

## Some Recent Developments in Secondary Education in Great Britain with Special Reference to Technical Education

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No apology is needed for addressing this society on an educational topic. In the 1830's Dr. Kay, later Sir James Kay-Shuttleworth, wrote a pamphlet, "The Moral and Physical Conditions of the Working Classes employed in the Cotton Manufacture in Manchester." This pamphlet inspired a number of influential Manchester citizens to found the first Statistical and Social Inquiry Society. Dr. Kay believed that education could be one of the most important means of overcoming the squalor and degradation prevalent in industrial cities, and he devoted his life to developing an efficient elementary school system. Education to him was important as an instrument of social change.

To-day we have reasonably clear ideas about elementary or primary schooling, but we are still very uncertain about the aims and methods of secondary education. The two major world powers, Russia and the U.S.A., not only have very different political systems, they have different educational aims, but both favour the common school, and both are strongly opposed to the British system of selective schools. The American High School emphasises the social aims of education, and the primary task is said to be to teach students how to be citizens and how to get along with people. In Russian schools since 1932 the emphasis seems to have been on imparting information. Teaching methods by our standards are rather old fashioned, there is much memory work and class discussion is not encouraged. Social training is not neglected in Russia but it is the responsibility of youth clubs and not the responsibility of the schools. In both countries there is to-day a considerable ferment on educational circles. There is much criticism in America of the lack of exacting academic standards and in Russia boarding schools have been established in large numbers primarily, it seems, because it is felt that many children need more social training than day schools are able to offer.

In Great Britain we have an established tradition of selective secondary schools, but in recent years this has been much criticised.

### *Three Types of School*

The Education Act of 1944 required local authorities to provide schools suited to the age, aptitude and ability of the children in their areas. While there was general agreement that in the early years of schooling one type of school was adequate, it was felt that from the age of 11 years individual differences in aptitude and ability were so

great that more than one type of school was necessary. For many centuries the grammar school was the only type of secondary school, but between the two great wars central or modern schools were provided for some of the children aged 11-14 who were unable to gain admission to grammar schools. In addition there was a small number of junior technical schools which accepted pupils at 13 years and offered a two or three year course. Most of these schools were housed in the buildings of technical colleges and institutes and were in the first instance regarded as a useful way of using during the day time premises normally occupied only in the evenings.

In order to implement the 1944 Act, Local Authorities had to plan their provision of secondary education. To aid them in their deliberations were the reports of several government committees. The Hadow Report on "The Education of the Adolescent," published in 1926, recommended a system of secondary education based on the grammar and the modern schools. Only passing reference was made to the Junior Technical Schools. But the Spens Report on "Secondary Education" published in 1938 advocated a tripartite system of grammar, modern and technical high schools.

"We are convinced," the Committee wrote, "that it is of great importance to establish a new type of higher school of technical character, wholly distinct from the traditional academic Grammar (Secondary) School, and as a first step to this end we recommend that a number of the existing Junior Technical Schools . . . . should be converted into Technical High Schools in the sense that they should be accorded in every respect equality of status with schools of the grammar school type . . . . . the age of recruitment for these schools should be 11+ and the method of recruitment should be through the general selective examination by which children are recruited for the Grammar Schools" pp 274—5.

The Spens committee also suggested somewhat tentatively, that the provision of grammar school places should amount to no more than 15% of the secondary school age group, and that those authorities providing more than this should consider whether their provision was "in any way excessive."

The outbreak of war prevented Local Authorities from considering these recommendations, but in 1943 the White Paper on Educational Reconstruction drew their attention to "three main types of secondary school to be known as grammar, modern and technical schools."

### *Three Types of Student*

In the same year the Norwood Report, "Curriculum and Examinations in Secondary Schools," declared that there was three types of pupil corresponding with the three types of secondary school; the grammar school type "interested in learning for its own sake," the technical school type "whose interests and abilities lie markedly in the field of applied science or applied art," and the modern school type who "deals more easily with concrete things than with ideas."

