General education in the royal air force 1910 - 1961

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GENERAL EDUCATION

IN THE ROYAL AIR FORCE

1918 - 1961

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GENERAL EDUCATION SCHEME

(RAF Education Test Part II class in session)

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Note

Since some of the original material I have consulted is subjected to certain official restrictions eg the Official Secrets Acts 1911 and 1920 and the Public Records Act 1958, it has not always been possible to provide specific source references.

For instance though I am allowed to refer to the Robson Memorandum and the Donald Report I cannot give conventional source reference to them.

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GENERAL EDUCATION IN THE ROYAL AIR FORCE

1918 - 1961

INTRODUCTION

The White Paper of the Permanent Organisation of the Royal Air Force (The Trenchard Memorandum) published on 11th December 1919 placed a great deal of emphasis on the training of ground crew. Uppermost in Trenchard's mind were, of course, the need to replace the trained mechanics who had been lost to the service on demobilisation and the formation of a technical cadre which could be rapidly expanded in time of war.[1] The prime aim, therefore, of the Education Service and later of the Education Branch of the Royal Air Force has been to secure a high degree of technical proficiency among both apprentices and adult recruits.

It has always been recognised by the Royal Air Force that facilities, through which all officers and men can obtain education in the wider cultural sense, should complement those of a purely technical nature. While the syllabuses of most training establishments contained an element of liberal studies it was considered to be insufficient to meet the future needs of the trained airman. Thus as technical continuation training was provided for the maintenance of trade standards so complementary facilities were to be provided for education in a broader sense. It was for this reason that the General Education Scheme was launched in 1923 and members of the Education Service carrying out the work of the Scheme found themselves responsible for the following tasks:

a. The provision of assistance to all ranks in the study of education subjects related to service requirements.

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1 Cmd 467. The Permanent Organisation of the Royal Air Force. (December 1919)

b. The provision of educational facilities designed to develop mind and character.

c. To provide assistance for all ranks to fit them more adequately for careers in civilian life when their service with the Royal Air Force comes to an end.[1]

The function of the General Education Scheme has not necessarily been restricted to these basic responsibilities and from time to time additional tasks have been added. Furthermore the same degree of importance has not be consistently attached to all three tasks - the relative consideration given to each being dependent upon existing service or political requirements.

Because technical education has, in the main, been carried out by officers and NCOs of the specialist branches, education officers carrying out the requirements of the General Education Scheme have largely found themselves on the teaching of general studies.

The aims of this paper are therefore threefold:

a. To trace the teaching of general studies in the Royal Air Force from its foundation to the end of conscription in 1961.

b. To describe the necessary changes which have been made in educational organisation to meet changing circumstances.

c. To evaluate the place of general studies in air force education.

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1 AP 3379 Education in the Royal Air Force. Chapter I (1966)

CHAPTER I

ORIGINS AND ORGANISATION OF THE RAF EDUCATION SCHEME

The Royal Air Force, springing as it did from an amalgamation of the Royal Flying Corps and the Royal Naval Air Service, drew heavily on the traditions and organisation of the two older services during its formative years. Thus in the period immediately following its formation the RAF continued to share with the Army the system which had been devised by the War Office for the general education of officers and other ranks.

On the outbreak of war in August 1914 existing educational activities in the army had come virtually to a standstill although occasional talks on general subjects were still given by visiting civilian lecturers, under the auspices of the Young Men's Christian Association. In the Autumn of 1915 a YMCA committee, with Dr William Temple as chairman and Dr Basil Yeaxlee as secretary, was formed to strengthen and extend such work. This Committee, which consisted of members of the Association's headquarters personnel and university staff continued its work intermittently until April 1918.

In April 1918 all civilian resources were co-ordinated by the establishment of the YMCA Universities Committee on which the Universities of Great Britain, local education authorities and professional education bodies were represented. The YMCA met the whole cost of the undertaking including administration, fees and expenses of lecturers, purchase of books and apparatus and so on. Although this cost the YMCA a quarter of a million pounds, the committee was given a free hand in carrying out its programme. By far the greater part of the activity was overseas, but work in the United Kingdom was undertaken at all camps where YMCA centres were established. Among these centres was the Red Triangle

College at Aldershot where, "under Mr. S. A. Williams, civilian teachers conducted classes in a great variety of subjects attended by 12,000 Army and RAF men".[1]

Later on the Adult Education Committee of the Ministry of Reconstruction paid tribute to the work of the YMCA Universities Committee with the air force and stated in its final report that "very valuable assistance has also been obtained from the YMCA who were always willing to place their resources unreservedly at the disposal of the Royal Air Force".[2]

The organisation of lecturers by the YMCA led to the realisation that there should be a more formal basis for general education and Haig himself suggested the preparation of a scheme of general education throughout the Army in France with the following aims:

Making men better citizens of the British Empire by widening their outlook and knowledge.

Helping them by preparing for their return to civil life.

The order authorising the proposed scheme of education appeared on 8th March 1918. Under it authority was given for the introduction of a system of Education for all troops in France, and officers were to be detached to formations to organise the scheme. Other ranks of the Royal Flying Corps, as members of the British Expeditionary Force, were naturally included in the scheme and on the formation of the Royal Air Force on 1st April 1918, the facilities which had existed for its predecessor were retained , and both serving officers and civilian lecturers continued to meet the educational needs of the new service

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1 "The civilian contribution to Army Education" by Dr. Basil Yeaxlee (Journal of the AEC No 17 (June 2942))

2 Final Report of Adult Education Committee of the Ministry of Reconstruction 1919.

within the framework laid down by Haig. Within a month of its foundation, however, the Royal Air Force was looking for teachers from within its own ranks to undertake "this important work" and Commanding Officers were being asked to submit to Air Ministry the names of those officers and men under their command who had either degrees or the Board of Education Final Certificate.[1]

In November 1918 the Air Council announced its intention of establishing a body of professional teachers to ensure the efficiency of ground training and to extend the general educational development of all ranks.[2] These teachers were to replace those officers who had been either seconded from their units for educational work in the RFC or who had been recruited for the same purpose from within the RAF. The complete scheme for the permanent organization had been submitted to the Air Ministry in draft form by August 1918 but with the end of the first world war it was shelved and priority given to the demobilisation of the RAF.

The importance of the Demobilisation Resettlement Scheme lay in the fact that it gave the RAF the opportunity to try out several of the main features which had been proposed for the permanent education system. The RAF demobilisation machinery, unlike the much larger Army counterpart, involved a large measure of decentralisation and an almost complete lack of printed matter. General control of the scheme was invested in a Staff Officer in the Department of the Chief of Air Staff who had been appointed to deal with education matters in May 1918 and was exercised by informal fortnightly meetings at which Command Education Officers met under his chairmanship. At these meetings any difficulties and outstanding problems were discussed and wherever possible decisions were given at the time and only referred to higher authority when major policy matters were involved.

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1 Air Ministry Order A26/1918 dated 1 May 1918

2 Air Ministry Order A/1439/1918 dated 14 November 1918

At station level education officers were appointed from those nominated under the terms of AMO A/26/1918 to administer the scheme and although arrangements were made for the supply of books and equipment and for the employment of part-time staff, it was then left to the education officers to meet every reasonable demand of an educational character as far as the means at their disposal permitted. In cases where this was not possible and where no suitable alternatives could be offered they were then to seek assistance from the Command Education Officers.

Although the demobilisation scheme worked smoothly, the whole period of demobilisation was one of uncertainty in which the very future of the RAF was in the balance. Thus no beginning was made towards implementing the draft plan of August 1918 until 1920, by which time the demobilisation authorities and Disposal Boards had dealt so effectively with staff and equipment that practically nothing of the original organisation remained. Meanwhile the YMCA Universities Committee continued its work through the period of demobilisation and was not dissolved until 29th September 1921.

The RAF Education Scheme had therefore to be built up from scratch. Not only had it to be a new scheme but it also had to be a new scheme in a new service, for while the other two services could return to their peace-time footing, the RAF had nothing to return to and special importance had to be given to the build-up of an esprit-de-corps and a sense of personal responsibility. Although this latter quality was obviously required in aircrew it was no less needed among ground staff. The airman's work was not carried on in modern factory conditions with up-to-date machinery, systemised methods and constant supervision. The RAF particularly in the period between the two world wars, was of necessity organised in small scattered units with much of the work of Imperial Policing being in out-

of-the-way places and among backward people. An airman could quite easily find himself the sole representative in his trade and would have to be prepared to act on his own initiative and resources in dealing with any emergencies which could arise. Alternatively an airman could find - and still does - that a change of station could involve a complete change in the character of work which he would be expected to perform. Thus education in the RAF was faced with two particular problems:

a. How could it develop mental alertness and understanding of scientific principles which would ensure the requisite adaptability and resource in dealing with sophisticated equipment?

b. How could it help towards the development of certain essential qualities of character and mind making for a keen and unified service?

It was decided to meet these two problems by the establishment of a professional civilian education service to replace the existing temporary arrangement of serving officers and NCOs and YMCA lecturers. From a present-day point of view the decision seems illogical particularly when one considers the grounds on which the Donald Committee based its report in 1944. The decision, taken in 1921, was based on three premises put forward by Colonel Curtis:

a. A civilian teacher could enjoy a less formal relationship with both his students and his military superiors than could a service officer. This relative informality would encourage the service student to express himself more freely in class than he might otherwise do and at the same time it would allow the education officer more freedom of approach to his military superiors should he wish to discuss any matters concerning education.*

*It is interesting to note that this idea was not successfully transmitted to the Apprentices: Flight Lieutenant T. P. Kelly (an ex-Apprentice from No 6 Entry(1925) stated "The civilian education officers were far stricter with us Brats (the accepted RAF term for Halton apprentices) than were the RAF instructors. They wouldn't think twice about putting you on a charge."

b. The education service as a civilian organisation could offer terms which would attract the best possible entrants by the award of credits for previous teaching experience. Thus new entrants to the service would not necessarily have to start a completely new career and furthermore if they wished to return to civilian teaching, local education authorities would recognise any period which they had spent in the education service.

c. These conditions of entry would give a greater depth of experience and outlook in both common-room and class-room than could be expected from a service officer and this in turn would have a beneficial effect on the student.

There was a good deal of opposition to this scheme particularly on the grounds that it might undermine the authority of commanding officers but the difficulty was overcome by instituting a system of dual control. Under it, education at stations became the responsibility of the commanding officer, and in all matters concerning policy and general organisation it was to him that the education officer was accountable. Alongside the normal service chain of command, a second system dealing with the professional aspects of the education officer's work was established under the general control of the Educational Adviser at Air Ministry. This post had been created on 1st January 1921 to take over the duties of the Staff Officer responsible for education and to administer the much larger educational organisation required to implement the proposals of the Trenchard Memorandum. Wing Commander Curtis, the occupant of the original post, retired from the RAF and was appointed to the new job as a civilian (acquiring the rank of Colonel in the process). For matters of service policy and routine matters the Education Adviser was responsible to the Director of Training and Organisation although on questions

of a purely educational nature he was granted the right of direct access to the Chief of Air Staff.

This arrangement continued until 1st January 1925 when after a reorganisation of the Air Council the Education Adviser was transferred to the Department of the Air Member for Personnel, being directly responsible to the Director of Training. He was however given the right of direct access on professional matters to the Air Member for Personnel. (See Appendix 2)

The Education Adviser was responsible for the appointment of all education officers whether in training school or on operational stations. He was assisted by Command Education Officers at Command and Area Headquarters - in most cases the same men who had been, as serving officers, in charge of the Demobilisation Resettlement Scheme. Station education officers were responsible to their appropriate Command education officers in professional matters but the education staff at units which had a training function were directly under the Education Adviser.

Four grades of staff were initially recruited but the term education officer does not appear to have been used until after 1923. In fact the older terms of "professor", "headmaster" and "assistant master" were retained, at least in common usage for several years after that, particularly at the RAF College and in the apprentice training schools. In a letter to the Secretary of the Inter-Services Education Committee on 23rd October 1932,[1] the Deputy Director of Training indicated the type of work undertaken by these four grades of staff, which excluded the two "professors" at the RAF College at Cranwell.

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1 On Air Ministry file A/433694/23

Grade I	Headmasters of the larger schools and certain administrative appointments.
Grade II	Area Education Officers, headmasters of smaller schools, second masters of the larger schools and lecturers at the RAF Cadet College.
Grade III	Group Education Officers and assistant masters in aircraft apprentices schools.
Grade IV	Non-graduate assistants (who were not recruited after 1920) and graduates awaiting initial appointments.

(In the case of non-graduates the letter went on to say that they were eligible for promotion only after obtaining a degree or after reaching the tenth increment on the Grade IV pay scale.)

Recruitment of civilian education officers was understandably small during the period up to 1933 and, of necessity the majority of those recruited were posted to the various training establishments. As can be seen in Table I on page 18 the total strength of the Education Service in 1925 was only 119, of whom ninety-two were employed at training units and two more in special research posts, only the remaining fifteen being employed on operational stations.

Notwithstanding the relatively small numbers involved, the Air Council decided to put their civilian teachers on a more formal basis and in 1927 they were incorporated into the Royal Air Force Educational Service.

The recruitment of ex-officers from the First World War who had initially filled the teaching posts in the training establishments dried up in the mid-1920s and appointments were subsequently made entirely from graduates. The basic pay scale of Grade IV Officers which began at £225 per annum was found to be insufficient to attract the right type of teachers which the RAF required and in 1929 this Grade was abolished and its officers promoted to Grade III. By 1934 the total service had only increased by twenty-two, but it may be assumed that a greater proportion of these new entrants were destined for work on operational stations. The Air Force Lists after 1930 no longer give the locations of officers but an announcement in the RAF Education Bulletin for May 1928 indicated that the Government of India had agreed to the appointment of four education officers for service with the RAF in India and a fifth for service with the RAF in Aden, and in all probability these appointments were paralleled by similar appointments at other stations overseas.

Following this period of relative stability the service began to expand from 1935 and the increasing size of the service was reflected at Air Ministry level by raising the status of the Education Adviser in October 1937 to that of Director of Educational Services directly responsible to the Air Member for Personnel. (see Appendix 2)

In addition to the increased number of permanent officers, the RAF Education Service recruited large numbers of temporary members drawn from both the teaching profession and industry to cope with the vast expansion of the RAF in the immediate pre-war years.

TABLE I

Numbers of civilian teachers employed in the Royal Air Force Education Service 1925 - 1939 (selected years only)

GRADE OF TEACHERS	YEAR				
	1925	1929	1934	1937	1939
Principal Education Officers	1	1	1	2	2
Grade I " "	3	4	6	14	17
Grade II " "	13	15	20	27	41
Grade III " "	65	106	112	168	187
Grade IV	35	Discontinued during 1929			
Special Posts	2	2	2	2	2
Total	119	128	141	213	251

Source:
Relevant Air Force Lists

CHAPTER II

LIBERAL STUDIES IN TRAINING ESTABLISHMENTS

The problem of developing the mental alertness of the new entrant coupled with the need for him to understand the scientific principles behind the equipment which he would use, was tackled by the establishment of a number of schools of technical training. Of these the first was RAF Cranwell established in February 1920 and now the Royal Air Force College. Originally, however, it contained the "Boys' Training Centre for Boy Mechanics" - the forerunner of the apprentice schools - as well as catering for adult recruits and flight (officer) cadets. Other training schools followed, including the Apprentice School at Halton, the Electrical and Wireless School at Flowerdown, the Technical Training establishment for men at Eastchurch and the RAF Depot at Uxbridge where the training of men entering non-technical trades was undertaken.

APPRENTICE TRAINING

Pride of place in the air force's training scheme has always been given to the aircraft apprentice schools. As early as November 1919, the Air Council had decided that it would be air force policy "to enlist the bulk of those (men) belonging to the long apprenticeship trades as boys who will undergo a course of three year training before being passed into the ranks". [1]

Not only have its ex-students provided, and still provide, the bulk of the senior NCOs in the more advanced trade groups in the RAF, but are also a major source of potential officer material, particularly in the Engineering Branch. The pattern of organisation and instruction has varied little with the passing years

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1 The Permanent Organisation of the Royal Air Force (Cmd 467) November 1919

and from its inception the apprentice school at Halton has been able to demand and obtain a high standard from would-be apprentices. This is borne out by the Air Ministry pamphlet "The Organisation of the Royal Air Force 1919-1926" (HMSO 1926) which has the following to say about recruitment into the apprentice school:

> "Although this (ie recruitment) appeared to be our most difficult problem in 1919 it has not been so in practice. The measure of success in its retention has in fact exceeded expectation. An excellent type of apprentice is forthcoming, nearly every local education authority in Great Britain being represented. The bulk - over 80% - come from technical and secondary schools while a good many of the remainder came from schools of analogous status".

Some forty years later the standard of admission remains high and would-be technician apprentices must currently possess four GCEs at Ordinary Level including English, Mathematics and a Science subject.

It was intended that "the training of all these boys will eventually be carried out at Halton Park (near Aylesbury) where ample and well-equipped technical shops are already in existence. Pending the erection of permanent barracks to replace wooden wartime huts, use will also be made of Cranwell in Lincolnshire".[1] Accordingly the first course (or Entry as they were officially known) of apprentices, some 227 strong were attested at Cranwell in February 1920 and were allocated in varying numbers to the following trades:

Fitter, aero engine	Rigger, aero
Fitter, armourer	Carpenter rigger
Fitter, jig and tool	Coppersmith
	Draughtsman

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1 The Permanent Organisation of the Royal Air Force (Cmd 467) November 1919

Despite the fact that over the years the individual trades have changed to meet new demands, the aircraft apprentices, initially at Cranwell or later at Halton, have always been trained in one of the two main branches of aircraft engineering, viz: propulsion or airframe.

Cranwell continued to train all apprentices until January 1922, when No 5 Entry was the first to be inducted at Halton. For a time both stations continued to undertake apprentice training but by the Spring Term 1926 barrack accommodation for over 3000 apprentices had been completed and all entries still at Cranwell were transferred to Halton.

In order to try to develop an esprit-de-corps among the apprentices, all boys were allocated an entry to one of the Wings which were organised on the Public School House system. All activities whether social, recreational or instructional were based on these wings and in order to reinforce the sense of community, all staff, except for a small number in Station headquarters, were appointed to a particular wing for the duration of their tour. This distribution of staff applied to civilian training and educational staff as well as to officers and airmen responsible for the military aspects of the apprentices' life.

The training and education in the period upto 1939 was undertaken by both serving airmen and civilian instructors. Generally, technical training was the responsibility of serving airmen, usually senior NCOs, although there were a limited number of ex-service instructors who had been given NCO status and who worked under the supervision of RAF Officers. The more theoretical side of the curriculum was exclusively undertaken by civilian teachers of the RAF Education Service, all of whom were university graduates and most of whom had additional

professional qualifications. Sixteen education officers, including one Grade I Officer and one Grade II, were assigned to each wing, while overall control rested with the Principal Education Officer on the headquarters staff. It is indicative of the importance with which Halton was regarded that until 1937 it was the only station to have a Principal Education Officer established, a post which was accorded Group Captain status. For administration of the curriculum, however, the school was divided into four Sections, to each of which was allocated two hours' teaching per week. These sections dealt respectively with Mathematics, Engineering Science, Engineering Drawing and General Studies, and within each wing came under the responsibility of the four Education Officers designated as Section Heads. The section heads from the three wings constituted the four three-man Section Committee whose main jobs were to advise the Principal Education Officer on any matters relating to their subjects and to co-ordinate and standardise the work in the wings. The subjects of the first three sections which are listed in Table II (see page 23) show the close relationship which existed between the academic and the more technical aspects of the apprentices' training.

The General Studies Section did not have this close affinity with workshop instruction but was broadly humanistic in content and aimed to produce airmen who were able to think clearly and intelligently about problems not only of interest to themselves but also to the world in general. The syllabus was designed, therefore, less with the object of transmitting knowledge than of teaching the apprentices to think for themselves by placing knowledge before them and showing them how to use it. To attempt to secure this aim the provision of ample library facilities was considered essential and the central library at Halton was stocked

TABLE II

RAF HALTON

AIRCRAFT APPRENTICES' SYLLABUS

TOPICS INCLUDED IN THE MATHEMATICS AND SCIENCE SECTIONS

SECTION	PHASE I (INTERMEDIATE)	PHASE II (FINAL)
Mathematics	Algebra I Graphics I Trignometry I Mechanics I	Algebra II Graphics II Trignometry II Mechanics II Mechanics of Flight Mensuration Calculus
Engineering Science	Introductory Course Heat Applied Mechanics I Magnetism and Electricity	Applied Mechanics II Magnetos and Ignition Strength of Materials Properties of Materials Mechanics of Structure Mechanics of Flight
Engineering Drawing	Introductory Course Types of Projection Applications	Detail Drawings Assembly Drawings Full Working Drawings Sketches

with standard reference books rather than with the normal school text-books which were in fact very little used in any part of the course.

The general method of instruction followed in the General Studies Section was for each Education Officer to give a lecture on his specialist subject to all the classes in turn in order to arouse interest in a topic and to raise issues for study and discussion. These lectures were then followed by class discussion of the problems raised, with each Education Officer taking his own class.

The apprentices were at this stage shown how to use reference books, their indexes and tables of contents so that they could build up their store of knowledge on any given subject and, more importantly, learn the art of using the library. The first part of the course of lectures started with an outline of the growth of Western civilisation from the Greek City-State to the modern industrial society. No attempt was made to break down the course into rigid divisions but instead an effort was made to show the apprentices that in order to realise why man had developed as he has done it was necessary to look at all aspects of his past life and to see how these were inter-related. In addition, from time to time, the normal lecture programme was interrupted and lectures on more topical subjects were given.

In the second part of the course beginning in the fourth term the apprentices undertook a study of British and Imperial institutions and policies. The course began with an examination of the structure and working of the British Constitution and this was followed by a series of lectures on Imperial Geography in which the growth and development of the individual dominions and colonies of the British

Empire was traced with a view to understanding their present positions. This in turn led to a study of the problems of the British Commonwealth as a whole and topics such as trade and transport, Imperial foreign policy and defence, the colour question, and emigration were included.

In English, because of the large size of classes, normally some two or three times as big as those in secondary schools, the amount of written work required of apprentices was restricted to one essay per term. No compulsory subjects were set but a wide variety of essay titles were given from which the apprentices were allowed to choose. In assessing these essays the ability to express opinions lucidly and to make rational judgements was considered to be far more important that the ability to amass facts and marks were awarded accordingly. The remainder of the time allocated to English was of a more informal nature with an emphasis being placed on the reading of plays and short stories. Through the former it was hoped to accustom the apprentices to speaking in public and to improve their diction while through the latter it was hoped to arouse an interest in literature and wean them away from the "Penny Dreadfuls".[1] For this reason the apprentices were allowed free range in the library and no attempt was made to impose any literary standards, the education officers offering advice rather than instruction.

