REPORT
FROM THE
INSPECTORATE

Aspects of Vocational Education and Training in Japan

International Report

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PREFACE

This is one of a series of publications planned by the Further Education Funding Council's inspectorate to build up knowledge of the post-16 vocational education and training systems of other countries in order to highlight those aspects which might inform thinking in England in particular, and the United Kingdom in general.

CONTENTS

COMMENTARY

1 This report is based on a visit by inspectors from the Further Education Funding Council (FEFC) to Japan in November 1996. The group was joined by a member of the FEFC's quality assessment committee, and a senior official from the Department for Education and Employment. The main purpose of the visit was to study the contributions of various Japanese vocational training institutions to the preparation of young people for working life.

2 The group was aware of the commitment of Japanese industry to training. A large proportion of young people obtain further education and vocational training, and achieve high standards. Changes in the country's economy also prompted the group to consider:

- the extent to which training systems recognise the possibility of future career changes and the need to adapt skills
- mid-career retraining and lifelong learning arrangements
- the impact of industrial quality assurance systems on training provision
- the effects of economic change on company training policies.

3 Because the visit took place around the time of publication by the FEFC of the learning difficulties and/or disabilities committee's report, *Inclusive Learning*, (HMSO, 1996) the group also sought to discover what arrangements are made in Japan for students with learning difficulties and/or disabilities.

4 The key features which are described in the report are as follows:

- Japan is a prosperous and rapidly-changing country, with a population, workforce, and output per head around twice that of the United Kingdom. It has invested heavily in education, through public funds, private companies, and household budgets
- most secondary school pupils stay in education to the age of 19, and around 35 per cent continue into higher education
- vocational education is primarily provided by employers or privately funded colleges. Government departments set a policy framework, but have less direct influence on provision than in the United Kingdom. Innovative courses result from close links with industry
- despite the adoption of systems and practices from elsewhere in the world, during the period since 1945, many of the traditional values of Japanese life and society remain. These include hard work, attention to detail, the search for continuous improvement, and a great respect for the advantages to be gained from study and education
- recent innovations in education aim to increase the flexibility and creativity of Japanese students, and to introduce learning styles which depend less on whole-class work and rote learning

- vocational colleges have good resources, including some excellent information technology equipment
- lifelong learning opportunities are beginning to be developed, but they are at a relatively low level, except those for people who benefit from the training policies of large companies
- women are increasingly demanding opportunities for education, training and advancement at work, which will change their traditional social roles
- there are training opportunities for people with disabilities, but the concept of learning difficulties seems little recognised
- in the last two decades, the United Kingdom has faced many of the same challenges which are now confronting Japan, and it would be useful to continue to share experiences.

SCOPE OF THE VISIT

5 In a short visit, covering only a small geographical portion of the country, it would not be appropriate to make judgements about the overall quality of provision, nor was this attempted. The intention was to highlight those aspects of practice which might inform thinking in the further education sector of the United Kingdom, and to draw the attention of the group's counterparts in Japan to experiences from the United Kingdom which might be of interest to them.

6 The group visited five privately funded special training schools, two industry-based junior colleges, one publicly funded college of technology, one senior high school offering a new integrated course of vocational and general education, the national theatre school, two adult education centres, and a postgraduate school of management. In addition, meetings were held with officials of Monbusho (the ministry of education, science, sports and culture); Rodosho (the ministry of labour); the National Institute for Educational Research; and the National Association of Vocational Schools in Japan. These institutions are listed in appendix 1, and pen-portraits of each are contained in appendix 2. The visits were arranged by the British Council, which provided briefings.

7 Before the visit, the group received helpful briefings from education and labour attachés at the Embassy of Japanese in London; from officials of the Northern Development Corporation and Sunderland City Training and Enterprise Council, both of which had arranged training for Japanese companies investing in the United Kingdom; from INWARD, the organisation responsible for arranging inward investment in the north-west of England and from senior staff of four major Japanese companies which have established manufacturing bases in England.

ECONOMY AND GOVERNMENT

8 Japan has a population of 125 million, a labour force of 67.7 million, and an unemployment rate of 3.5 per cent (*Japan Country Profile*, Economist Intelligence Unit 1996). Because of raised life expectancy and a decreasing birthrate, the proportion of the population aged over 65 and dependent on the productive workers is rising steadily, and reached just over 20 per cent in 1994. The proportion is expected to reach over 25 per cent by the year 2020. Manufacturing has been the mainstay of Japan's economic growth, although the continued strength of the yen prompted the policy of outward investment to overseas locations, mainly in Asia, which had lower costs. Nissan, for example, had dropped its recruitment in Japan from 3,000 new staff in 1993, to 50 in 1996. Some 22 per cent of the labour force is employed in manufacturing.

9 Household savings are very high. In 1994, workers' households saved 22.5 per cent of their monthly income. Housing is expensive and its quality variable; only just over 50 per cent of households nationally are connected to mains drainage. There are very high ownership rates for consumer durables, and the response to market saturation is to produce more technological advances. The fastest selling product in Tokyo, for instance, appeared to be the new PHS (personal handy-phone system) telephone, which even homeless people in the 'cardboard city' were seen using. Private expenditure on the education of young people is expected, and represents a considerable investment for many families. The average birthrate is now only 1.5 children per woman.

10 The projections of growth in the Japanese economy remain strong relative to other Group of Seven (G7) countries, and a new government looks likely to restrain the previously high-spending public sector. This restraint is intended to include reforms of some government structures. There are some major liabilities in the economic structure; the government has yet to find a way of tackling unfunded pension liabilities for the growing proportion of elderly people; in 1995 seven housing loan companies collapsed and had to be supported by public funds; and in 1997 a massive accumulated debt of the former Japanese National Railways (JNR) has to be paid off by government. The buoyant economies of other far-eastern states are an increasing threat. Restructuring, rather than increased production, is responsible for the continued profitability of the manufacturing sector. Japan is a net importer of food and drink, fuel, and much raw material. It has a fast developing service sector. Beneath the prosperous corporations, there are very large numbers of small- and medium-sized enterprises, many of which are, in the opinion of economic commentators, inefficiently managed (Economist Intelligence Unit *op. cit*.). The relative lack of productivity of white collar workers is a concern to some of the major corporations. Some statistical comparisons with other countries are shown in table 1.

Table 1. Comparison of economic data

	Japan	*United Kingdom*	*United States of America*	*South Korea*
Population (million)	125	58.78	259.68	44.56
Workforce (million)	66.45	25.96	133.70	20.75
GDP per head ($000)	36,719	17,450	25,818	8,540

Sources: 1994–96 Economist Intelligence Unit country reports; the Stateman's Yearbook; UK Annual Abstract of Statistics; UK Labour Market Trends

11 Japan has 47 prefectures which administer local government, and there are direct local elections for prefectural governors, city mayors, and city, town, and village assemblies. There is increased interest in moving commercial and government activity away from the Tokyo area, partly because of its intense overcrowding, partly as a response to local demands in outlying prefectures, and partly because of the fears of disruption which would be caused by another major earthquake in the Tokyo area. The earthquake in Kobe in 1995 gave a foretaste of the problems which would have to be tackled. Nevertheless, Tokyo still occupies an overwhelmingly strong position as the centre of economic and governmental activity, even though there is an excellent national rail network and improved electronic communications.

12 Japan has a parliamentary system of government, with a prime minister chosen from a ballot of the Diet. The Diet comprises the house of representatives, or lower house, which holds greater authority than the house of councillors, or upper house. As a result of political reforms and a recent general election, there are now 500 seats in the lower house, with 200 filled by proportional representation and 300 candidates from single-seat constituencies. Electoral boundaries have been redrawn, and there is less scope for direct influence on individual politicians by corporations. There are 12 ministries and 11 government agencies under the nominal control of the prime minister's office. The most influential are the ministry of finance, and the ministry of international trade and industry. The latter has played an interventionist role in overseas trade and investment, and along with several other ministries provides funding for developments in vocational training.

13 As in most developed countries, including the United Kingdom until 1995, Japan has separate ministries of education and labour, with complementary responsibilities and objectives. In practice, there is some overlap and competition between the ministries. Both supply some funding for vocational education, albeit in different types of institution, as do the ministries of agriculture, construction, and health. These ministries also have the power to approve the content of courses in colleges which fall within their jurisdiction. The ministry of education, science, sports and culture (Monbusho) quotes it main purpose as 'the duty of promoting and

disseminating education, science, culture and sports', and carrying out related government programmes 'on an integrated basis'. Its annual budget for 1996 represents 7.7 per cent of total government expenditure.

14 Monbusho is responsible for some 65,000 education institutions, educating around 23.8 million students, although its direct influence reduces after the upper secondary phase, when the majority of institutions are privately funded. Its approval of many of these vocational institutions consists of regulating the numbers of teachers, classrooms, and other facilities. It also offers equipment grants, student bursaries and loans. Several of the privately funded colleges visited did not wish to seek such government approval, as they preferred to avoid what they saw as the unwelcome intrusions of bureaucracy into their affairs. Table 2 shows the numbers of institutions in the post-compulsory education sector which are privately and publicly funded.

Table 2. Post-compulsory sector; privately and publicly funded institutions

Institution type	*Total*	*National*	*Local public*	*Private*
Upper secondary schools	5,501	17	4,164	1,320
Colleges of technology	62	54	5	3
Junior colleges	596	36	60	500
Universities	565	98	52	415
Special training colleges	3,476	152	219	3,105
Miscellaneous schools	2,821	3	59	2,759

Source: Monbusho 1996

15 Rodosho (the ministry of labour) exerts its influence through the management of 'campaigns' to promote or respond to changes in industrial or occupational structures. The ministry sponsors training institutions, courses, and some occupational testing systems. In 1996, its campaigns included those for equal employment opportunities for men and women; the harmonization of work and families; the promotion of employment for the elderly; the revitalisation of small and medium enterprises; a national industrial safety week; and the promotion of comfortable commuting.