Despite the tripartitism of the White Paper and the Norwood Report, the Education Act of 1944 makes no mention of modern, technical or grammar schools, and local authorities are simply required to provide schooling suitable to the age, aptitude and ability of their pupils, but in the Ministry of Education pamphlet, "The Nation's

Schools" published in 1945, reference is again made to these "three broad types" of post primary school. No attempt is made to specify the percentage of places for each type, as it is recognised that the requirements of different areas will vary, but the pamphlet maintains, "there are good grounds for thinking that, taking the country as a whole, there is no case for increasing the present intake to secondary courses of the grammar school type. Indeed, it is reasonable to suggest that it might with advantage to many children be somewhat reduced . . . . . On the other hand, there is without any doubt ample scope for a very substantial increase in the provision made for secondary courses broadly described as technical."

Circular No. 73 to Local Authorities develops this contention :

"In general, any increase of the present intake into existing grammar schools is likely to hinder rather than help the proper development of secondary education.

"The additional pupils so admitted may not only find themselves committed to curricula which are not best suited to them, but may in fact jeopardize the standards and objectives which are and must be peculiar to the grammar school type of education. Furthermore their withdrawal from the modern and technical schools in which they would more appropriately have been placed, would handicap the organization and development of these schools."

An examination of the statistical tables appended shows that local authorities have not accepted the official advice about the provision of grammar schools and technical schools. Technical high schools have not been established in large numbers, and grammar schools have not reduced their intake.

### *Grammar Schools and Industry*

In the various pronouncements so far quoted certain attitudes are expressed or implied.

- (1) Industry needs more able recruits.
- (2) A Grammar School education turns boys away from a career in industry whereas good Technical Schools will attract a proportion of the best brains and will channel them into industry.

No one will quarrel with the first contention, but the other deserves careful examination.

In "The Nation's Schools" (1945) we read :

"Under the present system, the children who are judged to be the abler and brighter have been transferred to the secondary schools at the age of 11+. Their ability has thus been drawn very largely into professional, clerical and office occupations. Industry on the production and manufacturing side has to that extent been deprived of its reasonable share of the national talent—a loss which a country so highly industrialised as this cannot afford to carry."

This is an inadequate statement. Industry failed to receive its share of the national talent before the war because wages, conditions of work, methods of recruitment and prospects were unattractive compared with professional and clerical occupations.

The grammar schools were not at fault if their students realised that there were more satisfactory and dependable ways of earning a living than industry was prepared to offer.

It is surprising that the many wise men who sat on consultative committees and who drafted White Papers failed to realise that industry would receive a higher proportion of the national brainpower only if it was prepared to pay for it.

### *Post-War Developments*

Since the end of the war industry has offered much more attractive conditions to the young worker in the form of better pay, greater security, encouragement for part-time study and much better long term prospects. It now has much more to offer the bright and enterprising youth than clerical work, banking, accountancy, insurance which used to attract so many grammar school leavers before the war. This might have led to a general demand for technical high schools to which the bright boys of the country would clamour for admission so that they could be prepared for the golden opportunities in industry.

There has either been no such demand or the local authorities have not heard it. Certainly the statistical tables show that the number of technical schools has decreased from 324 in 1948 to 303 in 1956. There has been a marked increase in the number of pupils in technical schools, but I think this results largely from the admission of pupils at 11+ instead of 13+ to some schools.

I wish to suggest several reasons why there has been no increase in the number of technical schools in the post-war period.

