

Progressive Education

The Spens Report*

THE publication of what has already become known as the Spens Report is of great significance for the educational system in England and Wales, and its complete or even partial adoption will be of far-reaching importance.

The Consultative Committee responsible for the Report, under the chairmanship of Sir Will Spens, master of Corpus Christi College, Cambridge, was a strong one. Its terms of reference were to examine the organization and so forth of schools other than those administered under the Elementary Code which provide education for students beyond eleven plus years, "regard being had in particular to the framework and content of the education of pupils who do not remain at school beyond the age of about 16". In view of the potent criticism aimed at present-day secondary school education in that, as the Report points out, it generally seeks to satisfy the curricula inspired by the various school certificate examinations, the latter part of the Committee's aim is well timed and of the utmost importance, because it is only a small percentage of secondary school students who eventually proceed to the universities.

To-day, the Board of Education recognizes nearly one thousand four hundred secondary schools, and these contain altogether nearly half a million students. That is, nearly 12 per cent of the child population of secondary school age in the country receive a secondary school education.

The Committee adopted a liberal point of view by considering education "in terms of activity and experience rather than of knowledge to be acquired and facts stored". It was appointed in March 1935 and since that date has examined one hundred and fifty witnesses, while various sub-committees have examined twenty-two witnesses. These witnesses can be taken as widely representing educational thought since they have been drawn from the Board of Education, directors of education and members of local education authorities, associations representing those officials, organizations representing teachers, other organizations, and many individuals including school inspectors, professors of education, psychology and physiology, and head masters and head mistresses of public, secondary, technical and senior schools.

* Report of the Consultative Committee on Secondary Education with Special Reference to Grammar Schools and Technical High Schools. Pp. xxviii + 475. (London: H.M. Stationery Office, 1939.) 3s. 6d. net.

GENERAL RECOMMENDATIONS

One of the outstanding features of the Report is the revolutionary changes suggested in secondary school organization and classification, to be outlined in the next section. This is doubtless due to the realization that the aim of secondary education is now not to train children "to work with their heads rather than with their hands", for conditions have now changed: democracy is challenged and "the duty of citizenship in a democracy renders it essential that all should be taught to understand and to think to the best of their ability". Those children who are capable of thinking best in abstract terms would undoubtedly derive greatest benefit from the academic training of the Grammar and Technical High School. But it is equally as important that many children, some of them of marked ability, would profit best by a Modern School education. This being so, careful allocation of children at eleven plus years from the primary schools to these schools is a matter for serious consideration.

In view of this, the Committee directs attention to the unfortunate fact that Grammar and Modern Schools are at present administered under different codes and often by different authorities. Differentiation goes even further in the scales of teachers' salaries, types of buildings, quality of equipment, size of classes and so forth. To eliminate this, it is suggested that all secondary schools—Grammar, Modern and Technical High Schools—should be placed on an equal footing so far as these conditions are concerned. The maximum size of classes should be thirty, and (with special permission of the Board of Education) should never exceed thirty-five. It is suggested, too, that all fees should eventually be abolished as soon as the financial condition of the State renders this possible.

SCHOOLS AND THEIR CURRICULA

A revolutionary change in the organization of schools offering a secondary education is visualized in the Report. It should be possible for children of eleven plus years to be transferred to one of three types of secondary school, namely, the Grammar School, the Technical High School or the Modern School (at present known as the Senior School—a term used by the Board of

Education to designate both selective and non-selective Central Schools). Transfer between these schools should be possible at thirteen plus years, but attendance should be compulsory at one or the other of them up to sixteen years. Transfer at thirteen plus years should also be possible to technical schools, which include Trade, Junior Technical, Home Management and Junior Commercial Schools: but here also, attendance up to sixteen years should be compulsory. In all types of schools, education should be brought into closer contact with the practical affairs of life, and the first two years of all schools should have a common curriculum.

Education in the Grammar School should be suitable for students passing on to the universities: but reconsideration of the curriculum in these schools is now essential. There is, at present, a grave tendency to over-work and over-strain the adolescent students, especially in girls' schools.

The curriculum in Grammar Schools should allow for the teaching of all subjects allowed at present, so far as this is possible. Proposals have already been made for a greater unification of the subjects, but these should be treated with the utmost caution. It is not certain, for example, that geography, if combined with history, could retain the distinctive character which it has achieved in the hands of modern scholars. Yet, there is much to be said for the intimate alliance between subjects, provided the essential autonomy of each is preserved. The teaching of physics and mathematics, for example, suffers much from a separation which Newton would have found incomprehensible. Subjects are also needlessly subdivided—a subdivision which, in some cases, for example, mathematics (the separation of plane from solid geometry, of elementary calculus from algebra), physics and biology (for example, neglect of zoology compared with botany), tends to distort rather than bring out the characteristic architecture of the subject.