16 Rodosho's permanent measures and programmes include:

- support for workers affected by labour market changes, especially in specified depressed industries, to develop new or improved skills
- promotion of lifelong learning for employees, by giving grants to employers so that they can give their employees paid education or training leave, and by giving grants to cover part of the fees of adult workers at special training schools
- support for a network of 15 computer training colleges and 20 regional software centres, designed to tackle specific skills shortages

- promotion of human resources development in private enterprise, for example through advice and guidance centres in each prefecture, and a system of grants
- establishment of a range of public training facilities, which include:
  - 29 polytechnic colleges providing training at junior college level (first two years of a degree)
  - 240 human resources development centres, funded through the prefectures, providing long-term vocational training for young people graduating from lower secondary school. As the proportion of young people progressing to senior high schools has increased, many of these centres now cater for employed and unemployed adults
  - 65 polytechnic vocational centres providing short-term vocational courses, particularly those for unemployed adults
  - 19 training centres for people with disabilities.

17 The two ministries have separate systems of support for institutions, and different objectives in their oversight of qualifications and assessment. There is apparently little collaboration in developing policies. There is certainly no agenda to merge the operations of the two ministries. The impact of the proposed administrative reforms may be to extend the role of Monbusho in relation to science and technology education.

18 Private sector training is largely unregulated in content, quality, or quantity. Large companies run their own training schools, serving their own needs, and catering only for their employees. The many privately funded institutions may be run entirely as businesses, with their success determined by market forces, or as an educational trust, to fulfil the specific objectives of their founders. The ministry of labour has responded to certain acute skills shortages by establishing its own computer colleges and vocational training centres, but there appeared to be no particular attempt to ensure adequate or sufficient provision in a locality, or for an industry. Most students, after the lower secondary phase, pay substantial fees. Some may also have to move away from home in order to study.

Education Reform

19 It is almost 10 years since the National Council on Educational Reform completed its proposals to the prime minister and Monbusho established the Headquarters for the Implementation of Educational Reform as the department responsible. Working with the Central Council for Education, the ministry's advisory body, Monbusho has commenced a number of reforms and enacted the relevant legislation. Changes to the school curriculum recognised the need to decrease the pressure placed on children in a highly competitive system, to recover human dignity, and to value individuality. Since pressure, bullying, and conformity were acknowledged to be major features of the former system, change is slow. There are signs

of changes to teaching styles, involving greater attention to individual students; students are given more extra-curricular activities; there are opportunities for visits outside school, sometimes unaccompanied. One related recommendation was that comprehensive course programmes should be created, with more options, and a credit system which would assist transfer between schools. The group visited one such upper secondary school, where a new curriculum pattern had been designed, offering a wide range of options which included both general and vocational education.

20 A second important aspect of the reforms is the development of mechanisms to support lifelong learning at both local and national levels. Institutions vary in the way they interpret these objectives, but the major features of lifelong learning we identified in Japan were similar to those in the United Kingdom. They included in-company training, distance learning, adult education classes, and short updating courses. The support mechanisms included: government assistance to private sector initiatives; a centre for the promotion of lifelong learning in each prefecture; and increased research into participation levels, and mid-life training needs. The encouragement of lifelong learning features prominently in the objectives of both the ministry of education and the ministry of labour.

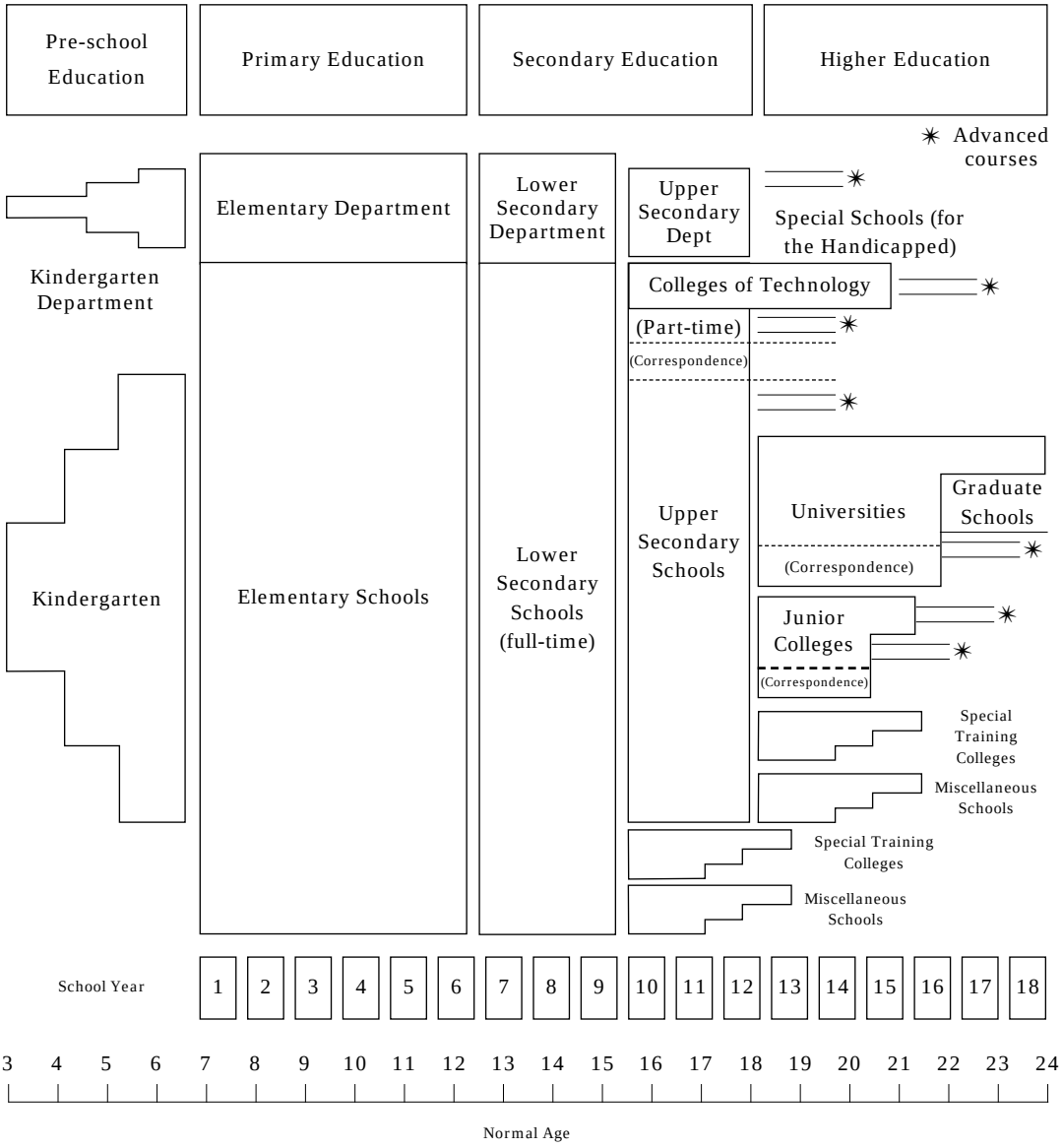
21 Examples of the growing commitment to lifelong education observed during the visit were: the short updating courses for adults offered at Tokyo Polytechnic College, which Rodosho subsidised as part of its lifelong learning initiatives; and the magnificent conference centre built alongside a high-quality housing development in Kanagawa prefecture. Staff employed by the prefecture ran courses and conferences for local people at the centre, as well as international conferences and programmes for business. A 'Culture Centre', was established with funds provided by a major newspaper group to celebrate its centenary. This centre offered a large programme of sport, language, and cultural courses, wholly financed from student fees, on lines very similar to those found in adult education centres in England. As in England, its daytime students were predominantly female, or retired men. The major difference was the accessibility of the centre, which was located above a large department store in a shopping mall. It offered a learning environment to adults which was clean, smart, businesslike, and rather expensive.

ROUTES THROUGH THE EDUCATION AND TRAINING SYSTEM

22 The modern system of education in Japan has developed over the period since the end of the 1939–45 war into a single-track system substantially influenced by the United States of America. Figure 1 shows the main elements of the system, and the ages at which students change from one stage to another. Six years of elementary schooling are followed

by three years of lower secondary and three years of upper secondary or high school education. University courses are four years long, with junior colleges providing the equivalent of the first two years of a degree course. Although the compulsory stage ends with the lower secondary school, the proportion of students continuing to upper secondary education rose steadily to reach 95.8 per cent in 1995. For the last 20 years, at least one-third of all pupils have continued into higher education, and in 1995, the proportion was quoted as having reached 45.2 per cent. The picture offered by these official statistics is complicated by the fact that some higher education is offered outside the university sector, which itself embraces various types of institution, ranging from large, world-class universities to small, single-subject colleges.

Figure 1. Organisation of the Japanese education system



Source: Monbusho 1996

23 Upper secondary schools provide pupils who have completed their compulsory education with either general or specialised education. General education is by far the most popular, accounting for at least 75 per cent of the age group. This type of education provides the best opportunity to enter higher education, at least at the most prestigious national universities. Specialist courses are vocationally orientated. They tend to lead to courses in the colleges of technology or junior colleges, or directly to employment, where technical education may be continued with an employer or in a special training school. Figure 2 shows the structure of the curriculum in a general education upper secondary school. Specialist schools offer the same core of Japanese, mathematics, and foreign language, but up to 30 of the 80 credits comprise vocational studies.

