Information technology and modern languages in the national curriculum

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The challenge of information technology

If pupils are to face up to the challenge of the importance given to Information Technology in the National Curriculum they need to be given frequent opportunities to develop their skills using appropriate hardware and software. The use of information technology, having little meaning without text, images or data to process for a specific purpose, finds an ally in Modern Language teaching with its stress on the processing and communication of information. These two compatible modes of communication can combine to mutual benefit to process information and have as their audience a foreign pen-friend or a link school, for example. Thus Modern Language teaching can give Information Technology a realistic or even genuine purpose, while the latter provides an up to date and effective means to manipulate and convey the foreign language and, at a different level, flexible and independent language practice through subject specific programs and simulations.

Examples of interesting practice and exciting developments involving computer technology and language learning are not difficult to find, yet the National Curriculum aims to achieve systematic application. This raises the questions: how ready are Modern Languages departments to help their pupils rise to this challenge? How much access do their pupils have to computers? What sort of programs do they use? This article outlines the position of information technology in the National Curriculum with regard to Modern Language teaching and then describes the results of an attempt to seek answers to these questions to illuminate future planning.

The national curriculum context

In preparation for the introduction of the National Curriculum all the individual subject working groups were asked 'to indicate the potential for using information technology (IT) and developing capability for its use in their particular areas (. . .). Thus their attainment targets and programmes of study, particularly those related to design technology, will provide the framework for the planning, delivery and assessment of work related to IT.' (Her Majesty's Inspectorate (HMI), (1989): *Information Technology from 5 to 16*, Curriculum Matters 15, London: Her Majesty's Stationary Office (HMSO), page iv.)

In the Programmes of Study for 'Information Technology Capability in the National Curriculum' it is stressed, in turn, that 'In each key stage pupils should develop information technology capabilities through a range of curriculum activities' (Department of Education and Science (DES) and the Welsh Office, (1990b): *Technology in the National Curriculum*, London: HMSO, p. 51), and examples are given of the sorts of tasks that could be carried out in various subject areas.

'The World of Communications and Technology' is one of seven areas outlined in the National Curriculum proposals for modern languages which 'must be covered *at least over the period of each key stage*'. (DES and the Welsh Office, (1990a): *National Curriculum: Modern Foreign Languages for ages 11 to 16*, London: HMSO, paragraph 6.25.) This Area of Experience 'brings together the various means of long distance communication with applications of technology' (*ibid.*, p. 105) and including computers, electronic mail and text and data processing.

Based on the work of the Modern Foreign Languages Working Group, the proposals of the Secretaries of State for Education and Science and for Wales also contain many examples of how computers might be used in various tasks to meet the criteria of the statements of attainment. Possibly mindful of the varying levels of computer provision and the consequential difficulties of access in some schools, the Secretaries of State have accepted the advice of the Working Group not to prescribe the use of computers. They do, however, state that 'Some of our examples suggest the use of information technology. We do not mean to imply that these are the only circumstances where IT could be used, and we would wish to encourage its use wherever appropriate.' (DES and the Welsh Office, (1990a): op. cit., para. 5.9.)

Information Technology has been defined as 'the technology associated with the handling of information: its storage, processing and transmission in a variety of forms by electronic means, and its use in controlling the operation of machines or other devices'. (HMI, (1989): op. cit., p. 1.) However, the definition of Information Technology in this investigation will be limited to the role of the computer either used by itself or in conjunction with other pieces of technology.

Current use of computers in modern language teaching

The emphasis described above on the cross-curricular nature of Information Technology in the National Curriculum and the encouragement by the Modern Foreign Languages Working Group in their final report of the use of computers in modern language teaching led the author to investigate the present situation in secondary schools. A case-study approach was adopted in order to investigate the factors affecting the use of computers in depth.

Ten schools in four Local Education Authority (LEA) areas in West Yorkshire were selected. Of these schools six were urban schools, two were suburban schools, one was an inner city school and one was an independent school. For the sake of anonymity the schools will be referred to by an unconnected letter of the alphabet (A–J). While the schools under investigation cannot be said to be a representative sample of secondary schools in the country nor even in West Yorkshire, it is hoped that this report will shed some light on the current use of information technology in modern language teaching.

• Where possible the author interviewed members of the Modern Languages and the Information Technology Departments and observed language lessons using computers. The following discussion seeks to identify the common themes and experiences arising out of these visits rather than to focus on idiosyncratic situations. A summary of the situations in the schools is given in the Appendix.

Provision of computers in modern languages departments

As will be seen from the summary in the Appendix, most of the Modern Languages departments had their own computer or were in the process of acquiring one. The whole school policy or rather the practice on the deployment of its computers was the determining factor. In several cases the computer had been given to the department as a direct result of the school upgrading the computers in the main computer room. In other schools the policy was to purchase new computers and locate them in departmental areas now that the schools in question had established a central resource of computers.