The curiosity of children of secondary school age about the practical concerns and activities of the world is frequently so strong as to amount to a passion. Advantage should be taken of this in order to bring the studies of the secondary school into closer contact than at present with the practical affairs of life. In mathematics, physics and chemistry, for example, the 'problem method' should be the standard mode of procedure—practical questions of wide interest and utility being made the occasion for the introduction of new mathematical or scientific knowledge and technique. If the utility phases were adequately developed in all subjects, everything which those concerned about 'education for citizenship' rightly demand would probably be granted.

Important defects in the teaching of mathematics are emphasized in the Report. This is ascribed to an imperfect synthesis between the idea that some parts of mathematics are useful to the ordinary citizen or to certain widely followed vocations and should therefore be taught to everybody, and the old idea that when mathematics is not directly useful it has indirect utility in strengthening the process of reasoning and in inducing a general accuracy of mind. It is suggested that mathematics can be put on a sound footing only when it is taught as other subjects should be taught, since it is one of the main lines which the creative spirit of man has followed in its development.

The approach to science, too, needs readjustment. It should not be by way of a systematic study of particular sciences, as is the method adopted in most schools. This feeling has already led, in some schools, to the provision of courses in general science as an alternative to courses in particular sciences. This general science tends to relate science to everyday experiences. It avoids what is of a purely academic nature and illustrates laws and general principles by special reference to practical applications drawn from the physical and biological worlds. In this way, general science makes more direct contact with life and creates real interests.

The teaching of science has lost close touch with life itself, and for this reason has often failed either to give the knowledge required or to stimulate the student's interest. The Committee believes that there is a general body of knowledge, not confined to either the physical or biological sciences as they are generally considered, which ought to be known by the average citizen. In boys' schools especially, science is too often restricted to the physical subjects. It is now suggested that in science teaching the pupils should be given some knowledge of the natural laws which operate in the universe. It should reveal the influence of scientific thought and achievement on the evolution of our present-day civilization, and it should show the possibilities (for good and for evil alike) in the future of the human race. The appeal here is to social interest and social utility.

Therefore, in physical sciences should be included astronomy (since the earth is only a very small portion of the whole), physics, chemistry and possibly some geology. Some astronomy is considered to be essential. In chemistry, a certain amount of organic studies, such as fermentation and saponification, should find a place, as they do in most American schools. The approach to biology should be through natural history, with primary emphasis on plants. This should merge later into the general characteristics of living organisms, taking examples from plants, and animals, including man.

In country Grammar Schools full advantage should be taken of the rural environment. Though the reforms suggested for the urban Grammar Schools apply also to rural Grammar Schools, it must be realized that the latter have special difficulties and special advantages. The resources of the countryside are at the disposal of the teacher. Rural schools enjoy unrivalled opportunities for framing syllabuses which have a high practical value derived from their close affinity to the world outside the school, and at the same time should develop in the student an inquiring and critical mind and the power of independent judgment.

Among the features prominent in the curriculum of a rural Grammar School should be the local survey and the school garden. A general local survey could be the basis of much geography and history teaching. The school garden, apart from its intrinsic merits as a means of teaching biology and agriculture, could be an agent in agricultural research such as the testing of new fertilizers. Sir John Russell stated that this has already been done in certain schools in connexion with the Rothamsted Experimental Station, and the pupils realized that they were being employed in a joint enterprise by a great scientific institution and that this was not an exercise book problem but "something which mattered". Bee-keeping and poultry husbandry should be encouraged in the rural schools. Elementary mathematics should be based on the farm and the local survey; material and statistics should be taken from them. Science should have a biological bias, and domestic science should include training in the utilization and conservation of farm and garden produce.

The technical schools of the Report include Trade Schools, Junior Technical Schools, Home Management and Junior Commercial Schools. These have developed their curricula on a broad scientific, utilitarian and vocational basis, and thus offer appropriate courses for a certain type of pupil. In this they are justified, but the Committee does not consider that they offer a real alternative to the Grammar School, and therefore it has suggested the institution of a new type of school, namely, the Technical High School.

The Technical High School should provide good intellectual discipline apart from the more purely technical training. Therefore, during the first two years, teaching should be of a general secondary school type. In other words, this school should develop a curriculum designed to provide a liberal education, with science and its applications as the core of inspiration. The subject material should include English, history, geography, mathematics, science, engineering drawing, handicrafts, physical education, æsthetic subjects, and a foreign language (preferably German) where the

student shows special capability of profiting by it. The method of teaching science in the Technical High School will clearly be different from that adopted in the Grammar School. The Technical High School should also offer a new type of leaving certificate having the same status as the first school examination, that is, fulfilling first conditions for matriculation.

FIRST SCHOOL CERTIFICATE EXAMINATION

The present first school certificate examination is subjected to severe criticism in the Report. It is remarked that the examination should follow the curriculum, not determine it. Profound changes in the syllabus are recommended, and it is suggested that greater use be made of school records.