Towards the end of the course each apprentice was given a dissertation to write, known as the "Task". The topic could be chosed from a list of about forty subjects and the choice of approach was left to the individual boy. During the

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1 Air Ministry Pamphlet AM 848870/28 dated 1st July 1928. (The Educational Syllabus of the School of Technical Training for Aircraft Apprentices)

first two months he was required to study his topic and prepare an outline of his proposed dissertation which, together with a bibliography, was submitted to his tutor for evaluation and advice. Subject to a satisfactory assessment the apprentice was allowed to proceed with his Task which had to be completed by the end of the eighth term when the final examinations in "academics" were held.[1]

Considerable store was set on the dissertation to which was allocated 50% of the marks assigned to the General Studies Section in the Final Examination in Educational Subjects. This examination given at the end of the eighth term, was set and marked internally so that the apprentices were examined on what had been taught and there was no need to teach to a rigid externally-imposed syllabus. In order to secure and maintain an acceptable educational standard the examinations were moderated by the staff of the Education Adviser at Air Ministry. In addition to the written examinations and the Task each Wing Education Officer was to allot a maximum of 600 marks out of a possible 3000 for "zeal and attainment".

The examinations played an important part in determining the apprentice's future in three ways. First, the marks were carried forward to the end of the ninth and final term, when each boy sat his trade tests which, unlike the educational exams, were externally devised and administered by the RAF Central Trade Test Board. Although it was the result on this technical side which determined whether an apprentice qualified as an LAC, AC1 or AC2, he could not pass out in the rank of LAC unless he had obtained at least 75% overall in his education test examinations. Should he get less than this amount he would then have to sit the Reclassification examination after he entered man's service. Secondly, a limited number of Halton apprentices were accepted for cadetships at Cranwell each year

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1 Air Ministry Pemphlet AM 848870/28 dated 1st July 1928. (The Educational Syllabus of the School of Technical Training for Aircraft Apprentices)

and only those passing out among the top ten per cent were considered for flight cadetship and from these only about half a dozen were finally selected.

Air Commodore Sir Frank Whittle, when an Aircraft Apprentice in No 8 Entry, obtained one of these flight cadetships as the result of one of the other cadets failing his medical. In "Jet" he admits: "My cadetship was very nearly a near miss, because five were awarded and I passed out sixth. Unfortunately for him, but fortunately for me, the apprentice who had passed out top failed his medical examination and so I just scraped in".[1] The keen competition was reflected in the high standard of those apprentices accepted for cadetships, for Whittle goes on to relate how four of the five ex-apprentices from his Entry passed out in the first seven from the RAF College, "and all, except one who was killed in a flying accident have since attained high rank".[1]

Thirdly, a distinguished pass would exempt an apprentice from the Higher Education Test which, although not a pre-requisite for promotion to any specific rank, was taken into account when considering candidates for advancement.

In addition to the main apprentices school at Halton, a second school was established for the instruction of electrical and wireless mechanics. It was originally located at Flowerdown and the first apprentices were attested there for training as wireless operator mechanics in 1922. In 1929 the school was moved to Cranwell, where it stayed with various changes of title for over twenty years, receiving its present name of No 1 Radio School in 1941. The school by the very nature of the training which it offered was much smaller than Halton and its lack of size, together with its changing title and location denied it much of the lime-

1 Sir F. Whittle: "Jet"

light in which Halton was constantly exhibited. Nevertheless the same examinations were applied to secure a similar standard of entrant and the academic content of the radio apprentices' three year course was much the same as that of their engineering counterparts.

In both schools the pattern of instruction, including the importance placed on term work and liberal studies bore a strong similarity to the National Certificate Courses in Engineering which had been instituted in 1921. It is probable that this similarity was the result of a deliberate policy on the part of the Air Ministry for in 1926 representatives of the Board of Education and the Institute of Mechanical Engineers were invited to inspect and report on the work of the apprentices at Halton. The report from both bodies was favourable but despite this, the course which the apprentices followed was not considered acceptable for National Certificate purposes because of its somewhat specialised nature. This non-acceptance in no way affected the curricula and the RAF apprentice schools provided a type of training scheme which could with advantage have been largely copied by private industry. Only after the end of the Second World War did industry appear willing to profit from the experience of the RAF Schools.

ADMINISTRATIVE APPRENTICES

Alongside the two schools for technical apprentices a third school was established for Administrative Apprentices at RAF Ruislip, the home of the RAF Record Office, in October 1925. This school provided a two year course for boys entering the three trades of Clerk Secretarial, Clerk Accounting, and Clerk Equipment and until 1938 when normal entry ceased owing to preparation for the Second World War, it accepted an intake every quarter. The size of this school

was much smaller than Halton - the first three entries being eleven, thirteen and six strong respectively. Even by 1938 when the RAF was increasing rapidly the size of No 52 Entry consisted of only fifty two apprentices.

Entry to the Administrative Apprentice school could be achieved in one of two ways. The first and subsequent odd-numbered entries were by open competition and interview while the even numbered entries were recruited by "direct entry" (ie from the boys who were held to be educationally exempt from the entrance examination). To qualify for the latter method a boy had to have a school certificate with matriculation examption and many had higher school certificates. Having qualified academically, final selection was by interview. In actual practice there was little to choose between the two types of entry as the same type of boy was seeking to get in either way.

With the high academic standard of entry and the small number of apprentices discipline was much less severein education at Ruislip than it was at Halton. Each entry however had to attend compulsory education for one half day per week in which instruction was given in the following subjects:

English	Imperial Geography
Maths	Book-keeping
British History	

Apart from lessons in book-keeping very little serious study was undertaken in the other subjects and no Task, as at the other two schools, was set. Because of the small numbers of apprentices only two education posts were established at Ruislip and the relationship which developed between the apprentices and the two officers was much more relaxed and informal than was apparently the case at Halton. Although no serious work was undertaken,the Administrative Apprentices were still

required to take end-of-course examinations and the grading which was obtained in these, together with the results of the trade tests, determined the rank at which an apprentice passed into man's service. Those who obtained 80% or over were granted the rank of LAC, those between 60% and 80% the rank of AC1 and those between 40% and 60% the rank of AC2. Apprentices who obtained less than 40% in the final examination failed altogether although it was most unusual for anyone to do so. In fact, two ex Admin Apprentices, Mr. H. S. Hillier (of No 2 Entry) and Mr. S. Davies (of No 18 Entry) both stated that it was most unusual for any apprentice to get below 80% in the educational tests. It appearsthat the standard of the examination was set far too low for the type of entrant who was being admitted but it was presumably not raised because admistrative difficulties which it would have created. There would here seem to have been a position in which those actually teaching were aware of the true position and utilised the time allocated for discussion of topical questions in tutorial groups, while those who set the examination had not attempted to equate the level of the examination with the academic level of the apprentice. This was, perhaps, one of the few instances in training schools in which genuinely liberal education could be given without the spectre of examinations looming up at the back of the minds of both students and teachers.

BOY ENTRANTS

Owing to the economic conditions prevailing in Great Britain in the 1930s there was no shortage of well qualified applicants for places at the various apprentice schools which in turn meant that the RAF was able to fill its establishment in the more highly skilled technical and admistrative trades. There was, however, a

relative shortage, following the RAF's enlargement in 1933 onwards, of personnel in the trades of armourers, wireless operators and photographers (who were required for observer duties) and it was decided to utilise the over-subscription for the apprentice schools by offering boys vacancies in the trades mentioned.

In September 1934 the first Boys' Training Unit was opened at Cranwell for wireless operators when 90 Boy Entrants (as they were known to distinguish them from the Air Apprentices) were selected for the fifteen month course. Subsequently schools for armourers at Eastchurch and photographers at Farnborough were opened but these only gave a twelve month course. There was a difference not only in the type of boy who was selected for Apprentice training compared with the Boy Entrant but the course itself was of a much more limited curriculum. The instruction which the Boy Entrants received was far more related to the task in hand and general education was restricted to some English (grammar and composition), elementary trade calculations, basic science and workshop drawing. Unlike the apprentice schools the Boy Entrant scheme was closed down entirely at the outbreak of the Second World War and did not re-open again until 1947 when it was extended to cover a much wider range of trades ranging from Airframe Mechanic to Telegraphist.

ADULT ENTRANTS

Although the two apprentice schools catered for most of the skilled tradesmen in the inter-war air force, numerically they were not expected to provide more than one third of the total number of airmen. The remainder were recruited as adults and made their first contact with the Royal Air Force at the RAF Depot at Uxbridge.

This Depot served as both a recruit training centre and as a holding unit for trained airmen, but in its latter capacity provided no facilities for any sort of training.

The type of training undertaken at Uxbridge can easily be imagined and bore a strong resemblance to the initial training of army recruits, with most of the officers and senior NCOs having been transferred or seconded from the army. In addition to drill, physical training, first aid and the other usual constituents of a recruit's curriculum, provision was made for five hours weekly to be spent on education during the ten weeks induction course. Unlike education at the apprentice schools it was not allocated specific times during the week but the hourly lessons were fitted in between other periods.

The aims of education at Uxbridge were twofold:

a. to give the recruit some understanding of the role of the air force.

b. to revive the habit of study.

There was no examination at the end of the course and education could and did follow a much more liberal pattern than at Halton in an attempt to develop mind and character. T. E. Lawrence tends to confirm this in his account of the occasion while under training at the RAF Depot in 1922 on which he first met his civilian teacher. "The master was youngish, a lean dark civilian. From the first sentence, my analysing mind felt a conflict between his spirit and the other side of the valley. In the training camps we were being subdued to the passivity of puppets when master jerked our string. Yet here was this other master only just across the Pinne (the stream which divides Uxbridge Camp) in M Section telling us

that education made us worth having in the Air Force and that it flowed from the inner man educed by his will."[1]

On completion of recruit training an airman had three options based upon his own choice and his performance at the Depot. Those wishing and able to become skilled tradesmen in the mechanical and electrical trades were posted to one of the schools of Technical Training for courses of upto six months duration. In contrast to the education which they had received at Uxbridge their trade training was of a kind which had a direct bearing on their work. Three hours weekly were assigned to education which consisted of English, workshop calculations, drawings and engineering science. Other airmen were allocated to the administrative trades which cover the clerical, medical, and equipment fields. These men went to special units to complete their trade training; eg those destined to be clerks went to the RAF Record Office, then at Ruislip, while would-be medical orderlies simply moved across the road from the Depot to the RAF Hospital at Uxbridge. During this period of training, however, no formal education was given. Although there appears to be no reason for this omission, Squadron Leader King (now Command Medical Secretarial Officer at Headquarters Air Support Command) who was under training as a medical orderly at Uxbridge in 1930 suggested that it was probably because of the relatively high academic standard of the entrants - in a time when the RAF could afford to be highly selective in its choice of personnel.

Finally those not destined for either the technical or admistrative trade groups left Uxbridge and were posted directly to operational stations where any education which they wished to acquire had to be obtained under the aegis of the General Education Scheme and in their own time.

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1 T. E. Lawrence "The Mint".

CHAPTER III

THE GENERAL EDUCATION SCHEME

In the formative years of the RAF the educational needs of officers and airmen on operational stations had not been completely neglected although the prior claims of the training establishments had restricted the number of teaching posts on operational stations. Indeed, the introduction of general education at operational stations preceded the establishment of training units by some three years. As has been mentioned earlier, the air force, though a separate service from April 1918 was still assumed to be included in the scheme of work organised by the Universities Committee of the YMCA.

It would seem, however, that unlike the Army, the Royal Air Force had not taken full advantage of the facilities offered by the Committee. The reason for this was no doubt partly due to the different organisation of the two Services. The Army, especially in the United Kingdom, was generally concentrated in the traditional garrison areas like Aldershot and Catterick. This meant that for purposes of education several formations could be treated as a single unit from which there would be sufficient response for the services of lecturers. The RAF, on the other hand, consisted mainly of scattered and somewhat isolated stations, none of which could individually muster enough personnel to justify requests being made to the YMCA. Furthermore the control of army education was much more centralised than that of the RAF. Thus while individual battalion commanders may not have had any enthusiasm for the YMCA scheme they, unlike their RAF counter-parts, were bound to accept the programmes laid down by their Command Headquarters.

In September 1918 the Air Ministry attempted to rectify the position by bringing the attention of all Commanding Officers to the work of the YMCA Universities Committee.[1] They were reminded that the Committee was "willing and able" to provide lecturers whose subjects ranged from those of an instructional nature to those of a popular character. Commanding Officers were encouraged to plan written programmes of lectures for men under their command in co-operation with the Committee's Secretary or his representative with a view to maintaining the men's morale and providing them with opportunities for increasing their general education.

This order seems to have had a salutary effect at stations for the report of the Secretary of the YMCA Universities Committee for 23rd January 1919 contains the following paragraph:

"Co-operation with the Air Force

In a weekly order issued from the Air Force Headquarters, Commanding Officers have been instructed to apply to the Universities Committee for lecturers. Colonel Scott (of the YMCA) has arranged series of lectures for Aerodromes and Air Force Stations. Captain (Sic) Curtis, the Chief Education Officer to the Air Force, has expressed the wish that his Education Officers should be put in direct touch with YMCA Secretaries all over the country, and this has been done, so that a considerable number of requests for assistance of various kinds are not reaching the Educational Secretaries."

While the Committee continued to act in an interim capacity, the Air Ministry furthered its plans for a permanent education scheme. In November 1918 it laid

1 Air Ministry Order A1095/1918 dated 26th September 1918

down that all commanding officers were to ensure that all boys (ie personnel under the age of eighteen) were to receive ten hours instruction weekly of which eight hours were to be in service time. Where possible, service personnel were to be employed as instructors but failing this, arrangements were to be made for classes to be conducted by local civilians. The prime aim of this order was to increase the technical efficiency of the boys and to this end every effort was to be made to co-ordinate practical and theoretical instruction in mathematics, science and mechanical drawing and to relate them as far as possible to the work the boys would be required to undertake. The second aim was to increase the general educational level of serving personnel and instruction was to be provided in English and current affairs. The boys were also to be encouraged to read with a view to self improvement.[1]

It is interesting that the order incorporating these regulations was issued within three months of the passing of Fisher's Education Act in August 1918 and one might speculate how much influence those responsible for the framing of the Act had on the provisions of this Air Ministry Order. Despite the requirement of monthly returns of details of instruction given it would be wrong to assume that the order was any more successful than the comparable section of the Fisher Act which dealt with compulsory continuation schools, owing to the uncertainty of the future of the RAF in those early days. By 1924, however, King's Regulations for the Royal Air Force charged every commanding officer with the responsibility of encouraging all his officers and men by all the means at his disposal to avail themselves of the opportunities provided for improving their general education.

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1 Air Ministry Order A1439/1918 dated 14th November 1918

In order to assist commanding officers, King's Regulations also laid down that an education officer would be established on the staff of each Area or Command Headquarters and he would be responsible for the organisation and co-ordination of all educational work at all stations in that command. To assist the Command Education Officer there was to be created a pool of whole-time teachers whose duties were to advise commanding officers on educational matters and to organize the educational work of stations.

It was obviously not the intention at this stage for an education officer to be established on each station and consequently recourse had to be made to other means of instruction. Most stations by their nature were located in remote areas or at least some distance from urban centres. In the North East, Catterick some eighteen miles from Darlington, and Ouston, eleven miles from Newcastle, may be regarded as not untypical of the relative isolation. Thus the possibility of officers and airmen attending technical colleges and evening institutes was limited. However, where it was possible, arrangements were made for personnel to attend evening classes by providing either service transport or travel warrants.

As local education authorities could only cater for a small percentage of air force personnel most educational work took place on stations. This was undertaken in three ways. First, a station might have an education officer established, in which case he would be personally responsible for the majority of teaching undertaken. Secondly, where no education post existed or where the demands of personnel could not be met by the education officer, locally employed civilians or suitably qualified service personnel were employed on a part-time

basis in the evenings. Finally, where qualified teachers were not forthcoming reliance was placed on courses of guided study organised by the command education staff and supervised by the education officer responsible for the station.

King's Regulations laid down that the general education scheme should make provision for the following possible contingencies:

"a. Officers wishing to prepare themselves for one or other of the University or professional qualifications.

b. Airmen preparing for one or other of the service education examinations.

c. Airmen requiring technical education (in English, applied maths, general science and drawing) in connexion with their professional work.

d. General education and culture.

e. Vocational education as an aid to obtaining employment."[1]

Officers might require assistance when preparing for one or other of the university or professional courses which were open to them. These courses were mainly of a scientific or technical nature and therefore any requests for assistance would be for mathematics or physics instruction. At the highest level officers serving on permanent commissions could apply for a place on one of the university courses which the RAF Offered annually. The majority of these, upto a maximum of twelve per year, were tenable at Cambridge where officers took a two-year course leading to an Honours Degree in Engineering. This was normally followed by a further year at the Imperial College of Science leading to the Aeronautical Diploma. Occasionally, however, officers were permitted to go straight to Imperial College and take the diploma directly.

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1 King's Regulations (1924 Edition) paragraph 426

Although all places were not taken up each year owing to a lack of suitable applicants, by 1928 forty-three officer-students had started university courses since the scheme's inception and of these one at least had been awarded a Ph.D.

At a second level officers might apply for courses in mechanical and radio engineering at Henlow or Flowerdown. These courses, which were also for officers on permanent commissions, lasted for periods upto twelve months. They were intended for officers likely to specialise in these two branches at later stages in their careers and obviously before selection a fairly high standard of academic ability and technical knowledge had to be obtained.

Although education officers would receive intermittent requests for aid from officers preparing for these full-time courses, most of their time with officers was spent with those studying for examinations qualifying them for promotion up to the rank of squadron leader or for entrance to one of the RAF Staff Colleges.

The station education officer could not, of course, be expected to deal with the professional element in an officer's examinations, except perhaps if his personal qualification enabled him to give tuition in mathematics or engineering science to officers in the technical branch. He was, however, expected to provide instruction on the general studies side of these examinations. In the case of the promotion examinations this consisted of Imperial Geography, while for the Staff College Qualifying Examination candidates had to be prepared in English and Military History; special emphasis being placed in the former on essay writing and precis work.

Much of this instruction was on a tutorial basis as the candidates on any given station would not necessarily be taking the same subjects nor would they all

be able to attend classes at the same time. This, coupled with the lack of education officers at many stations, resulted in a tutorial system being introduced by Command Education officers in 1925. Under this system, which amounted to a personal correspondence course for each candidate, each officer who intended to take these examinations registered with the Command Education Officer. He would then be allocated to a number of education officers, each of whom would be responsible for one aspect of his examination syllabus, eg precis work. Each education officer would not be expected to undertake primary responsibility for supervising one officer but instead would be responsible for a given aspect of the studies of several. The courses of work were arranged and exercises were set at Command headquarters but were transmitted to the officers through their appointed tutors to whom all work was returned directly - Command headquarters merely receiving periodic progress reports.

The success of this tutorial system may be judged by the fact that it was continued for Staff College examination candidates, apart from the immediate post-war years, until the revision of the qualifying system in 1964.

Only a relatively small proportion of an education officer's time was spent in giving assistance to his fellow officers. Much the greater part was spent meeting the other requirements laid down for him in King's Regulations, especially in assisting airmen to prepare for their promotion examinations.

Originally, in order to gain promotion, an airman had only to pass a trade test set by a Central Trade Testing Board. Each of these boards, which corresponded to the major trade groups in the Royal Air Force, were appointed by Air Ministry to administer trade tests in order to ensure that a uniform standard was maintained for each rank in a given trade regardless of where an airman might be

serving. The preparation of candidates for CTTB examinations was entirely a service matter and was undertaken by flight or section NCOs as the tests were concerned purely with an airman's trade ability and service knowledge. Should he pass his trade test and should he have suitable assessments by his commanding officer an airman would be eligible for promotion should any vacancies occur in the rank to which he was qualified.

The education officer therefore had initially no responsibility for the service career of airmen but in 1924, however, additional, education qualifications were needed for promotion and these took the form of two simple tests, one for re-classification as a leading aircraftman and the other for promotion to sergeant. Responsibility for assisting the airmen to prepare for these examinations was laid firmly with the education officer by the 1924 Edition of King's Regulations.

Both examinations were strictly utilitarian in character and as success in them was compulsory before promotion could be achieved, they were restricted in content to no more than the minimum which an airman could be required to know to carry out efficiently the duties in that rank. The tests, therefore, were confined to English and Arithmetic in the Reclassification Examination while in the Promotion Examination for Sergeant, Map-reading was added as a third subject. In both tests, the first part of the English paper consisted of either writing a "service" letter in which certain RAF conventions had to be observed, or else a report on an incident which it was considered might be within the experience of the candidate. The second part simply required the airman to make a summary and answer comprehension questions on a simple order or regulation. The content of

the Arithmetic paper was restricted to simple calculations and accounts and the only difference between the two tests in either subject was a difference in the difficulty of the problems set rather than a difference in syllabus.

No provision was made for history, geography or any other subjects of a general vocational nature and because of the limited academic content of these examinations no certificates were awarded. It was thought that if certificates were granted, airmen would tend to use them on discharge from the service as a means of convincing prospective employers of their academic ability and once the true standard of these examinations had been determined, employers, not realising the limited aims of the tests, would form a wrong impression of RAF standards as a whole - whether on the educational or, more important, on the technical side.

Apart from the personnel who had previous (war-time) commissioned service or had secured exemption from the re-classification tests by virtue of attaining an equivalent standard while under training, every airman regardless of his academic standard was obliged to take the first test if he wished to be reclassified. T. E. Lawrence, probably the most famous airman ever to serve in the RAF, remained AC1 for many years because of his refusal to submit to what was for him so trifling a test, nor, of course, having entered the RAF under an assumed name could he claim the exemption to which his Army service entitled him. Exemption from the Promotion Examination to Sergeant could only be claimed either by previous commissioned service or the possession of a similar certificate of the Army or Royal Navy.

The first examinations were held in the Spring of 1924 but did not become obligatory until 1st January 1926. This delay was to permit personnel who were

otherwise qualified but who might be prevented from taking the examinations through lack of educational facilities or deployment on active service, time for preparation. The examinations were held bi-annually; the Reclassification Test in April and November of each year, and the Promotion Examination in May and December. Until 1935 airmen had to prepare for these examinations in their own time but the increase in size of the Education Service in the period 1934-35 enabled many stations to allow airmen to attend during working hours. For the Promotion Examination all candidates (who had to be either Corporals or Acting Sergeants) were required to attend compulsory classes in order to qualify for the examination. As has been pointed out the content of the course was quite elementary and far below the standard of many of the airmen and it was a common practice for many airmen, particularly ex-apprentices, simply to turn up for registration and then absent themselves from class.

Although the results of the examination still in existence are incomplete they indicate the relatively stable size of the air force through the 1920s to the mid-1930s and the increase which took place in the period after 1936.