Figure 2. General education subjects in upper secondary schools and the number of credits for each subject

Subject areas	*Subjects*	*Standard no. of credits*	*Subjects required of all students*
Japanese Language	Japanese language I	4	●
	Japanese language II	4	
	Japanese language expression	2	
	Contemporary Japanese language	4	
	Contemporary Japanese use and usage	2	
	Classics I	3	
	Classics II	3	
	Appreciation of classics	2	
Geography and History	World history A	2	One of these two subjects
	World history B	4	
	Japanese history A	2	
	Japanese history B	4	One of these four subjects
	Geography A	2	
	Geography B	4	
Civics	Contemporary society	4	●
	Ethics	2	or ●
	Politics and economy	2	●
Mathe-matics	Mathematics I	4	●
	Mathematics II	3	
	Mathematics III	3	
	Mathematics A	2	
	Mathematics B	2	
	Mathematics C	2	
Science	Integrated Science	4	Two subjects from among these five categories of subjects
	Physics I A	2	
	Physics I B	4	
	Physics II	2	
	Chemistry I A	2	
	Chemistry I B	4	
	Chemistry II	2	
	Biology I A	2	
	Biology I B	4	
	Biology II	2	
	Earth science I A	2	
	Earth science I B	4	
	Earth science II	2	

Figure 2. (cont.)

Subject areas	*Subjects*	*Standard no. of credits*	*Subjects required of all students*
Health and physical education	Physical education	7–9	●*
	Health	2	●
Art	Music I	2	
	Music II	2	
	Music III	2	
	Fine art I	2	
	Fine art II	2	One of these four subjects†
	Fine art III	2	
	Crafts production I	2	
	Crafts production II	2	
	Crafts production III	2	
	Calligraphy I	2	
	Calligraphy II	2	
	Calligraphy III	2	
Foreign Language	English I	4	
	English II	4	
	Oral aural communication A	2	
	Oral aural communication B	2	
	Oral aural communication C	2	
	Reading	4	
	Writing	4	
	German		
	French		
Home Economics	General home economics	4	
	Home life techniques	4	One of these three subjects
	General home life	4	

Number of School Hours per Week for Special Activities

Homeroom activities and club activities	Two school hours or more (One school hour or more for homeroom activities)

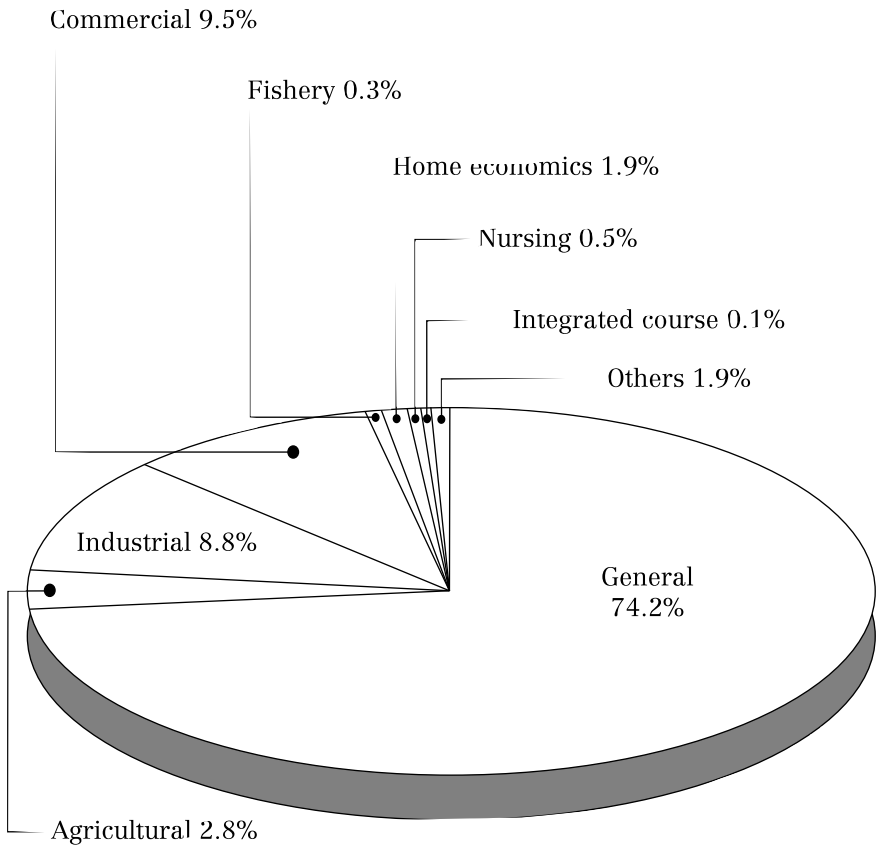
Note: for both full-time and part-time courses, 35 school hours of lessons per school year are counted as one credit; one school hour lasts 50 minutes

** 9 credits for students enrolled in full-time general (academic) courses*

† 3 credits for students enrolled in full-time general (academic) courses

24 In 1994, Monbusho developed the concept of an integrated upper secondary course, offering both vocational and general education. The initiative is intended to offer an alternative to the overwhelmingly popular general courses, and to introduce learning styles, with aims similar to those of the general national vocational qualification (GNVQ) in England, which are intended to encourage a more adaptable workforce. The group visited a Tokyo Metropolitan High School, which offered this programme. The school had been formed from the amalgamation of one general and one commercial upper secondary school. These had closed, and a new building opened on the site in April 1996. The admission of students was suspended for one year to allow staff to be appointed and curriculum planning to be completed. A modular, credit-based curriculum is now offered, with a core of general subjects and a wide range of general and vocational options, plus short courses to develop specific interests. Students were positive about the opportunities offered by the unusually large number of options, as well as the modern buildings and state-of-the-art information technology. When all three years of the school are in operation, there will be 190 units of study on offer, compared with the more usual 40. Eleven such schools were established in 1995, with a further 31 planned. Figure 3 shows the percentage distribution of upper secondary school students by type of course.

Figure 3. Percentage distribution of upper secondary school students by type of course



Source: Monbusho 1996

25 After a steep increase in participation in higher education to 1975, the proportion has stabilised at around 35 per cent of school-leavers. Once within higher education, most people study either social sciences (40.1 per cent), engineering (19.5 per cent) or humanities (16.1 per cent) (Monbusho, May 1996). The comparable figures for the United Kingdom in the same year, taken from Universities and Colleges Admissions Service (UCAS) data for entry to first year degree courses are: social sciences, 14.5 per cent; engineering, 11.9 per cent; humanities, 14.2 per cent. Relatively few Japanese undergraduates study natural sciences (3.6 per cent, compared with the UCAS figure of 14 per cent), and Monbusho records no entries for business degrees. Of those entering junior colleges, the majority (26.4 per cent) undertake studies in humanities, with home economics (24.6 per cent) and education (15.2 per cent) the next most popular subjects. The junior colleges are broadening their base, and some are in the process of changing to four-year universities. They have traditionally been dominated by female students, and seen as a staging post on the way to marriage. Over 80 per cent of new entrants to the junior colleges are female. Over 40 per cent of graduates from all higher education institutions are female, and women are pushing hard for equal opportunities in the workplace, backed up by policy initiatives from Rodosho.

26 Although assessments of progress, and regular reporting of attendance and achievements are a normal part of the schooling process, the pressure to succeed is not created by end-of-course examinations, as in England, but by the highly competitive nature of entry to the next stage of education or employment. Most students who enter higher education do so through entrance examinations which are set by individual institutions. It is these entrance examinations which generate the publicity about the pressurised Japanese education system. In the year before sitting these examinations, upper secondary students will often work seven days a week, attending *juku* or crammer schools in the evenings, at weekends, or in holidays. The pressure on students to achieve will have been mounting steadily up to this point, with the right choice of kindergarten, elementary and secondary schools all contributing to the opportunity to enter the most prestigious universities. These in turn provide passports to the best employment opportunities. At each stage, supplementary classes are available through *juku*, as well as the encouragement offered by what Japanese refer to wryly as the third school, the *Kyoikumama* or school-minded mother.

27 Having entered the higher education system, many students find that the pressure eases. So much so, in fact, that there is growing concern about the quality of many students' attainments within higher education. The government has announced its intention to keep university reforms under constant review, with initiatives to review standards, introduce self-monitoring, develop more flexible modes of study, improve buildings, strengthen the expertise of teachers, and expand graduate enrolment. Universities are also being encouraged to contribute to lifelong learning

programmes. The failure of many university courses to develop real employment skills in undergraduates leads them to enrol on vocational courses in miscellaneous schools and special training colleges (STC).

Despite the four years of university study, the cartoon suggests that it is the vocational course, ostensibly at a lower level, which provides the springboard for employment. As the diagram of the educational system (figure 1) shows, students might move to a miscellaneous school or special training college immediately after lower secondary school, and this route is now being promoted as an alternative entry for higher education. Nevertheless, the major international companies will only permit graduates from specified universities to sit the company entrance examination.

28 The miscellaneous schools are part of a long tradition in Japan, where specific philosophies and skills could be taught by a master to a group of apprentices or disciples. The schools are financed by student fees or investment trusts. Special training colleges are a category of institution offering particular forms of vocational training. They are characterised by their conformity to certain basic standards of staffing and accommodation which allows them to receive government grant aid for equipment, and their students may apply for bursaries. The umbrella term which covers both kinds of organisation is *semmon gakko*. Once an independently established school can meet the criteria for approval, it can apply for a licence from Monbusho to become a special training college. The National Association of Vocational Schools of Japan (NAVS) is a pressure group which exists to help miscellaneous schools to effect this transfer, which is financially beneficial. Although the courses last typically for two years, involving 1,700 hours of study, their grant aid is low compared with that of the junior colleges, which are regarded as part of the higher education system. Whereas around 80 per cent of junior college students are female, enrolments to special training colleges are said by the NAVS to be more evenly balanced. Since there are almost twice the number of students in

special training colleges as in the junior colleges, the costs of addressing the perceived financial imbalance would be very high.