- (1) The prestige of the grammar school is still a powerful attraction. Even when parents are reasonably sure that their child will be apprenticed to a trade at 15 or 16 they think that he gains certain educational and social advantages from a few years in a grammar school, and for the parents themselves there is a certain social distinction in having a son at grammar school. Many local authorities have therefore found it easier to satisfy their electors by adding a new wing to the grammar school than by founding a technical school.
- (2) In some areas, and especially in highly industrial areas where one might have expected technical high schools to be established, there has been political pressure in favour of comprehensive schools, about which I shall say more later.
- (3) Grammar schools have proved much more ready to adapt their curriculum and outlook to the changing needs of society than was at one time thought possible or desirable. Many grammar schools have introduced technical subjects of value to those pupils who, as they make their way through the school find that their inclination is towards a career in industry.
- (4) The problem of selection for technical schools at 11+ has not been solved. Although the Norwood Committee proclaimed the existence of a group of pupils "whose interests and abilities lie markedly in the field of applied science or applied art," it is hard to recognise this group, if indeed it exists, amongst 11 year olds. Psychologists have not been at all sanguine about detecting practical aptitudes at that age, and the fact that a child is interested in aeroplanes or model engines is a very shaky guide to the way he will develop later. In the absence of convincing evidence about their child's practical aptitudes, it is not surprising

that parents are reluctant to choose a type of education which may prove quite unsuitable.

- (5) The aim of the technical school is vague and uncertain. "The Nation's Schools" suggests that the technical school's aim is "to send out pupils equipped with a good general education that will stand them in good stead in whatever occupation they may enter." The same could be said of any school. This is a real problem. Should the technical schools teach industrial skills such as carpentry, bricklaying, engineering, or should they concern themselves with a broad general education with a bias towards industry? As yet the technical schools have not given a convincing account of their peculiar contribution to the educational system.
- (6) Although industry needs more able recruits than it received before the war it looks for them at 17 or 18 not at 15 or 16, and in order to find them it has had to turn to the grammar schools from which it recruits large numbers of student apprentices with qualifications in science and mathematics. One of the great problems of education in Britain to-day is to encourage a higher proportion of children to continue their schooling to the age of 18. Table D shows that the grammar schools are having some success in doing this. Of the 1947 intake 19,295 or 20.2% were still at school after their 18th birthday, but in January 1953 the technical schools had only 633 pupils aged 17 or over. In view of the shortage of teachers with qualifications in science and mathematics it seems more economical to build up the sixth forms of grammar schools than to establish sixth forms in technical schools where, for some years to come there could be no more than a handful of pupils for each sixth form master.

#### *Bipartite System*

Although there has been reluctance to found technical schools, technical education has not been neglected in the post-war period. Instead of separate technical schools other types of school have incorporated technical subjects in their curriculum. Scotland has only two types of secondary school, the Junior Secondary School and the Senior Secondary School both of which offer technical studies. Cheshire has no technical schools but it shares the responsibility for technical studies between its grammar schools and its modern schools. Middlesex has adopted a similar system. In the West Riding, Huddersfield College, a grammar school with an excellent record of university scholarship successes, is absorbing the local technical school and is being re-born as Huddersfield New College.

The statistical tables show the growth in the number of bilateral schools, but there is much more blurring of distinctions and overlapping of functions between the different types of school than the figures suggest. It seems that we are moving towards a bipartite instead of a tripartite system.

#### *Comprehensive Schools*

So long as there is more than one type of secondary school some system of selection of pupils is necessary. In the past ten years there has been a good deal of popular feeling in support of proposals

to abolish 11+ selection tests and to provide a common or comprehensive secondary school for all. The arguments for and against these proposals are too numerous for me to set out in this paper, but I wish to refer to some of the most significant. Unfortunately this is now a party issue. In its report "A policy for Secondary Education" (1951) the Labour Party states its case for the comprehensive school and attacks the tripartite system because it perpetuates class segregation and gives a feeling of inferiority to children unable to proceed to a grammar school. The report denies the possibility of determining the future development of children at 11 and maintains that it is in practice impossible to transfer pupils at 13. Moreover the Education Act requires that parents' wishes should be consulted, but this was impossible with the tripartite system. The comprehensive school, according to the report, "caters for all children through a system based on a central core of subjects common to all, from which branch classes in specialised subjects taken according to the desires, aptitudes and capacities of the children."

A further argument advanced in favour of this type of school is that it would be attended by children of all social classes and so would promote social unity and lead eventually to improved human relations in industry and the community.

