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Evidence-based practice and e-learning in Higher Education: can we and should we?

Martin Oliver and Grainne Conole

ABSTRACT

Policy makers are increasingly looking to evidence-based practice as a means of ensuring accountability and validity in education and more recently in e-learning. In this paper, the origins of evidence-based practice are reviewed, and considered in relation to the emergence of e-learning as an area of policy, research and practice. The close links between these three activities within e-learning are described, and a critique is presented that raises methodological, epistemological and moral questions about this approach. This analysis identifies a number of implications for e-learning, including the problems facing practitioner-researchers working on project funding and the potentially distorting effect of e-learning policy on research in this field. Possible alternative approaches are suggested, advocating a more inclusive conception of evidence-based practice in which any single model (such as the hierarchy of evidence developed within medicine) is prevented from dominating evaluation by explicitly adopting a commitment to inclusivity and empowerment within evaluation and research.

Keywords: evidence-based practice; e-learning; methodology; policy; epistemology

INTRODUCTION

The ever-increasing usage of Information and Communication Technology (here grouped together as 'e-learning') to support post-compulsory education has facilitated global competition in Higher Education (Hanna, 1998). The consequences of this include a drive to...
create ‘mega-universities’ adopting these technologies (Daniels, 1996), the widespread movement towards online provision in support of traditional courses and the establishment of virtual universities. These developments are justified using research that suggests that such approaches maintain (IHEP, 1999) or improve educational quality and reduce per-student costs (e.g. NCIHE, 1997). Thus, the UK is now embarking on the creation of an e-University (PriceWaterhouseCoopers, 2000) and a Colleges Online initiative, positioned to compete in the global educational marketplace.

However, such policies ignore a growing body of research that challenges these assumptions, arguing that e-Learning is valued as much on political as on pedagogic grounds (Jones et al., 2002), creates inequality (Oliver et al., 2002) and may increase, not reduce, costs (Laurillard, 2001). Such issues are glossed over in the current political climate, in no small part due to the rise of evidence-based practice as a way of linking research and policy, as will be argued below.

In this paper, the rise and the main features of evidence-based practice will be outlined in relation to wider policy changes, focusing on e-learning. Next, a number of methodological and philosophical issues in relation to evidence-based practice will be discussed. Finally, the implications for e-learning practice will be considered.

This paper adopts discourse analytic approaches to policy analysis, viewing both e-learning and policy as socially constructed practices (Potter and Wetherell, 1987). This reflects the belief that it is not technology per se, but its use in particular social contexts that influence learning (see, e.g. Oliver and Conole, 2002). Within this framework, relevant policies and literature describing evidence-based practice are reviewed. The analysis focused on questioning taken-for-granted assumptions so that ‘normal’ practices are seen as being problematic. This led to the identification of three complementary perspectives (methodological, epistemological and moral) which are used to structure the results section. First, however, the historical policy context will be described, focusing on the rise of evidence-based practice.

BACKGROUND

The Rise of e-learning in UK Higher Education

The use of computers in higher education in the UK has been on the government’s agenda for a considerable length of time, since at least Flower’s report (1965). In more recent years, the profile of such activity has been raised both by dedicated funding programmes (such as the Teaching and Learning Technology Programme, which invested over a hundred million pounds in projects in this area over a period of about a decade) and through policies arising as a result of the recommendations of the Dearing report (NCIHE, 1997). The Dearing report advocated resource-based learning, including the use of computers, as a way of maintaining quality while coping with the twinned tensions of increased student numbers and a diminished unit of resource. Within this report, technology was given a pivotal role in areas such as managing information to support students’ choice of institution, guiding management decisions and shaping teaching and learning. Since then, the role of e-learning has been developed even more clearly through the instigation of the University for Industry (now re-branded as LearnDirect) and the ongoing development of the e-University (PriceWaterhouseCoopers, 2000), a governmental initiative intended to bolster the position of the UK’s institutions in the global Higher Education market. The Joint Information Systems Committee (JISC) has also invested heavily in the development of a technical infrastructure.
and associated research and development, particularly through the creation of an Information Environment for e-learning and the population of this with tools and resources for learning. (Further details of these activities are available from the JISC Web site, http://www.jisc.ac.uk.) Complementing these technical developments are the recently established Learning and Teaching Subject Networks (http://www.ltsn.ac.uk) and the Institute for Learning and Teaching (http://www.ilt.ac.uk).