29 The special training colleges perform an important function in the vocational training structure. It is intended that they will offer opportunities for employed people to update their skills or retrain. Many of the colleges have close links with industry, and may even be the training centres for large companies. They are no longer bound by legal requirements to deliver a particular curriculum, even for upper secondary age pupils. They can offer daytime and evening instruction. Students may attend for the study of a single subject. The hours of study can be converted to a credit-based system accepted by other colleges. Rules for the employment of teachers were relaxed in 1994 to allow instructors to be recruited directly from industry. Many of the colleges have excellent standards of equipment relevant to their specialisms.

FUNDING

30 Post-compulsory education is funded in many different ways. Publicly funded institutions receive their running costs from either national or prefectural administrations, but their students may still pay fees. It is estimated that a Japanese family might spend up to a third of its disposable income supporting a child through higher education. Upper secondary schools in the private sector charge fees which vary according to their perceived prestige, rather as independent schools in England do. A typical contribution is between £1,000 and £2,000 a year. A significant extra cost for families is entailed in the purchase of often elaborate school uniforms.

31 A two-year course in the business and information technology colleges visited costs around 2.15 million yen, (around £12,000). In the Tokyo area there is intense competition between providers, and one college visited was offering discounts on its courses to attract students. As accredited colleges, the special training colleges receive small government grants for the purchase of computers and industry-standard software. In the technology colleges supported by Rodosho, student fees are much lower. In universities they are higher, although different kinds of universities charge widely differing fees.

32 Student scholarships are available through the Japan Scholarship Foundation, which is supported by national government funds. The foundation provides low-interest or interest-free scholarship loans to enable competent students to continue their studies. A total of 484,000 students were being supported through this system in 1996. The proportions of students receiving financial assistance varied in the colleges visited. In the publicly funded technical college, just over a third of students received the scholarship of 48,000 yen a month (£260). In a private business college, only 20 students out of over 5,000 full-time students were supported in this way.

33 The graduate school which the group visited was entirely supported by a wealthy foundation established by the head of the Matsushita corporation. A trust fund of 11 billion yen (over £60 million) had been established to build the college and provide bursaries to its students, who therefore live and study free of charge. The level of their bursary after the first year is tied to their performance. High achieving students have the incentive of a more valuable bursary.

34 Many of the specialist training colleges and junior colleges are wholly owned and run by their host industry or company, usually through a tax-beneficial trust arrangement. As employees, their students pay no fees. At Nissan Technical College, for instance, young technician trainees received the equivalent education to that on a junior college course, working two years full time in the college, and living on site. In order to qualify for this training, however, they had completed two years with the company, to satisfy their employers that they deserved the investment.

QUALITY ASSURANCE

35 Few of the measures used in the United Kingdom to assure the quality of provision were in evidence in the institutions we visited. Where the colleges are regulated by government approval systems, the regulation mainly relates to physical resources. Despite the fact that quality assurance systems such as BS5750 and ISO9000 have their origins in American and then in Japanese manufacturing industry, there was little evidence of the transfer of these systems to educational institutions, as has happened in the United Kingdom. Except in some specific trades or professions, there are no national systems of testing and assessment of student performance. There is no inspection of the quality of teaching.

36 Monbusho employs inspectors. They conduct annual checks on accredited vocational colleges, to assess the standards of premises, materials and equipment, and the deployment of staff. They also check the performance of the training institution in finding relevant jobs for the trainees. The standards to which the institutions are expected to conform are specified by Monbusho to assist the process of accreditation.

37 Where the quality of provision is high, it appears to be based on a sense of shared purpose, coupled with a sense of commitment from both employers and employees, to do a job well, with the backing of adequate resources. The Japanese concept of *kaizen* – continuous improvement – maintains a competitive edge in business and manufacturing, but it also has religious overtones linked to Buddhism and the search for perfection. Attention to detail is much in evidence, and underpins both policies and practice. For example, the group was impressed by the degree of careful planning which had preceded the opening of the new integrated high school. Punctuality is a universally exact science.

38 The characteristics most valued in Japanese managers are the ability to develop their staff and to encourage a spirit of harmonious working in a

team. Goals are therefore communal, rather than individual. The improvement of quality is similarly a shared effort. At the Nissan Technical College, the course structure, with its contributing units, was prominently displayed on a wall in the hallway. Each unit is regularly reviewed by the teaching staff, in consultation with students, and updated annually. A major assessment item is a group project in which each group member's contribution must be successful. The course structure is reviewed by the teachers in consultation with company managers, to ensure that it continues to meet the needs of the company. At Nissan, the concept of harmonious working was evidenced by the mission slogan 'high technology and humanity'. The training produced technically expert personnel, but was designed to ensure that they could apply their theoretical expertise to the manufacturing process and develop sympathetic personal skills as employees and members of a work-group. Their primary goal was to ensure customer satisfaction with the products.

39 In the private sector colleges, the key performance measure is the ability to recruit students at a competitive price in the marketplace, and to retain them for the duration of the course. Their business strength and reputation is built on the sound preparation of students in well-equipped learning environments, and on their success in enabling their graduates to progress into employment. The perceived quality of an institution depends on the rate of progression to employment or the next stage of education. The nature of a college's links with prestigious employers or universities is an important determinant of its success. Data on students' progression and industry links are carefully monitored.

40 Some institutions involve employers in course reviews and the supervision of students' projects. A group of junior colleges which are all company training schools within the same prefecture act as external assessors to each other's work, and judge graduate projects, so as to create uniformly high standards.

41 Although there is no unified system for assessing learning in vocational education, there are some assessments which extend beyond the individual institution. The ministry of labour runs a system of skills tests through its training centres, not dissimilar to the competence-based systems in the United Kingdom. These are intended to assist the entry of trainees into the labour market, or to support job changes. Large employers run systems of internal examinations which are available to employees seeking promotion. These examinations are very demanding, and employees are generally expected to invest their own time in preparing for them. Suppliers to the large companies may use the same examination system. In some professions, for instance accountancy, trainees are submitted for examinations devised by a board drawn from the profession and from academics. Certain occupational standards are regulated by the government. At a private technical college offering training for the building and construction industries, students were prepared for entry to national occupational accreditation examinations.

42 Large companies promote the view that lifetime employment makes the portability of qualifications of less importance in Japan than in the United Kingdom. In fact only around 300 companies have more than 5,000 employees (1986 census), and these account for only 14 per cent of employees. The ministry of labour estimates that 50 per cent of all high-school graduates change their jobs within three years. The average time spent in a job in Japan is calculated as 12.5 years, compared with 9.2 years in England, and less in the United States of America. As large companies restructure, and the proportion of the working population protected by the lifetime employment tradition decreases, it is likely that transferable qualification systems may assume a greater importance than at present.

SUPPORT AND GUIDANCE FOR STUDENTS

43 Since the performance of a school or college is largely judged by the success of its students in progressing to the next stage of education or employment, responsibility for guidance is carried largely by the institutions. There is no equivalent to the careers service in Japan. It is the responsibility of teachers to find employment for their students, and to assist their transition to the next stage. Local employment offices may assist with this task. In one specialist information technology college, there was effective use of industrial placements during courses. The holding company is also involved in systems and software design, consultancy, and games production. This provides an industrial dimension to the courses offered. About 200 students graduate each year, and progress straight to the software houses which produce computer games and other information technology products.

44 There is a national training programme for guidance teachers, supported by Monbusho, and arrangements for sharing best practice. For instance, the National Institute for Educational Research seconds teachers to work on development projects for half a year at a time, and runs conferences to encourage good practice. Local authorities maintain links with employers to encourage recruitment, and most schools have a programme of informative visits by employers to the school, or of students to the workplace. Parent–teacher associations are also said to be active in providing assistance with guidance.

45 To assist schools and colleges with the work of occupational guidance and job placement, agencies of the ministry of labour run seminars for guidance teachers, and job interview fairs for students and employers. There are six student employment centres which offer job placement services to graduating high-school and university students. All job agencies must be licensed by the ministry, and some are run by vocational colleges. Employment exchange services are offered by the local employment security offices, called ‘Hello Work’, and these help schools in their locality. There are special measures to assist schools in dealing with underqualified

young people who may have dropped out of education early, and to help young people with learning difficulties and/or disabilities find jobs.

46 Many students attending the new upper secondary school were making lengthy journeys. They had heard about the new style of course from their lower school teachers, and had been attracted by the opportunities it offered. A privately funded college of technology recruited 60 per cent of its new students by word-of-mouth recommendation. It has good relationships with senior high schools, and representatives of the college visit 400 such schools a year, where they issue prospectuses and make presentations to prospective students. A public relations company is hired to make presentations in hotels near to selected schools, and these are advertised in the local press.

TEACHING AND LEARNING

47 Members of the group were able to observe classes in most of the institutions visited, and a wide variety of teaching styles was in evidence. Typically, classes were large, with up to 40 students, and a formal, lecturing style was adopted, sometimes assisted by a microphone on the teacher's desk. The largest class was an information technology session with 80 students, one teacher, and two support staff. There was some relationship between the size of classes and the kind of learning undertaken. In large classes, teaching methods stressed the acquisition of information by memorisation; students' exercises were based on problem-solving or drills upon which the whole class worked simultaneously. It is easy to understand how under such circumstances a student who was finding it difficult to keep up would need to engage in additional studies. Large classes encouraged inattention. Students in a privately run business college were not kept on task, even in their computing classes, where some were observed playing computer games, or sleeping. Thanks to the teacher's use of the microphone, inattentive students in an English class in an upper secondary school were able to chat to their classmates without causing undue disruption to those who wished to work.

48 In an adult education centre, classes in history and philosophy, taught by university lecturers working on a part-time basis, were also very formal. The microphone was used, even though the classes were small. As is sometimes the case in England, it was apparent that older students expected to learn in such a way, even if they found the work difficult to follow. Teachers did little to check that students were learning. Both the teaching styles and cultural norms combined to make it difficult for an older student to admit that he or she did not understand. A small English class in this centre was informally conducted by a native English speaker, but the structure of the workbook used, and the disjointed approach by the teacher to the lesson, left the students bemused. Nevertheless, they smiled politely, even when they could not respond adequately to the questions being asked. The emphasis placed on written work means that

most students have very little confidence in speaking English. In an attempt to counteract this problem, the Japanese government sponsors up to 4,000 visiting teachers a year, mainly from the United States and the United Kingdom.

