The Future Curriculum in English and IT: how teachers and student-teachers view the relationship

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ABSTRACT This project was undertaken by researchers at three universities in England where there is a well established tradition of introducing student teachers to Information Technology. Questionnaires were administered at three key points in the course to a student group in each university, to establish how students’ concepts of IT were developing and to identify key influences on their practice and their thinking. Selected students were interviewed towards the end of their teaching practice, as was the school mentor for each student wherever possible, and all staff in the student’s host department were invited to complete a questionnaire. All tapes were transcribed. The study suggests that student teachers of English have a broader view of literacy than is currently predominant in schools and this view positively embraces the role of IT in literacy. Student teachers do not envisage the disappearance of books, instead they see a wider and more inclusive range of texts, including the electronic, as part of the normal focus of the English teacher. Practising teachers of English range from those with an essentially negative attitude to IT, to an increasing number who are themselves developing this broader view of literacy. Current pre-service provision appears to be succeeding in giving new English teachers a positive and committed attitude towards the use of IT in the current and future literacy curriculum.

Introduction

The English curriculum in the UK has, probably since the 1960s and certainly since the production of the Bullock Report (DES, 1975), been a controversial and much contested field (Goodson & Medway, 1990; Cox, 1991). One crucial territory over which the contestants have fought is how
literate behaviour is defined (Mathieson, 1975; Protherough & Atkinson, 1991) and how English Literature influences the definition of ‘reading’ (Eagleton, 1983). Validating what should count as a text has become more problematic given that media texts have entered the field and presented themselves as candidates for ‘reading’- for study and analysis in serious terms. How Media Education should relate to English (Goodwyn, 1992b) remains unresolved, but this issue has a long history and opposition to non-print or non-literary media is deep-rooted (Leavis & Thompson, 1933). To observers of the nature of controversies within English, the quiet, if minimalist, incorporation of Information Technology within policy for the subject (DfE, 1995) is surprising. Given the hostility towards media study and the cultural and social preferences detectable in the 1995 English Curriculum, IT might well have been belittled or ignored by that curriculum. IT had, it is true, been mentioned positively in earlier documents concerning the nature of English, such as the Kingman Report (DES, 1988) and the proposals by Cox (DES, 1989) for the National Curriculum in English, but so had ideas and concepts which were negated by the 1995 ‘reformed’ version of English. IT survived the reforms intact and has been given a role; other innovations did not and have not.

The key issue for this paper is that however much IT has achieved recognition and status at the policy level, it remains controversial within the professional field of English, and not just in the United Kingdom alone (Lankshear & Knobel, 1997). English departments are extremely variable in their use of IT from very extensive use to almost complete neglect. Teacher education has for many years been providing student teachers of English with a reasonable introduction to IT (Goodwyn, 1991) but the great majority of serving English teachers are unskilled and yet to be fully convinced of the value of IT (Collins, 1992). Jude Collins' article reveals, based as it was on a thorough piece of research (Banks, 1992) in Northern Ireland, that many English teachers see IT as a threat to traditional literacy and especially to books. That some of these attitudes arose in a society which still maintains schooling divisions by ability, and which valorises the traditional in ways not characteristic on the mainland, leads us to question how general the findings are. Though our study provides many points of similarity with Banks, it does suggest that mainland English teachers are far more positive about IT.
However, a survey in 1992 (Goodwyn, 1992a) showed that for the great majority of experienced teachers, literature in the liberal humanist tradition (Eagleton, 1983) remained the central purpose of English teaching. Davies (1996) draws similar conclusions about the English teaching profession. The liberal humanist tradition, drawing upon the ideology of Romanticism, tends to see technological change as threatening, and again not in the UK alone, nor at school level only (Lanham, 1993).

In schools, then, some English teachers have actively resisted the computer as a source of learning for pupils, often viewing it as a threat to literacy. This study reveals that this resistance is still present but that it is diminishing, especially amongst new entrants to the profession and that English teachers are developing a new concept of literacy which incorporates electronic text and which embraces a much broader view of what being literate will mean (Tweddle, 1995, Adams et al, 1997).