TABLE III

NUMBER OF CLASS A PASSES OBTAINED IN RECLASSIFICATION TESTS AND PROMOTION EXAMINATIONS DURING THE PERIOD 1924-1938
(HOME STATIONS ONLY)

ar (Spring Exam)	'25	'26	'27	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
classification st	-	-	-	-	151	109	96	175	119	141	123	-	-	393
motion Examina-n	17	19	-	-	22	21	27	37	37	-	44	-	-	290

rce: RAF Education Bulletin 1925-1939

In addition to these two fairly basic tests, the Higher Education Test was introduced in 1926 to encourage airmen to study to a higher standard. Although the examination was not related to promotion to any specific rank, commanding officers were required to take account of whether an airman held the certificate when considering him for promotion. Apart from encouraging a general interest in education it was hoped that this certificate would prove to be of value when an airman left the service and was seeking employment. Because of this, the Higher Education Test was set at a post-school certificate level and any airman who obtained a full pass could consider himself as having reached the standard of the Higher School Certificate.

The test itself consisted of three parts which could be taken at annual intervals during which time a candidate had either to attend a regular course of lessons or demonstrate to the education officer that he was following an organised course of study. Unlike work for the two promotion tests after 1934, preparation for the Higher Education Test had always to be undertaken in an airman's own spare time. It was considered that, as the test was not directly connected with his career, an airman should make some personal effort to obtain it.

Once enrolled for the Higher Education Test the airman would be required to take periodic tests ("progress tests"), the results of which would be carried forward to the annual examinations. The first examination consisted of three compulsory subjects: General Studies, including English, Mathematics and General Science. In Part II eight subjects were set, being combined into four groups. Although a candidate could take as many subjects as he wished in the examination, to be successful he had to pass at least one complete group. This grouping was

maintained in Part III but candidates could make a choice from eight pairs of subjects, and Appendix 3 indicates the wide choice which was available in Parts II and III of the Higher Education Test.

Unfortunately the Air Ministry were unable to secure recognition of the Higher Education Test by either professional bodies or central and local government departments and therefore defeated one of its aims. Nevertheless many airmen enrolled in Higher Education Test classes, although presumably owing to service turbulence and the evaporation of initial enthusiasm, relatively few completed the three year course. This wastage may be ascertained if the number of candidates for Part I in any given year are compared with the number of passes at Part III two years later as in Table IV on page 46.

In concluding the review of service examinations mention ought to be made of one which made a very brief appearance on the educational scene. With the expansion of the RAF during the period after 1936 there was an urgent need for airmen aircrew to fill positions as air gunners and navigators. Consequently the subjects of Navigation and Meteorology were withdrawn from the Higher Education Test and replaced by a separate examination especially designed to test the basic theoretical knowledge of potential aircrew in those two subjects.

The new examination, known as "The Examination in Air Navigation", was open to airmen of the rank of Leading Aircraftmen and above and was first held in May 1939. It consisted of one paper of $1\frac{1}{2}$ hours and in addition to acting as an aircrew qualifying examination, it was intended as an alternative to the Map reading paper of the Educational Test for Promotion to Sergeant.

As the necessity for passing the Reclassification Test and the Promotion Examination had been waived in order to meet the demand for NCOs to cope with the increased size of the air force,[1] this seemed a rather empty attraction. However, the Air Ministry Order indicated that this relaxation was a purely temporary measure and that airmen thus promoted would be expected to qualify within "a reasonable time".

No attempt was made to reimpose this requirement before the outbreak of war and in common with the other examinations, the Examination in Air Navigation was suspended in September 1939 having survived only one sitting.

TABLE IV

HIGHER EDUCATION TEST

COMPARISON OF PART I CANDIDATES AND CORRESPONDING PART III PASSES

Date of Part I Exam	1929	1930	1931	1932	1933
No of Part I Candidates	440	455	443	760	951
No of Part III Passes	79	59	104	114	122
Percentage pass - rate	19	13	24	15	12

NOTE: No account is taken of airmen who enrolled but did not complete the first year course.

Source: RAF Education Bulletins 1929 - 1934

1 Air Ministry Order A276/1938 dated July 1938

Apart from these service examinations education officers were also required to make provision for airmen to improve their technical knowledge and to provide facilities of a general cultural nature. Assistance for airmen in the first category was normally given on an ad-hoc basis by a system of tutorials. Where necessary however, as in the case of personnel taking City & Guilds or National Certificate courses, and if practicable, arrangements were made for attendance at evening classes in local technical colleges.

In the wider field of general education, education officers were given authority to invite speakers to their stations to give lectures on subjects of current interests although to judge from accounts given by airmen who served with the RAF during this period, these lectures were apparently not particularly well attended. In addition limited financial aid and other facilities were made available to stations through the agency of the General Education Scheme for activities of a cultural nature, eg grants could be obtained for the purchase of gramaphone records for station music clubs although they remained the responsibility of the education officer.

It was recognised by the Education Adviser's staff that the demand for this type of education would never be as great as that for the service examinations with their obvious material incentives. Nevertheless airmen were encouraged to widen their educational horizons and to this end each station was provided with a reference library, organised under the auspices of the station education officer or, at stations where there was no such post, by an officer appointed by the Commanding Officer. It was hoped that the provision of generous library facilities in which the term "reference" was extended to cover almost every field

of genuine enquiry, would generate in airmen a desire to utilise their spare time to the benefit of their own education, the education officer providing guidance rather than instruction. Nevertheless, although this was the ideal, the education officer was specifically enjoined to meet to the best of his ability any reasonable demand made on him within the framework laid down in King's Regulations.

The final responsibility of the Education Officer was that of rendering assistance to all ranks leaving the RAF, but special attention was to be paid to the problems of those officers serving on short service commissions to whom it was considered there was a two fold obligation to find suitable employment. The first oblication was to the RAF itself for it was found out that officers, who had no skills other than the ability to fly, were unable to secure employment, consequently, recruitment of this type of officer might well dry up. The second obligation was to the officer himself for, having persuaded him to join the RAF, it was thought that provision should be made for his post service career.

Each education officer was therefore to use his personal initiative and undertake his share of research in adding to the store of resettlement information pooled at each command headquarters and subsequently passed to Air Ministry. He was also to acquaint himself with all the relevant facts, particularly those relating to careers which were considered to be most suitable for ex-officers, viz:

(1) the professions

(2) Commerce and Industry

(3) Overseas Administration (the Colonial Service)

(4) Overseas settlement

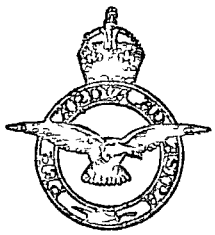
Not only had he to make short service officers aware of the prospect in these fields but he also had to bring to their attention the qualifications which were required for entry and to impress upon them the necessity of an early start in obtaining them. Having it was hoped, aroused the desire for study, the education officer was to give them all possible assistance and was under orders to report at once to either his Group or Command Education Officer any problem with which he was personally unable to cope. Apart from appointments for officers who professionally qualified a considerable number of jobs were available for those without recognised qualifications. In these cases it was found that prospective employers were after men of all-round ability with a wide general education. The General Education Scheme was utilised to give direct aid to this latter group by the provision of tutorial courses in a large variety of subjects as shown in Appendix 4 and by the utilisation of visiting lecturer facilities.

The Education Services did not undertake the work of job-finding for these officers and it is probably for this reason that no special emphasis was laid on the need to provide resettlement facilities for airmen. The vast majority of the latter would leave the service having acquired a trade which could be used in civilian life and, in any event they would be helped in their search for work by the "Regular Forces' Employment Association" with its specialist job-finders.

In the period between the wars the RAF education service emerged from a somewhat haphazard arrangement of civilian lecturers and seconded service personnel and developed into an organised professional body of civilian teachers. Their work expanded from the training establishments, where, in addition to providing the theoretical knowledge behind the practical training, they introduced

an element of liberal studies, to the whole field of general education on operational stations. There is no doubt that originally there were objections to the expansion of the work of the Education Service, possible as much because of the status of its members as of its aims. These objections remained spasmodic and restricted to station level for both King's Regulations and Air Ministry Orders indicated that official thinking was aware of the need for a high standard of general education to complement technical training.

Limitations imposed by the government's financial policy prevented the Education Service developing as fully as was originally planned. Not until the 1930s were its resources adequate enough to permit any extension of its programme. All too soon the threat of war and the subsequent expansion of the RAF re-imposed restrictions on general studies on both training establishments and operational stations as the urgent need for technical proficiency in all ranks forced the withdrawal of education officers from the wider field of liberal education.



ROYAL AIR FORCE

◇ ◇ ◇

This is to certify that

Alexander A. A. Bennett

has passed the Higher Education Test in the subjects named overleaf and has been awarded the Royal Air Force Educational Certificate.

CHAPTER IV

WARTIME RE-ORGANISATION AND THE DONALD REPORT

The question of the commissioning members of the RAF Education Service had existed since its inception despite the advantages claimed by Colonel Curtis for the civilian organisation. In fact in July 1935 the RAF Education Officers' Association forwarded a special memorandum to the then Secretary of State for Air recommending the commissioning of its members. Despite this no progress was made along these lines apart from the promise that in the event of war, permanent members of the education service would be commissioned. In February 1939 the Air Ministry offered Education Officers commissions in the Administrative and Special Duties Branch of the RAF Volunteer Reserve, making them liable to undertake training in wartime duties, and if hostilities began, to be mobilised either on special duties or for continued training and educational work. As a result the majority of medically fit officers in the Service, whether on permanent or temporary engagements, were commissioned into the RAFVR at various dates during the period April-June 1939 in the substantive rank of Pilot Officer. They were, however, accorded honorary rank corresponding to their status in the Education Service; thus Grade III Officers became Flying Officers and Flight Lieutenants, Grade II Officers Squadron Leaders and Grade I Officers Wing Commanders.

In September 1939 all Education Officers commissioned under this scheme were mobilised and had to report for duty in uniform. Many of them were immediately allocated to new duties in the administrative, technical, and general duties branches, but the majority remained on training duties, although not necessarily

on the same units or tasks that they had been employed on before the war. In the same month, however, it was decided that those Education Officers who had been retained on instructional duties were to be demobilised and although they retained the RAFVR commission they reverted to civilian conditions of service.

The majority of these were demobilised by the end of 1940 but records of members of the Education Service which were examined showed that demobilisation of members could and did occur throughout the war depending upon the demand for educational instructors. Those demobilised, however, continued to wear uniform and retained their honorary rank based on their seniority in the Education Service. The difference between them and their embodied colleagues were often not clearly understood by commanding officers who found them serving on their units - the only visual difference being small crossed torches worn in the lapels of their uniform. Consequently their treatment varied from mere acceptance as "civilians-in-uniform" to that of complete integration (and duties). What was incontestable was that they continued to receive the same salaries as they would have received in civilian teaching and in this respect were less well paid than their colleagues who had been mobilised into any of the combatant branches.

Meanwhile changes necessitated by the vast increase in the training programme were being effected at the Air Ministry. The importance of efficient training had been recognised early in the war and on 8th July 1940 the composition of the Air Council was altered and a new Service Member, known as the Air Member for Training was added. To the new department created was transferred responsibility for all aspects of training ranging from that of the Air Training Corps to Flying

Training (see Appendix 2). It was obvious that the Directorate of Education Services, concerned as it now was with the improvement of service efficiency through training, ought to be transferred to the new department and this transfer was effected by the end of the year.

Education remained the concern of the Air Member for Training until the latter post was abolished on 31st December 1946 when his responsibilities were re-allocated between the Department of the Chief of Air Staff and the newly formed Department of the Air Member for Material and Services. Thus for a short time the Director of Educational Services was responsible directly to the Chief of Air Staff, before being re-allocated to the Department of the Air Member for Training.

The wartime expansion of the Royal Air Force proved to be too great for the remaining education officers to cope with the training schemes which the increase necessitated. Suitable entrants into the air force were therefore assigned immediately to instructional work at the various training establishments which mushroomed up during 1939-41. This still proved insufficient to cope with the training programme particularly following the reduction of the age of call-up from twenty-one to nineteen in June 1941 and consequently in October of that year the Air Ministry announted that in order to fill this considerable number of vacancies, graduates in mathematics and mathematical geography were to be offered immediate commissions whether the applicants were entering directly from civilian life or currently serving as airmen. The order announcing this scheme [1] laid several understandable restrictions on applications from serving airmen who were

1 Air Ministry Order A892/1951 dated October 1941

currently serving in aircrew trades or in the wireless and electrical trades and from any airmen in medical grades I and II who were under thirty-two years of age. However anyone accepting a commission under this order was virtually demobilised as he was immediately incorporated into the RAF Education Service which, as has been indicated, was still basically a civilian body. A large number of those eligible did not, therefore, apply but preferred to try to gain a commission in one of the combatant branches.

This demand for instructors increased rather than subsided with the end of the war in Europe in order to cope with the introduction of the Educational Vocational Training Scheme. Although detailed plans of the scheme were not published until April 1945 the air force had already begaun recruiting instructors for its execution in February of that year.[1] They were to be of two types - educational instructors and vocational instructors. The former were to be taken from men who had degrees, teaching certificates, Higher School Certificates, or who held School Certificates with Matriculation Exemption. The vocational instructors were either to hold a professional qualification or where their background lay in non-professional fields had to hold the City and Guilds Certificate or have experience of civilian instructional experience. For purposes of discipline officers were to be given the acting rank of Flight Lieutenant while airmen were given that of either acting Sergeant or Flight Sergeant.

During the period of the EVT Scheme there were therefore three types of instructor. Initially there were officers of the RAF Education Service who were, as we have seen, simply civil servants in uniform. Throughout the war these

1 Air Ministry Order A120/1945 dated February 1945

officers, if on operational stations, had endeavoured to keep the General Education Scheme functioning but, obviously, with the introduction of this new scheme the former was once more tacitly put into abeyance and education officers were then assigned to posts in the EVT Scheme. Secondly, there were officers recruited from other branches to supplement those of the Education Services. These remained members of the RAF and were paid at normal service rates of pay and although sometimes referred to as "Education Officers", strictly speaking this was not necessarily correct and their correct title was that of EVT Officer. Later on, however, on the creation of the Education Branch many of them did, in fact, transfer from their original branch and became Education Officers. Finally the non-commissioned instructor element of the Scheme remained service personnel and were officially designated as EVT Instructors.

Overall responsibility for the EVT Scheme lay within the jurisdiction of the Air Member for Training but control of general policy was delegated to the Director of Training (Plans). Under the terms of the scheme three types of training were envisaged: Resettlement, Educational and Vocational. Although Command Education Officers were charged with the task of co-ordinating all aspects of the Scheme, because of the differing demands which it made upon the RAF resources, two Directorates were responsible for its administration at Air Ministry. The Resettlement and Education training was allocated to the Director of Educational Services while the Director of Technical Training looked to the Vocational training commitment. At station level the work was to be co-ordinated by station EVT Committees on which the EVT Officer, was an ex-officio member.

The range of qualifications which enabled officers and airmen to be considered for employment as EVT instructors varied considerable and obviously not all who were successful had had previous teaching experience for at its height some 10000 commissioned and non-commissioned instructors were employed on the EVT Scheme. Arrangements were, therefore, made for the establishment of a number of schools for the training of EVT staff.

The coexistence of both serving officers and members of the Education Service and the incorporation of the latter into a uniform which was hardly recognisably different from the serving officer seemed to have little, if any, deleterious effect on the standard of education in the RAF and these therefore seemed to be grounds for questioning the grounds on which the decision to have a civilian educational service had been made. Consequently in May 1944 Sir Archibald Sinclair, Secretary of State for Air appointed a committee under the Chairmanship of Air Marshal Sir Graham Donald to enquire into the functions and organisation of the Royal Air Force Education Service.

The committee approached its task by examining in the light of wartime experience the arguments put forward by Colonel Curtis[1] when justifying the civilian status of the Education Service. The idea that a civilian could enjoy a less formal relationship with Service personnel than could commissioned instructors had been disproved by the results obtained both during the war and under the EVT Scheme which was introduced during the period of the Committee's deliberations. The personnel under instruction were not aware that they were, for the most part, being taught by civilians and accepted their instructors as properly commissioned officers, giving them the normal respect due to their rank.

1 Page 13 supra

This, however, did not reduce the standard of training and during the war when compulsory instruction was necessary, the appearance of a uniformed lecturer probably had a salutary effect on reluctant conscripts. Furthermore the tremendous response to education generated by the EVT Scheme obviously dispelled the fear that the traditional relationship between officer and man would be a deterrent to the potential student. It may be that occasionally some reluctance was generated by the lecturer, but at the same time many airmen would be more willing to attend classes, or seek assistance (not always educational) because they believed that the uniformed instructor belonged to the same service and understood the problems inherent in air force life far better than their civilian predecessors.

However the system then prevailing at the time of the Donald Committee's investigations of having members of the Education Service in uniform was neither satisfactory nor equitable. Their treatment varied from Station to Station, many commanding officers regarding them in every way as fully commissioned, and therefore expecting them to undertake the full range of duties appropriate to the rank which they claimed. The majority of education officers undertook these tasks conscientiously if not willingly, and did not seek to avoid them by claiming civilian status. This attitude was not unexpected when one considers the pressure from members of the Service for complete assimilation into the RAF and the response to the invitation at the outbreak of war to apply for commissions in the Volunteer Reserve.

Thus many education officers were filling positions demanding the same qualities as those required of commissioned officers and yet from a financial

aspect, they felt they were being less than fairly treated. For while their basic salary was higher than that of officers of comparable rank they were required to pay an economic rent for any official quarters they might occupy as well as for all meals taken in Mess. On isolated stations where private accommodation was unobtainable, or on large stations where the demands of the post necessitated the education officer living within camp bounds, he found himself at considerable financial disadvantage.

There existed, therefore, a cogent argument for embodying the Education Service as a combatant branch, and this was further reinforced by the integration which has taken place in the fields of education and training during the war years. Before 1939 the two areas of instruction had been separated by a quite precise line of demarkation, but wartime conditions had called for a more rational approach and had led to education officers taking over most of the training commitment from the specialist officers. The excellent results which they subsequently obtained in this field seemed to preclude a return to the pre-war system.

There remained the one valid point in Curtis's argument that if normal service conditions of entry were to apply to education officers, then the service could not expect to attract men with any degree of teaching experience. New entrants would almost invariably come straight from universities and being unable to bring with them the wider perspective one could be expected to acquire in civilian life, would eventually reflect the same service outlook as their fellow officers - an outlook which Curtis held to be detrimental to education. Curtis visualised, and indeed secured from the Board of Education, recognition of

education officers' service as contributing to their total teaching career with the result that incremental and pension rights were safeguarded. Thus there was no difficulty in attracting teachers into the Education Service for a limited number of years if they so required and the previous complement had been composed of an equitable mixture of permanent career officers leavened by those on short-term engagements.

The benefits of both prior experience and the ability to enter and resign, although perhaps overstated by Curtis, were recognised by the Donald Committee and during the course of its deliberation consulations were made with the other two Services, the Ministry of Education and the National Union of Teachers as well as other interested organisations in order to determine whether full integration of the Education Service was compatible with external recognition and civilian career prospects. In addition the possibility of allowing entrants to be credited for previous teaching experience was discussed bearing in mind reaction from other branches of the air force and, of course, the Treasury.

The Committee's final recommendation was that "the educational function must be more firmly established in the life of the Service and should contribute as much to morale as to knowledge. Education cannot obtain its best if it is something extraneous imposed on the service from outside. The civilian teacher cannot do more than serve with, but not in, the service.

However good his advice it cannot escape the suspicion that it is lacking in appreciation of service needs. We have therefore taken the view that all teachers employed in the Royal Air Force in the future ought to be officers in the full sense of the word, mobilised as part of the Force".

The Air Council agreed to the recommendation and on 1st October 1946 the Royal Air Force Education Service was replaced by the Royal Air Force Education Branch, composed of uniformed combatant officers![1] The majority of the original members of the Branch were, however, members of the old Educational Service who relinquished their honorary ranks on being commissioned into the Branch and received direct permanent commissions similar to that of their honorary ranks.

The only restriction enforced in such cases was that officers should be able to complete twenty two years commissioned service by the age of sixty. Towards this any previous commissioned service could be counted, so that anyone who had been embodied into one of the other branches during the Second World War could claim to have such service considered. Those who had remained in the Education Service throughout the war were unable to be given credits for this time and their twenty two years were deemed to start from 1st October 1946. This arrangement obviously excluded a number of serving members from taking up permanent commissions and they were allowed to continue under their civilian conditions of employment. They continued to wear uniform but retained the distinguishing collar-dogs which the new Branch abandoned. This distinction continued until 1950 when all remaining members of the Education Service were granted permanent commissions on the Supplementary List.

All new entrants to the Branch and many of those who had been temporarily engaged in the old Service were initially only granted short service commissions although many subsequently transferred to permanent commissions on either the General or Supplementary Lists. Those who did so, however, were required to

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1 Air Ministry Order A883/1946 dated 1st October 1946

retire at the age of fifty five, the normal retiring age of other branches and had to be able to complete at least sixteen years service before that age.

Into the order announcing the changeover and the absorption of members of the Education Service into the Branch it was felt necessary to interpolate an outline of the educational requirements on operational stations. This was to ensure that new entrants to the Branch would be fully aware of the duties which would be required of them, for as commissioned officers they would have no opportunity of complaining about having to undertake non-professional (ie non-teaching) tasks.

It was pointed out that the General Education Scheme consisted not only of a certain amount of teaching of students attending classes on a part-time basis but a wide range of other educational facilities all of which were directed partly towards the improvement of professional and technical efficiency in the air force and partly towards meeting the educational and post service vocational needs of the individual airman thus providing within the RAF opportunities for adult education comparable with those in civil life.

It was also pointed out that in addition to their teaching duties education officers would be required to act as advisers to their commanding officers in education matters affecting the well-being of all station personnel and to organise and direct any educational programmes needed to carry out the provisions of any education scheme which may be devised.

This responsibility in fact, was no less than that which had been required of education officers in the General Education Scheme before the war, but it seemed to portend a much wider employment of Education Officers out on operational

stations than had been the case before 1939. Indeed the Educational and Vocational Training scheme still in operation when the Order was issued seemed to be the probable basis for the General Education Scheme even when the RAF returned to its peacetime basis.

CHAPTER V

WAR TIME EDUCATION AND EDUCATION FOR RESETTLEMENT

The threat of war has always resulted in the contraction of a nation's cultural and educational activities and thus in 1938 the General Education Scheme was put into a state of abeyance, for although the RAF Education Service was expanding, it was not doing so fast enough to keep pace with the entry of recruits. The majority of education officers were withdrawn from operational stations and transferred into training schools where their subjects were restricted to those which would provide a scientific background to the recruits' practical training.