None of the departments which had their own computer equipment had found any problems with the availability for use of the computer. In many cases, as only two or three of the members of the languages department were likely to use the stand-alone computer, this was by informal arrangement. This lack of a need for a booking sheet may also have reflected the fact that

where possible the use of the computer room with a whole class was preferred by the teachers.

In two schools the use of the computer was made difficult as some Modern Languages teaching rooms were on different levels which made the movement of the computer trolley impracticable. In these cases the use of the computer involved prior arrangement and a room change which in one school had discouraged the use of the stand-alone computer by all but the two teachers on that corridor.

The most practical arrangement was seen in School C. The Modern Language teachers were fortunate to teach in rooms leading off a central area where three departmental computers and one printer were located. Small groups of pupils could leave classes to consult a database or to word-process some work. As the computers were on trolleys they could also be wheeled into a classroom for use with a class. Perhaps significantly, this department was one of the most enthusiastic as a whole in the use of computers.

Central provision of computers

In all schools visited there was at least one and sometimes two rooms of computers. The computers were usually linked on a network which made the classroom management more straightforward as pupils did not need to load the programs from individual floppy discs. The disadvantage of networks lay in the fact that the file servers could only process one work-station at a time. In one case it took seven minutes of a thirty-five minute lesson for all pupils to log on to the program. The types of computer also had an effect on their usefulness for Modern Language teaching as comparatively little modern languages software is yet widely available for machines other than the Nimbus, Archimedes and the BBC machines.

While some Heads of Department had never sought to use the computer room and were therefore unaware of how easy or difficult it would be to gain access with a class, it was clear from talking with the others that here again the determining factor was the main school policy on the use of computers.

The ease or otherwise of access to the computer room depended principally on whether the school policy was that Information Technology and Word-Processing should be taught as separate subjects or should be integrated into the main curriculum after a short introductory course for all. In the former case, access to the computer room was difficult as the few remaining vacant slots were sought by several departments. In the latter case, there was much more flexibility, often with a specialist IT teacher on hand to support the subject teacher. This flexibility had, however, tended to lead to a random approach with some pupils getting far more use of the computers than others depending on a combination of their subject options and on the enthusiasm for information technology of their particular subject teachers.

Only School I had a deliberate cross-curricular policy on information technology which was backed up by systematic practice. As part of the policy, various departments were responsible for particular information technology applications. The English and Modern Languages departments were jointly responsible for the teaching and practice of word-processing. Each class was pre-booked into the computer room for two double lessons of seventy minutes a year for word-processing in the foreign language. This policy, however, meant that little access was available to the Modern Languages department above its quota because of increased use of the computer rooms by all departments.

Use of computers in modern language teaching

With the exception of Schools C and I, the use of computers in language learning depended heavily on the enthusiasm of one or two individuals. This is not to say that in every case they were the only ones in their department to use computers in language teaching but rather that the interest in the use of computers in the department stemmed from their enthusiasm. Notwithstanding, only five Heads of Modern Languages claimed that more than half the department ever used computers in their teaching.

Only with regard to the word-processing in the school mentioned above was there any balance in the use of computers by the different language classes. Elsewhere, it seemed that whether or not a particular pupil had the opportunity to use a modern languages computer program, to search a foreign language database or to word-process in the foreign language depended solely on who taught him or her. In one school some Year 10 pupils of high ability said they were very pleased that their teacher gave them the chance to word-process in French lessons as this was their only experience of word-processing.

Even the modern language teachers who were most enthusiastic about the use of computers in modern language teaching said that they tended to use computers mainly as an extra at particular points. Some said they were used as a treat at the end of term or when many of the class were out of school. This made the use of a single computer more practical with the class. Several said that they tended to use computers when the examination classes had left in May. The reason given was the increased availability of the computer room. This end of year use, however, made it difficult to integrate some topic-based programs into classwork. Self-contained programs, authoring programs and content-free generic software such as word-processing packages were thought to be most suitable for this type of use.

While there did not appear to be a particular pattern in the frequency of use of computers with respect to the age or ability of pupils, the teachers who did use computers in their language teaching said that they tended to use certain activities with particular age groups. Word-processing tended to be used mainly, although not exclusively, with Year 12 and 13 students. Younger pupils tended to enjoy language games and holiday simulations while traditional testing programs, particularly verb programs, were popular with all ages.

Availability of software

With regard to the software programs owned by the Modern Languages departments, what was most noticeable was the general lack of choice of what to use with the pupils. Indeed only one school (G) had actually purchased more than two commercial packages. The larger number of programs in some of the other schools included self-written programs and programs written by colleagues. Indeed, money to purchase new commercial software was mentioned by some Heads of Department although not as frequently as might have been expected.