Across these policies, many claims have been made about the efficacy and the efficiency of the use of computers to support learning and teaching. However, the extent to which such claims are rhetorical or are ‘evidence-based’ remains open to question. In order to begin to answer this question, the rise of evidence-based policy and practice will now be outlined.

Universities, Accountability and Policy Development

Post-industrial societies share several features, including a tendency to view knowledge as a commodity, increasing computerisation of information and the use of ‘performativity’ to decide the value of things (Lyotard, 1979). In this context, Universities have experienced a change in status, becoming increasingly accountable to government and re-positioned as providing a service to the economy (Barnett, 1994). This reflects an ever-growing decrease in governments’ trust in the professions (Davies et al., 2000a).

Such trends are common across Western cultures (e.g. PoAS, 2001; Ketl, 2001). In Europe, they have led to significant changes in the work of universities and the role of academics, characterised by the privileging of administration and the rise of quality assurance (Henkel, 2000). The notion of accountability has been applied ever wider, with pedagogy steadily becoming a matter of policy rather than a concern of individual academics (Holley and Oliver, 2000).

This has been echoed across the public sector, notably within healthcare. Here, initiatives emerged to link research, practice and policy together and these became known as evidence-based practice. This now forms a major part of policy creation within healthcare in the UK, with foundations such as the National Institute for Clinical Excellence using evidence-based practice to provide guidelines and develop policies that are applied nationally (Davies and Nutley, 2000).

The aim of linking research and policy originated within a positivist tradition of social inquiry (Nutley and Webb, 2000). In evidence-based practice, as it has evolved in medicine, a hierarchy of evidence has been drawn up on the basis of reliability (interpreted as the elimination of subjective bias). In this, the randomised control trial is ‘enshrined’ (Davies et al., 2000b, p. 251) as the pinnacle of researchers’ aspirations, with other quantitative approaches ranked beneath it and qualitative approaches firmly located at the bottom of the table, grouped alongside accounts that lack a research methodology. The purpose of this grading process is to allow studies to be summarised in reviews that aggregate findings in a systematic manner.

Recently, evidence-based practice has been advocated as a way of linking policy, research and practice within education (Fitz-Gibbon, 2000; Evans and Benefield, 2001). The remainder of this paper takes this view of evidence-based practice derived from medicine as a starting point, and considers three sets of issues (methodological, epistemological and moral) that arise in relation to e-learning. Reference will be made to different types of evidence-based practice (systematic reviews, general experimentation and randomised-control trials) as appropriate throughout this analysis.
AN ANALYSIS OF EVIDENCE-BASED PRACTICE AND ITS RELATIONSHIP WITH E-LEARNING

Methodological Issues

At the heart of evidence-based practice lies a concern for effectiveness and the best way of researching this, it has been argued, is by experimentation (Evans and Benefield, 2001). The form of experimentation that has found particular favour within evidence-based practice is the randomised control trial. This is privileged on the basis of a search for causality (Davies et al., 2000a). Indeed, this method has become all but synonymous with evidence-based practice, having been used to define in American law what counts as ‘rigorous’ research and how evidence-based practice should be implemented (Feuer et al., 2002). Ironically, however, such trials adopt a ‘black box’ model in which inferences are made not about innovations, but about a particular strategy for allocating subjects to experimental conditions — leaving such studies unable to explain causes and instead simply offering pragmatic justifications (Davies et al., 2000b).

As Hammersley (1997) has pointed out, this preference for quantitative methods in educational research is inappropriate: both quantitative and qualitative methods have roles to play in the process of research. This is particularly true in the field of e-learning, which being a relatively new field of study, remains contested by the various disciplinary traditions (education, psychology, computer science, etc.) that contribute to it. This contestation means that no single model has arisen to explain how e-learning works; psychological theories such as constructivism sit alongside social scientific theories such as the notion of habitus and cognitivist theories such as cognitive load theory (Oliver and Aczel, 2002). Lacking any singular model, it is impossible to reconcile the diverse studies that are undertaken in any systematic way. Each has to be interpreted on its own merits and reconciled with other studies in a way that is sensitive to the theories involved. As such, it has been argued that all studies in this field should be interpreted methodologically, as case studies, even when they adopt experimental approaches (Holt and Oliver, 2002).

