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ABSTRACT

City Technology Colleges (CTC) in England are founded on the concept of business education and industry partnerships ensuring the integration of work and education. Secondary school business education is concerned with how business organizations function, technological problem solving, and applied skills. Business education occupies a position of low esteem in the curriculum hierarchy. Business is a defined context within Design and Technology in the National Curriculum, but opportunities for delivering business education exist on all levels. Work experience is the most common school-industry activity, but many activities enhance business education. Business-related activities need management, coordination, and resources to be a successful part of business education. A core program of business education within a broad curriculum framework is necessary for high school students. If a strong school-business relationship exists, students will be prepared for a lifetime of learning. A whole-school policy on business education is needed with implementation responsibility vested in senior management. (This document contains 4 tables, 25 references, and 4 appendices: programs of study relating to business education; key stage 3 of business education at Dixons Bradford CTC; key stage 3 of business education at Thomas Telford School; and planning business education.) (NLA)

Business education in the secondary school: a CTC response

Eve Gillmon

Number 4 in a series of CTC Trust publications
General Editor Dr Helen Sharp

The author

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This series of publications is intended to disseminate within the educational arena in this country and abroad, the information, expertise and experience emerging from CTCs. CTCs are independent colleges; within national guidelines each is free to develop the CTC initiative in its own way. The CTC Trust respects this independence and wishes to state that its publications do not necessarily reflect the policy or practice of the movement as a whole.

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Preface

City Technology Colleges are founded on the concept of partnerships between business and industry. These close links built in from the start are designed to ensure that understanding and experience of the world of work are integral to the curriculum.

As yet, CTCs are in the early stages of development (the first opened in 1988, two in 1989, four in 1990, six in 1991; one will open in 1992 and another in 1993). Nevertheless, the need to develop a systematic approach to providing students, from the time they enter the school, with an insight and understanding of the business world has produced a number of schemes in CTCs matched to local situations. Some of these are outlined in this paper.

The paper addresses business education in the secondary school curriculum. Broadly, it covers

- the place and purpose of business education in secondary schools;
- the curricular and extra-curricular elements which contribute to business education;
- the vocational perspective;
- strategies for coherence and development.

The basis for much of what is described, whilst referring to developing CTC practice, also draws on the experience and outcomes of TVEI (Technical and Vocational Education Initiative) and other government and industry sponsored initiatives. Schools are not homogeneous institutions. They have differences in ethos, local culture, curriculum emphasis, staffing, accommodation and resources and it is unlikely that models of implementation will be wholly transferrable. Where exemplars of business education activity are described, they are offered as those from which staff and students have benefited and as practice which is evolving in an organic way as the CTCs themselves develop.

We hope that this paper will be of interest to secondary school curriculum managers and subject specialists, and also to those in the business world who are becoming increasingly involved in the curriculum in schools preparing young people 'for the opportunities, responsibilities and experiences of adult life' (Education Reform Act 1988, Section 1, Paragraph 2).

Susan Fey
Chief Executive, CTC Trust

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Acknowledgements

In putting together this paper, I have drawn on the experiences and views of teachers and advisers in the field of business education, as well as published documentation from TVEI sources and the NCC.

Many thanks are also due to students and staff at Dixons Bradford CTC, Leigh CTC (Dartford), Thomas Telford School (Telford) and Macmillan College (Middlesbrough), whose response to continual requests for information and exemplar material was at all times patient and co-operative. In particular, I would like to thank Leigh CTC staff and students for providing the photograph for the front cover.

To all of the above, and to former colleagues and students whose experiences have informed my thinking, I am grateful.

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Glossary

The following abbreviations are used in this document:

BTEC	Business and Technology Education Council
CPVE	Certificate of Pre-Vocational Education
DES	Department of Education and Science
EIU	Economic and Industrial Understanding (cross-curricular theme)
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
KS3	Key stage 3 (National Curriculum)
KS4	Key stage 4 (National Curriculum)
IOD	Institute of Directors
IT	Information Technology
LCCI	London Chamber of Commerce & Industry Examinations Board
NCC	National Curriculum Council
NVQ	National Vocational Qualification
PEI	Pitman Examinations Institute
PoS	Programmes of Study (National Curriculum)
PSE	Personal and Social Education
RSA	Royal Society of Arts Examinations Board
SEAC	Schools Examinations and Assessment Council
TVEI	Technical and Vocational Education Initiative

Summary

This paper discusses the position of business education in secondary schools and in the National Curriculum in particular. It explores the relationships between business education and other curriculum areas and the role which other activities such as work experience and business challenges can play in promoting business education in secondary schools.

A set of recommendations for the organization of business education in the secondary school is included in Section IV.

The following are the key points made in the paper.

- Business education in the secondary school is concerned with the following:
  - Awareness and understanding of how business organizations function;
  - Skills and attitudes conducive to problem solving through the technological process;
  - Applied skills such as communication skills;

- In most schools, business education occupies a position of low esteem in the curriculum hierarchy;

- 'Business' is a defined context for the teaching of Design and Technology within the National Curriculum, but opportunities for delivering business education exist in all areas of the curriculum at every level:
  - The National Curriculum cross-curricular theme of Economic and Industrial Understanding contains key elements of business education;
  - Links with the National Curriculum areas of information technology, science, mathematics, modern foreign languages and English exist;
  - Business education opportunity goes beyond the formal curriculum;

- Work experience is probably the most common schools–industry activity, but many other activities can be used to enhance business education;

- Business-related activities need managing, co-ordinating and adequate resourcing if they are to be a successful part of business education:
  - The role of specialist teachers of business education must change. A business education generalist is now needed to co-ordinate and manage all activities related to business education;
  - Permeation approaches to managing learning need additional resourcing;
  - Students learn by doing but a proliferation of unrelated activities can be counterproductive, confusing and ultimately de-motivating;
  - Managing work experience, in particular, requires a considerable amount of resources;

- A core programme of business education within a broad curriculum framework from 14–18 is necessary for all students, irrespective of vocational aspirations:
  - Key stage 4 foundation business courses are marginalized within the curriculum and reach only a small minority of pupils;
  - Opportunities to acquire vocational credits in a range of business skills should be available for those who wish to pursue them from key stage 4 onwards;

- If a school is run in an efficient and businesslike manner and interacts regularly with the local business community its students will experience a gradual introduction to the world of work and will be well-prepared for a lifetime of learning;

- A whole-school policy on business education is needed with responsibility for its implementation vested in senior management;

- CTCs are already responding to the need to promote business education. For example:
  - Two models of delivery for business education at key stage 3 are described in the main text, with further details in Appendices B and C;
  - The development and piloting of new curriculum frameworks such as the Technological Baccalaureate and Euroqualifications within CTCs are helping to promote a coherent strategy for a 14–18 curriculum which is well-managed and adequately resourced;
  - The piloting of alternative approaches to the management of business education may provide useful models for other schools to consider.

I. Introduction

Business means industry – from mining to manufacturing; from finance through banking and insurance to the high street supermarkets and the corner shop; from production of raw materials to the exchange of goods and services in foreign markets.

Business education is concerned with enabling students to understand and participate in the business community, as consumers, producers and citizens. Knowledge and understanding of business institutions, their working practices, problems and goals, as well as of their history, achievements and values are pre-requisites to active participation in community life.

In short, business education is about enabling people to acquire

- Knowledge about the business world;
- Understanding of the key economic concepts which underpin its activities;
- The skills necessary to function within it.

An essential characteristic of City Technology Colleges is the commitment to promoting a business and industry culture throughout the curriculum. This is being achieved in a variety of ways across the CTCs currently operating, with differing emphases according to location and culture. In their research and development role, CTCs are expected to provide a lead in demonstrating how business activities and opportunities can be harnessed to curriculum in a coherent way, and not shoot off in all directions like fireworks – bright, beautiful but short-lived!

Table 1 summarizes the steps being taken in CTCs to promote business education. Further information is available in the sections below and in the Appendices.

II. The place of business education in the secondary school curriculum

Background

The evolution of a liberal education system which produced social stratifications of the 'town and gown' variety left a legacy which is difficult to overturn and for which Britain has paid a high price. Described by Adrian Wooldridge (1990) as 'the curse of the Mandarins', this deep-rooted belief that activities related to trade and industry were somehow inferior to the pursuit or dispensation of academic knowledge, and therefore not appropriate destinations for the educated, has significantly influenced the structure of school curricula. Attempts at reform such as the introduction of

Table 1. *Some initial CTC responses to the promotion of business education*

Key stage 3 (11–14 years)	ADT College, Wandsworth	Piloting the cross-curricular integration of 'universal donor' units focussing on economic aspects of science and technology.
	Brooke College, Corby	Enterprise and industrial awareness targeted via core subjects in rotation, in partnership with local industry.
	Dixons Bradford CTC	Using local industry contexts, a cross-curricular team working with representatives from business have devised a unit-based course covering programmes of study in the core and foundation subjects.
	Emmanuel College, Gateshead; Leigh CTC, Dartford	Using business related themes linked to Information Technology (IT), students undertake a series of projects designed to raise their business awareness and develop economic understanding whilst focussing on the development of applied IT and presentation skills.
	Macmillan College, Middlesbrough	Wholly integrated programme of industrial and business familiarization driven through a personal development programme throughout the key stage and including 3 days work observation in Year 9.
	Thomas Telford School, Telford	Within a modular curriculum, 'business' is one of 7 core areas. Students experience a planned selection of core and option business-related modules within a thematic approach to the whole curriculum.
Key stage 4 (14–16 years)	Leigh CTC	Student enterprise projects and examination syllabuses linked in three areas – business studies, languages and design.
Post-16	Brooke College; Leigh CTC; Thomas Telford School	BTEC National Certificate in Business & Finance being taught jointly with an 'A' level syllabus in Business Studies. In addition, at Leigh CTC, NCVQ core skills are integrated into all business courses.
	Bacon's College, Rotherhithe	Piloting of a linked vocational approach to business skills and language competence through the Euroqualifications route.
	Djanogly CTC, Nottingham	Business Understanding introduced as a core module in BTEC Engineering course.
	The BRIT Performing Arts and Technology School, Croydon	Developing industry-specific units to enhance a range of BTEC courses, and piloting a new course in Administration of the Performing Arts.
	Harris CTC, Croydon; Aske's College, Lewisham	BTEC First Diploma and National Diploma in Business & Finance offered.
Joint activities	Bacon's College, Djanogly CTC, Leigh CTC	Working as a consortium to develop inter-college student language and business simulations through electronic links for the LCCI Euroqualifications and RSA examinations.

a tripartite secondary system, the move to comprehensive secondary education, and more latterly government funded initiatives such as the Technical and Vocational Education Initiative (TVEI) have met with continued resistance from many of the education establishment. From a curriculum perspective, these reforms failed to bring about attitudinal changes. Obsessed with academic snobbery and contemptuous of technical or vocational skills, schools (supported by universities and examination boards) persisted in offering menus which clearly divided the academic sheep from the utilitarian goats, thereby perpetuating the narrow outlook of the one and alienating the other, with consequences which are familiar to all – a low participation rate in post-compulsory education and training for 16 to 18 year olds, and 21% of 16 to 24 year olds having no qualifications at all.

