Oxford Review of Education
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713440173

Selecting a Key Skills Delivery Mode: thinking about efficiency and effectiveness

Anthony Kelly

Online Publication Date: 01 June 2001
To cite this Article: Kelly, Anthony , (2001) 'Selecting a Key Skills Delivery Mode: thinking about efficiency and effectiveness', Oxford Review of Education, 27:2, 227 - 238
To link to this article: DOI: 10.1080/03054980123729
URL: http://dx.doi.org/10.1080/03054980123729

Oxford Review of Education, Vol. 27, No. 2, 2001

Selecting a Key Skills Delivery Mode: thinking about efficiency and effectiveness

ANTHONY KELLY

ABSTRACT *This research-based paper attempts to describe a continuum of delivery choices available to school and college managers by which Key Skills can be introduced as part of Curriculum 2000. It describes the pressure to integrate, the illusion of contextualisation and the consequent pre-eminence of staff competence as a determining influence on the effectiveness of the delivery structure. It describes some problems associated with integration and the relative efficiency and effectiveness of discrete and integrated delivery. The paper goes on to define a continuous array of mixed modes of delivery, the levels of support required to underpin them, the external influences that impinge on the process of their selection and the effectiveness of monitoring and tracking systems.*

INTRODUCTION

It has been argued (Tribe, 1996) that the concept of Key Skills suffers from a lack of theoretical underpinning, and others (Hyland & Johnson, 1998) regard it as an expensive and disastrous exercise in futility, whose chief function is to unite industrialists and educators under a convenient banner. At worst, it was seen (Green, 1998) as an impoverished form of general education—an ineffective surrogate which could not achieve the goals it set itself—and at best as something about which teachers could not reasonably be expected to enthuse (Mathieson, 1992). Theoretical development, efficiency, effectiveness and teacher enthusiasm have always been pivotal issues for those proselytising Key Skills, just as they have been for opponents.

At least in respect of teacher enthusiasm, things have changed! The research for this paper has revealed widespread, if guarded, enthusiasm for the introduction of Key Skills, perhaps as a result of its linkage to A-level reform and a revised UCAS tariff system. The improved perception of Key Skills has not been confined to educators either. Employers have long since asserted the value of communication skills (Austin Knight Ltd., 1998) and we are told that students perceive Key Skills as reflecting their own needs as well as those of employers (Duckett, 1997). In addition, the need for IT and numeracy skills is now largely undisputed, although the extent to which Application of Number meets those needs has been called into question (Wolf, 1999). For managers, the debate has moved on. It is now centred on the practicalities of organising efficient and effective delivery. This paper addresses some of these issues, while attempting (in a qualitative way) to represent the management processes involved in the selection of the various modes of Key Skills delivery.

ISSN 0305-4985 print; ISSN 1465-3915 online/01/020227-12 © 2001 Taylor & Francis Ltd
DOI: 10.1080/3054980120051921

TABLE I. Interviewees and supporting materials

College interviewees	School interviewees	Documentation list
Curriculum Manager	Deputy Head (Curriculum)	Key Skills organisational chart
Key Skills co-ordinator	Key Skills co-ordinator	Key Skills policy statement
GNVQ co-ordinator	GNVQ co-ordinator	Job description of KS co-ordinator
A-level co-ordinator	Head of Sixth	Copies of internal communications about Key Skills
A-level and vocational tutors involved in Key Skills delivery	Teachers involved in Key Skills delivery	Copies of external communications about Key Skills
Students	Students	INSET documents

METHODOLOGY

A nationwide programme of research was undertaken which included extensive on-site interviews at some 65 schools and colleges across England, seminars for experienced practitioners and a survey of 100 schools.

The interview schedule for the centre visits was informed by a series of four 'expert practitioner seminars', attended by representatives from Awarding Bodies, materials development companies, managers, teachers and tutors. The centres visited represented a range of experience and geographical spread. (Independent schools, schools outside England and training providers were not included.) The personnel interviewed at each centre varied slightly with size and type of institution and, to a lesser extent, with availability. A typical list of interviewees for schools and colleges is contained in Table I. Interviews were semi-structured, tape-recorded and transcribed. In all, approximately 300 people (excluding students) were interviewed in the course of the project.