Even the apprentices' training at Halton and Cranwell was curtailed - the first victim being the "Task"[1] which was no longer imposed on apprentices after the thirty-fifth Entry at Halton. Chief Technician B. W. McCarthy of RAF Innsworth (ex No 38 Entry) stated that not only was the Task abandoned by 1939 but by the time he passed out in the following year, no examinations were set in the General Studies Section and no grading was given to apprentices on the basis of examination results. Apprentices entering Halton after the outbreak of war found an even more attentuated course which was reduced to two years' duration and from which all liberal studies had been excluded in a desperate attempt to provide trained ground crew for the RAF.

One result of the suspension of the General Education Scheme was the discontinuance of the requirement for the Promotion and Reclassification examinations from July 1938 onwards [2] although the examinations continued to be set until

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1 Page 25 supra

2 Air Ministry Order A276/1938 dated July 1938

May 1939. Subsequently the promotion of airmen was to be solely dependent on their ability to pass their trade tests, which were still maintained throughout the war in one form or another, and to convince their section commanders and hence their commanding officers of their suitability for promotion.

By 1940, however, it was decided to re-establish the General Education Scheme on a modified basis at least. In April 1940 Command Education Officers were re-appointed to Bomber, Fighter and Coastal Commands while one was also appointed to the newly-formed Balloon Command.[1] Their terms of reference differed only slightly from those which had been laid down originally in 1922, but it laid more stress on the provision of facilities for general education within the RAF rather than on specifically examination-orientated instruction or resettlement. Command Education Officers were given the opportunity of discovering the special educational needs of personnel in their Commands and of advising the Director of Educational Services of the methods they were using to meet these needs. Without education officers on stations to assist them, the Command Education Officers were forced to rely on commanding officers' advice, which in turn would have had to be gleaned from their junior officers and section commanders. Through these the Command Education Officers were to arrange for the provision of libraries on stations and for the visits of occasional lecturers.

By the summer of 1940 it was evident that if the system were to work efficiently then specialist education officers' posts would have to be re-established at station level, and in November orders were given for the re-appointment of station education officers. This was not on the pre-war scale

1 Air Ministry Order A221/1940 dated April 1940

of one per station, but arrangements were made to "link" neighbouring stations for educational purposes, the normal establishment being one education officer for each four stations.[1]

Their task was to cover both Service and general education, with, initially, more concentration on the former, as it was felt, quite rightly, that not only was it more important but the wider field of general education could be well-covered by civilian organisations. The "Service" element covered not only programmes aimed at improving the technical standard of airmen in their respective trades but also included "the holding of any preliminary education tests which a commanding officer may require". The function of these tests is not easy to determine and one can only presume they were in order to assist in selection for promotion but whether or not they were correlated to the technical training of airmen, or were of a purely general nature, is not known.

In the provision of general education, the station education officer was to provide classes in general subjects to complement the lectures given by visiting lecturers and to arrange for classes in what are described as "semi-vocational" subjects and which, in fact, included lessons in art, pottery and other arts and crafts.

Assistance was also to be given to conscripts who wished to continue their studies. Local Education Authorities were asked for help in such cases, and generally they agreed to allow members of all three Services to enrol at technical colleges and evening institutes without payment of fees. However, the impracticability of sending more than a minute proportion of men to local evening classes

1 Air Ministry Order A809/1940 dated 1st November 1940

was soon realised and in January 1941 the facilities of the Army Correspondence Course Scheme were made available to members of the RAF.[1]

This scheme had been originally launched by the Army in the autumn of 1940 to provide tuition for personnel who wished to maintain or improve their education. For this, arrangements had been made with a number of established Correspondence Colleges and some professional bodies to provide schemes in various professional subjects. Education officers were responsible for ensuring that personnel registering under the scheme were able to obtain the necessary textbooks and that their work was submitted regularly.

Apart from these specific tasks in connexion with general education, the station education officer was to be an ex-officio member of the Welfare Committee of each of the stations which he parented in order to determine the needs of the airmen, and conversely to ensure that all personnel were aware of the facilities which were available.

For the first two years of the war the aim of the General Education Scheme was basically the provision of facilities to maintain the level of morale of the air force. This, although essential, particularly in the latter part of 1940, was only half the task and attention was given to the necessity of acquainting all ranks with the cause for which we were fighting. Therefore by late 1941 it had been decided to extend the General Education Scheme to include lectures on current affairs in an attempt to explain the principles for which the Allies were fighting and to prepare airmen for the problems they were likely to meet demobilisation.[2]

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1 Air Ministry Order A1/1941 dated January 1941

2 Air Ministry Order A871/1941 dated 23rd October 1941

While attendance at these lectures was not to be compulsory, commanding officers were encouraged to permit airmen to attend. These lectures were to be given with two aims in mind:

a. To encourage personnel to follow intelligently the course of the war and events at home and overseas.

b. To give airmen clear ideas about what they were fighting for.

In the hope that the maximum amount of interest would be generated, a period of discussion was included as an integral part of each lecture and freedom of expression was encouraged, although airmen were to be prevented from developing arguments of a party political or religious denominational nature. To provide a basis for these lectures and the subsequent discussions the air force utilised the pamphlets which the Army Bureau of Current Affairs had started to publish in September 1941. These pamphlets consisted of two series, "Current Affairs" and "War" and were published in alternative weeks, although the latter seems to have had a much more restricted distribution. Members of the war-time RAF with whom the writer has spoken all remember the former, but few can recall the latter.

The ABCA Scheme although possessing a number of advantages, suffered from the absence of any logically developed sequence of topics. This was made inevitable by the necessity to publish articles with a degree of topicality and to present them in an interesting form. Thus though W. E. Williams (now Sir William Williams CBE) was appointed Director of the Scheme, he was the only educationalist on the staff, for he was assisted by a team of journalists whose forte was their skill in presenting facts and opinion to the ordinary newspaper reader. In their search for topicality, they ignored any attempt at the logical

development of a subject and in the course of successive weeks in 1942, ABCA topics included "Women at War", "Meet the Americans!", "Turkey Today", "Taking Stock" and "Blitzkreig in the Pacific". Apart from the permanent ABCA team of writers, well-known authorities undertook to write occasional articles on their own specialism.

The range of subjects, despite the excellent presentation, was too wide to prevent the officer on the Station from developing a theme and consequently much of the subsequent work was scrappy and shallow. In addition, many of the airmen attending had insufficient background knowledge to supplement the facts given in lectures and so were made to participate in any worthwhile discussions.

Despite these shortcomings, ABCA bulletins were widely used by the air force and by April 1942, 1150 copies of each bulletin were being distributed each forthnight to RAF stations in the United Kingdom.

Towards the end of 1942, however, plans were made for the RAF to produce its own current affairs bulletins, and the first issue of "Target" as the new publication was called, came out on 18th January 1944 and was thereafter published on a fortnightly basis until the end of 1946. In the first issue the then Chief of Air Staff, Air Chief Marshal Sir Charles Portal (Now Lord Portal of Hungerford) announcing the aim of "Target" stated that it was to provide topics for discussion and to present serving airmen with the opportunity to express their opinions about problems which were either current or which would occur in the post war world.

The accompanying editorial stated that the publications would be similar to those of the Army Bureau of Current Affairs except they would naturally be more concerned with the air force problems and news. The information bulletin "War"

was not being copied, but each edition of "Target" would include a brief resumé of the war in the air as it had developed over the previous fortnight. The remainder of the pamphlet was given over to notes on citizenship and post war reconstruction, and it retained this form until early 1945.

It was obvious that if discussions were to be permitted on the scale intended then education officers would be unable to cope with the task which was accordingly passed over to junior officers. Many of them had had no training in leading discussions, and, indeed, there was no need why they should have had as the whole concept was completely alien to traditional military discipline. In order to assist them steps were taken to provide some form of instruction in the running of discussion groups and on 22nd November 1943 the RAF School of Discussion Technique was established in Highgate.

The aim of the school was to provide junior officers in the RAF and WAAF with the basic techniques of running discussion groups and this was attempted by providing five day courses with the following standard curriculum:

Day 1 Lectures on Air Ministry Policy towards discussion group work.

Day 2 Lectures on the aims and methods of discussion group work.

Day 3 Lectures on topics and their treatment.

Day 4 Lectures on historical, political and economic subjects.

Day 5 Group practice in syndicates.

Although the school was staffed by education officers, guest speakers were invited to give lectures on the fourth day of each course and the official records of the school show that such persons as Sir Stafford Cripps, Wilfred Pickles, the

Prime Minister of the Netherlands and Sir Walter Monckton were among those who accepted.

The first course assembled on 6th February 1944 and consisted of 43 Officers. Before it closed in November 1945 eighty-one courses had passed through the School with between 30 and 45 students on each course.

Thus there was throughout the war an attempt to keep the minds of the airmen open and receptive to new ideas both by giving them lectures on a wide variety of subjects, especially in the field of social and economic problems, and by allowing them the opportunity to discuss problems exposed in these lectures.

It has already been pointed out that the main reason for both lectures and discussions was not educational in the purest sense but simply a means of maintaining morale. This applied particularly on isolated units such as balloon sites and radar stations where the problem was so severe that it had visible effects on efficiency. However, it is interesting to note that the means by which it was sought to overcome this erosion of morale was educational and although the acquisition of knowledge may have been a secondary consideration, it almost certainly had side-effects in which a genuine desire for further study was aroused.

This supposition, of course, cannot be verified and the demand for more formal education which arose during the resettlement period may have existed prior to these discussion groups, but have been denied fulfilment before the war because of economic circumstances.

Although the responsibility for organising the ABCA and "Target" discussion groups, fell naturally to the station education officer where available and to section commanders where they were not, this was by no means the first nor the only

opportunity which airmen had had of attending lectures and classes of a general educational nature. As in the First World War the RAF was assisted in the provision of these by various civilian bodies including the Young Men's Christian Association, the Workers Educational Association and the Extra-Mural Departments of a number of Universities. Although no overall plan existed at the outbreak of war to meet the demand for education from the rapidly expanding services, several ad hoc schemes were being developed. By late 1939 it was realised that if maximum use were to be made of the facilities available, some means of co-ordinating the existing effort must be established. Failing any official encouragement, the YMCA Education Committee in November invited representatives of other adult educational movements to form a consultative committee to examine the problem.

This led to informal discussions between the committee on the one hand and representatives of the three services and the Board of Education on the other. The outcome of these discussions was the agreement to form the Central Advisory Council for Education in HM Forces which would consist of members from the voluntary organisations, with the three services sending observers. The Central Advisory Council was formally established on 6th January 1940 and held its first meeting on 25th January with Sir Walter Moberly (Chairman of the University Grants Committee) as Chairman and Dr. A. D. Lindsay (Master of Balliol College, Oxford) as his Vice-Chairman. Dr. Basil Yeaxlee was appointed Secretary.

In order to make a practical contribution to the task of providing classes and lectures for servicemen, the C.A.C. invited the Vice-Chancellors of all universities and the Principals of university colleges to call representative

conferences in their Extra-Mural areas and to form committees through which the Central Advisory Council might work. This resulted in the formation of twenty three Regional Committees with members drawn from much the same bodies as the C.A.C. itself.

There was little in the way of educational activity which was not attempted and to indicate the extent of the coverage given, one could do worse than quote the aims of the scheme as visualised by the North East Regional Committee for Education in the Forces. These aims were:

a. to provide facilities for men and women in the Forces for talks, discussions, lectures and films on matters of general interest.

b. to offer opportunities for technical and vocational studies for men and women whose training has been interrupted by war-time service, so that no one need leave the Forces less well-equipped educationally than on joining.

Each Regional Committee acted as a clearing house to meet demands under these two headings. In practice few requests under b. were received as most servicemen went straight to their local technical colleges for work of this nature. Occasionally however tutors were obtained from university sources for those who wished to continue with higher professional and academic studies. The chief business of the Regional Committees, therefore was to meet requests for general education. An article in the Times Education Supplement dated 15th March 1941 claimed that subjects requested fell into three main categories:

a. Biographies of the various war leaders

b. International relations and the War situation

c. General political topics

This is largely confirmed by Table V showing the subjects covered by classes and discussion groups held in the NERCEF area during September 1941 and which may be regarded as typical of those provided by Regional Committees generally:

TABLE V

NORTH EAST REGIONAL COMMITTEE

RANGE OF SUBJECTS COVERED IN LECTURES IN SEPTEMBER 1941

TOPIC OF LECTURE	NO OF LECTURES/CLASSES
Background to War and Current Affairs	113
Europe, history and description	55
Middle East, history and description Far East, history and description	39
USA history and description	18
Sociological subjects	30
Biographical subjects	15
Travel	15
Science	11
Literature/Art	9
Local History	8
General Interest/Hobbies	4
Miscellaneous	6

Source: Times Educational Supplement 8th November 1941

Although the Regional Committees were willing to provide lecturers for single lectures they much preferred to run short courses consisting of a number of classes, usually held weekly, on a particular theme. Through this latter method, a stabilised class could be formed and, although there would indeed be weekly fluctuations in attendance, a core of students would remain to provide continuity. Also it could be assumed that those enrolling would have some interest in, and therefore some knowledge of, the theme of the course.

With a series of single lectures there would certainly be no common element among the audience nor would there be any guarantee that its members would have anything approaching a common standard of education or ability. If this presented a problem to the lecturer so, too, did the variation in the possible size of his audience. Even in peacetime with an organised course leading to a specific examination a class may easily vary between six and two dozen students in consecutive weeks. This sort of fluctuation must have been magnified by the exigencies of wartime service, so lecturers would never be in a position to decide in advance the form their lecture was to take - it would be pointless attempting to lecture a mere handful of listeners, although equally ludicrous would be any attempt to hold a discussion with upwards of fifty airmen.

Furthermore, there was a belief on the part of the Regional Committees that their lecturers should not only give lectures or lead discussions but should leave with their audiences both the inclination and the material to allow them to continue with discussions among themselves.

Lord Eustace Percy saw the Regional Committees acting as extended Extra-Mural

Departments of universities, taking the university to people who cannot go to it.[1] There were, however, obvious differences between the work of the Regional Committees and that of the Extra Mural Departments. The essence of traditional Extra Mural work required the existence of small groups and their ability to undertake free discussion, serious reading and a certain amount of written work. This was too much to hope for on war-time RAF stations whose routine would depend on rapidly altering circumstances and whose population was constantly changing.

Despite these difficulties a large number of educational visits were made to stations by tutors of the various Regional Committees. For example in the year ending November 1941, some 3,400 visits were made in the area administered by the North East Regional Committee alone, although statistics available do not indicate what percentage of these were made to RAF Stations in the area.

Although the tutors of the Extra Mural Departments usually formed the nuclei of the Regional Committees' staff they were not the sole field of recruitment. If one may again quote the Durham University area as exemplifying a typical Regional Committee, tutors were selected from four main sources and Lord Eustace Percy in his article in the "Times Educational Supplement" in November 1941 gives the following figures for the relative numbers drawn from each:

Internal University staff	20
University Extra-Mural Tutors	22
WEA Tutors (not included above)	26
Staff directly recruited by the Regional Committee	60

It was on the fourth group to which the main burden of teaching was eventually transferred as the first three were quite fully committed lecturing in their own

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1 Article by Lord Eustace Percy in "The Times Educational Supplement" 8 Nov 41

fields to be capable of undertaking a large amount of extra work. More important of course was that their numbers were fixed - very little recruitment taking place to their ranks during the war years. The Regional Committees had to look elsewhere to meet the demand for staff. The new recruits varied considerably in both background and teaching ability. Many were school teachers who were employed during their holidays or in giving evening lectures, while other were men from other professions who had no teaching experience but who were otherwise highly qualified. Thus within each extra-mural area, the Regional Committee was able to build up a panel of lecturers on almost any subject for which there was a reasonable requirement.

In spite of these attempts to generate interest in what might be described as general education, Dr. A. D. Lindsay admitted in 1941 that the work of the Regional Committees, although continuing to increase, was patchy and he felt an enormous responsibility for the effectiveness of the scheme rested with the Commanding Officers of Units.[1] While there may be grounds for considering that there was some basis of truth in his conclusion, for many Commanding Officers saw these visiting tutors at best as interfering with the running of their stations and at worst some sort of rabble rouser, Dr. Lindsay tended to overlook a somewhat vital point - the fact that many men were not and cannot be made to cultivate an interest in education of an academic nature. For men of this calibre, education if it is to exist at all, must develop along essentially practical lines and although outside the main theme of the paper it may be interesting to see in what ways these men were helped.

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1 "Times Educational Supplement" 29 November 1941

Originally they were sent off to technical colleges but eventually the impracticability of this method persuaded both the service and the Regional Committees to make some efforts to cater for their demands. The demands originated from three sources. First, there were craftsmen who were no longer employed in their trade but who wished to keep their hand in, in preparation for the day when they would return to their civilian trade. Secondly, there were those who wished to utilise their time in a creative environment either making objects of beauty or of utility for their own enjoyment. Finally there were those who foresaw the possibility of making money by learning a craft which might provide them with a secondary source of money either immediately or after the war.

The indication of the demand for instruction in this field of practical activity can be seen from the following figures:[1]

	September 1941	September 1942
Talks on crafts	34	176
Practical classes	80	272

Initially the Central Advisory Council ran into difficulties in providing instructors for this type of class, but in several areas, including the North East, use was made to the facilities of the National Council for Social Service which had been originally established to deal with the unemployed in distressed areas. In some ways, life on RAF stations was not entirely unlike the conditions in these areas - the airmen were isolated in what were often uncongenial surroundings with little continuous work and yet because of the nature of their task were often unable to leave the confines of their stations.

Returning to the provision of general education, in September 1942 the

1 "Adult Education - The Record of the British Army": Hawkins & Brimble

Director of Army Education announced that a second winter education scheme, similar to the previous ABCA Scheme, would be introduced from 1st November. One of the features of this scheme was the publication of a series of booklets designed to assist lectures and discussions on various aspects of citizenship and social responsibility. The topics, which covered local and central government, international relations and post-war reconstruction, were known by the generic title of British Way and Purpose, or, as it was generally known by its initials, BWP.

These booklets, which were subsequently published in a single volume, were in no way a prescribed text nor were they given any privileged status among the other possible sources of information. However, no single textbook covered the proposed BWP syllabus and therefore the booklets were extensively used. One booklet was published every month, beginning in November 1942, and was divided into four sections - each providing subject matter for one week's discussion. Thus for November and December 1942 the "British Way of Life" was the main topic, being followed in January 1943 by the "British Commonwealth". As previously stated the original scheme was intended only to cover the winter months but it was realised that the scope of the series was toowide to be completed in six months and eventually the full course extended for a period of eighteen months not finally ending until May 1944.

As the RAF had used the ABCA pamphlets to assist in carrying out the terms of AMO A871/1941 so they also used the new BWP publications. They were far better than the bulletins which they replaced as they formed a logical sequence of delopment as may be seen from the titles of the first two sessions in Appendix 5 Like the ABCA pamphlets the BWP booklets often contained articles by writers who

were well-known authorities on the various subjects under discussion. For example, Mr. (now Sir) Arthur Bryant had written a pamphlet on the "British Empire" in the ABCA series, while (Lady) Gertrude Williams had written on "The Citizen at Work" in one of the BWP publications.[1]

It is interesting to note in connexion with both these series the difference in the attitude of civilian educationalists and serving officers to the publications. The latter were - and many still are - convinced that there was a patently obvious left-wing bias both in the selection of topics and the way in which they were presented, although the idea of Sir Arthur Bryant being a fellow-traveller must surely raise a smile on anyone who has read his books. Conversely many lecturers employed by the CAC and its Regional Committees were convinced that booklets which had been produced and distributed through official military channels must inevitably include right-wing propaganda. It is difficult to believe, however, that H. A. Marquand, another contributor to BWP and later a member of the 1945-50 Labour Government would follow the same line of approach as Sir Arthur Bryant.

An unbiased reader of today would hardly find them following any political trend - what would perhaps impress him is the naivete and optimism of the writers - but this would not prevent any lecturer from using them to put forward any given party political line.

These booklets were used extensively in the RAF and provided a foundation on which both education officers and civilian lecturers could base their talks. Because of their success the pamphlets were reprinted, with only minor amendments, in book form in November 1944 and were thereafter used throughout the remainder

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1 BWP No 8 dated June 1943

of the war, and during the period of resettlement, as a basis of all citizenship lectures.

By late 1944 it was becoming increasingly clear that the war, particularly against Germany, was coming to a fairly early conclusion and in order to prevent a reoccurrence of the problems which had faced ex-Servicemen after the First World War, plans were made for the demobilisation and civilian resettlement of members of all three services. Although much of the post-release work was undertaken by the Ministry of Labour, each branch of the armed forces was given the responsibility of organising pre-release training schemes for its own personnel. In both the RAF and the Royal Navy this scheme was known as the Education and Vocational Training Scheme and the outline of the air force's plans was first published in September 1944.[1] In the preamble to the outline it was conceded that the air force had a considerable responsibility to assist in the reinstatement of personnel in civilian life and to this end arrangements were being made for the introduction of a scheme to facilitate this resettlement. It was further pointed out that participation in the Education and Vocational Training Scheme would not defer any airman's date of release, regardless of whether he was assisting in carrying it out or using the facilities which it provided. Furthermore, utilisation of the EVT scheme would not prevent anyone from taking advantage of the Ministry of Labour schemes or those of any other body which might subsequently be available on demobilisation.

Although the Air Ministry was to be ultimately responsible for seeing that the terms of the Order were carried out, the Order itself left much to the commanding officers of units and merely suggested an outline of the facilities

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1 Air Ministry Order A942/1944 dated September 1944

which should be provided, and granted commanding officers (and consequently their education officers) a large measure of independence in their execution. The thinking behind the order reflects the same ideas of decentralisation of responsibility which marked the Demobilisation Resettlement Scheme at the end of World War I from its army equivalent.

Detailed plans of the EVT Scheme were not published until April 1945[1] when it was announced that it would come into operation one month after the end of the war with Germany. Thus the scheme began to operate in June when the initial and relatively slow run down of the armed forces got under way.

At this time it was still considered that the war against Japan would take another fifteen months to bring to a victorious conclusion and plans for the implementation of release scheme plans were made on this basis. It was to have been developed as a gradual measure with men who had initially volunteered or been conscripted, being replaced by younger men. By this gradual introduction it was hoped that any teething troubles inherent in the scheme would be ironed out and that it would be running completely smoothly by the time complete demobilisation was envisaged in August 1946. Fortunately the dropping of the two atomic bombs on Japan in August 1945 removed a year from the planners' estimates and the air force, in common with the other Services, was faced with a position in which many thousands of men were no longer actively employed and in some cases constituted a potential threat to military discipline.