The presupposition that quantitative methods are actually best suited to the concerns of evidence-based practice is, Doherty (2000) has argued, a naïve form of ‘scientism’, wherein researchers seek to legitimise their work by aspiring to an ideal form of science based on measurement. Ironically, while such attempts strive for scientific ideals, they ignore the fact that much of what scientists actually do falls outside the remit of quantitative methods (Hammersley, 2001; Doherty, 2000). Moreover, e-learning represents what Becher (1989) would describe as a soft, applied subject, as contrasted with hard, pure sciences. It is characterised by revisiting and reinterpreting observed phenomena, rather than by an incremental approach to knowledge. This interpretative emphasis means that, if anything, qualitative studies are to be favoured.

None the less, such observations have done little to unsettle the current rigid hierarchy of knowledge that is embedded in the culture of evidence-based practice. Although some researchers have made efforts to incorporate qualitative approaches into the research-base (e.g. Green and Britten, 1998), for the most part, qualitative research remains at best as an adjunct to quantitative approaches (see, for example, Davies and Nutley, 2000).

Finally, the emphasis on quantitative measures not only causes problems for methodology, but also distorts the practice it seeks to measure. Within the UK, most of the people who specialise in e-learning (as opposed to, say, education or computer science) are on fixed term
contracts, often lasting two years or less and explicitly linked to externally-funded project work (Beetham et al., 2001). These individuals are required both to ‘do’ e-learning and to justify their work through evaluation (at least formatively). From this precarious position, this same group also seeks to establish their academic legitimacy by researching their practice. Thus there is no neat division of labour; these roles are complex, requiring individuals to be practitioner, evaluator and researcher. (There are, of course, specialist researchers and evaluators within e-learning who occupy simple, single roles, but such complex roles are currently the norm for e-learning practitioners; see Oliver, 2002).

The effect of this is that there is little or no difference between evaluation and research; the same studies that are used to judge projects and inform policy are also used to develop the research base in e-learning. The only difference lies in the way in which evidence is interpreted. The same evidence is considered in terms of rendering judgements for evaluation (documenting practice and providing evidence of ‘what works’ according to particular politicised definitions), and in relation to theory for research (proving that something can work or explaining why it worked—or equally, why things do not work or are problematic).

However, because of this situation, wherein the majority of research is arguably produced through projects funded to have a developmental remit, there is a strong influence of policy on research within e-learning, often intermediated by the performance measures that are set for projects in order to ensure accountability. (Indeed, the same holds true for practice in education more broadly; Fitz-Gibbon, 2000). It is well recognised that there is a common tendency in evaluation to measure what is easily measured, rather than what best describes our model of the world (Patton, 1997). Realising this makes it clear that the data gathered for accountability purposes are simply proxies for performance, not the performance itself. However, when such measures are put in place, they become a focus of attention, distorting practitioners’ daily work around them in a kind of Hawthorne effect. This impact can be summed up by the aphorism, ‘what gets measured gets done’, together with its corollary, that what is not measured often gets neglected (Blalock, 1999). The impact on research is that policy influences the kinds of questions that are commonly asked and also how they are investigated, making it harder to undertake the kinds of research that might actively challenge current policy assumptions. The lack of a clear division of labour for e-learning practitioners leaves them beholden to funders, resulting in a situation where research is driven towards a narrow view of evaluation (emphasising accountability and performance measurement, and in the case of evidence-based practice also specifying methods), thus constraining what it is feasible for research to achieve.