Materials collected from centres (See Table I) and a self-completion, mostly closed, postal questionnaire of a further 100 schools (48% useable response) widened the evidential base.

The 'findings' were triangulated by twelve *post facto* seminars, targeted at specific groups—senior curriculum managers, employers, co-ordinators, teachers and tutors—from centres not included in the schedule of centre visits.

STRUCTURES FOR DELIVERY

Reports (FEFC, 1998) show that internal structures sometimes impede rather than facilitate good practice, so it is important that they are understood. Moreover, the consequences of choosing one method of curriculum delivery over another need to be appreciated, in *advance* of its selection. That is the essence of good management—that decisions are underpinned by theory and informed by practice and research. Whatever system of delivery is selected, it should aspire to be effective, in that it goes some way towards achieving its purpose, and efficient, in that it strives to avoid unnecessary input. Every structure designed to deliver a curriculum attempts to resolve the tension between these two aspirations.

The structures conceived by schools and colleges to deliver Key Skills were found by the research to be many and varied, though they can be considered to fall into three broad categories: 'fully integrated', 'fully discrete', and 'mixed'. Although there is a considerable temptation to consider each separately, it is more profitable to regard the

three categories as options on a continuum, since many difficulties are shared across delivery mode and the reasons for selecting one are often those for rejecting another.

(i) Integration and Contextualisation

Many schools and colleges aspire to develop and assess Key Skills by complete integration within vocational and academic coursework. This approach has long been advocated by agencies within the Further Education sector (FEFC, 1998) and appears to have become accepted as the desired option, particularly by centres with experience of GNVQ delivery. The approach has been further bolstered by advocacy from independent consultants, frequently called in by institutions to advise on the efficacy of the various options available.

Most of the 65 schools and colleges visited had adopted (or were intending to adopt) a 'mixed' delivery approach, though some classified their modes of delivery as 'integrated' when they were clearly not. A certain reluctance to classify a delivery mode as anything other than 'integrated' was perceptible and occasionally centres expressed guilt at opting for a mode of delivery which was not fully integrated. In addition then to the problem of advocacy of full integration referred to above, there appears to be a problem of nomenclature. How, for example, should a system of integrated development, but discrete assessment, be described? Or a system whereby Communications and Application of Number are integrated, but Information Technology is not?

There also appears to be some confusion between the terms 'integration' and 'contextualisation'. Whereas 'integration' refers to the organisational incorporation of Key Skills delivery into vocational and academic courses, 'contextualisation' refers to the development of Key Skills in a context relevant to the students' own experience or coursework. Therefore, integrated delivery is by definition contextualised, although the converse is not necessarily true.

Since contextualised teaching is considered more effective, at least with some students (Duckett, 1998; Abbott, 1997), some teachers have assumed that integrated delivery is necessarily *more* effective and therefore preferable. This is erroneous because, while integration guarantees contextualisation and therefore a *measure* of effectiveness, discrete delivery may also be contextualised and in that sense may be just as (or more) effective. Integration may guarantee contextualisation, but it does not guarantee effectiveness.

So integrated delivery cannot be said to be more effective *per se*, even in terms of its own most obvious association with contextualisation. Consequently, factors such as staff competence and confidence, rather than integration, are more likely to influence effectiveness. In this it would appear that more discrete modes of delivery have an advantage—staff are specialist trained, are likely to be more confident and are selected for their expertise in Key Skills, rather than gap-filling teacher timetables. A fuller discussion of the relative claims to effectiveness of discrete and integrated modes of delivery is to be found below, but at this stage it can be stated that, all other things being equal, discrete delivery is more effective and integrated delivery is more efficient.

However, all other things are *not* equal! As will be argued below, the staffing cost of support structures tends to negate the supposed efficiencies of integration, just as the rising competence of staff delivering by integration tends to counter the effectiveness of separation.

(ii) Problems Associated with Integration

While integration has been shown not to guarantee effectiveness, it is, to a greater or lesser extent, a common feature of all mixed modes of delivery and so has an importance far beyond the purely integrated approach. Integration has problems peculiar to itself and these include: perceived differences between vocational and academic courses; the obstacle of inadequate sign-posting at A-level; and difficulties associated with the integration of Application of Number.