The Study

We set out to gain some answers to these questions:

} Were future English teachers positive about the place of IT in their world, personal and professional?
} Did they commence their teacher education with much experience of IT, if so where did it come from?
} How did their views and feelings change over their pre-service year?
} How did the school departments that they taught in view IT, especially in the future?
} What could be learned from a more in-depth case study of a sample of students and their mentors?
} What could be learned about future and current English teachers’ evolving view of literacy from this study?

Data Collection

Data gathering began in Autumn 1994. Table I shows details of numbers and times at each place. The first questionnaire’s purpose was to discover the extent of students’ familiarity with IT on arrival at the start of their course, and the consequent two were intended to discover how students and the regular staff thought about the English curriculum and how it might be shaped through IT. The first questionnaire was administered to all students at the three universities who were to teach English as their major subject. Questionnaire two was given to students at the end of the first or beginning of the second term, when they might have had some
experience of IT through their English Method classes, but before intensive teaching practice had begun. However, by that time some familiarity with their schools had been established. At the end of the academic year the third questionnaire sought to measure the extent to which ground had shifted under the influence of contact with classes and regular staff.

Students at Leeds were selected because they were members of one tutorial group (Clarke’s), and nothing about their age, gender or IT-experience suggested that they were at all unrepresentative. At Cambridge and Reading the questionnaire was given to more students than returned it, and the same thing happened in all three universities in the summer. This explains gaps in numbers between sampling occasions, but there is no suggestion that the returned questionnaires were unrepresentative. Further discussion about the limitations of our data is found later; all results were analysed using the SPSS statistical software (Table I).

Table I. PGCE student-teacher numbers for the questionnaires on IT skills/knowledge/attitudes, for school subject English.

Teachers were sent a very slightly adapted version of the students’ curriculum questionnaire, to seek their perceptions about the future curriculum. Again, all the returns from teachers in the same three cities (plus a few other places to which students were allocated) were entered on the SPSS. Also, twelve teachers, in total in all three places, were interviewed.
on the basis that they had mentored different kinds of student, as identified from answers to the first questionnaire. Some case study students were also interviewed.

The Quality of the Evidence

Before we present the findings, we need to discuss briefly the quality of the evidence. The researchers have gathered enough evidence to offer some general comments but there are inevitable difficulties in such a field study, spread over numerous sites. A considerable number of student teachers (104) took part in the study overall but were missing for parts of it or failed to complete all the questionnaires. Fifty-nine teachers completed questionnaires but this does not represent the complete range of teachers. Based on the SPSS package, we have used a ‘valid percentage’ figure throughout to even out some of these discrepancies and to offer what we feel is the most representative figure. The majority of teachers whom we interviewed are experienced mentors who have worked closely with student teachers and university tutors over the last several years. This makes them both an atypical group and also suggests that the majority are outward looking professionals concerned with the development of their specialist subject. These points limit the conclusiveness of the findings. However the researchers themselves have all worked with student teachers, English teachers and English departments for many years and have monitored IT activity over those years. They were all members of the National Council of Educational Technology (NCET) Future English Curriculum group which met and shared ideas about IT activities in English for three years (1992-95). We feel that this background helps us to interpret the data critically and to offer some tentative conclusions.

Findings

The students (Table II) were asked a range of questions and we provide some indicative findings.

<table>
<thead>
<tr>
<th>Age not given</th>
<th>Gender not given</th>
<th>21-25 years</th>
<th>26-30 years</th>
<th>31-35 years</th>
<th>36-45 years</th>
<th>45-56 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>84</td>
<td>3</td>
<td>4</td>
<td>73</td>
<td>14</td>
<td>3</td>
</tr>
</tbody>
</table>

Table II. Breakdown by age and gender of the 104 students who completed Questionnaire 1. Actual numbers.

Did they commence their teacher education with much experience of IT, and if so where did it come from?

We can summarise the results of the first questionnaire by noting that these English graduates were, as a whole group, by no means unfamiliar with word-processors, either from work, home or self-study, though less than a
third of the sample had had some tuition in IT as part of their degree study (Table III). Other aspects of computing which are now acknowledged to have a distinctly literary use (e.g. Landow, 1992), such as use of hypertextual structures available on CD-ROM, were less well-known to them, but not altogether unfamiliar.