49 By contrast, there were some examples of learning activity in which students were much more actively involved. Classrooms for computing had consoles from which the teacher could monitor student activity, and interject with guidance and advice, taking over control of their cursors where necessary. An English class in a high school was working in small groups on conversation practice, and gradually developing confidence. Technical studies at a company training school were entirely project based, with groups of students managing their own work. Well-designed workbooks, produced in-house, supported students' studies. In a postgraduate management school, no teachers were employed at all, apart from a director of studies who acted as facilitator. Students were expected to devise and manage their own research projects, using the expertise of trustees of the institution as a resource.

50 The standards achieved in upper secondary schools appeared to be broadly comparable to those found at general certificate of education advanced level (GCE A level) in England. The major difference is that all students must follow courses in a broader range of subjects. The two-year courses for high-school graduates run in vocational colleges demanded a level of achievement comparable to level 3 work in England. Technical projects at the Nissan Technical College were similar to those completed by level 3 or level 4 students on national diploma or higher national courses. Computer programming courses at this level matched industry standards more closely than many similar courses in the United Kingdom. In two privately run colleges, the work set and standards achieved by students were at a level below that which would be achieved in level 2 courses in England. The impression was given to inspectors that staff did not feel able to push students for fear that they would drop out of the courses. Reports sent to parents emphasised attendance rather than progress.

51 The reforms promoted by Monbusho have stressed the need for more creativity and individuality in schools and they will take time to work through the system. The reform of upper secondary schools is seen as an important step on the way to bringing reform and greater flexibility to universities. On the other hand, there are clearly advantages to some of the more traditional approaches, which have produced generally high standards of attainment. There seems little alternative to rote learning for pupils who during their years of compulsory schooling must familiarise themselves with two separate script forms, *hirajana* and *katakana*, each with 48 characters, and at least 2,000 characters of *kanji*, the ideographic script developed by the Chinese. In addition, *romaji* or roman script is used increasingly for signs and advertising, and must be mastered before learning English and other European languages. This gave the group of visitors pause for thought about an education system in the United

Kingdom where so many pupils fail to achieve competence with a language based on only 26 letters.

52 Although we understood that some schools now provide extra classes in basic skills for students who may be in danger of dropping out, there was some difficulty in engaging teachers and officials in discussions about the arrangements for students with learning difficulties. Special schools exist for students with disabilities, and some students with disabilities are able to attend mainstream schools, sometimes with additional support. The showcase upper secondary school we visited had lift buttons positioned for wheelchair users, and included Braille lift instructions. However, students who have difficulties with their studies are in general expected to work harder, and attend supplementary classes at the *juku* schools. The term 'learning difficulties', as used in the United Kingdom, appears to be an unknown concept.

53 Class sizes are typically large, but teachers in Japan teach an average of around 15 hours a week, in a nine-hour working day, and this enables them to offer additional support to students, and to run extra-curricular activities such as clubs and projects, some of which are work related.

RESOURCES

Staffing

54 The ratio of students to full-time teachers averages around 13:1 in colleges of technology, 24:1 in junior colleges, 17:1 in upper secondary schools, 18:1 in universities, and 22:1 in special training colleges. In the latter, which are mainly privately funded, it is much more common to find significant numbers of part-time staff. While full-time staff are required to have university degrees, industry experience, and professional qualifications relevant to the occupational area in which they are teaching, part-time staff may be employed simply for their current professional experience. Monbusho has made special provisions to allow people who may have special knowledge and skills, but no formal teaching certificate, to be appointed as special lecturers in order to augment the school curriculum. There is particular difficulty in recruiting staff with information technology expertise to upper secondary schools.

55 Teachers are trained on university courses, receiving instruction in theory and philosophy. They then follow a year's induction on appointment, receiving guidance from a 'master' teacher, and additional tuition at the teachers' centres in the prefectures. Since 1974, teachers' salaries have been specially augmented three times, in order to maintain comparability in status with other professional groups, and attract excellent people into teaching. Half the salaries of teachers are funded from national funds, so that schools are not unduly affected by local financial constraints. The group was intrigued to discover that teachers are paid about 20 per cent more than civil servants with comparable

experience, and that on average, elementary school teachers are better paid than those in upper secondary and vocational high schools. This average, however, is determined by the ages of those on the basic scales, and the elementary school teachers have a higher average age.

56 In one private college offering design courses, staff were recruited on recommendation or introduction from industry and were expected to have at least five years' experience in a subject-related field. They then took a qualifying examination and interview. In another, they were recruited directly from among former students of the college, and it was apparent that few staff had relevant industry experience or high-level qualifications. This college made heavy use of part-time staff, and acknowledged that it was because they were cheaper to employ. At Tokyo Polytechnic College, all staff were graduates, and some had masters' degrees. Some had worked as researchers prior to entering teaching, even where they were working in craft-related activities. In one company training centre, teachers were seconded from development departments and production plants for three years. They are regarded as technically competent, but receive guidance on how to deal with students on a personal level. At the theatre school, as might be expected, all the instructors were eminent and highly experienced practitioners in their own right. The level of discipline they maintained, and the quality of skill which resulted, was most impressive.

Equipment and Accommodation

57 Most of the places visited were considered to be among the best examples of their type. The level and quality of equipment and accommodation were mostly very high, but may not be typical. Senior high schools are installing high-quality information technology equipment in order to attract students, and to compensate for the lack of experience which students have of information technology when they leave lower secondary school. One high school visited had a computerised classroom with 40 workstations, a teacher's control console, and giant twin overhead screens. All the machines were top-of-the-range NEC multimedia computers, fully networked. We did not see them in use, but the existence of the overhead screens suggested that there might be an element of whole-class teaching and demonstration in the courses.

58 Colleges lease their computer equipment, with a replacement cycle of not more than three years, dropping to two in the company training schools. The need for updated equipment is recognised by government, and the grants made to private training providers are specific to computer purchases, as well as to library books. At one vocational training college established by the ministry of labour, funds for capital equipment are channelled through the Employment Promotion Corporation, which distributes funds on behalf of the ministry. Here, there were very high levels of equipment for control engineering, robotics and mechatronics. Programming courses were supported by up-to-date software; computer graphics work was usually completed on industry-standard Apple Mac machines. Elsewhere, computers were generally from NEC.

59 The company training centres operated realistic work environments, using equipment and materials which replicated those used in the main plants. Full-scale robotics equipment was used, and students were able to work on a small-scale production line which they had constructed themselves. Students at the NEC Technical College could receive instruction from managers working in plants in Japan and overseas, using satellite and video links.

60 Several of the institutions visited were newly built. All were clean and tidy, and free of damage or graffiti. We understand that few cleaners are employed in Japanese schools. The pupils take responsibility for cleaning designated areas, in order to instill a sense of responsibility. In the upper secondary school, there was a large library and good levels of circulation space. There have been attempts to upgrade all school buildings over the last few years. Private schools can obtain loans from the government. Space norms have been improved in all sectors, partly because the latest generation of children is physically larger than its forebears. The provision of large assembly spaces in schools is in part an anticipation of the need for shelters after a major earthquake.

61 One intriguing feature of several schools visited was the tea-house. The tea ceremony occupies a very special place in Japanese culture. It is a highly ritualised social event, with almost religious overtones. Training for the tea ceremony takes many years, but it is regarded as an important part of traditional social training. There are versions of the tea ceremony suitable for both men and women, and all the great tea masters are male. There were tea-houses in the postgraduate school, which had a tea master on its board of trustees; in the adult education centre, where courses in tea ceremonies were extremely popular; and in the new metropolitan high school, where they were intended to feature in personal and social education. Apparently, it is not unusual for high-spirited and unruly pupils to be offered tea ceremony classes to encourage a more dignified demeanour.

EQUALITY OF OPPORTUNITY

Students with Learning Difficulties and/or Disabilities

62 The group was surprised to find so little recognition of the needs of students with learning difficulties and/or disabilities in mainstream education. Provision at the lower secondary stage is either in special schools, or, as a result of changes made in 1993, in mainstream classes for students with minor learning difficulties, who are offered some supplementary help, or in special classes. Compared with thinking in the United Kingdom, Japan is at the stage prior to the publication of the Warnock report in 1978, where the focus was primarily on the students' disabilities, rather than on their learning and achievement. There is little awareness in everyday life in Japan of the existence or requirements of

such people; few public buildings make special provisions, and we found a reluctance or inability to engage in discussions about the nature of the provision made. While there were good facilities for access in a newly built upper secondary school, a showpiece adult education and conference centre costing in excess of £40 million had no such facilities.

63 From the post-compulsory stage, provision for people with disabilities is made under the auspices of the ministry of labour, using measures taken under the law of employment promotion. There are 19 human resources development centres to provide vocational training, some of which have residential accommodation, and four specialist centres for rehabilitation, for instance for those with spinal injuries. Trainees at these centres can receive a training allowance, and adaptation training in the workplace. A levy and grant system is in operation to encourage employers to apply the disability employment policy. An employee quota system is applied, of 1.6 per cent in private companies, and 2 per cent in public companies with over 65 employees. There is a penalty of about £100 a month for not fulfilling the quota. Around 50 per cent of the eligible companies have achieved the quota; some opt to pay the levy rather than conform. The levies are distributed to those employers who fulfil the quota, and as a payment of incentives to small- and medium-sized companies who employ many disabled people.

64 The ministry of labour also recognises the needs of people with disabilities in its local employment security centres. Here, there are special arrangements for vocational guidance, including sign language experts. There is detailed counselling, and arrangements to support entry into employment. Services exist to expand the number of occupations which people with severe disabilities can access. The ministry of labour is responsible for the training of staff in the vocational training centres it sponsors.