Business education has traditionally been targeted (incorrectly) at students in the low ability range. Introduced as an alternative to traditional curriculum subjects, its status amongst teachers has been and remains low. In the 1960s, it was polarized between the study of secretarial and commercial subjects and the study of Economics as a potentially rigorous academic discipline. The introduction of the CSE (Certificate of Secondary Education, discontinued 1988) and the raising of the school leaving age in 1972 boosted the take-up for secretarial and commercial subjects, these being identified as suitable havens for the non-academic, which would pave the way towards 'white collar' jobs. Such courses were particularly attractive to girls, and served to reinforce a gender divide which channelled boys into woodwork and metalwork courses whilst girls were offered typing and cookery!

Educationally such courses were narrow and skills focussed, with teachers – often highly-skilled part-time instructors but without formal teaching qualifications – dedicated to training workers to conform to traditional office behaviour. The study of Economics, where offered, was more often than not seen as the pre-cursor to the pursuit of a civil service, legal or academic career for the most able students only. It was the more acceptable face of business education, but was rarely taught or examined in an applied or business context. Indeed, it was not unusual to find schools where the teaching of Economics was completely divorced from any teaching of other business subjects.

During the 1970s, examination boards began to introduce a variety of schemes at GCE, both 'O' and 'A' levels which were related to business, for example Business Studies, Commerce, Accounting, Bookkeeping, Industry Studies and so on. The 1980s marked a watershed in schools' business education. Initiatives such as the Hampshire Business and Information Studies Project, Educating for Economic Awareness, Enterprise Education, Education for Capability, TVEI, SCIP (Schools Curriculum Industry Project) and so on contributed significantly to the development of new examination courses and teaching styles which focussed on learning through experience in business and industry relevant contexts. The designation of 1986 as Industry Year raised the profile of business within schools and

stimulated greater awareness and interest in business as a career area. The establishment of GCSE National Criteria for Business Studies and for Economics encouraged further the development of examination courses which integrated economic concepts, practical business skills and the application of information technology (IT). This in turn led to a considerable increase in the number of business-related examination syllabuses on offer in schools and therefore an increase in the number of examination entries (see Table 2). For example, the number of candidates sitting GCSE Business Studies increased by one third from 1988 to 1989; the figures for 1990 show yet further improvement. Entry levels for 'AS' examinations have also increased steadily over the past three years. It is expected that the figures for 'A' level entries in 1992 will reflect these changes.

Table 2. *Entry figures for business-related GCSE, 'A' and 'AS' levels 1988–1991 (obtained from SEAC, May 1992)*

	1988	1989	1990	1991
GCSE				
Business Studies	52,118	74,095	75,467	not available
Economics	35,351	33,259	29,926	not available
'AS' level				
Business Studies	–	26	178	1328
Economics	–	1023	1277	1364
'A' level				
Business Studies	–	15,[illegible]	13,013	16,060
Economics	43,113	4[illegible]9	47,128	44,679

Regrettably, despite these changes in demand and strenuous efforts on the part of industry and government, business education remains a stereotyped and low-esteem subject in many schools. Where business education teachers have been involved in or have led the introduction of IT in their schools, the subject has acquired a new status. The gradual introduction of the National Curriculum left some with mixed messages about the location and content of business education, with the result that many schools appear to be ignoring it altogether, whilst others greatly underestimate the implications of implementing it systematically and effectively from key stage 3 (KS3). In some institutions curriculum managers have dropped business education subjects from the curriculum altogether in the mistaken belief that the National Curriculum precludes them.

Business education in the 1990s

Within the secondary school curriculum today, business education is an umbrella term embracing a host of subjects such as business studies,

industrial studies, information studies, commerce, economics, economic awareness, enterprise activities, consumer affairs, office skills, and technology which are most commonly offered as option choices in the 14–18 sector. In addition, much work-related, industry-link and careers activity contributes significantly to students' understanding of business.

Regrettably, diverse pedagogical perspectives, the structure of option programmes and weak communication links within schools have in the past frequently led to duplication, overlap and – in far too many cases – complete omission of any structured form of business education. Attempts to plug the gap by including modules within personal and social education (PSE) provision provided only patchy coverage of this wide curriculum area.

Former Prime Minister James Callaghan, in 1976, sounded an alarm indicating that schools were failing their students in this area. He pointed out that there was a mismatch between school curricula and the world of work, and that the majority of students left school with little or no understanding of the workings or importance of the wealth-creating sector of the economy. Despite vigorous, although sporadic, activity on the part of industry and education, this situation still prevails in many areas. Young school-leavers compete for paid employment without any understanding of the related processes which underpin the nation's economy, or of the applied skills which are required to nourish it, or of the forces for change.

The 1990s heralds a new dawn – for the first time business education is built into a mandatory curriculum for all children during the 11 years of compulsory schooling. Unlike traditional curriculum areas, however, no established precedents for its teaching or learning exist and new ways of ordering the presentation of business knowledge and skills for younger students have to be devised. The impact of this change will have a ripple effect throughout the education system as students become increasingly aware of the economic factors which shape their lives, interact frequently with industry and business in the course of their studies and gain insight into the world of work and their potential roles within it.

To initiate such change, curriculum audits have been undertaken in many schools, in conjunction with school development plans, often to illuminating effect as evidence of duplicatory and repetitive teaching hitherto obscured by departmental boundaries has emerged. Simultaneously, new opportunities for collaborative and complementary activities have been identified, as the mapping of cross-curricular themes and dimensions has broken down subject barriers. The business world, more than any other context, lends itself to such approaches, straddling as it does the vocational/academic divide.

The aims of business education

The intended outcomes of business education at secondary school level can be summarized as:

- Awareness and understanding of different forms of business enterprise:
  - Knowledge of economic structures and business organizations within society;
  - Understanding of business enterprise;
  - Awareness and understanding of key economic concepts, such as resource distribution and global interdependency;
- Skills and attitudes conducive to problem solving through the technological process:
  - Initiative, confidence and flexibility in order to solve problems, and to make and implement decisions;
  - The ability to work with others;
  - An orderly and systematic approach to work including the ability to order priorities;
  - Attitudes and learning skills necessary for adaptability to rapid technical change;
- Applied skills:
  - Communication skills, including language and mathematics;
  - Use of basic communication technology and its appropriate application.

III. Business education in the National Curriculum

The location of business studies as a defined contributory element of the National Curriculum foundation subject Technology, and the delineation of a cross-curricular theme Economic and Industrial Understanding (EIU) has for the first time brought explicit business education within the reach of all students. Specific elements related to the processes of production and marketing are located within the programmes of study (PoS) for Design and Technology, whilst the National Curriculum Council (NCC) guidelines for EIU provide clear guidance as to knowledge and understanding of economic and business which are an entitlement for every student.

Although there was no overall business education aim, the National Curriculum does provide a supportive structure for developing business skills, attitudes and knowledge. These skills have been identified as:

- Proficiency in mathematics and the English language;

- Communication skills (including a foreign language);
- Problem-solving and decision-making;
- Team working;
- Creative thinking;
- Dependability and responsibility;
- Adaptability.

The development of such skills and attitudes draws on the curriculum as a whole and not merely a portion of it. The following sections highlight the curriculum areas which are most closely involved.

Design and Technology

The Design and Technology PoS include specified elements of business education, including:

- Identification of needs, wants and market opportunities;
- Understanding of cost constraints;
- Pricing and competition as dimensions of planning and production;
- Cost/benefit analysis and its implications;
- Production planning, scheduling, team work, organization and production of business plans.

The uniqueness of this area of the curriculum lies in the fact that it brings together the abstract and the practical. Students will use the full range of decision-making and communication skills to solve problems and to meet wants or needs which they will have identified, but will do so in a holistic manner which takes realistic account of financial, social and environmental constraints. It would be wholly counterproductive to teach the business-focussed PoS in isolation, but it is nonetheless essential that they are clearly identified and accounted for in planning holistic activity. For a list of related PoS, see Appendix A.

Information Technology

The application of IT as an aid to administration and decision-making in business has been the *sine qua non* of business education throughout the past decade, and this philosophy has now extended across the whole curriculum. Progressive capability in word and data processing, application of spreadsheets, desk top publishing and financial control software will equip students for their working lives in the next century, whether as the captains or foot-soldiers of industry. The importance of, for example, keyboard skills training for all has been discussed elsewhere (Gillmon, 1991).

It would be anomalous to single out business education as a delivery vehicle for IT skills, but at the same time it must be recognized that it is within the

context of business that people will most frequently experience its application, and many students will continue to seek to develop particular applications to a high degree of competence, as for example through word processing or data processing courses, with a view to employment in office work. It is, however, no longer acceptable for students to be trained to process and 'number-crunch' as a function; they must also appreciate the uses of information in business and community life. As IT represents a large and growing sector of UK industry, in itself it provides an important context for the study of business production, organization, and distribution.

Economic and Industrial Understanding

This is one of five cross-curricular themes. Under the banner of EIU, the NCC has laudably identified as an entitlement curriculum for all students, key elements of business education which, if fully and adequately implemented, would enable schools to justifiably claim that they had 'prepared pupils for the opportunities, responsibilities and experiences of adult life' (Education Reform Act, 1988, Section 1, Paragraph 2).

Delivering EIU as a cross-curricular theme depends on two assumptions:

1. That teachers have a level of economic literacy and business familiarity which does not generally exist;
2. That economic literacy and competence can be inserted into the existing curriculum without impinging on individual subject time.

Experience in the USA has shown that such permeation models have not worked in the past, and evidence is already mounting in the UK to show that EIU is being implemented only patchily. The fact that cross-curricular themes are not statutory has lowered their priority for schools trying to fit the National Curriculum into pressured timetables, and competing demands for in-service training make an adequate response to need in this area difficult to supply.

Many teachers have difficulty in relating their own subject specialisms to the world of business and need help with this. Teachers whose own career training and experience has been bounded by a narrow subject specialism will not have the general economic and business knowledge which they need. Lack of basic knowledge and understanding leads to a lack of confidence which leads to rejection. Unless a systematic programme is undertaken to provide all teachers with a basic level of economic and business literacy, the permeation approach is extremely unlikely to achieve the aims of the National Curriculum.

Subject links across the curriculum

Economic issues do not have neatly defined subject boundaries. Elements of business and economic education contribute to the aesthetic and creative, human and social, linguistic and mathematical, and scientific and

technological areas of learning and experience. Whilst it is not the purpose of this document to define subject content, the following will serve as brief signposts for teacher collaboration across some of the core and foundation subject boundaries.