<table>
<thead>
<tr>
<th>Application</th>
<th>Very confident</th>
<th>Fairly confident</th>
<th>Beginner</th>
<th>Never used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Mac</td>
<td>3.4</td>
<td>11.2</td>
<td>21.3</td>
<td>65.1</td>
</tr>
<tr>
<td>PC</td>
<td>8.2</td>
<td>27</td>
<td>27</td>
<td>37.6</td>
</tr>
<tr>
<td>Word-processor (on anything)</td>
<td>21.6</td>
<td>35.3</td>
<td>32.4</td>
<td>10.8</td>
</tr>
<tr>
<td>Use of CD-ROM</td>
<td>4.2</td>
<td>4.2</td>
<td>20.8</td>
<td>70.8</td>
</tr>
</tbody>
</table>

Table III. Self-estimates of skill and knowledge by all students responding to the first questionnaire, across selected areas, expressed as percentages.

One of the most striking findings, given that the great majority of the sample (70.2%) had left school relatively recently (seven years maximum and for some only three years ago) was their tiny exposure to computers at school; 53.8% had had no use, 32.7% a little use and 3.8% only had had considerable use. This finding might be put down to hazy or selective memory were it not that the interviews bore this out in detail.

The students' own experience in schools when teaching (see below) also reveals that IT has yet to be made much of in the English classroom. However, the cohort had had far more exposure to IT at home and at work. 43% claimed to have had no use of computers at home, and 40.4 % no use at work. This latter finding about the work environment was based on 92 of the total sample, of whom a third had experienced either constant or considerable use of IT at work. Certainly work seems to have been more persuasive (or compelling) towards IT use than doing an English degree, even though many students had used their IT skills in furtherance of their degree studies.

The picture then is of future English teachers picking up their IT competence from work, home and some self study before starting the course. There are only a very few student-teachers beginning their courses who see themselves as highly skilled users of IT, even though half of them claim confidence at word-processing. Word-processing may have been learnt on machines other than the Apple Mac and PC listed in the questionnaire, so that those responding might have felt
that their skills represented only a very partial entry into the realm of IT expertise.

*Were future English teachers positive about the place of IT in their world, personal and professional?*

At the start of their Initial Teacher Education (ITE) course, future English teachers may not have had a substantive knowledge base, but only six people of the sample of 104 chose to express their attitude towards IT as ‘negative’. Half stated that they had positive feelings, and 41.3% occupied neutral ground, but often with an accompanying brief comment to the effect that they were inexperienced but willing to learn. In other words, their neutrality was to be understood as tending in the positive direction. Despite the majority emerging recently from purely print-based studies of Literature, over 91% were willing to be positively disposed towards IT at the start of their post-graduate year. Student teachers now (1997) join their ITE courses with considerably more IT competence than even five years ago and more and more are feeling fairly confident, ready to make rapid progress. At the University of Reading, where students are asked to provide a ‘Position Statement’ before they start the course, the great majority make ‘improved IT competence’ one of their goals.

**Text Types and Attitudes to Them**

What follows is based upon the second and third questionnaires, aimed as they were at accessing the thinking of teachers and student-teachers about the curriculum in English. A key term in and for an analysis of these questionnaires is ‘text’ because in the idea of valid kinds of text lies the interpretation of the subject English by its teachers. Worthiness of textual type for classroom study and critical attention will demonstrate, ultimately, what kind of literacy is envisaged for the students. We believed these things at the point of constructing the questionnaire, but our thinking has been confirmed by Lankshear et al (1997) since that time. It is interesting to note, in the Australian perspective on the question of the significance of new technologies, how the issues are similar, for a changing definition of literacy, to those at work in the UK.
In researching the impact of IT on English teachers’ thinking, we placed digitised text types alongside more familiar kinds of text and under superordinate headings concerned with purposes and ends in reading and writing beyond mere acquaintanceship with computers and programs, so that individual choices might reflect the width or narrowness of the kinds of textual encounters which were perceived as appropriate. Questionnaires Two and Three (and the teacher questionnaire) were fuller than the first one. Analysis of the returns allows us to see how the views of the student-teachers changed, how those views differed from or aligned with those of the regular teachers, and wherein these changes and points of variance lie. However, there is not space here for an exhaustive analysis of the questionnaires, so instead we provide selected elements which strike us as indicative of general findings (Table IV).