**Epistemological Issues**

As described above, evidence-based practice arose within a positivist tradition, a philosophy that still guides it today. There is considerable debate over whether such a philosophy is appropriate in education (Smith and Hodkinson, 2002) and this is particular true in research into e-learning where, as argued earlier, the theoretical underpinnings of the field remain contested. However, evidence-based practice aspires to pragmatism, and the ‘scientism’ of the experimental method appears to be able to side-step theoretical debate by providing factual answers based upon empirical evidence. Davies and Nutley, for example, explain how evidence-based practice eschews theories (which ‘have misled so often’; Davies and Nutley, 2000, p. 48) in favour of pragmatics, since ‘it is just now widely accepted that even apparently
clear understandings have to be tested in real-world settings’ (Davies and Nutley, 2000, pp. 48–49). Such claims have a strong rhetorical appeal to governments who wish to appear dynamic and active, rather than reflective or contemplative, and whose policies are shaped by a current of anti-intellectualism (Avis et al., 1996). Although it must be recognised that many evidence-based researchers do aspire to theoretically-informed research, what seems to appeal most to policy makers is simply being told ‘what works’ (Davies and Nutley, 2000).

None the less, these claims to theoretical neutrality are simply false. It is not possible to make some claim about the way the world works without drawing on a theory, whether or not it is articulated (Barnett, 1994). Nor is it possible to define the appropriate scope of a study without some understanding—i.e. some theory—of what ‘counts’ (for example, as evidence) within it (Nutley and Davies, 2000a; Macdonald, 2000). One could argue that evidence-based practice is simply making the role of theory invisible by drawing on taken-for-granted assumptions about the way the world works, thus, laying claim to ‘common sense’ as a justification for conclusions.

It is a common warning of discourse analysts that the ‘normal’, or that which is absent from a text, is often of great importance (Potter and Wetherell, 1987); this certainly holds true for evidence-based practice. Ironically, although evidence-based practice claims to be founded on common sense pragmatism, ‘common sense’ appears to be remarkably uncommon. A perennial problem for evidence-based practice in education is that its recommendations are easily ignored or rejected by politicians and practitioners alike who believe that they already understand the processes under investigation (Fitz-Gibbon, 2000). The conclusions of evidence-based practice are judged against the audience’s own ‘common sense’ view of the world, or against political expediency, and are often found wanting (Nutley and Webb, 2000).

Rejecting evidence-based practice’s positivism, however, need not lead to a rejection of quantitative approaches—only the philosophy on which evidence-based practice rests. As has been pointed out, many mathematicians argue that what they do is construct models; whether or not these models correspond with reality is a separate issue (Kvale, 1996).

A further epistemological issue arises in relation to a second aspect of evidence-based practice, focusing on the sources searched when conducting systematic reviews. Much effort has been invested in developing authoritative databases for medical research, which reviews can then draw upon. No comparable resource exists for education—nor is it likely that one could be developed, since education is a discipline that co-exists closely with several others, including sociology and psychology. Attempts are being made to do this: for example in the Evidence for Policy and Practice Information and Co-ordinating Centre at the Institute of Education. However, their systematic reviews currently rely on searches across existing databases (including those for education, social science and psychology) together with manual and web-based searches of journals and through personal contacts by the researchers (ALRSG, 2002). Thus, while the scope of their search is broad, it is clearly not definitive, and the process still relies on individual knowledge of the various disciplines that might be relevant.

The problem of arguing that a search is authoritative is particularly acute in the sub-discipline of e-learning, which is intimately related to fields of study such as cognitive science, computer science, management studies and so on (Oliver, Conole, Cook, Ravenscroft, and Currier, 2002). The problem that arises from this situation is one of boundaries: since much educational research draws on thought or findings from other disciplines, how widely should the inclusion criteria for work be set? If, for example, educational developments are predicated on social or economic grounds, should studies from those fields form an integral part of the evidence base that is searched when conducting a systematic review?

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Moreover, the very idea of developing a definitive database runs counter to some of the most fundamental trends affecting the status of knowledge in the last half century. The idea that a definitive, authoritative body of knowledge can be defined and amassed has been critiqued as being an exercise of social control (Lyotard, 1979). This idea, Lyotard argues, is at odds with directions in society, which have come to favour divergent thinking that challenges existing frameworks (rather than reinforcing them) so long as this leads to productive new avenues for application or development.