Links with science

The study of science includes the economic, social, personal and ethical implications of science. Business contexts can offer opportunities for students to develop observation and enquiry techniques and to apply scientific knowledge in the solution of practical problems. For example,

- Integrating such concepts as opportunity cost and cost/benefit analysis in research and development (social and economic consequences);
- Understanding the causal relationship between economic pressures and scientific discovery (scarcity of resources, customer demand, quality control, environmental impact);
- The role of business institutions in the development of ideas (investment, research and development, partnership);
- Analysing production costs.

Links with mathematics

Business contexts provide realistic opportunities for the students to use and apply a range of practical mathematical techniques. For example,

- Collecting and processing data;
- Analysis of data and application of statistical techniques;
- Calculation (e.g. wages, pricing, profit);
- Costing materials and bookkeeping;
- Assessing performance using proportion, percentages, ratios and so on;
- Critical path analysis;
- Costing business plans;
- Personal budgeting and money management;
- Investment and business finance;
- Application of statistical concepts, for example insurance.

Links with English

Exploring the power of language is important. The English classroom offers opportunities for students to articulate their responses in a variety of real and simulated contexts, including those from the business world. Listening, speaking, writing, negotiating and debating are fundamental business skills which oil the wheels of industry.

Recognition of appropriate language forms and conventions of use can all be explored in relation to the everyday world of work and life, in advertising,

negotiation, presentation of information and so on. Young people need to be able to access the technical vocabulary used in the discussion of economic issues which affect their lives and prosperity, and to interpret and analyse the information which they receive through various media.

Production of school newspapers and magazines, communication with business firms, written and oral presentations, school theatre productions, conferences, seminars and advertising campaigns are all activities in which linguistic and personal development contribute to education about business, through business and for business.

Links with modern foreign languages

The need for UK business personnel at every level to have a command of one or more foreign languages is well recognized, and recent global developments have brought this need into sharper relief (Hagen, 1992a). Wherever business education is located within the curriculum, it offers opportunities for practical and realistic settings for the development of foreign language skill, and a focus for the development of awareness and understanding of socio-economic and cultural differences in the commerce of daily life in a multi-cultural world. Joint development work between language and business teachers is taking place in many areas under the auspices of TVEI, and new teaching materials have been produced. Examination boards have, however, been tardy in responding to the identified need for cross-subject integration. Some movement in this direction is now evident. An optional linked module has been introduced in a GCSE syllabus offered by the Southern Examining Group and the Euroqualifications framework recently introduced by the LCCI (London Chamber of Commerce & Industry Examinations Board) provides a new boost to the post-16 sector.

What is required to be taught

Whilst leaving schools free to choose how they package it, the National Curriculum statutory orders do not compromise on the content which must be taught to children under the umbrella of 'business education'. Reference to the orders for Technology alone will reveal a detailed list of concepts, knowledge and skills which 'Pupils should be taught' relating to business, industry and commerce (see Appendix A). Other core and foundation subjects also include business-related PoS, most notably Geography.

In addition, the cross-curricular themes of Economic and Industrial Understanding and Careers Education and Guidance, although non-statutory, spell out an entitlement curriculum for all students. EIU is defined by a series of indicative statements which provide schools with a useful checklist covering economic concepts, business enterprise, industry and work, consumer affairs, and government and society.

The challenge for secondary schools lies in squeezing what is for many an entirely new area into a curriculum perceived as already overcrowded. Part of the solution must lie in identifying the existing elements which can contribute and identifying and marshalling resources effectively. Equally important will be the conversion of many teachers to an acceptance of whole-school responsibility and effective team planning.

A CTC response: delivery models of business education at key stage 3

Cross-curricular approaches

Successful cross-curricular work is contingent upon the organizational infrastructure. Rigid timetabling, inflexible attitudes, and territorial boundary striking all militate against it, and even where there is an acceptance of the rhetoric by teachers, in practice it is rarely achieved and difficult to sustain. Pressures of examination syllabuses have in the past tended to sideline cross-curricular activity to either non-academic students or 'great egg race' activities tolerated as bolt-ons to the real business of subject syllabuses. The fact that business-related activities have the capacity to deliver and enhance elements of other subjects is often overlooked, which results in a waste of time and staff resources.

The following two schemes currently being developed in CTCs demonstrate differing whole-school cross-curricular approaches.

The Bradford Business Scheme

The Bradford Business Scheme is a cross-curricular initiative pioneered by Dixons Bradford CTC. The scheme targets PoS in English, Mathematics, Design and Technology and Information Technology. Through practical and investigative projects, the students work within a variety of industrial contexts, thus enabling teachers and students to tackle business and economic concepts within a workable and realistic framework. Extension to cover all areas of the curriculum is a long-term aim.

A critical organization feature has been block timetabling for whole year groups, and this has been achieved by reducing the number of periods allocated to core subjects. In Year 7, the time allocated to the scheme is two hours per week. A year group, co-ordinated by a business education specialist, is divided into three teams, each supported by staff with different expertise. Within the teams, students are formed into working groups, each of which reports to one member of staff for assessment and recording purposes. Team teaching is an important feature of the scheme, and staff development priorities include industrial placements for all teachers, and whole-staff in-service training on economic and business understanding.

The scheme revolves around units linked to the college's five-term year (eight-week terms). In Term 1, all students undertake an induction

programme during which team work is developed and a range of foundation skills are taught, particularly in IT and information handling.

Subsequent units are based on research projects focussed on a particular local industry. The projects are planned jointly by a panel of college staff and representatives from the industry in question, and students are offered a choice of topics within which they can pursue specified learning objectives. Support materials for the scheme are designed by the teachers and supplemented by industry-sponsored materials where appropriate.

Appendix B shows the programme for Years 7 and 8 currently being implemented at Dixons Bradford CTC.

Integrated modular scheme at Thomas Telford School

Business education is one of seven key areas for the KS3 curriculum at Thomas Telford School. The curriculum year is based around 16 modules of 2½ weeks approximately. There are three types of module – whole school cross-curricular, smallscale cross-curricular and subject-specific. Within each module, work is organized by core tasks, extension tasks and extension study. Business education is a core experience for all students within seven of the 16 modules; in others it is optional. Students are given a semi-free choice of options, but over the year will all experience business education in at least eight modules, through a combination of enterprise activity, taught concepts, and research projects.

In Year 7, the business education objectives are related to the NCC guidance on EIU, as described in 20 indicative statements at key stage 3. In Years 8 and 9, PoS from the Design and Technology and Geography statutory orders will be integrated to develop a more rounded business curriculum.

Appendix C shows a breakdown of the Year 7 programme, indicating types of module and business focus across core and options.

A subject-led approach

At Kingshurst CTC in Solihull, all students in KS3 study business education as a timetabled subject with a specialist teacher. This in-house course received praise from HM Inspectorate in their 1991 report on the college, which pointed out that:

> As a result of this work, students in Years 7 to 9 have an unusually good understanding of economic issues and business organization. Few pupils in secondary schools would be able to discuss issues such as the European market and its consequences for British firms at the level of Year 9 students at Kingshurst. (HMI, 1991)

To achieve links between subjects, whole-college termly projects are organized which involve the suspension of the normal timetable for up to eight days. Students have the opportunity to apply the knowledge and skills acquired from a variety of curriculum areas to practical problems and

challenges. One such project involved the setting up of a company to produce, package, and market Kefir yoghurt. In the course of the week-long activity, the Year 7 students, using staff and industrialists as consultant advisers, organized themselves into four divisions (production, packaging, head office and marketing) and elected a managerial team which met twice a day to plan and review progress.

The learning outcomes of this type of consolidation exercise are difficult to quantify, but where students are given regular opportunities to put their knowledge and skills base to the test, it serves to enhance motivation and bring relevance to otherwise remote concepts.

IV. Curriculum activities which contribute to business education

It is a mistake to assume that business education only happens in timetabled lessons. Students interact with business in their daily lives and derive knowledge and attitudes as a result. They are consumers and critics of manufactured goods and services, they are observers of adults at work both within and outside the school, from whom they absorb attitudes and adopt role models, and they are influenced by the environment in which they spend long hours.

Schools have not traditionally conveyed a businesslike image to their clients. However, the influences of local management of schools (LMS), the introduction of Grant-Maintained schools and independent CTCs, and the recognition of a need to adopt a marketing stance in a climate of free choice, is already impacting on many secondary schools. Newly-equipped administrative offices and bright, welcoming reception areas are beginning to emerge; the setting up of community enterprises within school campuses, closer links with industry, and the adoption of new technologies all reflect a new image for schools in the 1990s and in the process contribute much to the business education of their students. The gap between the world of school and the world of business is thus shrinking rapidly as more students explore aspects of community and business life and more representatives from industry participate in curriculum activities on school premises. The very ethos of the school itself as a viable and cost-effective organization should contribute to the business education of its students.

The range of activities which promote curriculum objectives is vast, and is constantly changing. Good teachers are nothing if not creative, and are constantly devising new schemes to capture the interest of students and to enhance learning. Industry too, in recent years, has produced a cornucupia of activities, challenges, and opportunities to assist schools. Few schools can claim to have an industrial dimension to the whole of the curriculum, but

significant movement in this direction has been generated by the work of TVEI.

All of the following activities contribute to the enhanced understanding of the world of business.

- Visits to and from business and industry sites;
- Enterprise activities;
- Business challenges;
- Industrial and business simulations;
- Work shadowing;
- Work experience;
- Careers education.

Industry visits and work shadowing provide experience of the business environment; simulations and challenges enable students to perform worker roles and work tasks, but do not usually provide experience of work environments. Work experience can provide all three, but the range is restricted. It is the bringing together of all of these activities which will provide the optimum experience for all students.

Progressive development of skills will only take place if the activities are part of a co-ordinated and managed programme, appropriate to the maturation level of the students involved. The all too common scenario where mini-enterprises spring up in every corner of the school at random merely serves to debase the activity as a vehicle for education and can leave students with misleading and superficial ideas about the operation of business.

Visits to and from business and industry sites

> Pupils in all key stages should visit and investigate industries and other places of work. (NCC, 1990a)

Familiarity with the business and industrial infrastructure of their local area is an essential reference point for students and can be achieved in a variety of ways: through family and neighbours in their working roles; through the media; through the study of local history and geography from primary age; and through extended opportunities to relate school work to a wide range of work situations. Without such a base, it is difficult to develop a more critical understanding of issues which affect the economy.

Nearly three-quarters (72%) of secondary schools arranged at least one visit to business and industry sites during 1988–89, with 62% visiting manufacturing industry. Students in the 14–16 age group were most commonly involved. As the National Curriculum becomes established, an increase in demand for visits to industry by younger students is inevitable. This increasing demand on industry from local schools may lead to an overload

of the system, and local strategies to minimize pressure need to be devised if firms are not to be swamped by requests which they cannot possibly fulfill.