Comprehensive schools have been established for some years in several rural areas in Wales, in the Isle of Man, in Westmorland and in Yorkshire. Most of these schools are quite small: 230 boys at Windermere and 400 boys and girls at Castle Rushen in the Isle of Man. These rural comprehensive schools came into existence not for the reasons mentioned in the Labour Party's report, but because in these rural areas there are not sufficient children to provide two or three types of secondary school in each district. In urban areas comprehensive schools tend to be very large, about 2,000 pupils is usual. They have to be this size in order to have a sixth form of workable numbers. Such schools have been established in Birmingham, London, Coventry, Manchester and elsewhere. It is too soon to form any opinions about them, but it is already clear that they do not satisfy all the critics of the tripartite system, usually because in order that pupils may be allocated to sets it has been found necessary to adopt an internal system of selection tests not unlike the qualifying examinations. In the initial stages transfers between sets are easy to arrange, but the divisions between the academic and non-academic streams quickly harden. It is by no means sure that the feeling of disappointment experienced by those who are not admitted to the academic stream is not as great as is felt by children who fail a selection exam. and proceed to a secondary modern school. Moreover there are grammar schools within travelling distance of the comprehensive school, and the competition for the relatively few places in these schools makes the qualifying fever even more hectic. Sometimes local authorities have tried to close grammar schools in order to give a clear field to newly founded comprehensive schools, or they have tried to expand grammar schools so that they become comprehensive. These policies have at times occasioned such fierce controversy that the Ministry has had to intervene. In 1954 Miss Horsburgh would not allow Eltham Hill Girls' School to be absorbed by Kidbrooke Comprehensive School. Nor was permission given to expand the Bec Grammar School

in South London to take 2,000 boys without selection. More recently Sir David Eccles has said that he will not sanction any plan which interferes with an existing grammar school.

### *American Experience*

It is surprising that the advocates of the comprehensive school have not studied American High Schools more closely. There has perhaps been a tendency to accept too readily the claims made for these schools and their failings have been glossed over. In "The New Era in Education" Professor I. L. Kandel of Columbia University, one of the most reliable of American educational thinkers has written :

"The comprehensive high school which is attended by all the children of all the people is the response to the American ideal of education in a democracy. It is not only considered educationally more efficient than separate schools but is regarded as essential for developing a sense of social unity and solidarity. Neither argument has been proved sound in practice." (p. 305).

One of the charges most frequently made against the American high school is that it caters only for the average and that the needs of gifted pupils and dull pupils are neglected. The former President of Harvard University, Dr. J. B. Conant, has written :

"There is no doubt that the use of our public schools consciously or unconsciously to keep our society 'democratic' and fluid presents us with an educational dilemma. The more we try to employ the instrument of universal education to offset the forces of social stratification inherent in family life, the more we jeopardize the training of certain types of individuals. In particular, we tend to overlook the especially gifted youth. We neither find him early enough, nor guide him properly, nor educate him adequately in our high schools."

According to the Harvard Report on "General Education in a Free Society," "The tendency is always to strike a somewhat colourless mean, too fast for the slow, too slow for the fast."

In both the U.S.A. and Canada it has been found that students who proceed to college before the end of their course are more successful than those who complete the course. Critics suggest that the longer a student stays in some schools the more he forgets.

### *Class Segregation and the Comprehensive School*

Exponents of comprehensive education might concede a slight falling off of academic standards, but they maintain that this is more than offset by the breaking down of social barriers which results from all children from all types of homes being educated in the same type of school. That cannot be achieved in Britain without legislation to close all independent and direct grant schools. Such drastic action is unlikely in the foreseeable future.

In neither Russia nor America in spite of many years of almost universal comprehensive education has a classless society been evolved. Professor Kandel in the passage quoted earlier doubts the efficiency of the high school in promoting social unity and solidarity. There has been research work on this problem in America<sup>1</sup> which suggests

<sup>1</sup> "Who shall be educated?" by Warner, Havinhurst and Loeb, New York 1944. There are other studies of the same problem.

that the social class distinctions which prevail outside the school are brought into the school, and that they influence choice of friends, choice of subjects and choice of courses of study.