It was therefore evident that after August 1945 the introduction of the full EVT Scheme could no longer wait until its teething troubles had been removed but

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1 Air Ministry Order A434/1945 dated April 1945

must be implemented immediately. There is ample evidence that on some units there were mistakes and failures as there are likely to be after the introduction of any new system of administration, but there is little doubt that elsewhere the scheme worked efficiently and that large numbers of officers and airmen benefited from the training which they received from EVT instructors.

Under the terms of the scheme three types of training were envisaged: Resettlement, Educational and Vocational, and at station level the task of co-ordinating the three aspects was placed in the hands of specially constituted EVT Committees of which the Station Education Officer was an ex-officio member.

Resettlement training was primarily to assist servicemen in their attempts to re-orientate themselves in a civilian environment by giving them background knowledge and understanding of citizenship and probable post-war problems and in this section alone was attendance at classes compulsory - airmen having no option but to attend one hour per week. This was merely a continuation of the scheme for citizenship classes which had originally been introduced on a voluntary basis in 1941; now it was considered essential that airmen should attend.

At stations at home the lectures continued to be given as far as possible by civilians working under the auspices of the Central Advisory Council but where this was not practicable - particularly in overseas theatres of war - the onus of giving these talks and leading the subsequent discussions fell to the various types of EVT instructors.

There was no rigid syllabus laid down for these instructors but they and their civilian counterparts were given considerable guidance by the published edition of BWP and by the fortnightly issues of "Target". With the introduction of the

EVT scheme this latter publication had changed in content and although still including topics and guides to discussion, it began to include advice on and opportunities for resettlement. This combination of material was retained until, with the end of the EVT Scheme in December 1946, publication ceased.

In addition to the course on citizenship, resettlement training was also extended to cover practical activities of a non-vocational kind ranging not only to provide a useful interest for men after they had left the RAF but were also intended to help maintain the morale of men who were serving on isolated units and who no longer had the esprit-de-corps of the war days to sustain them.

Educational training was designed to improve both the general educational standard of airmen and also to provide them with academic qualifications which would be of use when they left the Service and were looking for employment. Obviously the range in this section of the training scheme would have to cater for a much wider range of ability than the resettlement training which on the more theoretical side dealt with general principles rather than specific problems. Accordingly, the educational training was divided into three categories to meet what it was thought would be the three main levels of demand.

The first dealt with elementary educational training in which it was proposed to give a grounding in general education, including practical subjects, to airmen who had completed their final education at fourteen and who had undertaken no study since that time. The studies of airmen in this group were directed towards the RAF War Education Certificate for which it was hoped to gain external recognition and consequently be of some direct benefit to personnel studying for it. This certificate was introduced at the same time as the EVT scheme and to qualify

for its award an airman had to meet two conditions. First he had to be certified by the Station Education Officer or other approved authority as having attended classes regularly or where no classes were available, have worked satisfactorily under supervision for a continuous period of not less than three months in preparation for the examination and secondly he had to satisfy the examiners by attaining the prescribed standard in any three of the four subjects laid down for Part I of the examination. On completion of his Part I an airman then became qualified to enter for the Part II at any subsequent examination, providing he again could produce evidence of having completed three month's satisfactory study. In Part II an airman had to pass in two papers each of two hours' duration from a total of four and certificates were to to be annotated to show those subjects in which he satisfied the examiner.

The subjects of the examinations were as follows:

a. Part I

1. English
2. Elementary Mathematics
3. General knowledge of citizenship and current affairs
4. Housewifery

b. Part II

1. History and Geography
2. Geometry
3. General Science
4. Any subject prescribed for theoretical training in connexion with a vocational training course.

The examination was not a success, however, insofar as it was not recognised externally and although it may have been instrumental in setting a number of airmen who had previously been denied the opportunity, on the road to further study, it was abandoned in September 1948 and replaced by the RAF Education Test, a purely internal examination which was geared to an airman's promotion.

The second level of the demand was met by the establishment of an examination designated the Forces Preliminary Examination and administered by the Civil Service Commission. This examination, which was developed from a suggestion by Dr. Basil Yeaxlee, Secretary of the CAC, was framed to meet the needs of men and women who wished to prepare themselves for subsequent entry to a university or one of the professions. The syllabuses and regulations were drawn up by a committee composed of representatives of the Universities, the Ministry of Education, the Central Advisory Council and the three Services. The Civil Service Commission, which was also represented on the Committee, was given the added task of preparing the examination papers and marking the submitted scripts.

Success in the Forces Preliminary Examination was accepted by the Universities and the professional bodies as prima facie evidence of a candidate's eligibility to be considered for entry to a University or to be exempted from the preliminary examinations of a large number of professional bodies. Passing the examination did not confer on any candidate the right of admission to any particular faculty of a university nor to membership of any professional body, nor did it in any way supersede the existing means of qualifying. It was, however, a convenient alternative for members of the Forces and on account of its widespread recognition proved to be a highly successful examination - if success can be judged by the

number of entries for although no precise statistics now exist, the Civil Service Commission estimate over 10000 RAF personnel entered for the examination.[1]

The examination which was set annually consisted of two parts each containing a number of subjects, and which could be taken separately. Part I consisted of three compulsory subjects and although individual subject passes were recorded in the same way as GCE passes are, a candidate could not proceed to Part II until he had completed Part I. The subjects in this part consisted of:

a. English

b. Mathematics or Latin (or in approved cases a third optional subject from Part II)

c. General Knowledge (current affairs and citizenship)

In Part II candidates had to reach a pass standard in any two of the following before they could be granted a certificate:

a. Natural Sciences or Latin (provided that Latin had not been taken in Part I)

b. French or German.

c. History or Geography

d. Social Sciences

e. Additional Maths or Geometrical and Mechanical Drawing.

To allow for a measure of specialisation some of the above subjects were divided into a number of sections in such a way as to allow a candidate to pass by selecting questions from not more than two. Thus in Natural Science the paper was divided into three sections: Physics, Chemistry and Biology from which candidates

1 Estimate from Civil Service Commission dated 14th March 1968

could select any two, while Social Sciences was divided into four sections covering Politics, Economics, Ethics and Psychology from which only one section could be selected.

The FPE differed not only in its academic standard from the RAF War Education Certificate but also in the fact that it was an externally administered examination. It was this which presumably influenced its acceptance by professional and educational bodies and it was because of this acceptance that the examination outlasted the EVT Scheme which produced it and was not completely replaced in the RAF until 1954.

Finally higher educational training was provided for those already qualified in some way but who either required refresher training or who wished to embark on further professional qualifications. In most cases the standard of personnel requiring this level of training was too specialised for the average station education officer and the applicant was normally offered the choice of facilities for individual private study or a correspondence course for which the RAF became financially responsible. On other occasions applicants for this training could be given permission to attend local colleges and evening institutes on a part-time basis.

Vocational Training, the third element in the EVT Scheme was primarily designed for airmen who wished to continue with their pre-war trades and the Air Ministry listed four groups whom it was intended to help:

a. Airmen whose apprenticeships or other courses of training had been interrupted by conscription

b. Airmen who although qualified, wished to obtain "refresher" training in their pre-war occupation

c. Airmen who had no previous skill joining the RAF and wished to convert their service qualifications into those which would be accepted in industry.

d. Airmen who required preparatory training before leaving the RAF to undertake civilian training. (This group did not cover those who were already qualified by civilian standards in one trade and wished to convert onto a different one on leaving the Service).

Although excellent in concept this aspect of the scheme proved to be somewhat too ambitious, for despite the fact that on the Resettlement and Education Training sides, the station education officer could either provide the instruction himself or arrange, via correspondence courses, for theoretical instruction, in the Vocational Training element the greater proportion of training was of a practical nature. Thus although the Education Officer was still responsible, the efficiency of theoretical training depended upon such elementary factors as the location of the unit, the type of unit, and not least, the training which the airmen required.

On the station the main forms of instruction consisted of lessons by either part-time civilian teachers or service personnel who could provide both refresher training and conversion courses in the station workshops. Local technical colleges were used whenever possible to give continued courses of theory and practical work. Where neither of these were appropriate, or a higher standard of theoretical work was demanded courses were organised on a Group basis and finally should this not prove practicable, provision was made for issue of study syllabuses to students.

Although anyone so wishing could spend upto six hours weekly at classes during service time it was realised that many airmen would not take advantage of the facilities offered. The primary task of the station education officer or the EVT instructor therefore was to make airmen aware of the opportunities available. It was appreciated, however, that if these were to be of benefit, the decision whether to attend or not had to be left to the individual airman consequently enrolment for educational and vocational training was voluntary but once courses had been started then subsequent attendance became compulsory.

Initially the EVT Scheme was intended only for officers and airmen who had either joined up or who had been conscripted for the duration of the war. In January 1946[1] the Air Ministry announced that the facilities of the scheme would in future be available to all personnel, including regulars on long term engagements, until the termination of the Scheme.

By the end of 1946, the demobilisation of those who had served during the war had been virtually completed and it was felt that the need for the EVT Scheme, as it then existed, with its accent on preparation for civilian life was no longer necessary. Accordingly the Scheme came to an end on 31st December 1946 and any residual responsibilities were incorporated into the task of the revitalised General Education Scheme.

The air force had entered the war with a small select body of professional education officers who had been almost immediately concentrated in the training schools to meet the demand for technical training. Initially their ranks had been swollen by new temporary entrants to the service but they had failed to keep

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1 Air Ministry Order A37/1946 dated January 1946

2 Air Ministry Order A1049/1946 dated December 1946

pace with the increasing numbers conscripted into the RAF. More and more, therefore, especially in the United Kingdom education of a general nature had been handed over to the various civilian organisations of which the Civilian Advisory Committee was the most important, and because of its composition, the most influential. How far they were successful in their attempt to broaden the horizons of their students cannot really be determined but if their effort is measured quantitively, it can be seen that a vast number of airmen were given an insight into the world outside that of the air force and in many cases beyond the confines of their previous civilian life.

As has been pointed out, the first attempts at introducing education to the mass of airmen was desultory and intended purely to prevent the decline in morale. However the fact that this was followed by a much more systamatic attempt at providing a course of what today would be "Environmental Studies" showed that (at the higher levels in the RAF) there existed a belief in the value of a liberal education. That this belief was sometimes suppressed at station level may have been due to demands for education interfering with military efficiency and by the widespread belief that education was perhaps a cover for the propagation of extreme left-wing doctrine.

This arose to some extent from the content of the publications and also from a belief that the lecturers themselves were politically biased, while the title of the Workers' Educational Association alone aroused suspicions of this nature. There is little doubt that a number of lecturers, both inside and outside the RAF, did exhibit a certain radicalism, but this was never sufficient to warrant any

official action being taken either to correct it or worse still, to contract the education scheme because of it. The air force went forward into peacetime more than ever convinced of the value of education through which its personnel could learn to play an intelligent part in society.

CHAPTER VI

THE RECONSTITUTION OF THE GENERAL EDUCATION SCHEME AND THE EDUCATIONAL PROVISIONS FOR NATIONAL SERVICEMEN

Although the General Education Scheme had persisted, albeit in an attenuated form, during the war years, the ending of the EVT Scheme necessitated its post-war expansion not only to include the provision of facilities for regular airmen but, equally as important, to cater for the needs of National Service Airmen. The policy and terms of reference laid down for the new scheme followed roughly the previous pattern and maintained the original aim of "raising the level of general intelligence and to develop those qualities of mind and character which go to form an efficient disciplined force under modern conditions".[1]

In December 1945 Air Commodore A. H. Robson, the then Director of Educational Services, presented his proposals for the future of RAF education to the Air Member for Training. He concluded his paper by pointing out that "to attract men of the best quality from all classes of the people in future, the fighting services must provide a life and mental environment in keeping with the highest standards of the national community. There is no higher task than that which the Education service must perform in breaking down internal barriers of ignorance and prejudice and in balancing professional skill with the broader notions of citizenship".

Consequently more attention was paid to the wider field of liberal education in the outline of the General Education Scheme published in December 1946. The scheme was intended to cover:[2]

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1 King's Regulations (1928 Edition) para 436

2 Air Ministry Order A1049/1946 dated December 1946

"a. Assistance to officers, airmen and airwomen in the study of subjects of an educational character bearing on service requirements, including general and technical education related to air force branches and trades, and where appropriate to the scheme, preparation for service examinations.

b. Education in the wider sense, aimed at raising the level of general intelligence and developing those qualities of mind and character which go to form an efficient disciplined force under modern conditions, including inter alia, practice in self expression with a view to clear thinking and accurate statement, general reading and study for self development and the study of modern world problems.

c. Assistance to officers, airmen and airwomen who wish to prepare for business or professional careers or industrial occupations in civil life, including the provision of information, guidance and advice on such careers and employment.

d. The study of current affairs and citizenship.

e. The provision of facilities for practical activities such as handicrafts and hobbies of educational value and for the cultivation of music, art, drama and other cultural subjects.

f. The provision of library facilities.

g. The oversight of the arrangements for the education of the children of Service personnel."

The order authorising the introduction of the G.E.S. places special emphasis on the need for the study of current affairs and citizenship and urged that it should be incorporated as an integral part of an airman's curriculum, whether he

was on a training or operational station. It went on to point out that this need should be met by organised courses and the fullest possible use should be made of such training aids as the Army Bureau of Current Affairs pamphlets, "Hansard" and organised visits off the station.

The education officer like his predecessor before the war, was expected to meet as many of the demands resulting from the above orders from his own resources, but where this was impracticable, recourse could be made to the longstanding alternatives which ranged from the employment of part-time teachers to correspondence courses. Nevertheless a heavy demand was placed on the education officer and the old wartime "linked" system, whereby several stations shared an officer, could no longer prove a satisfactory basis for its execution. Neither, however, was a return to the previous system practicable, for the new Branch was having to cope with numbers far in excess of the pre-war all-regular air force. Although the Royal Air Force had declined from its maximum wartime strength the continuance of conscription in the immediate post-war years consolidated by the National Service Act of 1948 an air force of over 300,000 officers and men. Originally the majority of these were enlisted for eighteen months but in 1950 following the outbreak of the Korean War this period was extended to two years.

This constant influx of recruits necessitated a rapid expansion of the Education Branch to cope with both the demands of the training schools and of the General Education Scheme. To meet the latter, the Establishment of stations was altered to provide one education officer for each 450 airmen and airwomen on posted strength (ie in determining the number of education officer posts no account was

taken of personnel who were on training courses and who would be catered for on a different scale laid down for technical training). The winding-up of the EVT Scheme and the demobilisation of instructors employed under it would have created unacceptable gaps in the educational framework of the air force which could not have been met by members of the Education Branch serving on permanent or other regular commissions. Consequently early in January 1948 the Air Ministry announced its intention of establishing its own school of Education to undertake the following functions:

"a. To give specialist training in their duties to newly appointed officers and to undertake the orientation of their professional qualification to the educational requirements of the Royal Air Force.

b. To train personnel to assist in the teaching of current affairs and citizenship by explaining the principles and scope of these subjects and demonstrating the most appropriate methods of instruction.

c. To provide refresher training for (regular) officers in the Education Branch."[1]

As a result of the Order, the RAF School of Education was opened at Wellesbourne Mountford on 7th January 1948 and initially accepted newly commissioned officers for four week courses. The content of these courses included an outline of the organisation of the Education Branch in relation to the air force as a whole and the various administrative and clerical minutiae which the officers would require in post. The course also included a series of lectures on the role of education in the Royal Air Force generally, making special reference to the responsibilities laid

1 Air Ministry Order A/112/1948 dated January 1948

down by the Education Act of 1944 in respect of National Servicemen.

The Education Act of 1944 had made it the duty of local education authorities to provide facilities for full-time and part-time education for persons over compulsory school leaving age, and also to make proper provision for such cultural and recreational activities as they were likely to require. Section 41 of this Act, dealing with Further Education, states that "it shall be the duty of every local education authority to secure the provision for their area of adequate facilities for further education, that is to say:

a. Full-time and part-time education for persons over compulsory school age: and

b. Leisure-time occupation, in such organised cultural training and recreative activities as are suited to their requirements for any persons over compulsory school age who are able and willing to profit by the facilities provided for that purpose".

The continuance of conscription after the end of the war resulted in the induction into the RAF of airmen who would be marginally affected by this Section of the Act and while it was realized that the fighting efficiency of the forces must be the prime consideration, it was also realized that a period of conscription might cause a critical interruption of many National Servicemen's preparation for their future careers. The National Service Act of 1948, therefore, although exempting the armed forces from the requirements of Section 41 of the 1944 Act, still required each service to make provision for continued education. Section 28 of the National Service Act 1948 clarifies the position in the following manner:

"1. The duty of local education authorities under Section 41 of the Education Act 1944 to secure the provision for their area of adequate facilities for further education shall not extend to any person during his term of whole time service; and a person shall during his term of whole-time service be exempt from compulsory attendance for further education under that Act.

2. It shall be the duty of the service authorities to provide, so far as may be practicable, further education within the meaning of the said Section 41 for persons during their term of whole time service; and, notwithstanding the provisions of the last foregoing sub-section every local authority shall have power to provide, or secure the provision of, such facilities for further education for such persons as aforesaid as may be agreed between them, and any service authority, upon such terms, if any, as may be so agreed.

3. In making arrangements for such further education as aforesaid the service authorities shall have regard to any representations made to them by, or on behalf of, bodies of persons concerned with education."

The General Education Scheme could obviously provide the facilities required by the 1944 Act for all airmen, whether regular or National Service, should they wish to use them. While the problems with regular airmen were minimal, as it was in their own interests to further their careers in the air force by attendance at education classes, the National Servicemen could not be relied upon to respond to the inducement which was presented to his regular counterpart. Apart from the widespread dislike of the idea of conscription which, coupled with the annoyance

aroused by the differential pay scales of the two classes of airmen, bred a reluctance to undertake anything more than was absolutely necessary, there were three main difficulties inherent in educating the National Service Airmen.

First, many were conscripted into advanced trades which required periods of training for upto half their total service so that the type of education which they were being given did not conform in spirit to that envisaged by the 1944 Act, being purely of a technical nature. Secondly, the highest rank which the majority of National Servicemen hoped to attain was that of Senior Aircraftman, which until 1956 required simply a partial pass in Part I of the Education Test. This could often be taken while in basic training and if successful the airman would then be free from the necessity of attending any further education classes. After 1956 indeed even this requirement for SAC was removed, advancement to that rank being subsequently dependent purely on a trade test. Finally a number of airmen had not the ability nor even the inclination to reach the rank of SAC and so after basic training were unlikely to demand any further education.

Lest it be thought that this was the entire picture and that it has been painted too dismally, there were of course many airmen who used their period of National Service to make good deficiencies which had existed in their education on enlistment and although no breakdown of GCE results is given between regular and National Service candidates, it is acknowledged that a considerable number of successes in this examination were scored by the latter.

Modern legislation must, however, go further than the provision of opportunities and consequently produces regulations which force the individual to take

advantage of these opportunities. This tendency was well examplified by the case of service education in the era of National Service. The re-introduction of the General Education Scheme was followed by the Air Ministry decreeing that certain aspects of service education would be obligatory.[1] This in fact was by no means an innovation for compulsory education for citizenship had been first introduced in the regulations governing the EVT Scheme. The Air Ministry Order was, like the National Service Act of 1948, simply seeking to extend wartime arrangements by making necessary adaptations to fit them into the post war world.

In general it was laid down that where education was to meet a service demand, classes were to be held during normal working hours and attendance at such classes was to be compulsory. Education for individual needs was normally to be undertaken in the airmen's own time and naturally enrolment was voluntary, although once an airman had registered for a particular class subsequent attendance could be insisted upon. Circumstances varied considerably between stations and it was not uncommon for most of the classes to be held during working hours.

The education envisaged under Air Ministry Order A/373 was to be given during working time for it stated that "all airmen recruited as regular or as National Service airmen shall be required to undergo education training as part of service training". This new commitment was to be additional to that under the General Education Scheme or that given at technical training schools. For National Servicemen it was to consist of two hours weekly during their first year of service and one hour per week during the remainder, while regulars were to have one hour's compulsory education during their first year only.

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1 Air Ministry Order A373/1948 dated April 1948

During the first year the compulsory education included one hour per week for general education which covered English and RAF History and one hour on current affairs and citizenship. The purpose of the course in general education was to give recruits either a second start or the opportunity to continue their studies. In order not to prevent those attending classes from making maximum use of their time no examinations were held and therefore the syllabus could be adapted to suit the needs of different types of recruits.

In the second year the general education hour was dropped and only classes in citizenship and current affairs retained, bringing National Servicemen onto the same basis as first year regulars. The difference between the two types of compulsory education derives from the expectation that regular airmen would attend classes under the General Education Scheme in order to gain promotion, especially after 1949 when the RAF Education Test was introduced.

The syllabus for the citizenship and current affairs course was so designed to ensure that all airmen were informed of and understood their social and civic privileges under the National Service Act as well as their rights and responsibilities as servicemen. Apart from ensuring that each airman knew of and appreciated the need for conscription and the task of the armed forces, the lectures were to cover such topics as had been laid down in the British Way and Purpose handbooks originally published during the war years.

The order stressed that to obtain the maximum impact on recruits, the topics should be presented in the most stimulating way and that the widest possible use should be made of the various teaching aids available, including further education

broadcasts, lectures by visiting officers on specialist subjects and the provision of ample time for discussion. Furthermore in order to remove any constricting influences on the syllabus it was made quite explicit that no examinations were to be set in this subject either.

The introduction of this compulsory element imposed an additional load on the Education Branch and in June 1948 the Air Ministry admitted the shortage of Education Officers and the need to recruit Education Assistants to undertake those tasks which had previously been undertaken by the EVT Assistants.[1] Recruits for these posts were to be National Servicemen who had secured either entry to a University or to a training college. Suitable applicants were to be given the acting rank of Sergeant and to attend the School of Education for a six week course, of which two weeks were concerned with duties and responsibilities of a senior NCO and covered such subjects as leadership and man-management. The remaining four weeks covered the educational training element and included lectures on

"a. the organisation and work of the Education Branch

b. Instructional Technique Method and Practice

c. the scheme for education in current affairs and citizenship".[2]

The Air Ministry however never really considered the employment of senior NCOs as a suitable alternative to an all-commissioned branch. With a relaxation of the conscription regulations after the Korean war when more youths were permitted to undertake their conscription after attending university rather than before, the air force was able, by offering a three-year short service commission at regular

1 Air Ministry Order A467/1948 dated June 1948

2 Air Ministry Order A467/1948 dated June 1948

rates of pay, to attract sufficient numbers of graduates into the branch to enable the Education Assistant Scheme to be brought to an end in 1952.

The compulsory element in service education lasted for eight years. Despite the freedom from central control which had been accorded to education officers in an endeavour to vitalise the two subjects it had been found that there was little liking for this element of training by either officers or airmen.