Group visits have been a common form of ensuring that opportunities are made available to all. Different ways to manage these visits are being explored; for example, a system of small groups (maximum of 4 or 5), escorted by an ancillary member of staff or a parent, within a structure which requires them to feed back information and experiences to fellow students has been tried. A sense of competition injected into the group presentations enhances team work and engenders a very realistic model of business practice.

Visits are most successful in cases where a careful programme with clear objectives is established in advance and where teachers have been enabled to make prior visits themselves. They can be arranged to fulfill many diverse purposes: as a stimulus for introduction of new activities or fields of study; to observe particular processes; to consolidate prior study; as a communication exercise; to enhance careers information; to collect research and data; to consult with adults other than teachers. The experience of such visits gives students a sense of context for the rest of their learning, and provides opportunities for social and interpersonal skills at different stages of development. Where representatives from industry make reciprocal visits, relationships often develop which have profound and far-reaching effects, as has been evidenced through the many local 'Compact' schemes which have successfully altered attitudes of young people towards school and learning.

Many schools in the UK have developed excellent relationships with local firms, which are rewarding to all involved. Such partnerships are rooted in many different soils, and if there is any one message to be learned it is that there is no substitute for the local personal contact. At Djanogly CTC in Nottingham, a twinning programme has been instituted which although still in its infancy is proving a worthwhile investment in staff time.

Exchange visits took place initially, and regular follow-up meetings to discuss issues of common interest were arranged; subsequent development of these initial contacts led to collaboration on joint college–industry projects with mutual benefit. Staff from both the firm and the college are encouraged to use the link and to develop it as they wish. Inevitably such arrangements are vulnerable to personnel changes, but there is a commitment on both sides to handing over to successors in order that the link should not be severed.

Enterprise activities

The simplest way to describe enterprise activity is 'project management'. It involves students and teachers in setting up and running projects, which can be environmental, community-based, business-orientated or subject-related.

The essence of 'enterprise' is carrying through ideas in a planned and organized way.

The range of understanding and skills development associated with learning through enterprise mirrors those skills most often identified by employers as critical requirements in employees:

- Communication skills;
- Decision-making ability;
- Problem-solving approach;
- Negotiation skills;
- Planning ability;
- Creativity;
- Team work;
- Literacy;
- Numeracy.

Business-orientated enterprise projects, such as 'mini-companies' or 'school banks' enable students to learn relevant economic facts and to understand cash flow forecasts, profit and loss and marketing techniques, but enterprise has relevance for all subjects and promotes an active way of obtaining subject-based knowledge. It has also been recognized as making a real contribution to the professional development of teachers, particularly with reference to promoting cross-curricular and team work.

Many schools successfully undertake short-term whole-school enterprise projects on a suspended timetable basis, over one or two weeks. This has the advantage of freeing all staff to participate, and creating a different working climate within the school, as teachers and students explore new territory together; parents, industrialists and community workers are frequently involved.

Where enterprise activities are located within subject areas, or pastoral groups such as PSE programmes, house or year group activities, some schools have found it appropriate to relate them to examination syllabus requirements and records of achievement. Examples include modular GCSE and 'A' level Business Studies syllabuses, BTEC (Business and Technology Education Council) or CPVE (Certificate of Pre-Vocational Education) Enterprise modules, and the Young Enterprise Scheme.

Other schools operate a number of on-going enterprise activities, supported by consultants from industry and the community. Examples of these are school banks, booking agencies, creches, and school journals or newspapers.

A visit to Leigh CTC in Dartford during the lunch hour reveals a hive of entrepreneurial activity as students operate the school bank, the school shop

and a booking agency for local theatres and cinemas, all of which have designated premises adjacent to the college's reception area.

To develop enterprise activity in schools requires a full understanding of its nature by all staff. This includes recognition of its contribution to specified learning objectives and a commitment to liaison and co-operation with members of the business and social community.

A proliferation of unrelated enterprise activities in different curriculum areas can be counterproductive, confusing and ultimately de-motivating. A report by HMI (1988/89) found that where schools had set their enterprise activities within a whole-school strategy linked to a programme of prior industrial visits and related problem-solving activities and followed by community and work experience placements, students were better able to relate the experience to comparable activity in the real world than was the case where enterprise activities were simply bolted on to the main curriculum.

Business challenges

Business challenges to students range between national competitions sponsored by various organizations for the purpose of stimulating links between schools and particular industries and more locally derived activities arising out of particular need. The underlying purpose is to promote in students an awareness of business processes. The expansion of school–industry links through the TVEI programme greatly increased this form of activity, and was most successful where students were invited to consider genuine industrial problems in partnership with local employers.

> Of particular interest in recent years has been the business challenge based on the Royal Agricultural Show, involving students from Warwickshire and surrounding areas initially, but now being promoted on a nation-wide basis. This TVEI-inspired challenge calls on companies exhibiting at the annual Royal Show to pose a variety of real problems associated with their business for school students to try and solve. The range is wide, covering problems of design, marketing, and scientific investigation and the challengers include banks, engineering companies, farming organizations and food producers. Many schools have been able to incorporate work for the challenges within examination coursework. In others, the business challenge acted as a catalyst for cross-curricular activity which reflects the way in which industry actually works. Participating schools are invited to attend the annual show and to present the outcomes of their work, prior to a final judging and awarding of prizes.
>
> On a smaller scale, TVEI and GCSE students in Hampshire successfully responded to a challenge from a local firm who were relocating premises. The students were asked to identify the most efficient allocation of space for plant and staff, and to present their costed proposals to the Board of Directors. Many similar challenge-response activities have emerged through the expansion of education–industry liaison, and the growth of the new

Education Business Partnerships managed by TECs (Training and Enterprise Councils) will undoubtedly lead to a further increase.

A school-based business challenge at Dixons Bradford CTC resulted in the Year 7 students redesigning the college's reception area, in partnership with local consultants, including financial negotiations. The design was accepted by the college governors, and duly implemented under the supervision of the young managers!

On the whole, business challenge activities have been used most successfully with students in the 14–18 phase, where knowledge and level of maturity is a pre-cursor to positive contribution. This does not preclude their use at an earlier stage.

Industrial and business simulations

Business simulations are structured activities which provide students with experience of roles, tasks and problem-solving situations which mimic those in the workplace. They include business board games and computer simulations, and are normally short fixed-term activities. Many schools build simulations into suspended timetable periods as consolidation exercises drawing together skills and knowledge from various areas. Some popular simulations involve mock factory assembly lines featuring 'lego' bricks as materials, with a variety of problems being introduced at intervals, such as staff absence, fall in orders, related industrial action and so on. The involvement of local industrialists in the simulation and the subsequent debriefing has been a key feature of this model. However, new technologies and structural changes in the workplace must raise questions about the appropriateness of some assembly-line simulations and the lessons which they convey, or fail to convey, about the nature of modern manufacturing industry.

School-based industrial simulations usually fall into three categories:

1. Design and make simulations, in which a product is designed and a prototype built, but development stops before full production;
2. Production simulations which provide opportunities for students to take on the roles of managers and workers, and to explore issues related to the division of labour and industrial relations, health and safety and so on;
3. Enterprise simulations, some of which focus on the planning of a business but stop short of actual operation.

'Mini-companies' such as those organized by the Young Enterprise Scheme, are in effect the linkage of all three, with the important distinction that money is involved and real business transactions take place.

Computer simulations which can be used to support any of the three categories offer decision-making scenarios affecting the whole range of business operations such as planning, production, marketing and sales, personnel management, and accounting.

Traditionally, simulations have been used most in the post-16 sector related to preparation for the world of work. They are, however, capable of being experienced at a number of different levels. Because they are based on industrial realities, they are likely to offer material which is relevant to a number of curriculum subjects, and thus provide opportunities for cross-curricular integration and reinforcement.

Although no substitute for work experience placements, the provision of simulated work areas within schools can also provide opportunities to practice skills in a 'safe' environment prior to the real thing. The mock office is an example of such simulation which has proved successful in business administration courses. Students rotate days in the office on a weekly roster, or spend block time undertaking work – often commissioned by the school office, teachers or external business customers – and thus gain experience in a variety of office routines. The school bank or in-school shops and public service areas provide similar opportunities.

Work shadowing

Work shadowing is best described as a vicarious form of work experience. It involves an individual student following a particular worker for a period of time (usually 1-2 days) observing the various tasks in which he or she engages. It can be used to provide students with an insight into working environments, or particular work roles, and is sometimes used as part of the preparation for an in-school production simulation. From the careers awareness point of view, it enables young people to sample a number of occupational areas in relatively short periods of time. Ideally, work shadowing opportunities should be provided for students regularly throughout their school life, in addition to the informal opportunities which arise through family and local contacts. They should be seen as opportunities to enhance not only careers awareness and understanding of the business world, but as valuable extensions and stimulus for work across the curriculum.

At Macmillan College (Middlesbrough), which currently has students in Years 7, 8 and 9, all are encouraged to undertake industry visits and work shadowing from Year 9. One enterprising Year 9 student even managed to negotiate a day's work shadowing with a visiting HMI! The process of negotiating, confirming, planning travel and following up the placement with a report to the host firm or placement provider is an important element of such activity, and is overseen by the student's group tutor.

Work experience

Work experience is probably the most common schools–industry activity. The majority of students enjoy it, but there seems to be a general consensus that as a learning experience its organization leaves a great deal to be desired.

The principal criticisms are:

- Lack of clear learning objectives;
- Poor integration into the curriculum;
- Poor briefing and debriefing procedures.

Where work experience is a bolt-on activity to the curriculum, its integration with subject learning objectives is at best achieved in an *ad hoc* way. Where it is part of a planned and progressive experience of the working environment throughout the secondary phase, it can provide for considerable curricular enhancement, and enable teachers across the curriculum to incorporate it within schemes of work.

There is a tendency to assume that the only valid work experience is that discrete block of suspended curriculum time arranged by schools for their students. Experience-based learning is, however, equally derived from week-end, part-time and holiday jobs which students find for themselves. The contribution of such experiences is discounted too often and even dismissed by teachers as being in some way antipathetic to 'real' learning about work and working practices. A more positive attitude towards drawing from and building on the variety of such student experiences in their communities is needed.

Examples of links between work experience and most curriculum areas can be identified, but what is important in the context of the whole curriculum is that the learning benefits are optimized without overloading students. Too many separate assignments and projects hooked on a work placement can prove counterproductive to the aims of the experience.

CTCs place considerable importance on extended work experience schemes, commencing with short block placements in Year 11, and occupying up to one-fifth of curriculum time post-16. Leigh CTC BTEC students have a one-day-per-week placement; at Brooke CTC, each post-16 student has a weekly half-day placement and also 'adopts' a Year 9 student as a first step in the introduction to the world of work.