Differences between Vocational and Academic Courses. Generally, and notwithstanding the fact that Key Skills development has been de-coupled from general vocational courses from September 2000, Key Skills delivery appears integrated to a greater extent in vocational courses than in academic ones, with managers apparently of the opinion that Key Skills delivery within Vocational A levels is non-problematic. It seems that the proposed integration of Key Skills delivery within A-level is perceived by managers as less resolved than delivery within vocational courses, so for centres that deliver both Vocational A levels and A-levels, with students mixing qualifications, integration across the post-16 curriculum becomes problematic.

Inadequate Sign-Posting at A-level. The perception that opportunities to develop and assess Key Skills within A-level coursework are either absent or inadequately sign-posted appears to be an obstacle to schools and colleges adopting an integrated approach to delivery in advance of the course specifications becoming available. This research has found that many institutions are adopting a wait-and-see approach; selecting an interim mode of delivery based on expediency, rather than a long-term approach based on any in-house strategic rationale.

The Integration of Application of Number. Reports (FEFC, 1998) suggest that Application of Number is the least effectively delivered and our research suggests that it is perceived as the most difficult to integrate. It is possible that this may be a manifestation of problems intrinsic to the specifications themselves. Much of the development work in Application of Number demands a certain sequencing of tasks—collect data, analyse data and present data, for example. Consequently, if these tasks are embedded within different host subjects and sign-posted within different topics, those subjects and topics have to be sequenced in a similar fashion. Some teachers and course tutors have expressed the view that sequencing topics is sometimes extremely difficult to organise, and some managers feel that integration of Application of Number involves an implicit commitment to co-ordinated teaching across traditional subject boundaries.

(iii) The Relative Efficiency and Effectiveness of Integration and Separation

Although the link between integration, contextualisation and effectiveness has been shown to be, in part at least, illusionary, most discussions on the extent to which the delivery mode is integrated seem to centre on the tensions between efficiency and effectiveness.

The strategy whereby students receive Key Skills development and assessment only during normal academic and vocational coursework ('complete integration'), with little by way of support structures, has advantages which include: efficient single staffing;

TABLE II. Advantages of integration and separation

	Integrated	Discrete
Effectiveness	Linked to coursework & so more easily contextualised Key Skills perceived as part of 'normal' work	Specialist staff Appropriate staff available Complete delivery guaranteed
Efficiency	Single staffing Staff available (non-expert) Attendance compulsory	Key Skills easily coupled with tutorial & enrichment for funding

compulsory attendance; and encouraging the perception among students that Key Skills are 'part of the package'. This last advantage should not be underestimated as it is often difficult to motivate students in curricular activities that do not form an essential part of their established qualification syllabus (Coates, 1991).

Other research (Selwyn, 1999) has pointed to poor attendance among A-level students at compulsory IT courses which, it has been suggested, shows the difficulty of motivating even the best students for 'bolt-on' courses. Consequently, poor student attendance may be more problematic for centres that use discrete, rather than integrated, delivery.

The effectiveness of complete integration depends on the competence and willingness of course tutors and, to a lesser extent, on the suitability of host subjects to facilitate Key Skills delivery. This research has shown that management concerns about integration tend to be clustered around these issues, rather than on the relationship between contextualisation and effectiveness.

At the other end of the delivery continuum, the 'discrete' mode is characterised by a lack of development of the intrinsic relationship between Key Skills and coursework and while this strategy guarantees complete Key Skills delivery by specialist Key Skills trained staff, there is concern in some centres that the approach is less effective in centres where student attendance is problematic, or where Key Skills are perceived as an appendix to the 'real business' of coursework. In addition, the strategy becomes less efficient as more and more opportunities to develop Key Skills in normal coursework are ignored. In effect, the real cost of the discrete approach becomes that of double staffing, since the same outcomes could be achieved, all other things being equal, by course tutors within courses of study.

A matrix of how managers perceive the advantages and disadvantages of both extremes of delivery, in terms of efficiency and effectiveness, can be see on Tables II and III. These Tables are offered by way of summary of the discussion thus far. Of course, full integration and full separation represent only the extremes of delivery, although their features impact on all 'mixed' modes of delivery as well. Our research suggests that most centres plan to adopt something between these extremes and these popular mixed structures are now discussed in some detail.