Airmen objected to the idea of compulsion applied to education at all levels. Those at the lower end of the educational spectrum could see no purpose in learning about citizenship and current affairs and seeing no point in the classes they simply regarded them as an opportunity to escape from work. Airmen of average ability objected as the classes were not geared either to external examinations or to any advancement in their trade, so that although they were often denied the opportunity of attending education classes for their own material ends they were forced to attend lessons which had no apparent purpose. Finally among the most intelligent and academically well-qualified National Servicemen there was often a dislike of having to attend lectures given by those who were no better qualified than they were - an equality which was sometimes concealed by a patronising manner and therefore became a second cause of irritation.

Officers, too, objected to the compulsory element. Specialist Officers (ie those not in the Education Branch) disliked these classes, particularly on training establishments and flying units, as they interfered with training programmes or servicing schedules by demanding their men's attendance at inopportune times.

Education Officers also disliked the concept for three reasons. First they

disliked the principle of compulsion and the attitude which it engendered in their students. Apart from the short period of the EVT Scheme, education on operational stations, as opposed to training schools, had always been based on voluntary attendance and thus, as much as the "civilian - teacher" argument of Colonel Curtis, was one of the cornerstones of the excellent relationship between the airman and the education officer. In forcing airmen to attend, this relationship could well be undermined. This was not so important in the case of the National Service airman who was somewhat of a bird of passage, but where compulsion was applied to the regular airman in his early days on a station an antipathy to education could be instilled which would remain throughout his career.

The second objection was to the lack of grading of the airmen who attended these classes. Sections and flights could obviously not send all their airmen to one lecture so that each class would consist of a limited number from each trade with, consequently, a widely differing range of ability and interest.

Thirdly there was objection to the limited time available for the subjects to be taught. In English the time allowed was considered either too little or too much. Too little, because if an airman had need of instruction in English, it was ludicrous to suppose that anything of importance could be taught in one hour per week, and too much in that for many airmen it seemed a waste of time as has been indicated previously.

Coupled with the difficulty of teaching English was the difficulty in teaching Citizenship and Current Affairs. The latter half of this subject could be, and in many cases was, taught with considerable success - particularly where the range of intelligence was small. It was in the teaching of citizenship that problems were

encountered for while it is fairly simple to explain the composition and the functions of the instruments of government, to try to transmit the ideals behind these institutions is a much more difficult task and one which has not been successfully achieved in any field of English education. Again, Education Officers were hampered by the lack of time allocated to the subject, but their greater obstacle was probably the adolescent cynicism of their students.

It was therefore with a feeling of relief on all sides that the compulsory element of education was abandoned in August 1956[1] for almost all airmen. Nevertheless the Air Ministry Order did retain compulsory education for a limited number of airmen for paragraph 10 stated:

> "All airmen who have not passed, or who have not obtained exemption from, the RAF Education Test Part I, are required to attend educational classes until they have passed the test or until they have completed two years service. They are to attend for one hour per week during normal working hours and will be expected to give at least two hours each week in their own time to class work or private study."

Therefore the National Serviceman who came in suitably equipped with two GCE subjects could avoid the necessity of attending education classes throughout his period of conscription, although many continued to utilise the General Education Scheme on a voluntary basis alongside their regular colleagues until the end of conscription in 1961.

The result was obviously a tremendous reduction in the number of airmen attending classes and the Technical Training Command Annual report for 1957-58

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1 Air Ministry Order A296/1956 dated August 1956

welcomed this change from what it described as "mass-produced instruction ..... where formerly lecturers spoke to 150-200 quite frequently - swelling the statistics without perhaps doing much more".[1]

Not only was there a reduction in numbers but also a change in syllabus. No longer did the content consist of lectures in citizenship and English but was based on the RAF Education Test Part I and included English, Elementary Calculations and RAF History.

Even this system seemed to have its drawbacks not because of the unwillingness of airmen to attend but because of the difficulty in ensuring regular attendance at classes. Whereas before August 1956, the absence from lectures could be condoned if the airman was on essential duty, as soon as an examination course was started these occasional absences could, and did, have decisive effects on preparation for the RAF Education Test. This was realised quite soon after the alteration in the compulsory educational requirements and despite the terms of the Air Ministry Order, selection of airmen for these courses was suggested as the best means of overcoming the obstacles inherent in classes of this sort. If no selection was made, although the education officer would be conforming with the AMO "he was likely to achieve very little, and merely pay lip-service in effect to the Compulsory Scheme".[2]

There were, therefore, still faults in the new system and the opinions expressed by the education staff in Technical Training Command were eventually reflected at Air Ministry. With the decline in the number of National Servicemen

1 Technical Training Command Annual Report (TT/1101/3/C-in-C dated 22 Aug 58)
2 Technical Training Command Annual Report (TT/1101/3/C-in-C dated 22 Aug 58)

entering the RAF and the emergence of an all-Regular air force it was decided to abandon the requirements for airmen to attend education during the first two years of service after September 1960.[1] A regular air force would no longer be bound by the statutory requirements of the 1944 Education Act; with future entrants either coming in through the Apprentices' and Boys' Training Schools, where the provision of the Act were more than adequately met, or as adults who did not fall into the classes covered by the Act, compulsory education was unnecessary.

However in order to cater for anyone who was in need of education, provision for the retention of compulsory education was made in Queen's Regulations, for a commanding officer still retained the responsibility "with the help of the education officer.... to develop a sense of civic responsibility and to exercise a broadly educative influence in matters of public interest in local, national and international affairs".[2] It was hoped that this could be achieved voluntarily but the "officer commanding may make attendance compulsory should he consider this to be necessary for service efficiency".[3]

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1 Air Ministry Order A180/1960 dated September 1960

2 Queen's Regulations (Fourth Edition 1956), paragraph 1935

3 Queen's Regulations (Fourth Edition 1956), paragraph 1947

CHAPTER VII

GENERAL STUDIES IN TRAINING ESTABLISHMENTS

1945-1961

At the outbreak of war, in order to make fullest use of officers of the Education Service in training posts, the General Education Scheme was suspended on operational stations while the various training schemes were modified or abandoned for the duration of hostilities. Thus the training of adult entries was restricted to trade and service knowledge for the whole period of the war, while the Boy Entrant and Administrative Apprentice Schemes were discontinued completely and were not resumed again until 1947. Only the Air Apprentice Scheme continued although to begin with it, too, was modified and the general studies element removed from its curriculum.

Air Apprentices

The effect of the war on the Air Apprentices' School at Halton was to reduce the length of the courses by, inter alia, the exclusion of the liberal studies element of the curriculum. The attenuated course persisted until the 47th Entry was attested in August 1943 which was the first to return to the old pre-war system. At the time of its re-introduction there were obviously some doubts about the content of the English and General Studies curriculum for in a letter[1] to Headquarters Technical Training Command in March 1948, a Squadron Leader Clarke mentions, in evaluating a new English and General Studies syllabus, two other syllabuses which had been drawn up in March 1944 and in January 1947 and which

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1 Letter dated 22nd March 1948 on File HN/771/5/Ed

had been found unsatisfactory. Neither of these are now in existence and one can only surmise in what ways they were considered unsuitable.

By 1948, the third of the post war syllabuses had been produced and with little alteration, was accepted as the basis for the general education of Air Apprentices at Halton. Before going on to examine the syllabus in detail it may be opportune to understand the aims of this element of their eduction which Squadron Leader Clarke describes as "to inculcate in our pupils the powers of criticism and judgement. This in its wider senses will embrace politics, ethics and art in many forms. If the ideal is too vast and too elusive to be obtained, we may hope at least to show them how to distinguish in some cases between extremes. It will be of inestimable value to them to be able to recognise the true and the false in argument, the good from the bad in social conduct, literature, speech, and use of leisure, the just from the expedient in government. To be able to do so will make a better citizen and by this ability to recognise these differences he will himself be better and the ideals of our British way and purpose will have meaning and inspiration".

Although it is possible that the aim was set too high considering the standard and ages of the apprentices, it does indicate that a genuine attempt was being made to provide a liberal education for the post-war apprentices.

The English and general studies syllabus was devised to meet this aim and was allocated 152 periods, exclusive of examination time, during the first eight terms while the Apprentices were in "Schools". This was not really a significant proportion of the time spent on education as can be seen from the following

allocation of periods on the other educational subjects:

Subjects	Periods (each of 50 minutes)
Mathematics	261
Mechanics	285
Engineering Science	445
Engineering Drawing	152

Table VI[1] indicates the various topics included in each subject but the post-war syllabuses do not indicate at which stage each topic was started or completed.

It was realised that because of the relatively small amount of time allocated to general studies the object of the course could not be obtained unless the Apprentice gave voluntarily of his own time to reading and serious study. However, within the time allowed a determined attempt was made to develop the Apprentices' self-realisation through general studies.

The first phase of the syllabus was devoted entirely to a revision of English Grammar, for although most entrants had School Certificates, or, later on, had passed a number of GCE Subjects at Ordinary level, it was found that there was always a need to revise the basic rules of grammar before beginning the general studies sector. Not only were the English periods directed to revision, they also provided the basis for Apprentices who had not already qualified in English Language at GCE. These lessons would not in themselves have been sufficient but were augumented by voluntary English classes in the evenings.

The provision of voluntary classes was by no means restricted by subject or by school. The idea was common both to Halton and to Cranwell, and the subjects which were available to Apprentices at both stations included English, Geography and a number of scientific subjects. They were, however, not part of either

1 Page 111 intra

TABLE VI
RAF HALTON
AIRCRAFT APPRENTICES' SYLLABUSES
TOPICS INCLUDED IN THE MATHEMATICS AND SCIENCE SECTIONS

SECTION	TOPICS	
matics	Arithmetic	Algebra
	Mensuration	Geometry
	Trigonometry	Calculus
hics	Force	Circular Motion
	Work Power Mechanics	Governors
	Energy and Momentum	Momentum and Energy of Rotation
	Simple Harmonic Motion	Epicyclic Gearing
eering Science	Properties of Matter	Generators
	Heat	Motors
	Electric Circuits	AC Fundamentals
	Electrostatics	AC Circuitry
	Electro-chemistry	Poly-phase AC
	Electro-magmetism	AC Machines
	Electrical Measurement	Electronics
	Electro-magnetic Induction	
ering Drawing	Care and use of Instruments	Screw threads and springs.
	Orthographic Profections	Freehand sketching
	True lengths and shapes	Limits and fits
	Isometric Profections	Assembly Drawing
	Geometrical Solids	Inter-penetrations
	Graphical Science	Extractions

course and in each academic year depended upon the demand from apprentices as well as on the availability of Education Officers who would undertake this work. This latter normally presented no problem.

After the phase on English, Apprentices at Halton began their general studies with an examination of the British Commonwealth. This included lessons on the various Commonwealth countries, particularly the older dominions, and on the Colonial Empire and it is interesting to note upto the end of the period under review, the importance which was placed on this aspect of international relations. There were probably two basic reasons for this. First, until the mid-1960s the defence commitments of the United Kingdom were closely bound up with territories which had formerly been part of the British Empire, and therefore lectures on the Colonial Empire would still have a great deal of relevance to Apprentices who would sooner or later be posted to such areas. Secondly, Halton also trained apprentices from a number of Commonwealth Air Forces and here again some real interest could be aroused in the minds of the Apprentices - they were with colleagues who came from these countries and consequently what might have been arid facts were given a new depth.

From the Commonwealth the Apprentices went on, in the same phase, to study recent political history from 1919 to 1939 and to examine the trends in World War II before entering the third phase which was entitled Current Affairs I. In this phase and Current Affairs II which together amounted to 48 periods, the Apprentices studied such topics as Post-War Europe, the U.S.A., U.S.S.R and U.N.O., the Balance of World Power, and Britain's Economic Problems. Into current affairs,

too, were inserted a number of lectures on British Central and Local Government - which seemed somewhat out of place - and some periods set aside for preparation of the Set Task.

In the final part of the general studies course, that on Social Studies, lectures were given on the Welfare State, Political Parties and the meaning of both Democracy and Communism, after which Apprentices were considered to be prepared for the Final Examination.

Before turning to the administration of the Final Examination one must perhaps look at the Set Task of the post-war Apprentice. The pre-war Apprentice was given a choice of subjects and expected to complete 5000 words on the topic which he chose. On its re-introduction to the curriculum, the Task was reduced to a minimum of 2000 words but at the same time no assistance was given with either the choice of subject or form of presentation. However, the officer in charge of general studies for a particular squadron would be available to give any advice on means of obtaining information and suggestions on format. The end results of the Apprentices' work which the writer examined varied considerably in treatment and presentation. At one extreme was a Set Task which had been completed in an exercise book in manuscript, while at the other was one which had been obviously professionally typed and bound in stiff cover with a printed gilt title. Obviously the majority fall well between these two extremes but even with the average Task a considerable amount of work had been done outside the class room.

Although the course in general studies was made as interesting as possible and lectures were interspersed with films and occasional visits, this element of the Apprentices' Educational Training was still an examinable subject. Thus

though it may have been regarded as a leaven in the educational lump of the sciences, apprentices were aware that they had to pass in English and General Studies just as they had in Mathematics or Engineering Science.

Basically there were three examinations, the Intermediate (at the end of the third term), The Progress Test (at the end of the sixth term) and the Final Examination (at the end of the eighth term). Apprentices could, and did, fail at any of these stages with the result that they were either re-coursed (ie transferred to a junior Entry) or discharged from the School. Success in the Final Examination was not confined to a simple pass, for the marks gained by an Apprentice would be considered when determining whether he was suitable for a cadetship either at the RAF College Cranwell or at the Officer Cadet Training Unit. Should he not be awarded a cadetship his educational marks would also be considered when assessing his accelerated promotion after leaving Halton.

Upto the introduction of the new trade structure in 1951 the Apprentice leaving Halton would expect to enter man's service as a Leading Aircraftman with exemption from both parts of the RAF Education Test, but after 1951 he would normally pass out as a Junior Technician. Additionally, however, subject to certain standards, they could gain accelerated promotion to the rank of Corporal by gaining a minimum of 55% in Education as well as a given standard in their final Trade Test Board. A further small proportion of Apprentices, provided that, among other qualifications, they had obtained a minimum of 65% in educational subjects, were promoted corporal immediately on leaving Halton.

Attempts had been made before the war to have the apprentice courses accepted

as qualifying for the Ordinary National Certificates in either Mechanical or Electrical Engineering. For a variety of reasons these attempts had failed but following further discussions in 1951, selected apprentices were allowed to enter for ONC. This meant raising the standard of certain aspects of the maths and science syllabuses beyond that necessary for purely service requirements, so beginning with No 71 Entry in May 1952, all Entries were divided on the results of the Intermediate Examination, into Advanced and Normal streams. The Normal stream, consisting of about two thirds of the Entry followed the previous syllabus, while the Advanced stream followed the ONC - orientated syllabus.

The ONC scheme had little effect on the General Studies syllabus. It was accepted as a suitable course for ONC students for although there was no examination, the head of the General Studies had to certify that each apprentice had followed the course. There was, however, an indirect effect on general studies as a result of the subsequent streaming of apprentices. No changes were made in the content of the syllabus, but while the Normal Stream was largely restricted to a factual examination of the various topics, the accent, in the Advanced Group, was more on an understanding of the background [redacted] behind the facts and a much greater use of the discussion method was permitted.

While these developments were taking place at Halton, parallel steps had been taken at Cranwell where the Apprentices in the radio trades had been trained since 1929. Their course, too, had been reduced at the outbreak of war to two years but like that of the Apprentices in the engineering trades their course had also been restored to three years at the end of the war.

From a comparison of the English and General studies syllabuses of Locking, to which the radio Apprentices moved in December 1952, and Halton one is struck more by the similarity than by the differences. However, at Locking considerably more was spent on educational subjects which included:

Mathematics
Engineering Science
Technical Drawing
Radio Principles
General Studies

A total of 2068 periods were spent on education compared with 1332 periods at Halton, while of the former, 226 were spent on English and General studies.

Both syllabuses started off with a basic English course of revision but this was followed at Locking by a phase on English Literature during which both a Shakespearian play and a modern drama were studied. There was no attempt to make the apprentices memorise extracts, the accent being on appreciation and the development of a critical facility.

The English lectures were concluded by a certain amount of oral work including lecturettes, discussions and debates as it was felt that these boys would eventually become NCOs or instructors and in many cases their greatest handicap was their inability to speak clearly and coherently - even though, in many cases, they were quite able to express themselves adequately in writing.

As in the Halton syllabus, the English phase was followed by a number of periods on Britain and the Commonwealth but in addition to the subjects mentioned earlier, this phase included nine periods on the regional geography of Great Britain. The Current Affairs section, too, was similar to that in the Halton

Syllabus, but then the Locking Apprentices studied "Social, Economic, and Constitutional History". This included such topics as the Industrial Revolution, social legislation in the nineteenth century and Population, being rounded off with a brief study of Central and Local Government.

Like the Halton Apprentices too, those at Locking had to undertake a Set Task - in their case a minimum of 3000 words being insisted upon. The standard of the examples of these Set Tasks seen by the writer were very similar in standard to thos mentioned earlier. The same method of examination was used at Locking as was used at Halton although there were slight differences in the maximum marks allocated to each subject; English and General Studies at Locking accounted for 300 out of a total of 2400 awarded for Education. This total was then subjected to scaling along with marks for Technical Training and General Service Knowledge to produce an "Order of Merit" from which the various prize-winners and cadets were selected.

On passing out there was no difference in the conditions of service for radio apprentices; the average apprentice would pass out as an LAC (or Junior Technician after 1951) and be exempt from both parts of the RAF Education Test, while the more able would gain accelerated promotion in their trades. The only major difference lay in that, as we have seen, selected apprentices at Halton were able to qualify for the Ordinary National Certificate - this the radio apprentices were unable to do. It was considered, as it had been between the wars, a course for which there was no suitable civilian equivalent and it was not until 1962 that selected apprentices were able to qualify for an ONC in Radio Engineering.

Despite this failure to secure external recognition of the radio course, there was little difference, if any, in the academic standards of the two Apprentice Schools. Both produced a relatively large number of apprentices who were accepted for officer cadetship either immediately on completion of the course, or later when holding NCO rank, and both Schools therefore appeared to achieve their aim of producing airmen technically well-qualified and yet possessing powers of self-expression and an understanding of national and world affairs.

Administrative Apprentices

The Administrative Apprentice School was re-opened on 4th June 1947 when the first course of apprentices was assembled at RAF St. Athan.

Unlike the pre-war system of selection, the method used to recruit this and subsequent courses was a competitive examination set by the Civil Service Commission for all types of Apprentices. This examination was held three times yearly and those who were successful entered on an eighteen month Administrative Apprentice training course at the end of which they were expected to pass out as Leading Aircraftmen (and after the introduction of the new rank system in 1951, as Junior Technicians) in the trades of Clerk Secretarial, Clerk Accounts (later Pay Accountant) and Supplier General. The attainment of this rank on pass-out was dependent purely on an apprentice's ability in his trade, and unlike the pre-war system was in no way affected by the educational standards which he gained.

For the earlier Entries, the educational element was restricted to three subjects: English, Mathematics and General Studies which were included in all phases of the course and were concluded by a final examination in the fifth term.

The marks awarded in this examination determined whether the apprentice was granted an 'A', 'B' or 'C' Class pass, and although this, as has been pointed out, in no way affected his rank when entering man's service, it was used to determine what exemption could be obtained from the RAF Education Test. Any apprentice who gained an 'A' or 'B' Class pass was exempted from the complete test, while those who were merely awarded 'C' Class passes were only given exemption from Part 1 of the Education Test.

Of the thirty four apprentices who passed out in No 1 Entry in December 1948 only four failed to gain exemption from both parts of the test and examination records indicate a similar level of passes in succeeding examinations:[1]

Date	Entry No	No Passing Out	'A' & 'B' Class Passes
Dec 1948	1	34	30
Dec 1949	4	46	45
Apr 1952	11	31	30
Jul 1952	12	30	29
Dec 1961	40	41	38

As was the case before the war, the academic level of the course was well within the capabilities of most of the apprentices, and in order to provide an incentive to more serious study, arrangements were made for selected apprentices in the eleventh and subsequent Entries to be entered for the examinations of the Royal Society of Arts in English and Mathematics. More correctly, the education staff simply forwarded the papers of those apprentices which they considered suitable to the RSA who made their decisions and awarded certificates on the papers submitted. The results which the eleventh Entry obtained were not untypical of the results of subsequent courses:

1 These and the statistics on page 120 were obtained from records held at RAF Hereford

Subject	No Entered	1st Class Pass	2nd Class Pass
Arithmetic (Stage II)	17	8	6
English (Stage II)	27	3	21

This situation continued until 1956, when beginning with No 31 Entry, the mathematics syllabus was extended to include Book-keeping. No records are now kept of the syllabuses which were in use at the Apprentices' School at the time of this change but it must be assumed that mathematics was reduced to arithmetic processes as no more time was allocated to Education in the training syllabus. The alteration, however, enabled the more advanced students to enter for three RSA subjects at the end of their course.

In contrast to Mathematics and English, General Studies, which was always examined internally, was not geared to a specific syllabus and the content of the final examinations were dependent on what had been taught. The syllabus consisted of three phases, the first consisting of a survey of RAF history integrated with an outline of the political and economic geography of the areas in which the RAF was currently serving. Civics constituted the second element of the syllabus and during the teaching of this phase visiting lecturers were occasionally invited to talk on aspects of central and local government.

Finally a number of lessons were devoted to current affairs and attempts were made to introduce discussions and debates at this stage. While the former were quite successful, the more formal style of the debate proved to be less popular, although the Hereford Society, to which all apprentices were forced to belong, included a flourishing Debating Society among its activities. The reason

for the introduction of the discussions at the final stage of the course was mainly due to the selection of topics which lent themselves to this form of lesson.

A change in policy which came into effect with No 40 Entry which passed out at the end of the period under review, in December 1961, gave exemption from the final mathematics and English examinations to those apprentices who had passes in these subjects in GCE Ordinary level before entry. To obtain exemption from the General Studies element an apprentice had to have a pass in the same examination in one of a range of subjects laid down by the School. This range was quite extensive but from examination of final results tables the two most common were General Paper and Commerce.

Although apprentices holding GCE Certificates for subjects passed at Ordinary level were not uncommon, the standard of entrant was probably lower than that of the pre-war apprentice. Three factors contributed to this lower standard. First the increased size of the post-war air force predominantly manned by conscripts, needed a larger cadre from which to draw its potential NCOs so that the average size of the entry was much larger in the post-1946 era than it had been prior to 1938. The second reason was simply the greater variety of jobs which were available to the post-war school leaver; no longer was he faced with a choice between the services and unemployment - he was in a seller's market and could afford to ignore the services as a possible career. In any case he would normally be conscripted at eighteen and could, without sacrificing nine years of his life - the minimum length of his engagement - decide during his period of National Service whether service life appealed to him. Should it do so he could

then make up his mind during his period of compulsory service whether he should stay in on a regular engagement or not.