Whilst most work experience is of necessity rooted in local communities, increasing numbers of schools are organizing European work placements for their students, usually, but not exclusively, for students in the post-16 sector. Although development of linguistic skil'~ is often a primary aim, language ability is not a necessary pre-requisite to the benefits of a cultural exchange.

Leigh CTC has forged links with the town's twin, Capelle, near Rotterdam. Capelle is also twinned with the French town of Dunkirk. Tripartite work experience schemes operate through the medium of a secondary school in Capelle, and post-16 students from Dartford, Dunkirk and Capelle have opportunities to experience work in each other's towns.

It is a regrettable fact that there are more European students clamouring for work experience opportunity in the UK than there are UK students prepared to undergo a European experience. One approach to remedying this attitude is to arrange such exchanges at an earlier age. Schools in the independent sector have successfully taken large groups of 12 years olds to stay at community centres abroad, and arranged for them to work-shadow a variety of business occupations. Opportunities to forge links with European industries and schools are increasing, and the inclusion of European work experience as part of the planned curriculum for all post-16 students is not unrealistic.

Careers education

The relationship between business education and careers education can be seen as symbiotic in the sense that elements of the one contribute to the aims of the other. With the advent of the National Curriculum careers education has become an entitlement for all students and is defined as one of five cross-curricular themes. Table 3 illustrates the close relationship between elements of business and careers education, and points to the necessity for collaboration within schools in the interests of time, economy of resources and rationalization of activities. It makes no sense at all for careers education to function in isolation from the whole-school business education programme; equally, a business education programme which did not address careers awareness and preparation would be an anachronism.

Careers education is inextricably bound up with personal and social development in that it involves self assessment and continuing development of 'skills, attitudes and abilities which will enable [young people] to be effective in a variety of adult occupations and roles' (DES, 1989). Careers information is but one strand of a development programme which draws together elements of knowledge and skills from the whole curriculum to affect decision and choice-making. This includes awareness and understanding of issues of traditional occupational stereotyping, equality of opportunity, and changing patterns of employment locally, nationally and globally. It both contributes to and draws on business education activities long before conventional transition points are reached.

V. Vocational and pre-vocational business education

All education can be termed vocational or work-related in the sense that it encourages qualities, attitudes, knowledge, understanding and competences which are deemed necessary for adult life and employment. The term 'pre-vocational' is generally used to denote non-occupation-specific work skills. Business education can, however, be both generic and specific in that skills training for employment is ultimately connected to the market place

Table 3. *A comparison of business and careers education*

Aims of Careers Education (NCC, 1990b)	**Elements of business education**
Key stage 3	
To participate in decision-making that requires their own and other people's points of view to be taken into account	Communication skills; Enterprise activities
To explore the careers or experience of work of individuals admired by students	Visits to industry; Work shadowing
To identify local employment opportunities	Investigations and surveys of local industry and business infrastructure
To consider controversial issues related to work	Cost-benefit analyses
To compare how people earn their living locally and nationally	Study of local employers; Study of national organizations; Study of factors affecting location of industry
To prepare for curriculum choices in key stage 4, taking account of implications for future career opportunities	Information-handling skills; Research–analysis–evaluation
Key stage 4	
To strengthen understanding of the qualities required for team work	Mini-enterprise activities; Business simulations/games
To prepare for situations in adult working life where negotiation and assertiveness may be required	Communication skills
To prepare for choices of education, training or employment post-16	Information-handling skills; Research-analysis-evaluation
To examine the interaction between domestic and other work roles in adult life	Communication skills; Numeracy skills; Consumer education
To make personal contact with people in their work roles in the community and develop further an understanding of relationships at work	Visits to industry; Work shadowing; Work experience
To explore the international perspective of work and career opportunities	Study of international trade and economics; European business dimension
To identify and examine sources of information about future career opportunities	Information-handling skills; Research–analysis–evaluation
To explore future work opportunities	Study of local and national economic factors
To prepare for the tasks involved in obtaining further education, training or employment	Information-handling skills; Communication skills; Presentation skills

and to commercial transactions between employer and employee, buyer and seller and so on. These skills are applicable in any area of business, and are not restricted to administrative or financial occupations. Although the last two years of compulsory schooling form a distinct stage within the National Curriculum, from the point of view of vocational education, it is more realistic to consider key stage 4 (KS4) and the post-16 sector as a continuum. Whether a student continues in school or transfers to a further education college or employment with training at the age of 16, general education about, through and for business should build cumulatively on achievement and experiences to date. The distinction between pre-vocational and vocational in this context is thus largely one of location.

The importance of a sound general education is recognized by employers who do not expect schools to give students narrow occupational skills, but seek a good grounding in basic literacy and numeracy. In calling for national pass or fail tests in core skills for 14 year olds, the Institute of Directors (IOD) pointed out that

> young people who have not mastered the fundamentals of reading, writing, arithmetic and oral comprehension and expression by the age of 14 are likely to experience difficulty in obtaining secure and fulfilling employment. (IOD, 1991)

At the same time, the IOD recommended that school courses for 11–16 year olds should offer 'a flexible choice of abstract and applied vocational subjects' to meet the capabilities and aspirations of individual students.

In the context of specialist business education, applied vocational courses are perceived as either focussed skills training for office work, e.g. word processing, data management, clerical or secretarial support, bookkeeping and accounts, or broader administration and finance studies as a foundation for work in a range of commercial contexts. Whether offered as one or two-year examination packages (such as GCSE or 'A' level courses) or in modular group certificates (such as those of BTEC, Royal Society of Arts Examinations Board (RSA), LCCI, City and Guilds, Pitman Examinations Institute (PEI), and so on), the range of possibilities is extensive. Staffing and equipment limitations in secondary establishments have often constrained course provision in the past, although the work of some TVEI consortia in developing cross-phase partnerships with VIth form colleges, further education colleges, and local industries has created new opportunities to mutual advantage.

GCSE and vocational equivalents in business education

The rapid increase in the numbers studying Business Studies courses at GCSE level, and in the further education sector (see Table 2) reflects the growing number of young people who are attracted to work in the business services sector. Most of the pre-16 increase has taken place in those examination courses which are fully integrated with IT skills development

and where the teaching and learning approach is activity-based rather than textbook led.

Teaching methods and courses which foster enterprising attitudes and emphasize the research, planning and evaluation processes which underpin business activity have proved popular with both students and teachers in recent years. In some schools where such courses are provided for all students in Years 10 and 11, they have been the cornerstone of successful TVEI programmes, providing a common foundation course in business and information studies before students transfer to partner VIth form and further education colleges for more occupationally-focussed skills training. More commonly, however, they have only been available to a limited number of students as an alternative option during the last two years of compulsory schooling, and with a bias towards non-academically-inclined students.

These changes in teaching and assessment methodology have not been achieved without cost. Over-emphasis on process-based coursework assessment at the expense of content or practical skills development has left many students with a superficial or inadequate grasp of basic economic concepts. This has created an insurmountable gap for many of those attempting existing 'A' level or BTEC courses. For others the apparent re-treading of old ground in subsequent courses proves frustrating and de-motivating for teachers and students alike.

The establishment of business education as an entitlement for all students significantly alters the scope for its delivery in secondary schools. Whereas in the past GCSE courses in Business Studies and Economics commenced from a position of 'no prior knowledge' and in relative curricular isolation, such an assumption will not be tenable in the future. The mandatory requirements for the foundation subject of Technology and NCC guidance on the delivery of cross-curricular themes provide schools with a clear map for the delivery of an introductory business education to KS4. With the definition of GNVQ (General National Vocational Qualification) achievements and NVQ (National Vocational Qualification) competences in Business Administration, schools and students will be able to select appropriate bridging routes from KS3 to the post-16 sector which will meet the wide variety of student and employer needs.

However, there is a danger of recreating the vocational/academic divide in schools if GCSE and GNVQ routes are created as alternative options. A flexible combination of GCSE and GNVQ units (levels 1 to 3) would be preferable, although resourcing implications should not be underestimated. There was a time when a business education teacher could know and teach every element of secondary business education. These days are gone, and the delivery of business skills and knowledge requires networking across a range of curricular and industrial expertise.

A continuing demand for office skills courses at all levels exists, which schools have endeavoured to meet with limited resources and in a piecemeal fashion. Much of what is on offer, however, is yesterday's technology for yesterday's employment opportunities. What is missing is an integrated study of the nature of office work and its variety: analysing office activities, planning and designing office systems, investigating and evaluating new office technologies and systems – in other words, the technology of business information. The slanting of Design and Technology at KS4 towards such an approach for those students with an interest in office work would seem entirely appropriate, and would provide a context within which business skills could be developed and credits towards GNVQ obtained.

There are at present 96 syllabuses for GCSE available under the umbrella of Business Studies and Economics which have been approved by the Schools Examinations and Assessment Council (SEAC). The long overdue rationalization of this list under new criteria to meet with National Curriculum requirements is expected in 1992, and many existing titles will disappear. Simultaneously, the new and combined criteria for Economics and Business Studies GCSE will pave the way for the introduction of new short courses and 'vocational equivalents' to complement KS4 Technology. Whilst GCSE foundation business courses are not overtly vocational, their focus and content mirrors and overlaps that of vocational courses. Differences occur mainly in assessment and in levels of skill competence expected. Opportunities to accumulate credits towards GNVQs and NVQs can be accommodated within GCSE, particularly where modular syllabuses are selected. Such opportunities to gain an early foothold on a clearly visible vocational ladder will improve motivation on the part of many students, and bring a sense of relevance and continuity to their KS4 studies, not easily sustained by the prospect of achieving only a low grade GCSE.

Secondary schools now require a coherent business education programme from 14 to 18. This programme should retain the motivating factor of popular teaching and learning styles, and include clear markers for the acquisition, assessment and accreditation of knowledge and skills, and progressive routes to occupational training or further and higher education.

The 16–18 business curriculum

Business education courses at the post-16 level cater for all levels of ability and previous experience. Some secondary schools with post-16 students offer 'A' level, 'AS' level, GCSE and CPVE courses, but the majority of students seeking business education courses have been in the further education sector where BTEC and other modular schemes have held sway.

Post-16 students seeking an 'A' level qualification in Business Studies or Economics follow a syllabus from an approved awarding body, leading to staged and terminal examinations. Although 'A' level syllabuses featuring assessed coursework are gaining popularity, the style of teaching and

learning has changed little. Students following the BTEC route undertake a course of studies comprising core and extension modules, with continuous internal assessment (moderated externally). Teaching and learning styles are essentially practical and activity-based, with an emphasis on the development of specified core skills. The flexibility and choice of modules enables students to focus on particular business contexts or skills within an accreditation framework allowing progression to employment or further and higher education. The number of students entering higher education via the BTEC National route is increasing steadily.

Young people differ enormously in the style of learning which motivates them, and there is no doubt that the opening up of BTEC courses to the secondary sector has offered schools an opportunity to broaden their post-16 provision. The ability to combine 'A' level courses with more practical BTEC modules and learning methods has already made 'staying-on' more attractive to many students for whom university or higher education is not an immediately perceived goal, whilst at the same time raising the status of vocational education.