However, the problems for systematic review are more acute than simply which studies should be referred to in any database. This leads to a third problem facing the kinds of evidence-based practice that are currently advocated for education (Davies et al., 2000a). Even within medicine, the bastion of evidence-based practice, (Sackett et al., 1996; 1997), challenges have been raised about what should be counted as evidence and how this should be interpreted. Greenhalgh (1996) has argued that the rise of evidence-based practice has led to a 'spurious' divide between general medical practitioners who aspire to establish their practice on a scientific basis and those who emphasise the value of intuitive, narrative and interpretative aspects of consultation. Such a distinction leads practitioners to ignore the evidence that is to hand when consulting with a patient in favour of the generalised, abstract, codified forms of knowledge produced by evidence-based practice. This process of epistemological privileging runs counter not only to general practice in medicine but also to educational principles of student-centredness that are firmly valued by educational practitioners and researchers (e.g. McNiff, 1988).

However, Greenhalgh (2002) has not only questioned the exclusion of contextual evidence within evidence-based practice but has also raised questions about whether it is appropriate to focus solely on explicit knowledge. It is well recognised that experts cannot always explain why they do as they do; their professional knowledge is intuitive and tacit (McMahon, 2000). Greenhalgh (2002) points out that in the context of making medical judgements, this trend is extremely clear: while the novice practitioner rigidly adheres to rules, the expert practitioner has an intuitive grasp of situations, copes better with complexity and uses analytical approaches only in novel situations or where problems arise. Moreover, they know when it is justifiable to ‘break the rules’ laid down by (for example) systematic reviews. Instead of being directed by rules generated in this way, experienced clinical decision makers selectively apply general rules through careful consideration of the particular individual and their context. Thus, a focus on explicit, formal knowledge may contribute only indirectly to improving practice in this context; indeed, it can even hinder practice, as growing appreciation of the problem of ‘evidence-burdened’ practice has shown (Greenhalgh, 2002, p. 359). There is no reason to believe that this situation should be any different in education than it is in medicine.

Social, Educational and Moral Impact

Thus far, this analysis has focused on evidence-based practice as an approach to informing policy; in this section, its social impact will be considered.

The aspiration to link practice, policy and research is clearly laudable. However, the current approach being advocated to achieve this is inappropriate and misguided. Evidence-based practice adopts a centralised model of knowledge building, in which data are gathered, processed by experts and then disseminated in the form of recommendations to
practitioners and policymakers (Nutley and Davies, 2000b). This model is cause for concern on two grounds.

First, the process of review is elitist and exclusionary, drawing a distinction between experts and practitioners and thus removing any possibility that they might become the agents of their own improvement. This exclusion of practitioners from the process of research is inherently disempowering and stands in marked contrast to the radical agendas of educative research that follow the tradition of Freire (1972). It is particularly inappropriate given that, within e-learning, the dual role of practitioners as both evaluators and researchers has laid the groundwork for an inclusive and open approach. Indeed, there is evidence (e.g. Beetham and Conole, 2001; Beetham et al., 2001) of methodological benefits arising from practitioner involvement in the design and implementation of research and evaluation in e-learning. This resulted in an increased sense of involvement and self-identity for practitioners, as well as enhancing the validity of the results.

Second, ‘traditional conceptions of the role of evidence have placed unreasonable and unhelpful boundaries between the creation and the use of research’ (Nutley and Davies, 2000b, p. 342), with practitioners effectively disbarred from commenting on the interpretations of their practice. This has considerable implications for the political role of the researcher. Recognition that practitioners interpret rather than simply consume guidelines (Nutley and Davies, 2000b) helps to redress this situation, but does not go far enough. Unless practitioners are actively involved in framing and interpreting studies, then evidence-based practice can only serve the political interests of the powerful (who can commission such studies to support their agendas), widening the divide between those whose views ‘count’ and those whose do not (Oliver and Harvey, 2002).

Such concerns are vividly summed up by the claim that evidence-based practice should replace the ‘worryingly democratic’ conceptions of evaluation that currently hold sway in epistemologically inclusive fields (Macdonald, 2000, p. 129).