Table IV allows us to see how student-teachers evaluate things in ways different from those of the regular English teachers, and how paper-based texts are valued against electronic ones. However, comparisons
can also be made between collaborative and individual approaches to learning by the pupils.

Beyond the nearly 100% ‘highest value’ assigned to the printed book by teachers and student-teachers, it is clear from a reading of the figures in Table IV that paper forms are preferred to electronic ones, both by student-teachers and by regular staff, and this is true for both individual and collaborative work. Significant gaps between the general evaluations of the student-teachers and those of the regular staff open up over texts other than printed books, for example, texts on screen. 70% of student teachers ticked the highest and next-highest rankings (value columns 1 & 2) of ‘text on screen’, whilst for the teachers the same total amounts to about 50%.

The value of ‘text on screen’ grows for the student-teacher cohort from winter to summer, so that by the summer the values in columns 1 and 2 equal 71.4%, leaving only a relatively small proportion of the student cohort holding text on screen in low esteem. For the teachers, however, there is a wider spread of evaluations with figures much closer to a 50-50 split in opinion, but with a slight skew in favour of a higher evaluation. Optimism and scepticism about the new technologies are, apparently, spread more evenly among the regular staff.

Electronically stored texts, used for research purposes, provide interesting differences between student and regular staff groups, as well as between sampling times for the student group. Although the percentage of student respondents giving ‘medium low’ to texts on screen and electronically stored texts for research falls noticeably from winter to summer, which perhaps suggests an upward evaluation of these texts, nevertheless the highest percentage of any in the ‘lowest value’ occurs for students’ summer evaluation of electronically stored text for collaborative research (21.4%). For this significant minority of student-teachers, the end of the PGCE sees confirmation of the low value of electronic texts for use together by pupils. This might seem regrettable from the point of view of those who argue on behalf of improving reading by shared questions and analysis in front of easily-viewed texts (e.g. Bibby, 1994). Student opinion shifts concerning electronically stored texts, in that their value rises for individual research from winter to summer but falls for their collaborative use.

By contrast, the regular staff value collaborative research use with electronic texts, more highly than the students whom they mentor. The
explanation for this may not reside in the type of text so much as in the practice of collaboration; library books too are valued more highly by regular staff, but noticeably more highly when collaborative research is involved. Our interpretation here is that teachers who have used collaborative approaches rate them highly and we suggest that students' lower rating is likely to result from their having had little opportunity to try much collaborative IT work with pupils, and this is borne out by the case studies. In any case it would not surprise us to find evidence suggesting that regular staff have a greater range of pedagogic approaches within their confirmed and confident experience. It may be that regular staff work from a more sophisticated model of different ways to promote reading. Their student-colleagues, in a kind of symmetrical opposition, are prepared to work from the possibility that a larger range of textual types can be the subjects of widening literacy skills. When these two are put together, when the students gain experience of organising collaborative work and when the teachers broaden their repertoire of valid text types, then we can see how curriculum change of a significant kind is begun. Although, from the figures, book-based research is very clearly preferred to digitally-based, it is clear that students and regular staff do not quite agree on their evaluations of non-book but paper-based material. For both teachers and student-teachers, printed books take the highest score of any statistic in the study, showing very clearly the loyalty to print-based literacy of existing and future teachers of English. Newspapers, although quite highly valued by teachers, are still well below student-teacher values. Magazines, although not listed in Table III, are even more striking in their differences of value, with 60% of students rating them a '1', but only 24% of teachers doing so. Students and teachers are close (within 5% on value 1) in their rating of audio tapes, radio, video and charts. Taken together, these findings suggest to us that students are in line with much thinking about current good practice in English teaching; their views are not derived from wild speculation or idealism. That the students value text on screen considerably more highly than teachers may be linked to their higher rating of more popular forms of text such as picture books, magazines and newspapers. As teachers of reading they are starting out their careers putting more emphases on these aspects of literacy than the teachers they worked with. Students
are placing print based literacy very much in the foreground now but they show consistently that they are envisaging that other forms of text will become increasingly important in the near future.

Beliefs and Rationales about IT and the English Curriculum

Further views about IT and English, and refinements to the purely statistical findings of the questionnaires were taken from comments written on the questionnaire pro-formas, and from interviews with both regular staff and student-teachers. The mentors who were interviewed seem to us to provide a small but very representative sample; there were four from Reading, five from Cambridge and three from Leeds. We have sub-divided the comments which they wrote or made in interview into three categories. Decisions about which categories to create, and into which to assign particular individuals are inevitably subjective, but we present as much evidence as space allows about the actual attitudes and ideas which emerged.