The establishment of unit-based NVQs in Business Administration has clarified the existing maze of accreditation in this field. With the National Curriculum on the one hand and a clear structure of vocational qualifications on the other, schools have a framework for the progression and credit transfer which should prevent the cross-phase repetition so often experienced by students in the past. The way is now clear for schools to develop coherent PoS in business education from the commencement of KS4 to eventual employment, building on foundations laid in KS3.

Where students seek to specialize in a particular field, such as aspects of administration or financial services, facilities to work towards achieving recorded units of competence should be made available to them from the earliest opportunity. For students not seeking such specialization, a core unit of EIU will be an essential component of any vocational course.

Education about, through and for business is not and should not be confined to any single vocational track. It is not a process in isolation from other specialisms, but permeates all aspects of work and life. It follows therefore that all students in the post-16 sector should have access to it within a managed curriculum framework which permits learning and achievement to be accredited, irrespective of subject or course context. Well-planned modular curricular structures facilitate this where, for example, students following a variety of 'A' level, BTEC and NVQ routes are also able to select additional course credits from a wide menu of business and IT-related fields.

One such flexible framework is the new Technological Baccalaureate (TechBac) developed by City and Guilds in conjunction with the CTC Trust and four CTCs: Brooke College, Dixons Bradford CTC, Djanogly CTC and Harris CTC. From KS4, students can accumulate evidence of competence

in a range of GNVQ and NVQ business units, which can be credited towards a final TechBac award at the post-16 level (see page 31).

Vocational language training and business education

The stark contrast in linguistic ability between UK workers and their European counterparts needs no amplification. With the advent of the single market, the idea of monolingual business education becomes as unrealistic as the idea of business skills divorced from IT.

Closer work between modern languages and business education teaching in KS4 has been promoted vigorously under the auspices of TVEI in recent years. Such joint pilot schemes as that between Hampshire and West Sussex LEAs and the Wolverhampton Polytechnic Modern Languages in Industry project, have contributed to the production of industry-sponsored materials. The SEG (Southern Examining Group) Business Studies GCSE syllabus with a language option proved instantly popular, despite the limitation of its current availability in French only. Vocational language schemes offered by City and Guilds, the RSA and PEI offer greater flexibility, and will undoubtedly appeal to schools seeking extensions to GCSE at KS4. The AEB (Associated Examining Board) also offer 'French for Business' at Certificate of Further Education level (Hagen, 1992b).

The LCCI Euroqualifications scheme introduced recently has also been a welcome addition to the business education awards sector. This modular scheme is offered at three levels:

1. Commercial Language Assistant;
2. European Executive Assistant;
3. Diploma in European Business Administration.

It has been designed jointly with Chambers of Commerce in London, Brussels and Germany to promote occupational mobility and flexibility. Aimed principally at post-GCSE students, its structure allows for accumulation of practical business skill credits through the medium of a chosen language over a period of five years and complements NVQ units of competence in Business Administration at levels 1 and 2 and 3. Alongside the LCCI's FLIC (Foreign Language in Industry and Commerce) and FLAW (Foreign Language at Work) schemes, this framework offers a coherent vocational track for students contemplating a career in business administration.

A CTC response: flexible frameworks

A joint 'A' level/BTEC foundation year

At Leigh CTC and at Thomas Telford School, a joint foundation year in Business Studies has been introduced successfully for 'A' level and BTEC National students. This has provided a cost-effective approach to staffing

and resourcing, whilst enabling students to defer important examination choices until the second year of study.

Within the course at Leigh CTC, a European Studies unit is offered comprising an understanding of the infrastructure, economics and cultures of the Single Market as well as a business language requirement. IT is integrated throughout, and a number of students are concurrently being prepared for the LCCI Euroqualifications Commercial Language Assistant award. This scheme has been incorporated with a pilot of the NCVQ National Record of Vocational Achievement (NROVA), and of the GNVQ core skills. Students enrolled at the Leigh CTC, in addition to following a core curriculum, are accumulating unit credits towards a full NVQ in Business Administration within a flexible programme covering a range of applied vocational subjects and academic studies.

The Technological Baccalaureate and business education

For post-16 students seeking to specialize in business education, the TechBac offers breadth and choice, whilst obviating any need to abandon the study of science or technology at the end of KS4.

This four-section curriculum consists of:

- Section A. The exploration and development of individual potential (including the accreditation of prior learning);
- Section B. A common curriculum within a technological or commercial context;
- Section C. An elective curriculum related to the arts, humanities or recreation;
- Section D. An extension curriculum.

Essential mathematical, scientific and technological skills are maintained throughout the common curriculum (Section B), as is the integration of economic and industrial understanding as a core study. The extension curriculum (Section D) provides opportunity to acquire identified GNVQ and NVQ competences within a chosen field such as Business Administration, Finance, Leisure and Tourism, or a chosen subject studied to greater depth, e.g. Industrial Studies or Economics to 'A' level. The specialized study of financial, administrative and management procedures within a variety of organizational and business contexts is thus catered for under Section D.

More detailed information about the TechBac is contained in a briefing paper available from the CTC Trust (1991).

Euroqualifications

Collaborative work to develop business simulations and learning materials for the Euroqualifications programme is currently being undertaken by a

consortium of three CTCs: Bacon's College, Leigh CTC and Djanogly CTC. Students at these colleges conduct simulated business correspondence electronically through the medium of Campus 2000, and an electronic conference has been set up for the exchange of views and issues relevant to the work. The network will eventually be extended to include links with European colleges involved in the Euroqualifications scheme for staff and student exchange purposes and with European firms providing work placements.

Combining language skills and business education has been the inspirational source of an enterprise project at Leigh CTC, as the following case history illustrates:

> The Years 10 and 11 GCSE Business and French group have jointly produced a French language learning cassette for continental transport workers.
>
> The cassette is targeted at the large number of trucking and haulage firms in the East Kent area which regularly carry loads to France. The group saw the market as having great potential for expansion given the proximity of the Channel Tunnel.
>
> Having consulted the Dartford Chamber of Commerce, the students selected a group of firms for a mailshot market survey. Responses provided them with information about the style of cassette required and on key phrases. The students then produced a draft manuscript of introductory French, likely to be of use to regular travellers who are at a beginner's level. The finalized script was recorded by students and language assistants, for initial testing with local firms arranged through the Chamber of Commerce.
>
> Design and production of packaging to a design brief within a cost constraint led to consultation and skills work within the Technology area, and in the process the students considered issues of costing, pricing, sales, advertising and marketing.
>
> In the course of the project, students have assembled coursework portfolios which include business plans, drafts and recorded versions of the cassette and a variety of communications in English and French addressed to Chambers of Commerce and local firms. This will provide substantial evidence for assessment of GCSE Business and French, as well as for Technology, and will be appropriate for recording in records of achievement.
>
> Pending the success of the enterprise, plans are now afoot to develop further language and business skills through contacts with a number of French Chambers of Commerce with a view to producing an English version for French transport firms.

VI. Managing business education

The role of business education teachers

Clearly some of the aims of business education are common to core and foundation subjects within the National Curriculum, particularly the development of communication, numeracy, organizational, team work and technological skills. It would be a mistake, however, to assume that the cross-curricular nature of business as an area for learning removes the need for specialist teachers or for discrete elements in the curriculum. The NCC and HMI have been quite clear about this. Whilst not prescribing the methods of delivery, they have constantly reiterated the requirement for a team approach to National Curriculum Design and Technology which would allow for appropriate specialist teaching when necessary. In specifying the content of EIU at each key stage, they have also indicated the need for business and economic specialists to support teachers across the curriculum in planning, delivery and assessment:

> There is almost certainly a need for some time-limited modules of work with a specific focus on economic and business matters which will provide the hooks on which other teachers can secure the threads of school cross-curriculum policies. (Trainor, 1990)

Whether business education is delivered through specialist subject time, permeation of the curriculum, or integrated pre-vocational programmes, it is obvious that the role of the business education teacher in secondary schools must change significantly. There is clearly no place for the isolated specialization of previous times, whether skills or knowledge based. What is required for the 1990s' curriculum is a business education generalist, capable of co-ordinating those elements of the curriculum which enable students to develop a fundamental understanding of the business and economic processes which shape their lives, and the skills to interact with them (see Section IV). As a manager, he or she will contribute to cross-curricular resource planning and student direction; as a specialist, he or she will be a member of several teams, contributing the business and economic perspective to a range of curriculum areas as, when and how appropriate, as well as teaching to specified examination syllabuses. This has implications for the way in which such teachers are trained, which urgently need to be addressed by those institutions offering PGCE (Postgraduate Certificate in Education) and BEd (Batchelor of Education) courses in Business Education and Economics.

Management and resourcing of business education

The co-ordination of all the overlapping elements of business education within and across the whole curriculum calls for considerable management skill and resources. It is a task for senior management, and one which is best vested in a member of staff with business expertise. Even though management skills are generic, it would still be naive to suppose that a

manager with little or no background in the subject area would be effective in persuading staff to make the necessary inputs to teaching content, or indeed of being able to evaluate the effectiveness of such teaching. Schools do not usually appoint a science manager with no scientific background, or a modern languages manager without linguistic skill. It is all the more anomalous therefore that responsibility for business and industry related work should (as it too often is) be allocated to staff with no substantial background in the field of business.

Resources required to manage business-related activities in schools are almost always underestimated. Many teachers will readily identify with the scenario where work placements for 180 students have to be negotiated, documented, approved, organized and managed, evaluated and reported in the time equivalent of two hours per week with severely limited access to telephones or clerical support, or where planning and arranging student visits to local industry is hampered by inflexible timetables and transport constraints. Many, if not all, of these tasks lie outside the domain of the professional teacher and should be allocated to clerical and service personnel, thus freeing the teacher to concentrate on preparation for and review of the experiences being offered to students.

Towards a coherent framework

Continuity is at the heart of the National Curriculum and the development of an NVQ framework. It is important therefore that schools ensure that this continuity is maintained by devising a coherent plan for business education from 11 to 18. In addition to co-ordinating the many activities which contribute to development of business understanding and skills across the curriculum, managers and teachers will need to reconcile process and content. Much of current school business education activity is concerned with the 'how' factor, and promotes the experiential approach to learning, fostering team work, communication and presentation skills. The 'what' factor is less well developed and recorded, however.

The Technology Orders specify what must be taught within key stages (see Appendix A), and the cross-curricular non-statutory guidance documents indicate within broad guidelines what students should know and experience, but in order to provide students with a systematic development of concepts and skills relating to business, there is a need to identify and specify them in relation to each learning activity and at different levels. For example, Year 7 students setting up a mini-company will need to be taught basic bookkeeping and accountancy principles, while a similar activity in Year 9 should ensure the extension of these skills; planning should allow time and resources for these activities. Without such meticulous mapping, there is a danger that many students will travel within the same circle repeatedly without any opportunity to build on previous learning.