One of the main difficulties encountered with the use of software was the incompatibility of some types of computer. This has led to the discouragement in some schools to use the computer room which contained many more powerful machines but of a standard for which no subject-specific software was owned by the modern languages department. However, it was recognised that generic software programs such as content-free databases, word-processing and desktop publishing packages which can be used as tools have a major role to play in that they can serve the specific purpose of the teacher and be integrated into the other class activities.

A related problem identified in three schools in respect of German, in two in respect of Spanish and in two in respect of community languages was that little software exists for some languages. One indication of this is that the current AVP catalogue (AVP, (1990): 'Computer Software and Resources: Modern Languages', Chepstow: AVP) which is the most comprehensive educational software catalogue in the United Kingdom, lists only three programs for Italian, four for Russian and five for Spanish compared with 21 for German and 44 for French and none specifically for the other European and community languages taught in schools. The present size of the educational market for modern languages software does not seem able to support the expensive research and development costs of software houses. This is particularly so in respect of minority languages where software publishers have seen little return for their investment in terms of sales. These sales tend to be for a single disc rather than for multiple copies as in the case of textbooks.

Attitude of teachers to the use of computers

While in many of the schools visited there was an individual or sometimes a general interest in the use of computers in modern language teaching, it would appear that well over half of the modern language teachers in these 10 secondary schools only rarely if ever use computers in their teaching. Pupils who happen to be taught by these teachers are at an undeserved disadvantage compared with their counterparts in other classes or schools who are given the opportunity to gain familiarity in the use of computers for language learning and for communication in a foreign language.

In one school visited which did not use computers, the Head of Department said that this was not so much due to a lack of interest but rather to a lack of confidence to 'have a go' and to a lack of knowledge about what computers could do in language teaching. A need was felt for some basic training in the use of computers and for advice on which of the standard programs they should purchase and on how to use them in their teaching. The Head of Department and the other members of the department seemed concerned that they would be embarrassed if the computer did not work and they did not know what to do. This potential difficulty had been avoided in School D where a specialist IT teacher was automatically available to team teach whenever the computer room was booked. This arrangement was much appreciated by members of the department.

Lack of interest (real or apparent) was only mentioned by two Heads of Department as being a reason why some members of the department did not use computers more. A more frequent reason was lack of confidence by some members of department along the lines mentioned above. In an effort to overcome this, three Heads of Department had nominated a co-ordinator for IT within their department and had a programme of internal in-service education of teachers (INSET) using the non-teaching days set aside for training. It is perhaps significant that these initiatives were in schools A, D and I. In the first, the use of computers was increasing from a low base and in the other two the use of computers was general within the department. It is clear that this internal INSET in context coupled with the enthusiasm of these individuals had met with some success in encouraging other members of the Modern Languages departments to begin using computers in their teaching and subsequently to develop this use.

Meeting the challenge of information technology

One of the major obstacles in the way of those modern languages teachers who are enthusiastic about the use of computers is the access to the computers to use with their classes. A substantial injection of money is needed to purchase many additional computers if schools are not only to meet the minimum requirements for information technology provision of the National Curriculum but to give foundation subjects the opportunity to take up the challenge thrown down by the subject-specific documents in their encouragement of the use of information technology.

In order to rectify the dearth of good quality, flexible software for Modern Languages there is a need for continued and increased central sponsorship of software development and subsidy of the subsequent publication of programs. This strategy has been successful in the case of 'Granville' and is employed by the National Council for Educational Technology.

The need for central subsidy of software development and publication is all the more critical to the success of new technologies such as interactive video where the software development costs are substantially higher due to the more complex and wide-ranging programs and where the sales are likely to be lower due to the high cost of the hardware.

One way in which Local Education Authorities could support the use of foreign language software would be to purchase authority-wide software licences. These are provided by software houses for particular programs at an increased cost, in return the LEA obtains the right to distribute the software package free of charge to all the schools in its area. This then creates a situation in which INSET led by advisory teachers and advisers can be focused on programs that exist in all the relevant schools and for which material support and exploitation ideas can be made available and shared.

Many Local Education Authorities already provide extensive INSET for linguists in the use of computers in language learning and teaching not only to develop and support those teachers using the more advanced applications of computer technology but also those who have no experience of the use of computers. It is to be hoped that giving schools control over their own budget does not have a long-term pernicious effect on the central provision of INSET and support by the LEA.

In turn, Heads of Modern Languages have a key role to play in the development of the use of computers in their departments. They can influence school policy on the use of computers, nominate IT co-ordinators for Modern Languages, give the purchase of computer software a higher priority in their departmental spending, encourage the use of computers by their own example, incorporate the use of information technology into the scheme of work and include practical work on computers in the departmental element of the five non-teaching days.