The final factor was the increase in affluence as a direct result of the increase in employment. In many cases continued employment meant that whereas parents between the wars were unable to allow their children to continue to attend school beyond the minimum school leaving age, they were now in a financial position which enabled them to do so. Additionally many parents felt that they would make available to their children the educational opportunities which they themselves had been unable to utilise and allowed them to remain at school in order to reap the maximum benefits of an extended education.

The Air Ministry were aware of the changed circumstances and of the difference in the calibre of apprentices which these circumstances produced. From a financial angle the cost of each trained airman was disproportionately increased owing to the number of apprentices who failed to complete the course, while from a manning point of view it was found that a sufficient number of airmen of suitable NCO potential were being recruited on regular engagements from other sources. Consequently the Air Ministry decided to abandon the Administrative Apprentice Scheme, although its closure came after 1961 and outside this enquiry, and recruit all administrative trades either from adult entries or through the Boy Entrant Scheme.

Boy Entrants

At the same time as the first post-war Administrative Apprentice Course was assembling at St Athan, the first Entries in the revised Boy Entrant Scheme were

reporting to their new training schools at Locking, Kirkham (near Blackpool) and Yatesbury. They, like the Administrative Apprentices, were about to begin an eighteen month course but in a much wider variety of trades. The new scheme for Boy Entrants was much more ambitious than its previous counterpart both in the numbers of boys under training and in the number of trades which were open to them. In addition the training given was more intensive than that before 1939.

Initially, however, only engineering trades were open to Boy Entrants; those at Locking being trained as mechanicsin the Airframe, Aeroengine and Instrument engineering trades as well as a limited number of Aircraft finishers. The remainder entered on courses in Armament and General Engineering at Kirkham, or in one of the Radio Trades at Yatesbury. Because of difficulties of administration it was decided to transfer all Boy Entrants to one camp and in May 1950, RAF Cosford (near Wolverhampton) was opened up as the unified Boy Entrant training school.

Simultaneously with this move, the number of trades open to Boy Entrants was increased to include the Supply, Accounting and Secretarial, Photographic and Catering Trade Groups. The expansion continued until Cosford was too small to accommodate them all and in August 1955, the Airframe, Aeroengine, Armament, Electrical and Instrument and General Engineering entrants were moved to No 4 School of Technical Training at St Athan. Eventually even this move proved to be insufficient and Boy Entrants in the Administrative and Catering Trade Groups were moved to Hereford in January 1959.

No matter what their trade, all Boy Entrants followed a substantially similar

type of course, although obviously the trade elements within the different syllabuses were completely separate. Thus each Entry would have common periods in such elements of their curricula as drill, physical education and religious instruction but would go to their own respective class-room blocks for trade training. Education tended to fall into the second category, that of separate instruction for each trade, for as each trade group was supposed to have a different mean IQ, so each educational syllabus differed in its content. There were exceptions to this general rule, however, and for purposes of education Boy Entrants in the Accounting and Secretarial Trade Groups were amalgamated with those in the Supply Trades (together known for convenience' sake as the Administrative Trades) while those in the Photographic and Ground Signalling Trade Group also shared a common syllabus.

Whatever the trade group and whatever the reputed level of intelligence three subjects were incorporated into each syllabus, two of which were common to all. Each syllabus contained English and Current Affairs and Mathematics; in the Administrative Trades the third subject was Geography, while the other groups were given Trade or Technical Science. Although this came within the education syllabus, it was closely geared to the different trade groups and the content varied with each trade.

The English element of each syllabus retained a great deal of common ground and to judge from the "Order of Teaching" for the various trades there seems to be little differentiation, although as may be expected in the Administrative trades' "Order of Teaching" there was more time spent on formal grammar, eg parsing and the analysis of phrases and clauses, than was found in the other syllabuses.

In the "Current Affairs" section of the syllabus, which accounted for 20 periods out of a total of 160, the lectures were divided up between lectures on such pre-determined topics as "The World - Sources of raw materials" or "NATO", and a number simply classified as "Current Affairs" - thus allowing an element of topicality to be introduced.

In the only other general studies subject, that of Geography taught to Boy Entrants in the Administrative Trades, the syllabus consisted of four elements, three of which were concerned with the economic aspect of the subject; namely with the economic geography of Great Britain, of the Middle and Far East (with special reference to areas in which the RAF was stationed) and finally an examination of the main sources of the World's raw materials. The fourth element dealt largely with natural phenomena such as volcanoes and glaciers with a final lecture on "very elementary anthropology".[1]

Like all other subjects, Geography was subject to periodic "progress tests" occurring at the end of each of the first three Phases. At the end of the fourth Phase (in the fifty-sixth week of training) the final education examination was set, consisting of four two-hour papers in English, Current Affairs, (examined separately) Mathematics and either Geography or Technical Science. The relative marks which were awarded in each subject depended on each trade. For example, the maximum marks awarded in the Administrative Trades final examinations were:

English	100
Current Affairs	60
Geography	100
Mathematics	140

1 "Order of Teaching - Administrative Trades" (extracted from COS/7004/9/Ed dated 23rd June 1958)

The purpose of these examinations was simply to determine what exceptions if any, the Boy Entrants could gain from the RAF Education Test before passing out into man's service. Like the Administrative Apprentices' examinations they had no bearing on the final rank which the Boy Entrants would be awarded, for that depended purely upon the trade tests which they took at the end of their course. They did, however, count towards the final Order of Merit, being worth a maximum of 400 marks out of a total of 2,000. This Order of Merit had no effect on promotion prospects once the Boy Entrants had left their training school, but the most highly placed boys in this order were awarded various prizes and certificates which differed slightly at each of the training schools. Thus to be in the running for these awards a Boy Entrant had to do well in education as well as in other aspects of the course.

On the results of the four examinations a Boy Entrant would be awarded one of six grades ranging from A1* down through A1, A2, B1 and B2 to C. The table below indicates the grades which a Boy Entrant could be awarded and the exemptions, if any, which he could gain from the RAF Education Test.

TABLE VII

Marks Required to Gain Classification in the Final Education Examinations at Boy Entrant Training Schools.

CLASS	MIN TOTAL MARKS	MIN OVERALL PER CENT	MIN % PER SUBJECT	EXEMPT RAF ET.
A1*	340	85	75	I & II
A1	340	85	40	I
A2	280	70	40	I

CLASS	MIN TOTAL MARKS	MIN OVERALL PER CENT	MIN % PER SUBJECT	EXEMPT RAF ET
B1	220	55	40	I
B2	160	40	40	I
C	-	-	Under 40	-

Source: (letter) 24G/2162/Trg Ed dated 7th February 1957

The examination system was amended later to cater for boys entering with GCE subjects held at Ordinary level. As may be realised very few Boy Entrants obtained complete exemption from both parts of the RAF Education Test and the following statistics extracted from the combined pass lists of the Administrative and Cetering Trades of Nos 35 and 40 Entries will indicate the infrequency with which they were awarded:

Entry No	Date of Passing Out	No in Entry	Class of Pass A1*	Others	C (Fail)
35	Dec 1958	214	1	183	30
40	Aug 1961	230	3	211	19

Source: (File) HER/C5332/2/Ed

Although the general education of the Boy Entrant lagged behind that of the Air Apprentice in the post-war period, it did show an improvement on that of the comparative pre-war scheme. Airmen entering the air force through Boy Entrant Training Schools were always regarded as inferior to those coming in through the Apprentice Scheme - they only entered man's service as mechanics in their trade (whereas Air Apprentices entered as fitters) and their initial rank was only AC1. After the new rank structure was introduced, their initial rank was raised to Leading Aircraftman but by this time Apprentices were passing out as Junior

Technicians and after acquiring civilian-recognised qualifications in the process.

Nonetheless the Boy Entrant Scheme played an important part in the training of the post-war air force and more attention was paid to the educational element of their training. At all training schools there was a large staff of education officers so that even if the subjects themselves differed very little from those of the previous schools, the content and the method of instruction planted a broader knowledge of the basic principles of the subjects in the minds of the boys. Thus should they not gain exemption from both parts of the Education Test, they would at least realise that education had a wider meaning than the acquisition of facts to be grudgingly undertaken purely for purposes of promotion.

Adult Entry

It was evident that with the continuation of conscription after the end of the war, the pre-war system of training adult entries could not be revived. Consequently Uxbridge no longer functioned as the RAF Depot where recruits enjoyed their first impressions of service life. Instead a number of reception centres, including Padgate and Cardington, were established where recruits, both regular and national service, were required to report for service and where the necessary induction procedures, such as inoculation and kitting-out, were undertaken. The number of these centres varied from time to time, but normally there were four, of which three accepted National Servicemen while the fourth was reserved for Regular entrants. Because it was normal for airmen to stay at these reception centres no more than a few days, no provision was made for education.

Recruits then moved to one of the Schools of Recruit Training where they could complete a course of introductory training common to all trades. These

courses lasted approximately eight weeks and during this period airmen were introduced to service education. Upto the discontinuance of the compulsory element of education in 1956, the syllabus for all these basic training units consisted of lectures on RAF History, the reasons for National Service and descriptions of the defence obligations into which Great Britain had entered. There was no instruction given in English or Mathematics and educational standards at these units were regarded by the Education Branch as ludicrous.

The insistence of the inclusion of RAF History as an educational subject has always been a bone of contention with the education branch which has held that the syllabus which has to be covered and the time which is allotted to it, makes it a mechanical task and far more suited to be given to recruits by their flight commanders. Nonetheless it remained an element of educational training throughout the latter part of the post-war era at all basic training units.

Once he had completed his basic training, an airman was generally posted to a Radio School or a School of Technical Training listed in Appendix **6** where he would undertake basic training in the trade to which he had been allocated, in the case of a conscript, or which he had chosen, if on a regular engagement. Obviously the length of time spent at a School of Trade Training depended on the trade and the grade within the trade to which an airman had been posted. Normally an airman assigned to a technical trade underwent a longer period of training than an airman in an administrative trade, and similarly a potential fitter in a trade would undergo a longer training than a potential mechanic in the same trade.

The exceptions to this normal procedure consisted of two types of airmen. First there were those who were to serve as Trade Assistants - these were unskilled

men who would be posted straight to an operational unit and whose further training, if any, would be entirely of an on-the-job nature. The second type were those airmen who were joining one of the smaller trade groups which were too small to warrant a School of Trade Training. These men were therefore posted to the depot of their respective trades, so, for example, airmen joining the RAF Police would be posted to the RAF Police Depot at Netheravon, while those joining the RAF Regiment would go to the RAF Regiment Depot at Catterick. The training commitment would simply be one aspect of the function of these and similar units, but in this respect there would be very little difference between them and the established Schools of Trade Training.

Mention has already been made of the reduction in the amount of compulsory education which occurred as a result of AMO 296/1956.[1] The majority of trainees in the trades which demanded a high standard of entry were subsequently exempt from all education, and it was only their less well-qualified colleagues who were still forced to attend classes.

The syllabus which they followed was based on that of the RAF Education Test Part I and consisted of Elementary Arithmetic, English and RAF History and Geography. At the end of their training course they would then be required to sit an exemption examination and if successful would be considered to have qualified to RAF Education Test Part I standard and this would be excused compulsory education on their operational stations. Because it was realised that these exempting examinations were of a lower standard than the Part I itself, candidates were only allowed to claim exemption if they received a complete pass;

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1 Page 105 supra

passes in two subjects, although allowed in the proper Part I were not recognised in these examinations.

In 1960 the compulsory element of education was abandoned completely except for recruits into the Police and RAF Regiment trades. In these, recruits followed the former pattern taking an exempting examination while under training, as it was argued that men in these two trades were subject to more shift-work, active service and turbulence than airmen in other trades and therefore their opportunities for taking Part I of the Education Test were correspondingly reduced once they passed out of training. However, failure in the examinations had no effect on the final decision as to whether a recruit passed out or not - and even if unsuccessful he would no longer have to attend compulsory education classes on his operational station.

General studies therefore for adult trainees compared most unfavourably with that afforded to apprentices and Boy Entrants, but it is not hard to understand the reason. The Schools of Trade Training were required to turn out in periods ranging from eight weeks to a maximum of nine months a variety of tradesmen which it took the various RAF youth training establishments from eighteen months to three years to accomplish. General education, therefore, had to be sacrificed to technical proficiency and airmen entering in this manner and wanting education were required to utilise the facilities of the General Education Scheme once they had entered productive service.

CHAPTER VIII

POST WAR DEVELOPMENTS IN GENERAL EDUCATION

SCHEME FOR THE REGULAR AIRMAN

While the provision of compulsory classes in general education and current affairs was intended mainly for youths conscripted under the National Service Acts, regular airmen were covered by the scheme during the first year of their service. It was considered after this period that they would realise the value of education and that they would continue to take advantage of the other, voluntary, facilities which were available under the General Education Scheme.

It has been found that these facilities, apart from station recreational libraries, were generally only used when airmen (and officers) had a specific aim in mind. There has been a general reluctance for them to embark on any courses of lectures or instruction which has had no end-product. Conversely, providing some material advantage can be gained, no course need necessarily be considered too esoteric.

Thus although the EVT Scheme ended in December 1947, the examinations which had been launched under its auspices still attracted candidates and they were continued under the General Education Scheme. However, it was obvious that this was only a temporary measure and that eventually the pre-war examinations would be re-introduced.

The first to be replaced was the RAF War Education Certificate, the last examination for which was held in September 1948. In October of that year the Air Ministry announced that in April 1949[1] the RAF Education Certificate

1 Air Ministry Order A830/1948 dated October 1948

would be re-introduced in its place. Its purpose was to provide serving airmen with the opportunity of attaining the educational standards which would be required of them when the pre-war practice of educational tests for re-classification and promotion were re-introduced.[1] Although at the outset there was no compulsion for airmen to take this examination and airmen could be still promoted without having taken it, it was evident that its possession would soon become mandatory before advancement could be obtained. Even in the order introducing the Education Test airmen were warned that Part I of the exam would probably be required to obtain re-classification as an LAC while a sergeant would be expected to have Part II. Airmen who had passed the War Education Certificate were to be considered as being exempt Part I of the new Education Test.

In September 1949 airmen were advised that the Education Test was to become mandatory in 1951.[2] In order to become eligible for reclassification as an LAC after 1st January 1951 airmen would be required to have passed Part I of the examination while for promotion to Corporal after 1st May 1951 airmen would have to have passed Part II. The regulations however were not retrospective and airmen promoted before these dates without educational qualification would not be demoted.

Educational requirements for promotion have varied on several occasions since 1951. In May 1952 Part I of the RAF Education Test became necessary for re-classification to Senior Aircraftman (following the introduction of new ranks in the re-organisation of the trade structure in the RAF in 1951) while possession of the Part II became a requirement of promotion to sergeant.

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1 Air Ministry Order A830/1948 dated October 1948

2 Air Ministry Order A680/1949 dated September 1949

In November of the same year possession of Part I became a requirement for promotion to Corporal. An SAC still required a partial pass in two of the three subjects in this part of the Test, although this latter requirement was dropped in July 1956.

Sweeping changes were made to the Education Test in November 1953 following the decision of the Air Ministry to adopt the Cambridge General Certificate of Education as a recognised service examination. Subsequently the purpose of the RAF Education Test was redefined as providing:

a. a measure of educational suitability for the promotion of airmen to the ranks of corporal and sergeant as required by Queen's Regulations (the standards being defined as the possession of Part I for corporal and Part II for sergeant).

b. an objective for systematic study in a group of subjects at an elementary level, which will serve as an opportunity for revising education received at school and as an introduction to more advanced study."

Thus although it was primarily an examination to assist in the selection of airmen for promotion, the RAF Education Test was developed to assist in the wider education of many airmen who had no chance of or desire for advancement. Air Publication 3328 ("Examinations, Regulations and Administrative Procedure") introducing the new style Education Test stated quite firmly that "the syllabuses for the subjects in Part II of the Test are designed to lead to further study in corresponding subjects of the General Certificates of Education Examination of the Cambridge Local Examinations Syndicate (Ordinary level). Candidates

for Part II of the Test who obtain good passes should be able to reach GCE ('O' Level) standard after one year's further part-time study".

Although at Part I level the standard remained very elementary and covered only English, Arithmetic and RAF History and Geography, the syllabuses of the Part II subjects were based on those of the GCE which they were intended to precede.

Airmen who wished to obtain the complete certificate were required to pass in three subjects in the Part II which could be taken separately on successive occasions in the same way as GCE subjects. One of the three had to be English while the other could be taken from the following list:

Mathematics	Civics and Current Affairs
Workshop Drawing	Geography
General Science	History
Engineering Science	French
Housecraft	German

However, exemption from either or both parts of the RAF Education Test could be secured on a wide variety of grounds, both service and civilian. For exemption from Part I the main grounds were:

a. the successful completion of an approved formal course of education while on basic training.

b. a Class 'A' or 'B' pass in the examination held at Schools of Technical Training for Boy Entrants

c. Corresponding examinations in the other two Services.

Exemption from Part II was granted on proof of one of the following:

a. previous commissioned experience

b. a Class 'A' or Class 'B' pass in the final examination in the educational subjects of an aircraft or administrative apprentice course

c. passes in three subjects in the Forces Preliminary Examination

d. two passes in GCE 'O' level in any acceptable academic subjects, (In July 1953 this was amended to three passes one of which had to be English Language while the other exemptions were to be given on a subject-for-subject basis).

The RAF Education Test has been developed since 1951 and is now recognised by the majority of airmen in one of two ways. To the less able it signifies an apparently useless obstacle which exists between the technically qualified airman and promotion, while for the more intelligent it is regarded as a stepping-stone to higher education qualifications, for the examination is used by education officers as a means of selection of candidates for GCE courses. By this determination of a minimum standard, instructors are saved much of the frustration and time-wasting which is the lot of their civilian colleagues in further education who are unable to assume any basic level.

Although the Forces Preliminary Examination was devised for officers and men leaving the RAF after war-time service, its appeal proved to be such that it was continued after the end of the EVT Scheme. It was realised from its inception, that the examination was of a temporary nature only and that when the RAF returned to peace time operational strength there would be insufficient candidates to justify its retention. Originally it was intended to return to the Higher

Education Test which officially had been only suspended in 1938 but as it had secured very little external recognition, the possible adoption of the General Certificate of Education, which had been introduced in 1951, under the authority of the Secondary Schools Examination Council, was considered.

It was obvious that this idea had been in the minds of those who had designed the new trade structure of the RAF which came into being in January 1951. The order announcing the re-organisation in August of the previous year had laid down a tripartite system of careers which was intended to cover all grades and skills within the air force with corresponding differences in ranks and rates of pay. Briefly, the three trade careers encompassed the advanced tradesmen, the skilled tradesmen and the unskilled trade assistants, and within each rank a different rate of pay would be admissible.

In many trades the distinction between the advanced and the skilled tradesmen would be fairly clear cut and would be determined by suitable practical tests. In others, however, differentation was difficult and in order to create a barrier and to provide an incentive the possession of two subjects in the General Certificate of Education (Ordinary level) was insisted upon for entry to the advanced trades. These trades lay largely on the administrative side and ranged through the Accounting and Secretarial Trade Group to the Medical Groups, the subjects required varying with each Trade Group. For example an airman in the Accounting and Secretarial Trade Group had to have either a pass in English Language or Mathematics together with a pass in an extra optional subject, while airmen in the Police Trade Group had no restriction placed on the two which they had to have for

advancement.[1] Possession of two subjects at Ordinary level also had the added advantage of exempting the holder from having to pass the RAF Education Test.

Thus from January 1951 the air force recognised the FPE as means of exemption from the RAF Education Test and still held classes for airmen wishing to pass the examination, while at the same time, the requirements of the new trade structure demanded that many airmen should have two subjects in the General Certificate of Education. As this was also a service requirement, classes were therefore organised for airmen who wished to become advanced tradesmen. It is not suggested that this imposed an intolerable strain on the General Education Scheme as a whole but education officers on individual stations, particularly those which had a preponderence of Secretarial and Medical personnel, found that they were having to cater for two examinations of approximately equal academic level with completely different syllabuses.

Actually problems of an administrative nature were more serious than those of the curriculum, for although most stations would teach to the syllabus of the GCE examining board which was most popular in their area, so that the station itself could be registered as a centre or the airmen simply sent off to the local technical college, there was always the problem of "turbulence", as the posting of airmen is officially termed. An airman who had completed almost a full course leading to a particular subject with one Board might find himself posted to a different area where the station education officer was conducting classes for examinations held by a second board. In some subjects this was of no great consequence but where set books were involved or the format of the papers differed

1 AP 3282 A Vol 20 (February 1952)

radically, an airman might find that he would have to wait a further year before being able to sit the examination. In order to simplify examination procedure and to prevent frustration on the part of the potential candidates, consideration was given to the idea of arranging for one Board to act as the examining body for the whole of the RAF.

This possibility was examined in consultation with representatives of the other two services. As a result approaches were made by the Inter-Services Examination Sub-Committee to the University of Cambridge Local Examinations Syndicate in September 1952 with a view to inviting the latter body to conduct special GCE examinations for service personnel. These examinations would be partly based on the Syndicate's normal July and December Ordinary level papers and partly on papers specially set on alternative syllabuses, while for certain technical subjects in which the Board did not at that time examine it agreed to produce special papers. The General Purposes Committee of the Local Examinations Syndicate agreed to undertake this examination at their meeting on 9th October 1952[1] and subsequently the three services made arrangements for the phasing out of the FPE.

Despite these discussions preparation of students for the FPE continued and even as late as September 1952 it was announced in the Annual Report of the General Education Scheme presented at the Command Education Officers' Conference at Cranfield that no firm decision had been reached on the introduction of a special examining body for the GCE. The Report went on to say that "the Civil Service Commission intend to continue holding the Forces Preliminary Examination twice yearly in May and November. The examination is more than holding its own and

1 Minute 4. Report of the U.C.L.E.S. General Purposes Committee dated 9th October 1952.

justifying its continued existence as there were 1462 candidates in 1950 and 1963 in 1951.[1]

Full details of the new examination procedure were however published by the University of Cambridge in their Preliminary Notice of December 1952 while the RAF made them known to serving personnel in February 1953.[2] The order announcing the changeover pointed out that the Forces Preliminary Examination had been introduced as a temporary measure to meet special conditions and as they had since disappeared the examination must be considered obsolete. It went on to stress the advantage of the General Certificate of Education of the University of Cambridge Local Examinations Syndicate which was replacing both the FPE and the rather haphazard arrangements for the various other GCE examining bodies and listed five ways in which the new arrangements would be better than the old, although the two existing systems did not necessarily suffer from the same disadvantages. The Order claimed that with the introduction of the new system all candidates would sit examinations set by the same Board regardless of whether they were posted during the course of study or decided to transfer to a different Service. This, perhaps, was overstating the case somewhat as the ability to continue a special course of study would depend upon the qualifications of the new station education officer, particularly if he was occupying a digital post.