Whilst broad business education must remain an entitlement for all students, from KS4 onwards many will wish to focus on vocational pathways with a view to employment in the business services sector. A potentially bewildering plethora of vocational accreditation schemes exists within the field of business, and students, parents and schools can find it difficult to select suitable routes.

The introduction of NVQ levels 1, 2 and 3 in Business Administration has helped to streamline what is required by employers, but an overriding requirement for competence assessment in the workplace creates a stumbling block for many schools at present. Where schools have radically re-organized their administration procedures to involve students regularly in routine tasks such as telephone reception, electronic mail, fax handling, mail distribution, data storage and bookkeeping, this assessment and accreditation of skills and knowledge can be managed. It does however require increased liaison between teaching and administrative staff, with consequent additional pressure on the time of both.

The development of the new GNVQ structure for full-time students which will be piloted from September 1992, may provide a solution to workplace competence assessment difficulties and provide access to structured vocational courses alongside GCSEs and 'A' levels.

Selection of vocational pathways should open rather than close doors. Available progression routes from programmes offered by schools should be indicated clearly. There is little justification for offering students *ad hoc* courses in business studies, office studies, or business IT skills unless these are embedded within a visible framework which can be developed further. Opportunities to collate individually certificated modules into group certificates are offered by PEI, RSA and City and Guilds, and these provide flexibility and a degree of choice for students.

The City and Guilds Diploma of Vocational Education, offered at foundation, intermediate and national levels, provides a ladder of skills acquisition for students which is rooted in a vocational core addressing fundamental competences to function within the world of work irrespective of occupational context. Nine occupational contexts have been identified within the Diploma, all of which are business-related or have a business application.

- Tending animals, plants and land;
- Extracting and providing natural resources;
- Construction;
- Engineering;
- Manufacturing;
- Providing goods and services;
- Providing health, social care and protective services;

- Providing business services;
- Communication and entertaining.

Unlike the BTEC framework, students may be enrolled on the City and Guilds Diploma course from 14, and can work to achieve modular credits alongside or within GCSE and 'A' level courses. This makes the Diploma an attractive option for secondary schools seeking to offer a vocational dimension to their curriculum.

This framework enables students to move from a broad vocational introduction (foundation) at Years 10 and 11, to more structured and focussed programmes at GNVQ level 2 (intermediate) and GNVQ level 3 (national). Assessment of the units is based on demonstration of achievement, and is graded in-house, prior to external verification. Commonality of accreditation between elements of the Diploma and the TechBac is also envisaged, thus maximizing student achievement and minimizing discontinuity and repetition.

At present, the BTEC First Diploma in Business and Finance cannot be offered by schools to students pre-16. This anomaly serves to fragment the 14–18 continuum in business education and results in a situation where students must wait until they have sat GCSE before they can commence the course, even though the core of it covers the same content as GCSE Business Studies syllabuses. Clearly, this is not in the interests of either the students or schools, and should be resolved quickly. The existing First Diploma offers NVQ level 2 accreditation. It would seem entirely appropriate therefore to offer a foundation vocational award, alongside or integrated with existing Business Studies GCSE syllabuses which would enable students to get on the vocational ladder at 14.

In summary therefore, when planning a coherent business education consideration needs to be given to the following:

At key stage 3:

- National Curriculum Technology PoS;
- Identification of local opportunities and resources;
- Cross-curricular models or timetabled activity;
- Identification of specialist input needs to maximize learning from experiences and activities;

At key stage 4:

- Extension courses in business and economics beyond the National Curriculum Technology core;
- Development and continuity routes within the vocational area should be clearly visible;
- Commonality of accreditation and coursework with GCSE;

- EIU provision for all;

Post-16

- Access to business education for all;
- Continuity from KS4 achievement;
- Cross-curricular links and common accreditation;
- Specialist skill development modules for all;
- Core EIU for all.

A CTC response: management approaches

Managing work experience

The organization of work experience for students places considerable demands on school and industry staff alike. Time is required to negotiate placements, plan programmes of activity, complete administrative paperwork, prepare students and work colleagues, supervise, monitor, debrief and evaluate for each individual. Not surprisingly, in the majority of schools this work is inadequately resourced. Organizers of work experience tend to be teachers for whom the task is additional to their principal job. It is not uncommon for such staff to have insufficient time, no clerical support, no office equipment, no budget, and to be unable to visit employers or students due to heavy teaching commitments.

An alternative is to employ external agencies to manage the process. Where schools elect to use external agencies to manage their work experience programme, they are relieved of much of the administrative burden but may also find they have to sacrifice bridge-building opportunities with the local community, (an important public relations platform for the institution), and the opportunity to negotiate and re-negotiate cross-curricular objectives.

A model currently being piloted by Thomas Telford School involves the use of four part-time industrial consultants working closely to a brief designed by the school's BTEC consultative committee, and having regular contact with groups of students. The consultants' brief is:

- To act as Industrial Consultant to the BTEC Committee;
- To attend meetings of the committee;
- To liaise with and co-opt local industrialists to the committee as appropriate;
- To find work placements for all BTEC and 'A' level students;
- To negotiate occupations and activities of students during placement hours of work, special arrangements, clothing, meals, and so on;
- To monitor health and safety factors and to check insurance cover;
- To interview all BTEC and 'A' level students before placement;

- To act as industrial tutor during the period of work placement (minimum of two visits);
- To assist in the debriefing of students.

The industrial consultants meet weekly with designated curriculum managers, and also regularly with the students.

This scheme relieves teaching staff from the burden of researching and negotiating placements, whilst at the same time ensuring that the agents responsible are closely involved with curriculum planning and individual student development.

A whole-college approach to business education

One example of a whole-college approach to business education which demonstrates coherence from age 11 through post-16 is found at Macmillan College in Middlesbrough where business and industry related activities are co-ordinated by the Deputy Principal and a senior manager, and delivered through the personal development programme which underpins and drives the rest of the curriculum. The college aims to create a bilingual ethos for its students, with Spanish as the second working language, and offers an uncompromisingly technological curriculum from 14 to 18, compatible with local employment opportunities.

The starting point for planning has been the college's mission statement:

> Macmillan College will be an innovative, efficient and child-centred leader in European education.
>
> Our aim is to deliver a progressive educational programme which prepares students for skilled employment, ideally on Teesside.
>
> This will be achieved by harnessing and promoting the capabilities of highly trained, technically aware staff who are positive in their response to young people.

The approach is illustrated in Table 4.

VII. Conclusions and recommendations

Business education is enshrined in the Education Reform Act. Secondary schools must therefore devise strategies and curricula which allow it to be delivered. To do this, they will have to tackle three main issues:

1. The low esteem in which this curriculum area is often held;
2. The lack of industrial and economic knowledge of many teachers;
3. The lack of precedent in KS3.

CTCs have begun to identify ways of promoting business education which may prove useful for other schools to consider, but the changing of

Table 4. *Business and industry dimension to curriculum at Macmillan College*

PERSONAL DEVELOPMENT PROGRAMME

MOST STAFF UNDERTAKE AN ACTIVE PERSONAL DEVELOPMENT ROLE AS GROUP TUTOR
(10% of teaching timetable)

ANNUAL ONE-WEEK SECONDMENT TO LOCAL NATIONAL OR INTERNATIONAL INDUSTRY FOR ALL STAFF
(as part of two weeks' staff training programme – secondment involves specific curriculum-related brief as well as industrial training)

STAFF TRAINING DAYS (largely delivered by local industry)

INVOLVEMENT OF LOCAL BUSINESS PEOPLE IN INDUCTION PROGRAMME FOR NEW STUDENTS

PROGRAMME OF INDUSTRIAL VISITS IN YEARS 7-9
(6 visits in each year, supervised by Group Tutors, related to and reinforcing studies from each curriculum area)

REGULAR STUDENT CONTACT WITH ADULTS FROM THE LOCAL BUSINESS COMMUNITY
(through involvement in frequent invitation business lunches, lunches following governors' meetings, and curriculum support activities)

ENRICHMENT PROGRAMME
(including Young Engineers Club; supported by local industry)

WORK SHADOWING (Students into the Community Programme)
Year 9 students – 3 individual days at work
Year 10 students – 5-day block work shadowing

WORK EXPERIENCE
Year 11 students – 1 week block
Years 12-13 – work experience block placements (including European)

GCSE BUSINESS STUDIES FOR ALL STUDENTS
(all students take full range of key stage 4 subjects – no options offered)

followed by
BTEC First Diploma (Business & Finance)(GVQ/NVQ levels1-2)
BTEC National Diploma (Business & Finance)(GVQ/NVQ level 3)

BUSINESS EDUCATION

BTEC courses in the post-16 programme will be delivered jointly between the college and local industry. All post-16 courses will include a core module of 'Business Understanding'.

perceptions and acceptance of business education as a curriculum tool for all rather than a stepping stone from school to work will require managing. Pressures of curriculum change in school in recent years have appeared intolerable to many staff, and any suggestion which smacks of 'yet more in less time' is unlikely to be received kindly. What is necessary is to bring staff to the realization that elements of business education offer vehicles for many learning and training objectives, and are not distractions from mainstream school work. Unless the school has a clearly delineated policy on business education, with responsibility for its implementation vested in senior management, this is unlikely to happen.

For teachers to feel confident in adding a business dimension to their specialist fields, they must be provided with opportunities to acquire a solid understanding of economic concepts and business processes. In addition to the content of the statutory PoS relating to the business, industrial and commercial contexts (defined within Design and Technology), all teachers should be comfortable with the requirement to integrate economic and industrial understanding as a cross-curricular theme. This will not be achieved through *ad hoc* one-day in-service courses. A systematic content-based staff development programme linked to specific curriculum goals, and supported by targeted industrial placements for teachers should be a high priority in school development planning. Such programmes require management and adequate resourcing, and ideally should be linked to some form of national accreditation such as the Open University Professional Development diploma. In addition, at initial teacher training level, there is an urgent need to increase the minimum level of economic literacy required of all newly-qualified teachers. In appointing new staff, school governors should specifically seek candidates who can demonstrate a willingness and capacity to contribute to this curriculum area.

The need to provide students with a systematic development of knowledge and skills related to business, throughout the period of secondary education, presents a greater challenge than merely re-ordering the school timetable. The tracking, monitoring and recording of individual experiences and achievements will ideally be the joint responsibility of the student and a personal tutor. The co-ordination and timing of these must be agreed with curriculum planners and teachers, whatever model of delivery is chosen. Careful planning at KS3 will pre-empt duplicatory and repetitive activity in KS4 and ensure a sequenced development of business and economic understanding for all students.