School-focused INSET can deal specifically with the situation with regard to teacher attitude, software, hardware and access to computers. On-going support from the information technology department in individual schools would also seem to be desirable. A greater emphasis in a school on the cross-curricular nature of Information Technology can mean that Information Technology teachers are released from some teaching of Computer Studies allowing them to be available as IT support teachers in other subject areas.

Responsibility also lies with Initial Teacher Training institutions to supply new teachers who are familiar with the uses of information technology in modern language teaching. In line with the developments in the National Curriculum, the DES has reconstituted a Council for the Accreditation for Teacher Education which has issued regulations concerning the content and structure of teacher training courses. These stipulate that Information Technology should be a compulsory component of the courses to enable trainee teachers to develop confidence in the use of computers and to investigate the applications of computer technology to their subject areas.

Summary

Given the emphasis on the cross-curricular use of information technology in the National Curriculum and the encouragement given by the Modern Foreign Languages Working Group, it is important that the development of the use of computers in modern language teaching is not limited by external factors such as lack of resources for hardware, software and INSET. Unless the value placed on information technology in modern language teaching is matched by the provision of the necessary resources the use of computers will remain limited and fall short of the requirements of the National Curriculum and the entitlement of the pupils. The danger must be that the use of computers in language teaching will largely be the domain of favoured schools and enthusiastic teachers and fail to achieve the generality of application implied by a national curriculum.

References

AVP (1990). 'Computer Software and Resources: Modern Languages', Chepstow: AVP.

Department of Education and Science and the Welsh Office (1990a). *National Curriculum: Modern Foreign Languages for ages 11 to 16*, London: HMSO.

Department of Education and Science and the Welsh Office (1990b). *Technology in the National Curriculum*, London: HMSO.

Her Majesty's Inspectorate (1989). *Information Technology from 5 to 16*, Curriculum Matters 15, London: HMSO.

APPENDIX

Summary of the situation with regard to the use of computers in Modern Languages in 10 secondary schools in West Yorkshire.

School Department	Computers in Mod. Langs. Department	Access to Dept. computers	No. of computer rooms	Access to computer rooms	Language programs in Dept.	Use of computers	Problems identified	Future plans
A	One Amstrad Word-processor	Teacher use only	One Nimbus network	Some plus lunchtime	Fr/Sp verb, Fr/SP Holiday (1 & 2) Fr/Sp Adventure Holiday Fr/Sp Zoo, Fr. Database	Two teachers – increasing in Dept.	Lack of confidence Lack of interest	Have ordered two Nimbus and more software.
B	One Archimedes	Not used	One	?	Granville, Quelle Tête! Jeu des Ménages	Not used	Money, Dept's BBC programs do not work with Archimedes.	Purchase software for Archimedes
C	Three BBCs Two Concept Keyboards	Informal – resource area	One Archimedes	?	Self-written for Concept Keyboards, Granville, Fr. Folio	Most of Dept.	Commercial software unsuitable, need time to write more of own.	Continue Concept Keyboard development
D	None	N/A	Two Nimbus network	Weekly booking + lunchtime	Fr/Ger/Sp verb, Fr/Sp Holiday (1 & 2) Fr/Sp Adventure Holiday, Fr. Database Fr/Sp Zoo, Teacher-written, Granville	Most of Dept.	Money to purchase software	Install Nimbus on network in Dept. area
E	One BBC on trolley	Informal agreement	One BBC Master Archimedes	?	Granville, Kopfjäger Umziehen	Two teachers	Lack of confidence, lack of interest, time for INSET.	HoD to train and encourage others in Dept.
F	None	N/A	One	?	None	Not used	Lack of confidence, need for basic INSET	Request purchase of Archimedes for Dept., INSET
G	One BBC on trolley	Difficult – change rooms	Two Nimbus Archimedes	Archimedes in different building	Aldoda 'T', Granville, Fr. Verbmaster, Kopfjäger Umziehen, Quelle Tête! Jeu des Ménages A Vous la France, Folio, Deutsch Direkt, Allwrite, teacher-written.	Most of Dept. but mainly one teacher	Little software for German, difficult access to computers	Access Télétel
H	None	N/A	Two BBC Master networks	Booking	Used Campus 1000 Fun With Texts (borrowed Siville)	Some occasional use by most of Dept.	None mentioned	None mentioned
I	One BBC on trolley	Difficult – change rooms	Two BBC Archimedes	Good-blocks for Dept.	Granville, Edword, self-written worksheets and gap-filling	Systematic use by all Depts for word-processing	Lack of knowledge of available software need IT support.	Find out what software is available
J	Two Nimbus + Printer	Informal – resource area	Two Nimbus networks	Difficult – different building	Allwrite, Fr. Holiday (1) Fr. Adventure Holiday Fr. Database, Granville	Mainly two teachers	None mentioned	None mentioned