Race

65 Japan's racial homogeneity stems from its long period of isolation in the Tokugawa era. Nevertheless, there are minority groups for whom special provision is made. There is growing awareness of the need to help refugees, especially those from Indo-China. The ministry of labour sponsors initiatives for such groups, as well as for repatriates from China and elsewhere, who are in need of special consideration. In comparison with initiatives in the United Kingdom to support minority groups, the impact is low. Second and third generation Koreans in Japan still face significant discrimination.

Women

66 Women make up about 40 per cent of the labour force, although some manufacturing enterprises do not quote their female employees in their statistics. Some 70 per cent of these working women are married. An equal employment opportunity law has been in force since 1986, and the policy of encouraging equal employment rights is pursued through

campaigns sponsored by Rodosho. Although there are policies and legislation, there are no penalties for non-compliance with these, and young Japanese women in particular are becoming increasingly vociferous in their demands for equal treatment, as unemployment among university graduates rises. As at April 1996, there was 78.5 per cent employment among male graduates from the previous academic year, and 68.5 among females. Since the women are more likely to take general courses in higher education, their employment prospects are in any case less secure.

67 Officials at Rodosho (who included some high-ranking female civil servants) admitted that ideas were needed to change employers' attitudes. The lifetime employment tradition in large companies militates against the recruitment of women although family care and childcare leave has been available since 1995. Women can work shorter hours, although labour unions are divided as to whether the proposed elimination of limits on overtime working will increase women's opportunities or not. The tradition among many white collar workers of staying at work long into the evening, or engaging in the expected socialising after work, combined with punishingly long commuting times in some parts of the country, militates against the career progression of women with families. It is also starting to be regarded as damaging to men. One of Rodosho's campaigns during 1996 was the promotion of measures 'to maintain a harmonious co-existence between work and family life'.

68 Commercial courses recruit many female students, although as in England, the shift from secretarial to office administration studies is making these courses more attractive to men. The junior colleges still offer curricula which are biased in favour of humanities and home economics. Female graduates may find themselves employed as receptionists or 'office flowers' with few opportunities for advancement beyond finding a suitable husband. There are mixed responses to the needs of female students. We saw groups of male and female students engaged in courses for carpentry and building trades, but in the same college there were separate 'design' courses for ladies which continued an older tradition.

69 We met a number of able women who had made the difficult journey into high-ranking and responsible positions. We formed the view that in a changing society, women who were able to exercise flexibility, especially those with good skills in information technology and languages, would be well placed to find employment in companies where traditional employment practices were breaking down. One such woman, who started work some years ago in one of the large corporations, operated successfully as a self-employed management consultant, and now represents the north-west of England's inward investment company in Japan.

LIFELONG LEARNING POLICIES

70 In common with most other developed countries, Japan is increasingly concerned about the need to keep an ageing workforce up to date, and to enable people to change jobs or re-enter the workplace through retraining. In addition, the need to maintain good levels of general education throughout life is recognised. Policies to encourage lifelong learning have been adopted by both Rodosho and Monbusho, and these are beginning to take effect, although there is nothing like the scale of opportunities in the United Kingdom to return to education during adulthood.

71 Adult continuing education is growing from a low base. Some 7 per cent of prefectures have established subsidised adult education centres, offering basic education and some general subjects. Some of these operate in school buildings, where classes are taught by school teachers working outside their normal hours. Some 24 per cent of elementary and lower secondary schools have made such provision, while only 2.5 per cent of technical colleges, and 4 per cent of universities have done so. Universities are being encouraged to establish the equivalent of the extra-mural department, offering units of their basic courses on a part-time basis. The group visited an adult education centre which was originally established by a major newspaper group, but now is wholly funded from student fees. The main target for its work was the housewife, although with increasing early retirement, more elderly men had enrolled.

72 Until now, there has been little second-chance education in Japan. The upper secondary school visited had previously been a commercial college, and was still operating an evening programme which it planned to extend into more general education for those who wished to continue. A private college of technology ran evening courses for some 700 students at the post-secondary level, across seven departments, and a small programme of part-time work at upper secondary level for students who had dropped out of school. The college of technology offered a series of short two- or three-day updating courses in key technologies. A private school of business, which had significantly undershot its targets for full-time enrolments, had a separate section dealing with part-time students who were mainly in employment. They studied for about two hours a day for up to three days a week, paying full fees. Skill development centres run mainly by the prefectures also offer retraining and updating courses for adults.

73 There was little evidence of learning technologies in operation, although one college had formed a partnership with a university in England, to share learning materials using the Internet. About 130 schools and colleges offer correspondence courses in addition to part-time courses. These are often used by employed people to assist them to pass promotion examinations at work. Japan has a University of the Air, which between 1985 and March 1996 has produced 8,340 graduates. It is extending its broadcast range by introducing a third satellite in 1999, and has increased

the number of local study centres in order to provide more equality of opportunity. A campus local area network is under development. It is designed to exploit developing multimedia systems by providing teaching materials and information to local users in large-scale computer centres, public halls, and libraries. The NEC Institute of Management was the most sophisticated company-based organisation visited, using electronics communications and satellite technology to deliver training and management education throughout Japan, and across the group's global network.

74 Work-related updating, provided in companies, accounts for the bulk of adult learning in Japan. A survey conducted by the National Institute for Educational Research of Japan suggested that between 90 and 100 per cent of all companies provided some kind of off-the-job education and training, and 78 per cent of the survey respondents had received such training. The highest incidence was for induction training, followed by basic and advanced management training, company philosophy, technical training and business education. However, a separate survey of 7,000 people from a sample of prefectures revealed that almost 60 per cent had engaged in some learning activities during the previous year, excluding job-related training. Younger people had chosen classes to extend their skills, whilst more elderly people focused more on hobbies and healthcare. Mayoral offices and boards of education have begun to co-operate in establishing courses, funding social education officers, and designating places such as public halls as places for learning. In questions designed to elicit information on the barriers to learning, the National Institute for Educational Research of Japan survey revealed the shortage of time to be the greatest impediment. Younger respondents were keen to obtain qualifications which demonstrated their achievements.

ROLE OF INDUSTRY IN EDUCATION AND TRAINING

75 There have been many indications so far in this report of the role which industry plays as a provider of training. Most Japanese people who receive training obtain it through the private sector, or from their employers. Training in technical colleges is closely geared to the needs of industry. Vocational assessment, where it exists, is designed by committees of professionals from the relevant industry. Almost all companies train their staff off the job. Such training is by no means narrowly conceived. Courses in company philosophy, personal effectiveness skills, and outdoor education designed to promote personal development, are all common.

76 As well as running training schools exclusively for their own employees, large corporations fund some colleges as businesses, and their graduates enter the open employment market. Such colleges, run as educational trusts, provide tax benefits for their host companies, and contribute to the stock of trained people in the country. Commercial

companies are also said to contribute to the education of upper secondary age pupils, offering work experience, company visits, and information exchanges.

77 Other educational trusts continue the tradition of close tuition established in *samurai* schools and religious foundations. A graduate school was established as an educational foundation by the head of the Matsushita corporation, for the express purpose of improving the type of person entering politics and business in Japan. The school has a distinctive philosophy designed to perpetuate the ideas of its founder.

78 Within Monbusho's budget, itself accounting for some 7.7 per cent of government expenditure, 6.2 per cent goes to private schools and universities for current expenses; 7 per cent is spent on promoting lifelong learning, cultural, and sporting activities, and 1.7 per cent goes on aid to students. There is relatively little public subsidy of training costs borne by employers, but a levy of 0.35 per cent of employers' payroll contributions is passed through the Employment Promotion Corporation and funds public vocational colleges and the skill development centres. In 1991, for example, this amounted to over £500 million.

JAPANESE INDUSTRY IN ENGLAND

79 As part of the preparation for the visit, four members of the group met senior staff of Japanese companies which have established bases in England, to explore their perceptions of the English vocational education system, and its comparability with standards achieved in Japan. From these visits, some common themes emerged which were useful background for our visit.

80 A tool manufacturing company in the Midlands sifted 1,600 applications in order to recruit the 40 people who met its rigorous standards. It was searching for graduate engineers with the right attitudes, which include a passionate concern for precision, together with positive approaches to teamworking. Managers find that British engineers have a more innovative mentality, while Japanese staff accept the need for total discipline. The first group of staff found it frustrating to be required to build their products exactly to Japanese specifications, to meet existing standards. Company training initially took place in Japan. Technical managers were then trained as trainers, and also act as internal quality auditors.

81 Several managers expressed admiration for the education reforms within post-16 education in England. They saw them leading to a broader base of education, which in Japan is regarded as laying the right foundation for subsequent employment and company-related training. In a northern car manufacturing plant, executives expressed the view that Japanese universities do not provide a good preparation for work in functional areas such as engineering and technology, compared with the more focused approach in United Kingdom engineering degrees. They and others were

recruiting primarily from a postgraduate pool, although they would like to improve their links with further education colleges. Traditionally, company recruitment involves having a key person linked with a professor at a particular university in order to identify the best students from the best senior high schools. Japanese-owned companies in the United Kingdom are trying to build up their own networks in colleges and universities.

82 The presentation skills of United Kingdom executives were seen as very high, as was the general level of communication skill. There was a politely veiled suggestion that in the application of number and mathematics, Japanese managers might be superior. A managing director of a research company identified 'presenteeism' as the key cultural difference between United Kingdom and Japanese research staff and executives. While United Kingdom staff were conscientious, they found quick ways round the work to be done, and wished to spend time with their families. Japanese executives were painstaking over detail, and appeared content to work 15-hour days as a matter of course. Neither approach was necessarily more efficient. Daily exercises, work-group meetings, and good upward communications are important aspects of the working culture, and have been imported to England.