(iv) Mixed Modes of Delivery

Most centres visited as part of the research have opted, however temporarily, for a mixed mode of delivery in order to resolve, in part at least, the conflicts outlined above. Of course, just as there are degrees of integration and separation, there are various modes of delivery which can be described as 'mixed'.

TABLE III. Disadvantages of integration and separation

	Integrated	Discrete
Effectiveness	Staff incompetence Staff unwillingness Unsuitability of host subjects	Poor attendance Key Skills seen as addendum to the 'real' business
Efficiency	Time taken from coursework	Double staffing

Four categories of 'mixed' mode are represented on Figure 1, between the two extremes of 'integrated' and 'discrete'. Together, they form the continuum referred to at the start of this paper. The 'height' of each category represents the additional staff cost to the centre, over and above the normal cost of course staffing, of each mode of delivery. Modes of delivery at the integrated end of the continuum require lower additional staff cover, availing as they do of existing course/subject teaching. (The cost of equipment and staff training has been ignored.)

General Studies: General Studies is sometimes proposed as a vehicle for Key Skills delivery, particularly in centres with small sixth forms. While such an approach could conceivably be classified as either 'integrated' or 'discrete', it is really a 'mixed' delivery mode, since it commonly has to be supplemented by Key Skills development within academic or vocational courses and/or by supplementary delivery from specialist staff.

Specific Integration: One relatively common version of specific integration is to deliver integrated Communications and Application of Number, and discrete Information Technology. This is an example of what might be termed 'Key Skills specific' integration. The reported advantage for schools and colleges that have adopted this strategy is that it appears to make the most efficient use of specialist IT staff and facilities.

Another version of specific integration could be called 'subject specific' integration, where all three main Key Skills are integrated, but only in some host subjects, like Business Studies and Geography, for example. This appears to make good use of some (presumably willing and competent) staff, while avoiding others, and at the same time recognising that some subjects are more suitable hosts for Key Skills delivery than others.

Supplemented Integration: Another mixed approach appears to be to develop all three main Key Skills integrated as far as possible within coursework, but supplemented by specialist staff whenever necessary (Ofsted, 2000). In this delivery mode, course tutors are expected to avail only of a certain minimum number of opportunities to evidence the Key Skills. It is accepted that unsuitable or difficult aspects are left to Key Skills

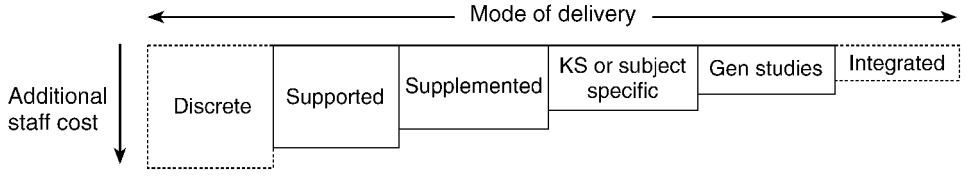

FIG. 1. The modes of delivery continuum

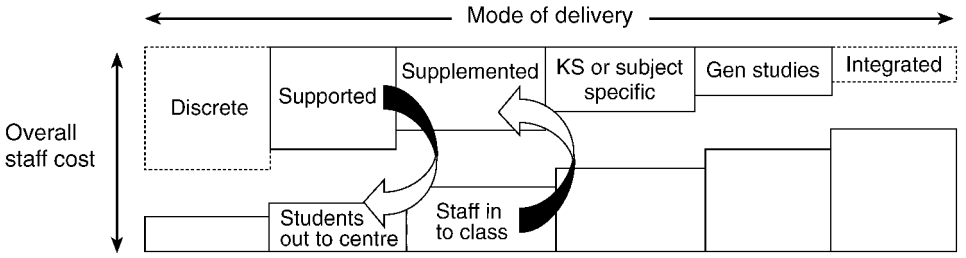

FIG. 2. Modes of delivery with their perceived support requirements

specialists, who augment skills development upon request from the course tutor. This approach is said to make for thorough monitoring and highly effective delivery (Ofsted, 2000), but to suffer from unpredictability, inefficiency and the difficulty in course tutors getting specialist assistance when required and at short notice.