I think most schoolmasters who have taught in schools which cater for a wide range of social classes would agree that the school does not succeed in breaking down social distinctions. It is an agent of social integration but its powers are limited.

Such is the enthusiasm for comprehensive education in some parts of Britain that very many schools of this type would have been founded were it not for the hard fact that large new buildings are nearly always needed to accommodate them. This material consideration has damped the ardour of some authorities and it has led to proposals for comprehensive systems which can use existing buildings.

#### *The Leicestershire Experiment*

The Leicestershire experiment which began last September offers some of the features of the comprehensive system without the building costs. The Director of Education for Leicestershire maintains that the scheme has "the practical advantage of fitting pretty snugly into the pattern of school buildings as they exist in the county, and should appeal to those who are old-fashioned enough to admire the particular virtues of the medium-sized school." The experiment "proposes a system in which the grammar school is associated with a number of secondary modern schools to form a single educational unit. All pupils would enter the appropriate secondary modern school and would be taught there for the first three years of the secondary course. . . . At the end of the third year of the secondary course, transfer to the grammar schools would be open to all children whose parents were prepared to give an undertaking that they would leave them at school for an extended course at least up to the end of the school year in which they attain the age of 16. . . . The remaining children would stay in the secondary modern school until they reach the leaving age of 15."<sup>2</sup>

The basic idea, which is to divide secondary education into two end-on stages is not new. Something similar was proposed by R. Pedley in his "Comprehensive Education" which was much discussed a year or two ago, and it is practised in the many parts of America where there are both junior high schools and senior high schools.

#### *Criticisms of Leicestershire Experiment*

There are two serious criticisms in such schemes. The first is that it necessitates a break in schooling at an age when many children are unsettled and desirous of going out into the world to earn their living. The other criticism is perhaps more telling. An essential feature of the Leicestershire scheme is that all children spend about three years in a secondary modern school. Such schools in England have an average size of 350 pupils and cater for the children in a limited area. They are neighbourhood schools and so vary widely from district to district, a school in the dock area of Liverpool for instance will be very different from a school in one of its more expensive residential suburbs.

<sup>2</sup> The Leicestershire Experiment by S. C. Mason, p. 10.



This means not only that there is little mixing of social classes in school, it also means that some schools have very few children of intellectual ability.

The table reproduced below was prepared by the Scottish Council for Research in Education and is based on performance in Moray House intelligence tests.

Occupation of Father	% of all children whose fathers fall in these grades (a)	% of all children with IQs of 113+ i.e. brightest 20% (b)	% of children in each grade with IQs 113+ (c)
Professional .. ..	2.1	7.0	66
Large employers ..	1.2	2.7	46
Other salaried ..	3.5	8.0	45
Small employers ..	5.0	8.0	32
Clerical and other non-manual ..	8.4	13.5	32
Skilled manual ..	36.0	35.1	19
Farmers .. ..	2.1	1.9	18
Semi-skilled manual	14.2	9.2	13
Agric. labourers ..	6.5	4.0	12
Unskilled manual labourers .. ..	21.0	10.6	10

Column (c) shows the striking differences between the innate ability of children from different types of home. In a neighbourhood school attended largely by children from professional homes 66 out of every hundred will be of sound intellectual ability, and they will presumably set the tone of the school, whereas in a neighbourhood school attended largely by children whose fathers are unskilled or semi-skilled workers, only 10 out of every 100 will be intellectually able, and they will be such a small minority that they will not be of much influence. Selection at 11 for grammar school education gives the capable child in a poor district the opportunity of escaping from the down drag of less intellectually gifted school fellows. If the opportunity is delayed for a further three years, as it is in the Leicestershire and similar schemes, then for many children it will be too late. They will have spent so long in a non-intellectual atmosphere with companions who cannot or do not wish to learn, and they will be so close to the age at which they can earn their living that the idea of prolonged schooling and intellectual effort will be distasteful. The effect of the Leicestershire experiment and of similar schemes will be to add still further to the difficulties of the bright child who lives in a poor district.