The first group, The Fearful, about a sixth of the sample, represent those English teachers for whom IT is genuinely a threat and productive of personal doubt allied to critical exclusion of IT from their subject. Anxieties about the erosion of print culture which were voiced in some comments on the questionnaires suggested that English teachers may have to be very assertive to preserve it. IT was seen as inimical to book-based culture, with computers being, for children, the instruments of mere play.

The second group, The Unresolved, represent nearly a third, those who are changing and redefining their concept of literacy but who have some strong mixed feelings. One teacher in particular (female with 8 years teaching) epitomised the mixed view. She used a machine herself and sometimes in school, but commented, ‘...we are English teachers and not IT teachers, it is just a tool’. Many comments from this group capture the concerns of those English teachers, anxious to preserve the values and reading-matter through which their subject has gained status, but aware too that cultural shifts and changing textual practices are bound to influence the ways in which their students learn.

These concerns are echoed in the final group, The Optimists, who can be categorised as pro-IT. They would represent half the sample, and their years in teaching offer a complete spread, from twenty-two (male), to four (female). These teachers vary from highly competent personally to having considerable theoretical knowledge but not much
practical experience. What unites them is their common view that IT can significantly enhance English teaching, that it is a crucial aspect of a developing form of literacy and that it does not supplant print culture but it does change it. Views of this group may be summed up, by one of their number who worked in a City Technology College (CTC), a comprehensive inner-city school with untypically beneficial material endowment, as:

- IT empowers and stimulates children
- it helps with close reading and with drafting and redrafting text
- it provides new kinds of information and communication that will be essential and ordinary in the future
- currently (with the exception of the CTC) there is a real frustration with lack of hardware and software, although this is gradually changing.

The students interviewed, four from Reading and three from Cambridge, reveal future teachers who have, to different degrees, integrated IT into their thinking about literacy. Their experience of IT as relatively recent school pupils was almost non-existent, but one had belonged to the school computer club. They had all had very limited use of IT in their teaching practice schools and with one exception expressed real frustration with this, in their terms, missed opportunity. Only one had similarities of view to the Unresolved teacher group. The others had all had very little exposure during their schooling but had picked up some competence at university or work and now saw IT as a key element in children’s learning and in their own role as facilitators of that learning. They were clear that books would continue to play a key role in English and that the ideal classroom of the future would have several computers but not more than five or six and that children would work in all kinds of ways as they did now. Technology would offer many new ways of reading and writing and of communicating with others all over the world. They were all very concerned that lack of resources might impede this progress but, even if it did, English teachers would nevertheless be involved in using IT in all aspects of their teaching.

What Could be Learned about Future and Current English Teachers’ Evolving View of Literacy from this Study?

The great majority of student teachers are keen to embrace a broader concept of literacy than that used by previous generations. In this concept, electronic text plays a key part; it does not supplant print culture but it changes it. It includes more popular forms of reading and it is inclusive of television and video. It seems to us much closer to the current practices of adult readers and more concerned with empowering readers than with transmitting a narrow view of ‘being literate’. Practising teachers reveal that this change is underway in the profession as a whole. Some teachers, only a relative few, either fear IT or reject it as a threat to traditional literacy; these
teachers tend to be literally ignorant about what IT does. As researchers we are not critical of this position, but we see it as the result of the influence of a particular and predominant view of literature and of an appalling lack of in-service training.

The majority of English teachers reveal a changing profession. Some have residual fears about IT being potentially ‘antisocial’ or more alluring to children than the hard work associated with reading serious books. However the majority feel clear that IT is not neutral. They consider that it could cause problems but that its benefits are enormous and that it does require them to rethink what learning to read and write means in a technological age. This rethinking is not a threat but an exciting challenge. In this respect the new generation and the previous one are similar although student teachers are in the vanguard of change and are frustrated by their lack of opportunity to try out new approaches. They are not, however, daunted by these frustrations, they are realistic that resources may determine what can be achieved but they are committed to exploring the new literacy opportunities that IT offers them and their students.

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