Supported Delivery: Supplemented integration, where Key Skills teaching within course-work is augmented by specialist drop-in staff (in the manner of team-teaching) should not be confused with 'supported' delivery, where students can drop-in to a discrete Key Skills support facility to develop or to improve their Key Skills. Any mode of delivery can be supported by a Key Skills Support Unit and examples of each have been found, but the defining characteristic of supported delivery is that the support structure is intrinsic to initial delivery and not compensatory. Support Units used in this way are characteristically staffed by specialists, whether they are used solely for Key Skills support or not, or enthusiasts with a particular interest or expertise in Key Skills.

One of the most commonly reported disadvantages of supported delivery (and this may apply to support systems generally) is that attendance at drop-in facilities by students who have been referred to it is usually poor and attendance is perceived by students to be stigmatised.

(v) Levels of Support for the Various Modes of Delivery

Support structures for Key Skills delivery will be discussed more generally now, but it is clear that, in theory at least, support is intended to increase effectiveness at an acceptable cost to efficiency. Perhaps the presence of support facilities underlying each mode of delivery is evidence that no one mode of delivery has a monopoly on effectiveness.

The overall cost of delivering Key Skills by any one mode of delivery must take account of the level of support required, a fact that was deliberately ignored in Figure 1. The calculation of overall staff cost (additional staff plus support staff costs) is therefore complicated by the fact that an estimate has to be made beforehand of factors such as student absenteeism and timetabling clashes. Managers perceive that integrated delivery modes require greater levels of support than those at the discrete end of the continuum, although the extent to which centres can ever completely support delivery has been questioned (FEFC, 1998).

Figure 2 is an attempt to represent that perception, though in graduating the continuum from one extreme to the other, it has been assumed that levels of support are changing commensurately and at more or less the same rate. (The cost of equipment and staff training has again been ignored).

If the representation in Figure 2 is even approximately correct, the supposed efficiency of integrated modes of delivery can be seen to be as illusionary as the supposed link between effectiveness and integration, when the cost of support is taken into account.

INFLUENCES ON THE CHOICE OF DELIVERY MODE

The influences bearing on a centre's choice of delivery mode are numerous. Some are peculiar to the catchment area or physical location, some to the organisation and staffing and some to the period of time and stage of development in which the 'restructuring' occurs. Among the most keenly felt influences in each of these three categories are: physical resources; staffing; and Curriculum 2000 reforms, and each is discussed in more detail below.

(i) The Influence of Physical Resources, Institutional Size and Competition

Physical resources. Generally, schools and colleges choose delivery modes to reflect the physical constraints that exist at the institution in terms of IT resources, split-site provision, ease of access and accommodation for large numbers of students. These are constraints that are not easily overcome and they form the parameters within which centres operate. They are determining factors in the selection of a mode of delivery and are commonly discussed at the early planning stages.

Institutional size. There is widespread concern that sixth forms below a certain threshold will have difficulty delivering the new broader curriculum. Although institutions are cautiously enthusiastic about the Key Skills innovations, their delivery is seen by some to be part of a problem faced particularly by small schools. Therefore, the mode of delivery selected by these centres tends towards efficiency and integration, with a number opting for mixed delivery by General Studies, as was mentioned above.

Further Education colleges, being larger institutions, have economies of scale not available to schools. Although this research shows no discernable link between institutional size and luxury of delivery, it is possible that schools with small sixth forms may be enticed (or forced) by circumstances to initiate co-operation with competitor institutions in order to overcome the disadvantages of scale. Until then, innovation and experimentation are likely to come from the FE sector, while schools adopt, from necessity, a more minimalist approach.

Competition. There is little doubt that modes of delivery selected by competitor institutions influences selection. Schools, which operate in closer proximity to each other than Further Education colleges, appear more mindful of what is being offered by competing institutions by way of curriculum breadth and enrichment programmes. This is likely to have the effect of reducing diversity within the school sector and of encouraging a wait-and-see, rather than a co-operative, culture.

However, the wait-and-see approach is not unknown in the Further Education sector either, since competition between schools, FE colleges and Sixth Form colleges is intense in some areas.

(ii) The Influence of Staffing

The willingness, selection, availability, competence and confidence of staff have been frequently mentioned in relation to the selection of a centre's delivery mode. The importance of these staffing factors was shown earlier in this paper to be critical, given the illusionary nature of the link between integration and effectiveness, and it is worth considering the underlying issues which seem to inform these concerns about staffing.