83 Executives perceived that in England, 'women dominated society', in contrast to Japan where there is little support for women in the workplace. It was suggested that married women are harassed into leaving executive positions in the company, or taking lower status jobs within it.

OBSERVATIONS

84 It would be unfair to draw many general conclusions from such a brief stay, but there are some observations among the many lasting impressions which we feel are worth recording. They are noted here in no particular order of priority.

– Vocational colleges are facing a demographic decline in the participating age group, but have generally failed to exploit new markets, or to diversify their interests in a buyer's market. A notable exception is the design institute which has successfully diversified from fashion and graphics courses into information technology and programming courses to include the design and development of computer games.

– Except for the special training colleges, there are very few links between educational provision and the changing nature of the labour market. Employers pay most of the costs of vocational education, but as their requirements change, only market forces will determine whether private colleges match these changes.

– There are risks in a market-led approach with no quality assurance measures in place. Some colleges make heavy use of part-time staff, to the detriment of quality. Many of these are people with two

jobs. Prefectural organisations are regarded as an important safeguard both of quality and sufficiency.

- Quality is assured by positive management, commitment, and good teamworking with a clear focus. Quality audits are in evidence in industry but not apparently carried over to the training world.
- Teaching is less formal than we expected. There was little evidence of the stereotypical obedient, hard-working and over-stressed students about which much is heard in the west. Some students were surprisingly unmotivated, and some teachers appeared poorly trained. Some exciting information technology equipment was not well used.
- Information technology equipment and training is future focused, and the ground is being laid for further developments as technology changes. Where investments of all kinds have been made in educational development, the quality is high with leading-edge technology.
- The arrangements we saw for art and design education were weak. Many industrial designers are brought in from the west, or trained there. There is little design education in the school curriculum, and traditional arts are well taught, but constrained by tradition.
- Culture and history have an important impact on practice. Schools benefit from the tradition of small, tight, communities of learners, offering support as well as a disciplined environment.
- The new-style integrated comprehensive high schools are an interesting innovation. They retain a heavy emphasis on general education, which given the high progression rate to higher education may be appropriate.
- Initiatives to encourage more flexibility and creativity run counter to some strongly held traditions in Japan. It would be unfortunate if the benefits of traditional approaches were lost in the process of change. Both parents and students need to understand the nature of the changes if students are not to lose motivation.
- The philosophy of lifelong learning has not yet penetrated much beyond the workplace. Even there, staff have a preference for long, qualification-bearing courses which are difficult to attend part time.
- Despite their apparent disadvantages, we believe that assertive and well-educated women could find themselves at an advantage in the newer, more flexible labour markets which are developing, particularly in service industries.

LESSONS FOR JAPAN AND THE UNITED KINGDOM

85 We gained the impression that there was no longer much interest among the Japanese in sharing experience with the United Kingdom. Japan's markets are in Asia; technical innovations were learned from the British a century ago, and the Japanese have moved on. There is a steady increase in the number of Japanese students wishing to study in the United Kingdom, but, in general, the language which the Japanese learn is American English rather than British English. Nevertheless, we would venture to suggest some aspects of United Kingdom experience which it would be beneficial to share with Japan:

- a standard qualifications framework which would offer a passport for those who need to change jobs, or operate outside the large company system
- open and distance learning arrangements which offer opportunities for learning to many people who cannot attend classes to study
- energetic marketing to promote lifelong learning opportunities, and to counter falling participation
- carefully designed teaching approaches and changed societal attitudes which can help students with learning difficulties and/or disabilities
- a careers service designed to benefit young people, which can offer vital support to busy teaching staff, and widen opportunities for further study or employment
- modern language teaching which is designed to develop confidence in the spoken language and which requires techniques which may be alienating to Japanese learners. Although we saw a language laboratory in one college, it appeared to be little used. Nissan apprentices did one hour's 'radio English' each morning
- liaison between government departments, and between local and national government, which can avoid undue duplication of, or gaps in provision
- a national system of inspection for vocational education, including rigorous self-assessment, established in consultation with providers.

86 Those features of Japanese provision which appear to offer lessons for the United Kingdom include:

- the belief in Japan that high levels of educational attainment are an essential prerequisite for a successful economy, and the accompanying high levels of investment by individuals and the nation

- the wide range of general and vocational education in the post-compulsory phase of education in Japan, and high participation rates
- the relatively low levels of public funding to vocational training. Industry and commerce play an important part in its funding, both directly, and through a levy system. Individuals and their families contribute significantly to the costs of their own education
- the high status enjoyed by teachers, and the good support provided for them
- the meticulous attention to detail which characterises the preparation for change. New policies may be slow to take root in comparison with the United Kingdom, but they are well researched, well resourced, and ultimately, successful
- the group responsibility for quality assurance which is part of a longer tradition of close work-groups, shared skill acquisition, and service to a customer (or master). It is as much a social tradition as an industrial concept, and does not therefore have to be bolstered with the same level of bureaucracy as is found in some colleges and firms in the United Kingdom.

APPENDIX 1

ORGANISATIONS AND INSTITUTIONS VISITED

Government Departments and National Organisations

British Council, Tokyo

Ministry of education (Monbusho). Science and international affairs bureau

Ministry of labour (Rodosho). Human resources development bureau; Women's bureau; International labour affairs division, minister's secretariat

National Institute for Educational Research

National Association of Vocational Schools in Japan

Publicly Funded Institutions

Kanagawa Foundation for Academic and Cultural Exchange (K-FACE) (local authority)

National Theatre, Kabuki Training Institute (Japan Arts Council, via Monbusho Cultural Affairs department)

Tokyo Metropolitan Harumi Sogo Senior High School

Tokyo Polytechnic College

Privately Funded Institutions

Matsushita Institute of Government and Management

NEC Institute of Management

Asahi Culture Centre, Yokohama

Nissan Technical College, Kanagawa

Tokyo Institute of Art and Design

Vantan Design Institute

Nakano School of Business

Chuo College of Technology, House No. 1

ACT Information and Business Processing College

APPENDIX 2

PEN PORTRAITS OF INSTITUTIONS VISITED

ACT Information and Business Processing College

A sister organisation of Chuo College of Technology, initially established to provide post-upper secondary business courses. However, in view of the intense competition between providers of business courses in the Tokyo region, the college is diversifying into other information technology and retailing courses. It discounts the cost of its courses by up to around £4,000 a year. Its teaching hours are determined by approval from Monbusho, and it prepares students to the standards required for occupational accreditation examinations set by chambers of commerce and business associations. It has 177 full-time students; 45 are on desktop publishing courses, 90 on business software development, and 42 on retailing. English is offered as an elective subject. Most students are graduates of senior high schools, but a growing number are from junior colleges or universities and most of these have little experience of information technology on entry. A part-time programme of short courses is offered in the evenings. There are 16 full-time and 25 part-time staff. Part-time staff work for companies in occupations relevant to the vocational subjects taught at the college, or in other vocational colleges and universities.

Asahi Culture Centre, Yokohama

The Asahi Culture Centre, Yokohama, is one of several adult education centres established by the Asahi newspaper group as a philanthropic gesture to mark its centenary. It has been established for 15 years. It operates seven days a week, 52 weeks a year. It is funded through membership subscriptions and fees from students, and receives no external subsidy apart from free advertising of its programmes in the group's newspapers. Some 20,000 people currently hold membership subscriptions for this centre, and these are valid for three years. Approximately 12,000 people a month attend classes, which cost between £12 and £20 for each class of two to three hours. Around 75 per cent of daytime students are female, and 80 per cent of evening students are in employment. Classes are offered in: sport- and health-related subjects; Japanese history and culture; world history, art and literature; natural history; languages; arts and crafts; and music and dance. There is no joint planning with the prefectural lifelong learning organisations, which offer lower-level provision for shorter periods, at subsidised rates. The centre is located in comfortable leased premises on the seventh floor of a department store building. It is unashamedly upmarket, catering for those who have high aspirations, high incomes, and come from the higher employment categories. Its staff are all qualified teachers, some of whom

are employed in universities. It is suffering a slight decline in student numbers, as more women are employed, and the younger generation are better educated.

Chuo College of Technology, House No. 1

The college was founded in 1909 as a miscellaneous school to provide practical and technical education in architecture, building, and construction. In 1976, it was designated as a special training college. It receives subsidies from the ministry of construction for machinery purchase, and there are minimum study hour requirements laid down for its two-year and three-year courses. The ministry does not otherwise determine or inspect the curriculum. The building and construction industries set standards for the occupational accreditation examinations for which students are prepared. There are 5,100 full-time students on daytime courses of around NVQ level 3 standard, with some technology work approaching NVQ level 4. Fifty departments offer architecture and interior design, surveying, building, technology and construction, and civil engineering. There are extensive modern buildings and up-to-date equipment. The college works hard to maintain its links with senior high schools in the Tokyo area. There is residential accommodation for 760 students. A three-year, part-time course at upper secondary level is provided for 63 students who have dropped out of senior high school and wish to complete their secondary education. There are some 700 post-secondary, part-time students. The college has links with over 500 companies which are consulted about course content. Study hours conform to the requirements of government departments. Residential centres are used for recreational activities and team-building exercises. Teaching follows routine exercises, but students were purposeful and more active than in some other colleges visited. An employment agency approved by the ministry of labour operates in the college, and most students use this to find employment. Many go into family businesses. There are significant labour shortages in architecture and construction.

Kanagawa Foundation for Academic and Cultural Exchange (K-FACE)

K-FACE is part of Shonan International Village, opened in 1994, near Sagami Bay on the Miura peninsula in Kanagawa prefecture. It functions as a conference centre for developing research, training, and cultural and international exchanges. The village and the training centre were part of a complex land and property deal by which the locality obtained an educational and cultural resource as part of a housing development. K-FACE has high-minded objectives but, so far, a low level of provision. The arrangement with the foundation allows access for local people for 50 days a year, on which they can attend conferences and seminars in a top-class venue. Courses are well subscribed, and their costs subsidised. The opportunities offered by the facilities could be more energetically exploited.