Third, there is a concern that evidence-based practice by its nature masks the real research issues and acts as a type of smoke-screen or ‘comfort blanket’ that can then be used by policy makers to make broad sweeping judgments or policy decisions based on ‘hard’ evidence.

Finally, in addition to the social implications of evidence-based practice, there is cause for concern that this approach seeks to establish hegemony within research. In order to be effective, the ‘consumers’ of the outputs of evidence-based practice must believe it is the right way to research; thus, evidence-based practice seeks to diffuse not only technological and organisational innovations, but an ideology as well (Nutley and Davies, 2000b).

DISCUSSION: THE IMPLICATIONS FOR E-LEARNING IN HIGHER EDUCATION

It has been argued that much research in Higher Education focuses on technique at the expense of studying motive or values (Zukas and Malcolm, 1999). Certainly, there is emphasis on technique in governmental policy concerning teaching and learning which has carried over into institutional structures and educational practice—but this is seen as something to be criticised and challenged, not endorsed and supported (Rowland, 2001).

Evidence-based practice can only support the technical view of education. By assuming that the problems facing education (and in particular, e-learning) are technical, evidence-based practice (in the sense adopted in medicine) becomes both feasible and desirable. If the
sector is faced with a simple problem concerning the skilled use of technology, then it makes sense to refine systematically the techniques through which technology is applied.

However, if teaching and learning is seen as being more complex than the application of technology, this approach becomes problematic. We cannot draw reliable, transferable conclusions about practice if our model of that practice is incomplete, ambiguous and provisional. This is clearly the case in education—and under conceptions such as those of Rowland (2001) and Zukas and Malcolm (1999), this situation should be embraced and explored rather than ‘solved’. Such a perspective clearly reflects wider trends in societies’ attitudes that favour generating (productive) complexity rather than reducing it (Lyotard, 1979).

Thus, unless we are willing to conceive of e-learning, or any other aspect of education, as being a standardised treatment that is applied to students (a view educational evaluators rejected over 30 years ago—e.g. Parlett and Hamilton, 1972—and which is equally denigrated by educational and social researchers—e.g. Rowland, 2001), the uncritical adoption of evidence-based practice, as outlined above, cannot be justified.

However, reluctance to accept evidence-based practice in its currently advocated form does not mean that the notion is completely irrelevant within the context of e-learning research. As has been pointed out, the adoption or rejection of evidence-based practice should not be seen as a simple binary opposition. There are clearly elements of the evidence-based approach that are sensible and laudable. Supporting practitioners in seeking out research on relevant issues may be considered a worthwhile aspiration, particularly if they are then encouraged to engage with it in a critical, thoughtful manner rather than blindly adopting whatever it advocates simply because it followed a ‘good’ methodology (i.e. one preferred by dominant evidence-based researchers). The huge increase in online publishing coupled with the availability of online databases of research illustrates how access to research can be supported by e-learning; the fact that online publishing is particularly prevalent within e-learning serves to show how relevant such an approach would be for the field in question. Similarly, whilst it may be inappropriate to provide answers to policies in an unquestioning and mechanical way, the development of methods of enquiry that allow practitioners to set and investigate their own agendas, driven by their own values, would clearly be worthwhile. The rise in community-based emailing lists and electronic fora again shows how e-learning can support (as well as become a focus for) such enquiry.

Such goals could be achieved in numerous ways. The traditional scientific model is one. Hypotheses could be posed, antitheses sought and syntheses developed, which in turn could be investigated. However, this is nothing new. It is simply the process through which research already takes place. Indeed, when explicitly tied to an emancipatory agenda, this proposal begins to look remarkably like action research (cf. McNiff, 1988). Given the strong link for e-learning practitioners between practice, evaluation and research, this might be a familiar and credible option. Equally, if the value of intuitive practice is considered to be of central importance, then the ongoing exchange of narratives between practitioners becomes a viable and valuable way of developing expertise and guiding practice (Greenhalgh, 2002). This model is in widespread use in many different areas of life, and is well documented by Wenger (1998). It is also a model well-suited to the kinds of collaborative exchanges that e-learning practitioners appear keen to develop—there is a strong tradition within this community of informal exchange of experiences, both face-to-face through workshops and conferences and through the use of electronic discussion lists (Oliver, 2002).