From the vocational training perspective, it is now commonly accepted that all post-16 courses should include a common business core, irrespective of occupational orientation. Opportunities for students to acquire GNVQ and NVQ unit credits in business-related skills should also be made available to students from the beginning of KS4.

Finally, a school which functions in an efficient and businesslike manner, which presents an open and accountable face to the wider community, and which enjoys regular interaction with its business community beyond the level of mere fund-raising, will create an environment within which student perceptions of the gulf between school and the 'real world' are less of a sharp divide and more of a gradual conduit to a lifetime of learning.

Recommendations

- School governors and managers should formulate a school policy on business education. Implementation of it should be the province of senior management;
- Curriculum elements which contribute to business education should be managed and monitored;
- Business education activities, and particularly the administration of work experience programmes, should be resourced adequately;
- The cross-curricular nature of business-related activity should be made explicit to all staff and the themes of Citizenship and EIU should be promoted strongly through in-service training;

Key stage 3:

- Key stage 3 business education should be mapped clearly and overseen by specialist teachers;
- Opportunites for work observation and work shadowing should be extended to students at an earlier age than is currently normal;

Key stage 4:

- At key stage 4, students should be given opportunities to undertake elements of GNVQ or NVQ accreditation alongside core and foundation subjects;
- Business education courses from key stage 4 should have a business communications language component;

Post-16

- All post-16 courses should include a common core of EIU.

Appendix A: Programmes of study which relate to business education

Technology

Key stage 3 (Years 7, 8, 9; age 11–14 years)

Developing from key stage 2 programmes of study pupils should be taught:

- To consider the influence of advertising on consumers;
- To identify markets for goods and services and recognize local variations in demand;
- To recognize that the preferences of consumers can change;
- To recognize that economic, moral, social and environmental factors can influence design and technological activities;
- To recognize potential conflicts between the needs of individuals and of society;
- To prepare a business plan, indicating a cash forecast and budget, and monitor performance against it;
- To know that original designs can be granted patents;
- To recognize that people are an important resource and need to be trained, organized and motivated;
- To understand how market research can be used to measure user needs and market potential;
- To calculate costs and make decisions on price;
- To recognize the relationship between price, cost, income and competition in the market for goods and services.

Key stage 4 (Years 10, 11; age 14–16 years)

Pupils should be taught:

- To estimate the operating costs of a system and its dependency on other systems, and to evaluate its efficiency;
- To know that organizations need to have procedures for health and safety, and people responsible for enforcing them;
- To develop a product and how to market, promote and sell it;
- To identify the critical path in a flow chart;
- To review the ways in which market research can be used to evaluate user requirements and market potential;
- To understand that external influences (legal, environmental, social, health, safety) have effects on business activity;
- To recognize how economics affects design and technological activities and to work to a budget;

- To know that external influences such as level of economic development, government policy and international agencies have effects on business activity;
- To measure developments against budget, calculate variances and decide which are significant;
- To undertake a critical review of the cost, income, quality, time and environmental impact and advocate possible alternative strategies;
- To analyse business systems and organizational models;
- To recognize that the choice of materials depends on the scale of production and cost of disposal of any surplus;
- To recognize that investment in tools and equipment involves consideration of finance, depreciation and obsolescence;
- To determine a balance between the demands of quantity and quality;
- To develop effective pricing, promotion and distribution;
- To use techniques for planning effective cash flow and budgeting systems including computer modelling, where appropriate, to evaluate options;
- To develop awareness of the competition which surrounds the development and application of inventions and the control of patents.

Key stage 2 (Years 3, 4, 5, 6; age 7–11)

Whilst the following programmes of study relate to key stage 2, there will be a degree of inevitable overlap; it will not be realistic to assume mastery of the concepts involved on entry to key stage 2, and planning of cross-curricular work should take these programmes of study into account:

Pupils should be taught:

- To know that the needs and preferences of consumers influence the design and production of goods and services;
- To recognize the importance of consumer choice and hence the importance of product quality and cost;
- To be aware that the appearance of artifacts and environments is important to consumers and users;
- To understand that goods may be designed to be produced singly or in quantity, and that this affects what each item costs;
- To know that advertising helps promote and sell goods and services;
- To know that costs include time, people, skills, equipment and materials;
- To recognize and represent organizational structures;
- To identify markets for goods and services;
- To know that, in the production of goods, the control of stock is important;
- To plan a simple budget.

Geography

Key stage 3

Local area	8	To explain where economic activities are located in the local area and offer reasons for these locations; and to explain the relationships between land-use, building and human activities in the local area;
USA/Japan/ USSR	14	To undertake a comparative study of the USA, Japan and USSR at a general level, as regards their comparative area, location, population, economic activities and output, physical features and trade;
	15	For one of these countries, investigate: (a) the location and development of manufacturing industry; (b) the development of energy resources and trade in fuels;
International trade	16	To analyse the patterns of trade between individual countries, including the types of commodities traded;
Human	19	why different means of transport may be used for different purposes and how people and goods transfer from one means of transport to another; To compare how goods and services are provided in settlements of different sizes; To investigate types and patterns of land-use in farming, manufacturing industry and the retail industry; patterns of urban land use and the issues that arise as peoples requirements change and settlements age; the reason for different uses of land and for the location of different types of economic activities To compare differences in economic development and welfare in different parts of the world;
Human	20	the economic and social consequences of developments in communications and transport systems To analyse the proportion of the population employed in primary To analyse changes in the distribution of two types of economic activity and the effects of such changes;
Environmental	21	the differences between manufactured food and natural resources the differences between renewable and non-renewable resources.

Key stage 4

Economically developing countries	14	To analyse and account for the processes and factors that have influenced economic development in the country selected;
		the role played by inward investment in the economic development of the country selected;
		To evaluate ways in which the government of the country selected and other organizations have attempted to stimulate economic development and redress regional imbalance
USA/Japan/ USSR		To undertake a comparative study of the USA
		To study location and development of manufacturing industry;
		To study how sources of energy have influenced the location and development of manufacturing industry in the country selected;
		To study environmental problems associated with the development of industry in the country selected;
		To explain variations in the levels of economic prosperity between different regions within the country selected;
International trade	18	Pupils should study the broad features of international trade;
		To analyse the patterns of trade between individual countries
		To analyse how the economies of individual countries are interdependent
	19	To evaluate the significance for individual countries of government policies affecting the patterns of international trade and the changing patterns and nature of trade movements;
	20	To analyse recent trends in the patterns of international trade and suggest likely future patterns;
Human	24	To compare how goods and services are provided in settlements of different sizes;
		why economic activities may develop in particular locations; the advantages and disadvantages of locating similar economic activities in the same place; and to analyse the distribution of farming

Appendix B: KS3 business education at Dixons Bradford CTC

The Bradford Business Scheme

The Bradford Business Scheme is a cross-curricular initiative. It is designed to provide students with an introduction to business understanding in the local context. At the same time, students cover aspects of cross-curricular themes and focus on programmes of study in Mathematics, English, Design and Technology and Information Technology. The scheme is unit-based, each unit being designed to cover one complete term (sometimes two) in a five term year, and focussing on a local industry. A key feature of the scheme is developing a partnership with local industry in both planning and implementing the units.

All 150 Year 7 students are divided into three teams, each supported by different specialist staff. The teams are sub-divided into mixed ability groups of four. Each group reports to one member of staff for assessment and recording purposes, but the activities are usually in large groups, thus facilitating team teaching. Table B1 gives the breakdown of units in Years 7 and 8:

Table B1. *Bradford Business Scheme units for Years 7 and 8*

Term	Team 1	Team 2	Team 3
Year 7			
1	Induction programme	Induction programme	Induction programme
2	Retailing: Kiosk design; Bar codes	Retailing	Retailing
3	Retailing: Stock control; Access to shops	Retailing	Retailing
4	Travel and tourism	Packaging	Woollen industry: Historical patterns of work; Designs in wool; Production and export; Advertising
5	Woollen industry	Travel and tourism	Packaging
Year 8			
1	Packaging	Woollen industry	Travel and tourism
2	Catering industry	Construction industry	Unit 7
3	Unit 7	Catering industry	Construction industry
4	Construction industry	Unit 7	Catering industry
5	Unit 8	Unit 8	Unit 8

Appendix C: KS3 business education at Thomas Telford School

Business education is integrated within a wholly modular curriculum, based on 16 modules per year, divided into three types:

1. Whole school themes (WS) – all subject areas produce work based upon the same theme;
2. Small-scale cross-curricula (XC) – two or more subject areas join together to base work around a chosen theme;
3. Subject specific (SS) – each subject area concentrates on a separate topic or theme.

The work planned within each module is divided into three types:

1. Core tasks which are completed by all students;
2. Extension tasks which are completed by more able students;
3. Extension study which are homework tasks.

The table opposite is a breakdown of the current Year 7 business education curriculum, indicating where business education is a core entitlement for all, where it is an option choice, and which other subject areas are involved with its delivery.

Table C1. *Year 7 business education curriculum at Thomas Telford School*

Module No.	Type	Core	Option
1	WS 'Myself and my school'	Teamwork	–
2	WS	–	Factors affecting tourism; Introduction to marketing
3	SS	–	Organization of businesses; Business plans
4	XC (with Maths)	Graph drawing; Price mechanism	Introduction to resource management; Housing needs in Telford
5	XC (with Design & Technology)	Business enterprise; Market research & advertising	Franchising
6	SS	–	Branding and packaging
7	WS 'Celebration'	Design & production (with Technology)	(as in core)
8	SS	–	Retail & wholesale distribution
9	XC (with Humanities)	Investigating local industry	Market research; Advertising
10	WS 'Health & Fitness'	Researching local health and fitness facilities (with Humanities)	Producing a game for German tourists (with foreign languages)
11	SS	–	Industrial relations
12	SS	–	Resource management
13	XC (with Maths)	Data handling; Introduction to forecasting	Planning and running a school function; Ugly Bug Ball (with Technology)
14	WS 'Environment'	Industrial change; Impact on environment (with Humanities)	–
15	SS	–	Ugly Bug Ball (with Technology)
16	WS 'European Community'	Visit abroad (with Humanities and foreign languages); Planning a trade fair	Running the trade fair

Appendix D: Planning business education

As the National Curriculum is refined and the full National Vocational Qualifications framework emerges, fresh opportunities for the provision of business education and its accreditation will undoubtedly occur. Table D1 is offered to school curriculum planners as an interim guide to workable permutations within current constraints.

Table D1. *An aide memoir to planning business education*

<table>
<tr><th>KEY STAGE 3
(National Curriculum)</th><th>KEY STAGE 4
(National Curriculum plus vocational element)</th><th>POST-16
(Vocational and academic integration)</th></tr>
<tr><td colspan="2">ECONOMIC UNDERSTANDING and INDUSTRIAL AWARENESS through
Science Mathematics Technology English Humanities Arts</td><td>UNDERSTANDING BUSINESS courses for all students
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