Matsushita Institute of Government and Management

The Matsushita Institute of Government and Management was established in 1979 by the founder of Matsushita Electric Industries. It is funded and owned by an independent foundation, approved by the ministry of education's lifelong learning division. Its purpose is to provide graduates with the opportunity to conduct individual research; to network with the influential members of the board of trustees, who are all drawn from major corporations; and to prepare for a career in politics, government, or business. It uses unusually progressive methods, designed to foster independence and creativity, in a small residential community. All the students' living costs are met by the foundation through a bursary system whereby payments are linked to achievement. Students can stay for up to five years. Bursaries are offered to students from abroad for short periods of study.

Nakano School of Business

The college is a vocationally orientated private organisation combining two institutions. Full-time students attend the Nakano School of Business, while part-time students attend the International Nakano. There are four buildings, each within walking distance of the others, all of which were recently built. Recreational areas include a gymnasium provided for leisure and tourism students that others may use. The library is for reference only. The quality of equipment is good. Computers are up to date and replaced every three years. The target enrolment of 4,000 full-time students has not been met, because of a population decline, and competition between colleges. There are currently 2,300 full-time and 3,000 part-time students. Some 50 per cent of part-time students are graduates, and most are employed, and 10 per cent of them are from overseas, mainly China. There are 50 full-time, and 150 part-time staff. Additional learning support can be purchased at winter and summer schools. A job-finding service is provided. There are some very large classes. In one instance, 80 students were with one teacher and two assistants. Large classes appeared to be linked to unproductive work and poor work discipline. Workbooks were provided, but not well used. Older, mainly graduate students on secretarial courses were better motivated, and working purposefully. There are no particular entry or exit standards. Students complete the requisite length of study and are then issued with a certificate. Some 80 per cent find work immediately.

National Association of Vocational Schools in Japan

A small organisation which acts as a pressure group for vocational schools and special training colleges which are privately owned. It is a political body, which lobbies government specifically for funding for the schools, and scholarships for their students. It encourages miscellaneous schools to apply for special training colleges status, through which they can apply for grant aid. The foundation also offers a training scheme for teachers, which is offered by the prefectures, in their teachers' centres, with some support from Monbusho.

National Institute for Educational Research (NIER)

The NIER was established in 1949. It acts as a think-tank for Monbusho, and its research activities link to the major policy initiatives of the ministry. It was formed by bringing together prefectural research groups, and its staff support the Central Council for Education in overseeing, and researching the effectiveness of, the educational reforms begun in 1987. It has a budget of approximately US$10.9 million of which 75 per cent is spent on researchers' salaries. Its staff are civil servants, and serving teachers are seconded to NIER for up to six months to work on development projects. Most curriculum development activity takes place in local centres run by the prefectures. It has a particular interest currently in monitoring the growth and effectiveness of lifelong learning initiatives.

National Theatre, Kabuki Training Institute

Kabuki is one of the traditional art forms of Japan, combining drama, music and dance in a highly stylised performance. Major roles are taken by members of traditional Kabuki families, but there is a growing shortage of people for supporting roles. This training school for Kabuki actors opened in 1970. The school is part of the National Theatre, funded through the cultural department of the education ministry, via the arts council of Japan. Students gain entry between the ages of 15 and 23; all are men; they may be graduates; they pay no fees. Entry is by audition. All courses are for two years, except for acrobatics, which is three years. Courses are offered in performance, dress and wig-making, dance, vocal training, manners and tea-serving, gymnastics and music. Classes continue from 10.00 until 17.30 hours, followed by individual tuition and practice until 20.00. Courses are not accredited, and students are not individually graded. Following the initial six-month period, students can leave, but few do so. Teaching is highly specialised, and very demanding, delivered by highly experienced performers. Students are guaranteed work in the theatre for a two-year period, after which they may join companies elsewhere.

NEC Institute of Management

The NEC Institute of Management was established in 1983 to strengthen the NEC Group by providing education programmes to develop its human resources. Its main activities include: skill enhancement programmes for employees on technical matters, foreign languages, and business management; corporate ethics and creative planning; and education for innovation. It is an organisation, rather than an institution. Its study programmes are delivered in traditional classrooms, at training centres and the NEC Technical College, a junior college recognised by the ministry of labour; in the workplace, to develop industrial engineering knowledge and skills; and via its 'Satellite Business College', using two-way video and audio transmission to connect a central classroom with satellite classrooms in 10 major cities in Japan. The institute develops teaching and reference materials for publication, and some of its lectures and seminars are open to the public.

Nissan Technical College, Kanagawa

The college serves the Nissan motor manufacturing company and its subsidiaries. It is classed as a junior college, approved by the ministry of labour, but receives no government support. It provides a two-year, off-the-job residential training course for 120 young technician level employees. It aims to develop superior personnel, with a thorough grounding of technical expertise. In addition to the full-time course, it offers 60 short courses a year to around 3,000 staff from Nissan and related companies. Students who are graduates of upper secondary schools can apply to join the course once they have two years' experience in the company. Staff are seconded from development and production departments for three years. Courses follow a unit structure, with workbooks and projects designed by company staff. These are reviewed regularly by staff, students and plant managers. Resources are generous, technically advanced, and provide realistic simulations of plant operations. A group of company-based junior colleges act as mutual quality assurance consultants, reviewing each other's courses, and acting as external assessors to graduate projects. Great stress is placed on personal development, so that students can operate effectively within the work group and learn to stretch themselves. Humanities education is part of the course and students engage in voluntary work outside the college. The reductions in recruitment within the company in Japan have led to a recent decline in the number of applicants. There had been no contact between the college and plants overseas.

Tokyo Institute of Art and Design

The college is situated on one site in a suburb of Tokyo, in buildings constructed over a 20-year period. Most (90 per cent) of the 1,000 students study full time. They are mainly recruited from upper secondary schools, although a few are university graduates in search of practical art and design skills. Courses are in general art and design, fine art, and specialist Chinese painting. They last between two and four years, depending on the level. The demographic downturn means that all applicants are accepted, whereas previously there were general education and drawing tests at interview. Staff are recruited for their abilities, rather than their qualifications. Few have teaching qualifications. The majority (80 per cent) of current teachers were trained at the school, and went straight into teaching there. Funding is through student fees. The college accepts no subsidies so that it can retain its independence. The four-year course costs around £6,000 a year. Information technology equipment was good, and up to date, but general art and design equipment was poor, and there was poor management of health and safety. Students' class work was undemanding, pitched at the level of an average general certificate of secondary education (GCSE) student. Job placement levels were said to be good, since there were plenty of jobs in poster, press advertising, and comic book (*manga*) production houses. The college represented the bottom end of a deregulated system. There were no clear standards, no

recognised qualifications, and no entry requirements. Teachers had no qualifications or external experience. Costs to students were high.

Tokyo Metropolitan Harumi Sogo Senior High School

A new, comprehensive upper secondary school, offering the newly designed integrated general and vocational course programme. The lavish new building opened in April 1996, after a two-year period of preparation. This year, it has one cohort of students only, totalling 250 students in six classes. Eventually, it will house 700 to 1,000 students, as well as part-time evening classes. The curriculum is a mixture of general units and vocational units related mainly to commercial and information technology specialisms. Resources are generous, and the information technology equipment in particular is very advanced. Students are aged between 16 and 19, and are required to wear uniforms. Sports facilities are available off site, but they will become part of the campus. Students spoke highly of the choices of course available. There will, eventually, be 190 units in the course programme.

Tokyo Polytechnic College

Tokyo Polytechnic College is a two-year vocational college established in 1974 by the Employment Promotion Corporation under the jurisdiction of the ministry of labour. The aim was to produce a technician level engineer. It is one of 26 such colleges, nationally funded. It provides high-quality vocational training in technical disciplines, supported by state-of-the-art equipment in many areas. Fee levels are low compared with private vocational colleges, at £1,500 a year for those who can afford to pay. About one-third of students receive scholarship loans. The two-year course involves 25 per cent more study than in the United Kingdom because of shorter holidays. Standards achieved are comparable to the higher national diploma in engineering and around national vocational qualification (NVQ) level 2 or 3 in architecture and design. The college offers short courses to employers, who determine the content and review the course annually. Although there is space to expand, there is no remit to do so. The college limits class sizes to 20. There are three applicants for each place and some courses attract 10 applicants a place. Selection is by entry examination, with ability in mathematics the most important criterion and English the second most important. School reports are only considered seriously where schools are known to the staff. Standards are maintained by means of final tests, on the basis of which graduates are awarded the certificates necessary to practise their trade or profession.

Vantan Design Institute

The Vantan Design Institute was founded 38 years ago, primarily to train and educate ‘fashion’ students, by which is meant dressmaking and tailoring rather than design. As young women’s aspirations changed, the management switched to information technology based design, and established seven other institutions, all using information technology as

the core, for design, performing arts, multimedia, animation, computer games development, and various aspects of business. There is also a commercial software development house. The colleges are privately run special training colleges, which receive tax benefits and some small grants for information technology hardware. They are housed in modern buildings, mainly rented, which have accommodated a rapid growth in student numbers. There has been heavy investment in top-of-the-range information technology resources, which were well used by motivated students. The group has 8,000 full-time and part-time students, with most full-time students in the art and design, performing arts, and games production areas. Fees are between £6,000 and £8,000 a year, or £470 for a part-time course. There was a high standard of work in games software and multimedia, with students receiving much individual support. Fashion and graphics work was poor, with copying and derivative design work executed at below the equivalent of level 3 in the United Kingdom. The group is run by energetic people who are prepared to innovate and invest. The college receives approval from the ministry of education, and obtains small grants, but does not wish to compromise its independence further. Its lack of prefectural accreditation was a cause of some annoyance to neighbouring colleges.

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