Willingness and Uncertainty. There appears to be a certain reluctance among some A-level staff to engage with Key Skills. This ranges from outright refusal to participate to concern about the erosion of subject teaching time. Other staff have taken to the prospect of developing Key Skills within their course teaching with relish, while expressing concern about the unavailability of sign-posted course specifications and the consequent lack of planning time for the coming year. These uncertainties contribute to centres proposing to opt for mixed modes of delivery, by way of compromise.

Selection and Availability. Selection and availability of staff are issues mostly for those schools and colleges that opt for discrete or mixed modes of delivery, since integrated delivery implies 'automatic' selection and availability of teaching staff. In Further Education colleges, where specialist Key Skills staff are more widely available, they are commonly selected to either support integrated delivery by some form of double staffing, or to develop Key Skills separately in a mixed or discrete delivery mode.

In centres where specialist Key Skills staff are *not* available, concerns about staff selection appear to have steered centres towards subject specific integration, where some subjects (and by inference, some staff) are chosen for fully integrated delivery while others are not. (For example, Communications integrated solely within English, History and Biology; and Application of Number solely within Physics, Geography and Business.) Such approaches, while appearing straightforward, can actually be fraught with the dangers of inadvertently disadvantaging some students in terms of gender, or of delivering an unbalanced set of delivery opportunities, as a result of subject choice. (In the example above, where Communications is delivered solely within English, History and Biology, there is an inherent bias in favour of female students (DfEE, 1999).)

Competence and Confidence. The competence and confidence of non-specialist staff affect all non-discrete modes of delivery, but particularly the fully integrated approach, since non-specialist staff are more likely to be less confident. The relationship (if any) between staff acquisition of Key Skills and teaching competence is not known, though indications suggest that confidence will increase with increased provision of staff training and development.

(iii) The Influence of Curriculum 2000 Reforms

The introduction of Key Skills certification into the post-compulsory system has been complicated by the new structures for curriculum delivery, and schools and colleges have had to work largely in isolation from each other as they struggle to develop curriculum models appropriate to their own institutions. Most commonly, centres are proposing to deliver Key Skills as part of a 'five column' curriculum model, with a

mixture of Tutorial, Enrichment, Key Skills, General Studies and Sports in a single two-year delivery column. What was formerly a two-tiered system (A and S levels) has become three-tiered (AS levels, A2 levels and Advanced Extension Awards), so the new curriculum structure is more stratified, as well as broader.

The extent to which the Curriculum 2000 reforms 'accommodate' early post-compulsory leavers is a cause for concern to some centres. It complicates the decision as to whether to deliver the Key Skills qualification over one or two years, since students may not be there for Year 13. Furthermore, since students are expected to broaden their choice of subjects in Year 12 and reduce it in Year 13, a tapering effect will be created, posing yet more problems for centres that opt for two-year integrated delivery. Student cohorts may change, both in size and constitution; subjects which are available in Year 12 may or may not be available in Year 13; and staff availability will be more unpredictable.

The obvious solution for some is to deliver the Key Skills qualification over the first year of post-compulsory study only, but most schools and colleges regard this as an unrealistic proposition, given the need to *develop* skills as well as the requirement to *assess* them.

EFFICIENCY AND EFFECTIVENESS IN MONITORING AND TRACKING

In most centres that took part in the research, the delivery mode and the monitoring and tracking systems appear to have been selected independently. The simplest monitoring systems appear to be associated with the extremes of delivery—fully integrated or fully discrete. Mixed modes of delivery, by far the most popular option, have all manner of monitoring and tracking systems associated with them and not a little confusion over exactly what is meant by the terms 'monitoring' and 'tracking'. The term 'monitoring' is most commonly used to describe the surveillance of student progress, while 'tracking' is the bureaucratic paper-chase that follows. Centres that have encountered staffroom opposition to the introduction of Key Skills, based on a fear of ever increasing levels of bureaucracy, have de-coupled the two by arranging for ancillary clerical staff to maintain the tracking system. This strategy has been found to decrease staff resistance in some centres, quite dramatically.