It must be recognised that these alternatives also have shortcomings. Action research can remain local, never informing wider communities to which it might be relevant; similarly,
informal learning through participation in work can perpetuate bad practice as well as develop 
good practice (Billett, 1999). E-learning research currently suffers from an overemphasis on 
self-reporting; case studies and action research are frequently descriptive rather than analytical, 
doing little to develop the kinds of practitioner-led hypotheses called for above. A culture 
change is required to address both the need for analysis and synthesis and to recognise the value 
of practitioner-led research agendas. It is hard to see how this could be brought about within the 
political climate currently surrounding e-learning, although an explicit commitment to such an 
agenda within the community of e-learning practitioners would help by aligning efforts so that 
they supported such value-led research (Wenger, 1998). Additionally, such an approach would 
have to overcome hostile attitudes in order to gain acceptance as a valid form of enquiry. ‘Pseudo-science’ research in e-learning (anything other than rigorously applied statistics) has 
been criticised for lack of methodological rigour (Mitchell, 2000), a situation that must be 
addressed if e-learning research is to gain credence.

Such problems are, however, inevitable. Any approach has its weaknesses as well as its 
strengths, and it is only by actively engaging with the outputs of a variety of approaches that 
these limitations can be perceived—and possibly overcome (Barnett, 1994). Thus, the 
ultimate problem with evidence-based practice is not that it has the range of associated 
methodological, epistemological and moral issues outlined in this paper. Rather, it is that the 
claims it makes for an authoritative voice threaten to stifle challenge and criticism. If such 
claims were abandoned, evidence-based practice could stand as a useful addition to existing 
approaches to educational research, adding another approach to the repertoire of e-learning 
evaluators and researchers. However, what is needed for this ideal to be achieved are the very 
things evidence-based practice rejects. What is required is a clear personal commitment to 
theories and assumptions together with explicit theory-building, rather than claiming a moral 
high ground and unassailable position through the rhetorical moves of denying the role of 
theory and claiming the right to define ‘what works’ (cf. Davies and Nutley, 2000). Given the 
current tentative, contested understandings of e-learning, any claims to such an authoritative 
position would be premature as well as restrictive.

CONCLUSIONS

The rise of evidence-based practice was, perhaps, inevitable in the political climate 
surrounding contemporary education. Nonetheless, its ascendance should not be viewed as a 
natural, neutral phenomenon. Evidence-based practice inappropriately dismisses qualitative 
approaches to research. It rests on philosophical traditions of positivism that are arguably 
inappropriate in an educational setting. Finally, it is spreading an ideology that disempowers 
practitioners. These problems are pertinent to many disciplines and subjects. However, this 
situation is particularly acute within the nascent field of e-learning, where understandings are 
partial and contested and practitioners have created a communal tradition that blends 
evaluation, research and practice together.

Thus, while the aim of evidence-based practice—linking research, practice and policy—is 
valuable, its methods are questionable, and even threatening to the community of practitioner-
researchers emerging in the field of e-learning. Given these concerns, we must now consider 
whether evidence-based practice can be reformed, or whether an alternative way of achieving 
these same ends can be found. Alternatives do exist, and it seems likely that the most productive 
way forward will be to encourage and develop this diversity rather than allowing any single
evidence-based approach (such as the medical model, with its hierarchy of evidence) to dominate. Thus, while we could adopt an evidence-based approach to e-learning following the current dominant model, we clearly should not—unless this approach is tempered by viewing it simply as part of a repertoire, as one methodology amongst several. The implications for e-learning are clear. If the dominant model of evidence-based practice underpins the research used to guide e-learning policies, these will be distorted to reflect the methodological, philosophical and moral concerns raised above, and (given the close link between short-term, project based contracts and research) this will in turn narrow the kinds of research enquiry practitioners will be able to undertake. Instead, a more eclectic research paradigm is needed, one in which different viewpoints can be raised, and in which the beliefs and interests of practitioners are valued alongside those of funders and policy-makers. Only in this way can the practices of e-learning serve a truly emancipatory social agenda.

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