In its present form, the school certificate tends to enforce uniformity in the curriculum. This is probably due to the fact that it is used as a test of education received and as a means of exemption for matriculation into the universities. It should not be used as a substitute for the matriculation examination, but should be a conditional first step towards the latter.

Greater freedom of choice of subjects should be allowed. There should be a reduction in content of the syllabus, and a candidate should be required to pass in at least five subjects, including English and either a foreign language or science (including mathematics). Thus, no candidate would be prevented from obtaining a certificate solely by reason of lack of linguistic or mathematical or scientific ability. The recommended reduction in content of the mathematics course and a simpler course in science would involve greater variation and some lightening of the syllabus; but no lowering of the standard of marking is implied.

Post-certificate work in the sixth form, possibly leading to the higher school certificate examination, should be encouraged for the benefit of students about to enter the universities.

PHYSICAL AND PSYCHOLOGICAL PROBLEMS

Physical and psychological problems receive due consideration in the Report. For example, physical training and physical fatigue and strain are of paramount importance in any school, and to ignore them would necessarily involve serious consequences. The physical growth of the child at puberty and adolescence must be considered in relation to such problems as posture, self-control, etc.

No adolescent, until calcification of the bones is complete, should be allowed to do heavy continuous

muscular work, either in or out of school, particularly if it involves postural fatigue. Risks of spinal curvature must be avoided, and the importance of adequate rest in a suitable position should receive careful consideration.

The onset of puberty must be recognized by the authorities through the characteristic well-marked physical and mental changes, and due allowances made for it. During this period, especially in girls, ample provision should be made for a liberal dietary and well-balanced periods of exercise, rest and sleep.

It is a matter for regret that some authorities do not provide for medical inspection and treatment in Grammar Schools. The practice of medical inspection and treatment should be made universal, and medical officers should be encouraged to undertake a wider scope of inquiry. Meals should be available at all schools, and in arranging

the dietary, the school medical staff should be consulted.

The psychological factors influencing the pupil in his mental development and his education should be studied continuously by the school teaching and school medical staff. These include the general characteristics of puberty and adolescence, mental and intellectual abilities, individual differences and special intellectual capacities, sensory capacities, attention, memory, imagery, reasoning, emotion, social impulses, self-assertion and submission, and so forth. In fact, the application of psychology to the study of the school child is of a special character, and therefore cannot be ignored. All trained teachers have received special instruction in this aspect of their careers, and this should make these problems less formidable than they would otherwise be, but it does not detract from their importance.

The Weather in Great Britain during 1938

By E. G. Bilham

SIR NAPIER SHAW, in the delightful Christmas card which his friends have been privileged to receive, describes the year 1938 as *annus memorabilis*. The description is a happy one, for the year was memorable in many respects. The amount of material available at the moment for the purpose of summing up the features of the year as a whole is relatively small, and we cannot here attempt anything in the nature of a detailed discussion. It has been thought, however, that a retrospect of the more striking meteorological events would be of interest.

The year began with a mild, wet and stormy January. In many parts of England and Wales no temperature below 32° F. was recorded, and in most districts the mean for the month was about three degrees above normal. Gales were numerous, and that on January 14-16 was exceptionally severe. A gust of 101 miles per hour was recorded at St. Ann's Head on January 15. A similar velocity was reached at the Liverpool Observatory on January 29, and 100 miles per hour was also recorded in the Orkneys on January 23. A magnificent display of the aurora occurred on the night of January 25-26.

Conditions in respect to warmth and wind were less abnormal in February, but it produced one of those coincidences of tidal and meteorological conditions necessary for the occurrence of floods on the east coast of England. Such flooding occurs when a wind-induced deepening of the waters of the North

Sea, due to strong winds from the north-west quadrant, coincides with a high predicted tidal level. These conditions prevailed on the evening of February 12, when the sea burst over the low-lying coastland between Winterton and Palling in Norfolk and flooded an area of the order of fifteen square miles. Later, on April 3, the sea broke through the defences at Horsey and caused a further extensive inundation. The rainfall of February was very deficient except in parts of Scotland, the general fall over England and Wales being about half the normal.

The shortage of rainfall south of the Border was accentuated in March, when the general fall for England and Wales was only 27 per cent of the normal. It was the driest month of that name at many stations. On the other hand, parts of Scotland had excessive rainfall, as much as 50 inches being recorded at Loan (Loch Quoich). The month will also be remembered for its remarkable warmth. Previous records of mean temperature were exceeded by a substantial margin. For example, at the Radcliffe Observatory, Oxford, where records on a comparable basis are available back to 1815, March 1938 gave a mean value exceeding the previous highest (1822, 47.3° F.) by as much as 2.6° F.

April continued the sequence of dry months. For the British Isles as a whole, it was the driest April on record, and probably the driest month of any name. The total rainfall of the three months