Generally, managers appear to emphasise effectiveness, rather than efficiency, when considering monitoring systems. Some interesting systems have emerged from the research, including an institution-wide electronic intranet that allows both 'read-only' and 'write' access to students. Issues of systems security have slowed progress in this development, as has the need for a multi-level access protocol that allows some staff write access everywhere and others read-only access in places.

Despite these problems, intranet monitoring and tracking is seen as a long-term solution in some schools and colleges. In other centres, even the smallest systems glitch seems to discourage staff who, while promoting IT skills to students, are themselves spurning its use.

Nevertheless, there is widespread recognition that it is both desirable and necessary to have students involved in tracking their own Key Skills progress. The extent to which this is possible varies, of course, from centre to centre and from student to student, but it impinges on student performance everywhere. Other research (Quicke, 1999) has shown that even low-achieving pupils are capable of reflecting upon their own learning experiences in a way that develops insights, and student self-tracking may eventually be part of the skill of Improving own Learning. It would be ironic if, while aspiring to

integrate Key Skills into coursework, tutors were to pass up such opportunities to demonstrate the wider Key Skills.

SUMMARY

The way in which self-tracking can be developed as part of the 'wider' Key Skills is likely to inform the next phase of the debate, bringing it to an ill-defined boundary, where the main three Key Skills end and the wider ones begin. Perhaps this boundary is close to the limit of what can presently be measured in terms of effectiveness and efficiency. If that is the case, then it is a consequence of uncertainty and cannot be resolved by reference to structures or to influences.

All the factors that influence the selection of a mode of delivery for Key Skills are interdependent; confidence is affected by competence, and availability is affected by curriculum change. No attempt has been made here to prescribe a single solution to the fundamental problem of delivering a Key Skills curriculum effectively and efficiently, because the research tells us that no one size fits all. Institutions play to their strengths and sideline their weaknesses—that is a manager's instinct. What this paper attempts to do is to inform that instinct.

REFERENCES

ABBOTT, I. (1997) Why do we have to do Key Skills? Student views about General National Vocational Qualifications, *Journal of Vocational Education and Training*, 49, 4. pp. 617–630.

AUSTIN KNIGHT LTD. (1998) *Soft Skills Hard Facts* (London, Austin Knight Ltd.).

COATES, P. (1991) The 16–19 Core Skills Initiative, *Curriculum Journal*, 2, 1. pp. 43–53.

DEPARTMENT FOR EDUCATION AND EMPLOYMENT (1999) *Statistics of Education: Public Examinations GCSE/GNVQ and GCE/AGNVQ in England 1998* (London, The Stationery Office).

DUCKETT, I. (1997) Core Skills: from the heart of the matter to the keyhole, *Forum*, 39, 2. p. 65.

DUCKETT, I. (1998) Key Skills in the Curriculum: skills development, enrichment and general education, *Forum*, 40, 2. pp. 56–57.

FURTHER EDUCATION AND FUNDING COUNCIL (1998) *Key Skills in Further Education* (Coventry, FEFC).

GREEN, A. (1998) Core Skills, Key Skills and general culture: in search of the common foundation in vocational education, *Evaluation and Research in Education*, 12, 1, pp. 23–43.

HYLAND, T. & JOHNSON, S. (1998) Of cabbages and Key Skills: exploding the mythology of core transferable skills in post-school education, *Journal of Further and Higher Education*, 22, 2. pp. 163–172.

MATHIESON, M. (1992) From Crowther to Core Skills, *Oxford Review of Education*, 18, 3. pp. 185–199.

OFSTED, FEFC & TSC (2000) *Pilot of New Key Skills Qualification 1997–99: A joint report* (London, Ofsted).

QUICKE, J. (1999) Key Skills and the 'Learning Curriculum': a way forward, *Forum*, 41, 1, p. 35.

SELWYN, N. (1999) Information technology and the A-level curriculum: a core skill or a fringe benefit? *Research Papers in Education*, 14, 2, pp. 123–137.

TRIBE, J. (1996) Core Skills: a critical examination, *Educational Review*, 48, 1, pp. 13–27.

WOLF, A. (1999) Mathematics: a key skill that never happened, *College Research*, 2, 3, pp. 7–8.

Correspondence: Tony Kelly, School of Education, University of Cambridge, Shaftesbury Rd., Cambridge CB2 2BX, UK.