It would be possible to elaborate still further the arguments against comprehensive schools, but I shall conclude with another comment from America taken from the recently published work, "Educating Gifted Children" by DeHann and Havighurst.

"The schools are non-selective, which means in effect that the average high-school student body consists mainly of boys and girls with ability just average or slightly above or below average. . . . Thus the gifted youth is likely to be outnumbered in the high school and college classes as well as in the elementary school. Unless the teaching is remarkably skilful and clearly directed towards

stimulating gifted students, such students tend, when outnumbered, to adopt the pace and attitudes towards learning of their average age mates."

### Conclusion

In this paper I have described some of the recent developments in secondary education. I have had to select my topics because the subject is so wide. What I have tried to do is to show how easy it is to make mistakes when planning educational development. Those who plan to break down the barriers between social classes by introducing comprehensive school systems may succeed only in strengthening the divisions which already exist. Events have shown that those who thought it necessary to establish technical schools in order to provide able recruits for industry were mistaken.

By way of conclusion, and as a topic which might be discussed in the light of these remarks, I wish to draw attention to the action of the Northern Ireland Ministry of Education in instructing the Belfast Education Committee to build two technical schools. This is a matter of some public interest. The Ministry has overruled the Education Committee who were opposed to the idea of separate technical schools and who favoured instead the provision of technical courses in grammar schools and intermediate schools.

It would be interesting to know what criteria the Ministry will use in selecting 10 or 11 year old children for technical education, and what the special aim of these schools will be. These are questions which only the Ministry can answer.

TABLE A.—NUMBER OF PUPILS IN GRANT-AIDED SCHOOLS IN ENGLAND AND WALES<sup>3</sup>

	1948	1950	1956
Modern .. .. .	960,500	1,095,247	1,340,591
Grammar .. .. .	591,651	585,622	634,933
Technical .. .. .	72,502	73,104	91,539
Bilateral Mod-Gram. .. .. .	—	7,554	33,165
Mod-Tech. .. .. .	—	2,345	9,371
Gram-Tech. .. .. .	—	3,568	10,006
Multilateral .. .. .	—	3,524	1,557
Comprehensive .. .. .	—	7,988	27,315

TABLE B.—NUMBER OF GRANT-AIDED SCHOOLS IN ENGLAND AND WALES<sup>3</sup>

	1948	1950	1956
Modern .. .. .	3,063	3,227	3,636
Grammar .. .. .	1,378	1,356	1,357
Technical .. .. .	324	306	303
Bilateral Mod-Gram. .. .. .	—	19	66
Mod-Tech. .. .. .	—	4	16
Gram-Tech. .. .. .	—	8	20
Multilateral .. .. .	—	4	2
Comprehensive .. .. .	—	10	31

<sup>3</sup> Annual reports of the Ministry of Education.

TABLE C.—PERCENTAGE OF 14 YEAR OLD CHILDREN RECEIVING DIFFERENT TYPES OF EDUCATION IN L.E.A. SCHOOLS IN ENGLAND AND WALES<sup>4</sup>

	1950	1956
Technical .. .. .	5.2	5.5
Grammar .. .. .	19.4	20.1
Other .. .. .	75.4	74.4
	100.0	100.0

TABLE D.—AGE OF LEAVING GRAMMAR SCHOOLS<sup>4</sup>

Year of intake	Estimated total intake	Age of Leaving (cumulative figs.)			Remainder staying after 18th birthday	
		under 16	under 17	under 18	No.	%
Pre-War	100%	%	%	%	No.	%
1928 ..	66,445	29.4	67.9	86.7	8,851	13.3
1929 ..	60,553	30.3	70.4	87.7	7,425	12.3
1930 ..	62,133	32.7	72.5	89.4	6,582	10.6
Post-War						
1946 ..	97,283	24.3	68.6	82.8	16,736	17.2
1947 ..	95,543	19.8	63.8	79.8	19,295	20.2
1948 ..	97,388	16.3	59.4	—	—	—
1949 ..	95,990	16.1	—	—	—	—

<sup>4</sup> *Early Leaving*, H.M.S.O.1954.