The third advantage claimed was the frequency of the new examinations which were to be held bi-annually, although this was true of the FPE. The fourth advantage was the incorporation into the Board's curriculum of special subjects and syllabuses designed for the Services. These, however, have gradually been

1 Annual Report on the General Education Scheme for the year ended 31st March 1952. Published 15th September 1952.

2 Air Ministry Order A57/1953 dated February 1953

reduced in number and at the time of writing (January 1968) in only one examination - viz: English Language I - is a special paper retained for HM Forces. The external recognition of the examination was the final advantage and although this also applied to the GCE of other Boards, and to a limited extent to the FPE, it showed the RAF had learned the pointlessness of having an internal examination of relative difficulty which they could persuade no-one to accept. These advantages were reiterated in the preamble to the first edition of Air Publication 3328 (Royal Air Force Examinations, Regulations and Administrative arrangements) which laid down the complete regulations for the conduct of GCE examinations under Service arrangements when it stated:

> "The possession of the General Certificate of Education in certain subjects is a requirement for transfer to certain advanced trades, for certain aircrew categories and appointments to commissions. In addition GCE has become a basic educational qualification for many purposes in civilian life and therefore will be of value to service personnel when they complete their engagements"

Notification was given, too, of the date of the first examinations to be held under the new arrangements. Despite it being a mere five months later, in July 1953, the Inter-Services Examinations Sub-Committee informed the Cambridge Board that there would probably be 1500 service candidates. This was a somewhat optimistic estimate, the actual figure being 1105 for "special arrangements" candidates while a further 62 were examined in subjects not included in the special arrangements, (ie under the old station-organised system). Of the first figure, 624 were air force candidates who each took

an average of two subjects while the corresponding figures for the other two services were:

Army 464 Candidates with 2.7 subjects each

Royal Navy 17 Candidates with 2.0 subjects each

Details of the subjects in which there were more than 50 candidates from the Services are shown in Table VIII below together with the percentage of passes awarded in each.

TABLE VIII

GENERAL CERTIFICATE OF EDUCATION - JULY 1953

RESULTS OBTAINED BY CANDIDATES SITTING UNDER FORCES ARRANGEMENTS

Subject	Number of Candidates	Percentage Pass
English Language	772	65
Mathematics	565	52
Geography	242	37
General Paper	93	82
Physics	91	35
French	82	41
History	81	36

Source: Minute 6. Report of the U.C.L.E.S. Awarding Committee on the 1953 Summer Examination for the GCE. October 1953.

In order that airmen who had been studying for the FPE should not suddenly find their time had been wasted, the Local Examinations Syndicate agreed to extend their syllabuses on a temporary basis to cover those subjects for which their was no direct GCE equivalents. As a result General Knowledge, Household Science and Social Science syllabuses were prepared and candidates were permitted to sit these three subjects until November 1954.

Since its adoption by the Services the GCE has become the apex of the

General Education Scheme. Despite the reduction in the size of the RAF through the ending of National Service and the contraction of overseas responsibilities the number of candidates entering for 'O' level subjects increased steadily until it reached a peak in July 1957 with a total of 4862 candidates. Since then the number declined gradually to about 4200 candidates. This was most probably due to the decline in the total size of the RAF with the phasing-out of National Service airmen. At the same time there has been an overall reduction in the number of subjects offered by candidates. Initially as has been indicated each candidate sat an average of two subjects but from the table in Appendix 7 it can be seen that this declined to 1.5 subjects per candidate by summer 1961.

This reduction has to some extent been exaggerated by the extension of the Forces GCE Scheme to cover 'A' level candidates from the summer 1956 examination onwards, the majority of 'A' level candidates restricting themselves to one subject at any one examination.

The probable reason for this continuing high demand for GCEs is that many airmen are more conscious of the need for externally recognised qualifications and as the future of the air force becomes less certain, so it is recognised that the chances of securing a worthwhile civilian job depend on convincing an employer of one's ability. The easiest way to do this is to be able to produce proof in the form of either a General Certificate of Education, or some professional qualification, the entry to which often requires a number of subjects in the GCE Ordinary level.

Thus by the time the majority of airmen came to study for the GCE examination they were normally more mature than, even though possibly intellectually inferior

to, children taking the examination at the normal ages of fifteen and sixteen. Thus the education officer could afford to adopt a less factual approach and try to place the subjects taught in perspective with the airman's other studies as well as with the world in general. A perusal of the grades obtained in the GCE examinations by air force candidates would tend to add weight to this suggestion for there is not a normal distribution of marks as one would expect. Relatively few obtain grades '4' and '5', the vast majority gain either '2' or '3' or must be content with '6' of '7'.

Results of this nature could indicate that students who obtained the higher grades had been successful because of their mature approach to subjects while those who received the lower grades were not really suitable candidates for an examination of this type, but felt impelled to enter because of regulations governing promotion.

The small size of classes on most stations and the relationship which education officers generally established between themselves and their students tended to encourage a more satisfactory and sounder approach to their studies among their abler students than can be expected in schools. Even National Servicemen who looked upon compulsory education with some hostility quite often underwent a complete change of outlook when attending voluntary classes leading to the General Certificate of Education.

Preparation for the General Certificate of Education was normally undertaken by attending classes held or organised by the Station Education Officer. Most education officers were capable of teaching all subjects in the RAF Education Test Part II but were not expected to teach to a higher level than that. Thus where

one was manning a digital post, recourse was often made to some other form of tuition.

There were three avenues open in a case where an education officer could not teach a particular subject. Should the demand be considerable he could consider the formation of a class to be taught by a part-time teacher who may either have been a suitably qualified serviceman or civilian. Because of the difficulty of securing instructors, most classes of this nature were held in the evenings. Alternatively permission could be granted to a would-be student to attend the local technical college, if practicable. There would be of course nothing to prevent an airman attending a technical institute in his own time without permission of his education officer but he could find difficulty in securing refund of fees or travelling expenses to which he would otherwise have been entitled. Such a refusal would normally be incurred where similar classes were held on the station or if the airman was not considered to be of a suitable standard. The final method of obtaining assistance and one used reluctantly was the enrolment of students for a correspondence course under the auspices of the Army Correspondence Course Scheme. Although initially planned purely as a wartime expedient, the extension of conscription necessitated its continuance to meet the requirements of regular and national service personnel where their educational or training needs could not be satisfactorily nor fully met by their respective Service Education Branch. The range of subjects available continued to increase so that by 1961 over 500 were open ranging from courses for external London degrees and

the final examinations of most professional bodies down to GCE and City and Guilds Examinations.

In 1949 the Scheme was renamed the Forces Correspondence Course Scheme in view of the large number of RN and RAF students but continued to be administered by the Army Institute of Education. At the same time as the change of nomenclature the whole concept of correspondence courses was widened and anyone who wished to follow a course not provided for under Service arrangements was given financial assistance to obtain one of his own choice subject to approval by his station education officers. This assistance is limited to:

a. 50% of the total cost of the course

or

b. £12 per year while the course is being followed whichever is the less.[1]

The only restriction placed on national servicemen was that in order to be eligible for either type of assistance they had to have at least six months to serve on the date on which they applied for a course. In fact the Institute of Army Education statistics for 1956 showed that 36% of applications for correspondence courses in that year were made by conscripts. A second restriction which was applied to both national servicemen and regulars was that the station education officer had to be satisfied that no suitable local alternative could be found and probably more important that the applicant had the necessary incentive and initiative to enable him to persevere with the course and that the course selected was within the applicant's intellectual ability.

Although the facilities so far described have been for airmen who had a

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1 Queen's Regulations (1953) paragraph 1953.

definite educational object in mind, and as has been indicated the majority tended to see the General Education Scheme as a means to self-improvement in the material rather than in the abstract sense, provision was made for those who wished to seek knowledge for its own sake. Education Officers, however did not normally hold classes for such airmen but normally relied on the facilities of the Central Committee for Adult Education in HM Forces.

By 1947 members of the Central Advisory Committee and its Regional Committees had begun to expect the winding up of the scheme, by which the facilities of civilian adult education organisations had been made available to members of the three services just at the more tenuous arrangements of the First World War had disappeared in 1919. In order to clarify the position a deputation from the CAC led by Dr. Basil Yeaxlee[1] met the Under Secretary of State for War on 2nd June 1947 at a meeting at which the three service education chiefs, including Air Commodore A. H. Robson RAF Director of Educational Services, were present.

The Under Secretary of State assured the representation of the CAC that it was the intention that civilian assistance to the forces should continue for the foreseeable future and laid down two main proposals which affected the composition and function of both the CAC and the Regional Committees. He suggested that the following alterations to the structure of civilian assistance should be undertaken.[2]

Regional Committees

a. In areas where there were no large military concentrations the Regional Committees were to be phased out by the end of 1948.

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1 Page 72 supra

2 War Office Memorandum 43/Edn/1769(AE6) 2nd June 1947

b. In the remaining areas the Regional Committees were to be progressively merged into the Extra Mural Departments of the participating universities and contact, thereafter, would be directly between Command Headquarters and the Extra Mural Departments.

The Central Advisory Council

The CAC was to continue until 31st December 1948 meanwhile arrangements were to be made for each service to have its own advisory body.

The proposals were presented at the next meeting of the CAC Executive Committee on 7th July 1948 and although the dispersal of the Regional Committees was agreed to, the idea of three separate service Boards proved unacceptable. Proposals were sent to each of the three Service Ministries on 14th July giving a summary of the objections to this idea and eventually a compromise solution was determined by an executive meeting of the CAC on 30th June 1948.

It was agreed that the CAC should cease to exist on 30th June 1949 and that the administrative and executive functions of the Central Advisory Committee should be passed to a new body to be known as the Central Committee for Adult Education in HM Forces. The terms of reference of this new committee were to be:[1]

a. To deal, subject to services policy, with problems of civilian educational provision submitted to it by the Services Departments, the Extra Mural Departments of the Universities, the Regional Committees for Education in HM Forces (until they were absorbed by the Extra Mural Departments) or other bodies.

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1 AP 3379 Education in the Royal Air Force

b. To co-ordinate the provision of civilian assistance for services education through the organisations connected with such work.

c. To administer the financial arrangements arising from a. and b.

d. To provide the names of suitable civilian lecturers for overseas tours and to administer the Overseas Lecture Scheme of the Service Departments as requisite.

Meanwhile the Universities with the exception of London had agreed to undertake the work of the Regional Committees as they were phased out. There had been some initial reluctance on the part of some members of Extra-Mural Departments on the grounds that much of the work would not be of university standard and that it would deflect their time and attention from the more important work of civilian adult education. These opinions were over-ridden and by February 1949 thirteen universities had agreed to participate and had provided the CAC with details of their Services Education Committees.

This new system of Services Education Committees with its direct contact between service and university authorities led to a much closer and better relationship between them, and the Annual Report on the General Education Scheme for 1951-52 states that "a much better understanding of both the needs of the Air Force and the resources of the committees has now been achieved. Nearly all the Commands refer in appreciative terms to the friendly nature of their relations with the various university committees."

Unlike the other two Services, the Command structure of the RAF in the United Kingdom does not have a Geographical basis but is organised functionally so that in almost all extra mural areas there will normally be stations from more than one

Command. For example in the area covered by Durham University there were stations from both Fighter Command and Flying Training Command. In cases where this occurred, the Command Education Officer of one of the Commands concerned would be appointed as the representative on the Local Committee and all relevant administration on behalf of the RAF would be undertaken by his Command staff. Appendix 8 tabulates the universities which participated in the scheme together with the Commands to which they were responsible.

Initially the university education scheme was intended primarily, if not entirely, to cope with the needs - real or imagined - of National Servicemen for the question of peacetime conscription was a delicate political matter and it was therefore considered that all possible educational facilities should be provided in order to make the disruption to the lives of these men a little less serious.

It was envisaged that university help would be required particularly in individual tutorial education. A scheme was evolved under which all National Service airmen with higher educational qualifications were to be interviewed at an early stage in their service careers by a university tutor and their educational needs determined. A record card would be made out for each student and he would be able to claim tuition if he was posted to any station in the United Kingdom where university tutors were available. In practice this scheme could rarely be fulfilled as only a small proportion of those National Servicemen eligible could be interviewed by a university tutor and even then the interviews were often hasty and inadequate. In most cases any contact with the scheme ceased after the initial interview and the record cards simply remained unused. Even where tuition was provided there was often little continuity because of turbulence and other service commitments.

If tutorial education for the National Serviceman had been its only justification, the revised scheme would clearly have been a failure. In fact a large volume of very varied educational work developed principally along two main lines:

a. through the provision of lectures on RAF Stations

b. through the organisation of short residential courses, normally held at the University and open to officers and airmen from all Commands, although the content of the course might well limit the number of those able to attend.

Some of these lectures and courses provided were comparable with the work done in civilian adult education in that it was voluntary and liberal. However before any lecture programme at station level could be arranged it was the task of the station education officer to determine the needs of his station which could be met by the university and in consultation with the secretary of the Services Education Committee to plan and to cost a programme to meet them. This draft plan would then be submitted to the Command Headquarters of the station concerned for approval. Providing the command education officer regarded the proposals as reasonable and in accordance with the educational policy of the command, the draft programme would be approved and the consolidated requirements of stations in each extra-mural area would be forwarded to the appropriate Command headquarters. Thus in the Durham University Area the station education officers at RAF Acklington and RAF Ouston would forward their draft proposals to their command education officer at Headquarters Flying Training Command, who after approving them, would forward them to the Command Education Officer of Fighter Command in his capacity as RAF Representative on the Durham University Services Education Committee.

The content and the level of such programmes varied from station to station. The lectures were normally directed towards subjects in the field of current and international affairs, but on stations where there was a large number of specialists in a particular trade or branch then subjects with a much more limited appeal would prove to be more popular. Lectures given under the university assistance scheme were not intended to form any part of a syllabus leading to any examination, but this ideal was not always strictly adhered to and lecturers were sometimes involved in giving talks to airmen taking GCE subjects which the education officer could not undertake or, more often, to officers preparing for promotion and Staff College examinations.

Apart from these semi-vocational lectures, however, it may be fairly stated that the station lecture scheme did not have the same success which it enjoyed during the war. After all, the conscript was only serving a period of eighteen months (or two years after 1950) and so for him boredom, although it may have existed, did not assume the same proportions as it had done during the war years, while the regular airman was often married and was within travelling distance of home. Thus even when lectures were given by a nationally known speaker they would often be attended by only a handful of listeners. There were exceptions and there could be a remarkable response when least expected.

This irrationality of response may be illustrated from the writer's own experience. In 1961 when Senior Education Officer on Gan, a coral island in the Indian Ocean where everyone was serving a one-year unaccompanied tour, I was informed by Headquarters, Far East Air Force to expect a visiting lecturer who was touring the Far East under the university lecture scheme. He was to

give three lectures during his stay on "Space travel","Vintage Cars" and "Topical Current Affairs" respectively. The talks were well advertised and as the station included a large number of technical personnel it was thought that the choice of the first two subjects would have proved attractive. However the attendances at these were so abysmally small that it was decided to cancel the third.

Some six weeks later, so there would have.been little change in personnel, the island was visited by Brigadier Smeaton, author of "Sunrise to Windward". Admittedly he arrived in novel fashion, sailing his yacht unexpectedly into the lagoon. I approached him with some trepidation, bearing in mind the previous episodes, and asked him if he would give a lecture on his experiences. Because of the small number who turned up earlier, I organised a much smaller room (in the Church Club, which in itself might have frightened people off) which could comfortably seat two dozen persons. On the night of the lecture the room was packed to capacity with only the people in the front row being able to obtain a seat and at least two dozen people peering through the windows at the rear. The lecture was repeated the following night with the same result and it was estimated that over 50% of the total service population of the island (then in the region of 450 officers and men) heard the Brigadier's talk which was largely autobiographical.

Apart from lectures on stations, universities also arranged to run short residential courses. Many of these were, unlike the lectures on stations, specifically aimed at providing assistance for service students preparing for examinations. The remainder, were, however designed purely to cater for those officers and airmen who wished to increase their knowledge of a particular aspect of a subject without any attempt at seeking some qualification. The most popular

courses were again those dealing with current affairs and sociology, with courses on the arts (painting and photography) and the business world following in close succession. Apart from the advantages gained from hearing specialist lecturers speak on their own topics, those attending were able to shake off the restrictions which surrounded their normal lives and were able to mix freely with their fellow students without regard to the normal conventions of rank. Although most of the courses were of quite a high academic standard and the lectures were concentrated in form, adequate opportunity was given for discussion and the expression of the students' own ideas.

Despite their popularity, there have been criticisms of the University short residential courses. The Command Education Officer of Maintenance Command mentioned the general line along which these criticisms developed in his Annual Report for 1950:- "Some doubts have been expressed and criticisms received which merit investigation into the number of courses which should be organised, the subjects that should be covered, the question of whether there should be separate courses for officers and airmen or mixed courses and, most important of all the methods of selection of officers and airmen to attend these courses."

Most of these criticisms arose from the fact that men had to be released from their units to attend and there was a feeling that many airmen simply attended to evade work for three or four days. While it is true to say that much of the demand for these courses was stimulated by the realisation that attendance was regarded as a duty and did not affect the applicants' leave, it is nonetheless true to point out that many of the shorter courses were held at weekends and even for these the places were usually over-subscribed. It was also recognised that

no education was completely wasted no matter how obtained and that attendance at classes, whether on or off the station should be encouraged so long as it did not interfere with the efficiency of the Service.

The Defence White Paper of 1957 which announced the National Service would end by 1961 and that Great Britain's forces would be cut by half by the mid 1960s was obviously going to have serious effects on the work of the Central Committee and the Services Education Committees of the Universities. However, although the 1949 scheme had been based on the provision of education for National Servicemen, the Ministry of Defence announced that it had no intention of jettisoning the idea of civilian assistance as being unnecessary or unsuitable for the all-regular forces of the future.

There were, of course, expected effects and side effects from the White Paper. The selective national service which had crept in during the late 1950s had relieved the Services Education Committees of most of their burden of providing tutorial assistance as fewer well qualified personnel were being conscripted. The most obvious effect was the decline in the number of lectures given on stations which even the fragmentary evidence in Table IX on page 156 will indicate.

In contrast to the contraction of the lecture programmes on stations, there was no corresponding reduction in the number of students attending residential courses. Figures for the latter remained fairly static for two main reasons. First, the number of residential courses had remained fairly constant throughout the period under review, but as they had been massively over-subscribed in the early post-war years, the reduction in manpower in the late 1950s simply reduced the number of excess applications. However as long as there were more than

TABLE IX

UNIVERSITY ASSISTANCE TO GENERAL EDUCATION 1950-1961

NUMBER OF LECTURES GIVEN AND RESIDENTIAL COURSES HELD

Year	1950-51*	1951-52*	1952-53*	1954-55*	1960-61/	1961-62/
No of lectures given on stations	1542	2998	3332	3150	-	115
% age of total teaching time	1.0	1.8	1.8	1.3	.7	.7
No of students on residential courses	2657	2687	3374	3235	-	2842

*Year ending 31 March

/Year ending 31 July

Source: Relevant Annual Reports on the General Education Scheme

sufficient applicants to fill the places and the necessary financial backing was available, there could be no reason for a reduction in the number of places on these short residential courses.

Secondly, the Services Education Committees themselves realised that with the run-down of the RAF, the course of education could be served better by the concentration of officers and airman from a number of different stations on a single course than by sending out lecturers to address groups of two and three. This residential system therefore allowed them to deploy both their lecturers and financial resources in a much more efficient manner, so that out of their total annual budget a far larger proportion was ultimately allotted to short residential courses.

In view of the advantages claimed on behalf of the short residential course from both the students' and the lecturers' points of view, it may be fairly stated that the Universities have made their greatest contribution to liberal education in the post-war RAF through the medium of this type of instruction.

General education in the air force represented on the one hand by the preparation of airmen for GCE by education officers at station level and on the other by non-vocational residential courses at universities has often been regarded as containing much that was not essential to the efficiency of the service and in its extended form as in the period of this survey, this was undoubtedly true. But as long as there was any degree of over-manning, as inevitably there has to be in any armed service during times of peace, then there was no justification for the reduction of the facilities provided. Only in time of war is it reasonable to prune off surplus activities so as to leave the General Education Scheme with its vital tasks of disseminating information and maintaining morale.

ROYAL AIR FORCE EDUCATION TEST

Certificate

Joseph William McIff

has qualified for the award of the Royal Air Force Education Test Certificate at the Examination held in May 1957

The subjects taken and the result obtained are shown below:

Housecraft
English
Geography

Class "D" Pass

Air Vice-Marshal
Director of Educational Services

Date 4th June 1957

CONCLUSION

Through this paper I have tried to illustrate the various steps which have been taken to provide the facilities for general education in the Royal Air Force and have supplemented this with descriptions of the changes in educational administration which circumstances have necessitated.

Of these changes the most fundamental was that taken on the basis of the report of the Donald Committee which established the Education Branch as an integral part of the Royal Air Force, and in doing so enabled it to play a fuller part in the work of the service. This in turn had an incalculable effect on the relationship between the education officer and his students, not only in the classroom but more generally in areas outside the scope of this paper. The fears of Colonel Curtis did not materialise, for education officers generally established a rapport with their adult students which differed little from that evident in any technical college. By insisting on staff, who with very few exceptions, were drawn from graduates, the Branch was able to command respect based on knowledge rather than on discipline. Of the relatively few non-graduates the majority in the General Education Scheme were ex-aircrew whose academic qualifications, although less formal, were reinforced by their aircrew brevets and ex-aircrew members of the Branch have been insisted upon by some station commanders, particularly on flying training stations.

At training establishments, a more formal attitude had to be maintained, and teaching by a uniformed education officer who was seen to be a member of the Royal Air Force with all that it entailed, made the task more acceptable to the young entrant who saw things very much in black and white. He would accept

discipline from an education officer as the latter fitted into his pattern of the hierarchical structure of the Service, but was often reluctant to accept the decisions and discipline of the members of the non-uniformed Service.

Nor has the second fear of Curtis - that educational standards would deteriorate if the Education Branch were made an integral part of the RAF - materialised. Whether it would have done so if the circumstances which Curtis imagined had developed is now a hypothetical question, for it has been avoided not only by providing a salary scale sufficiently competitive to attract well-qualified teachers into the Branch, but by the award of ante-dates of seniority, roughly equivalent to the credits of the Burnham Scale. Thus the Branch has been able to attract men with considerable teaching experience into its ranks and prevent the intellectual narrowness which might have resulted had all its members entered directly from the universities. Yet, at the same time the existence of a cadre of long serving officers on permanent engagements has enabled the Branch to examine the problems involved in teaching in the air force from both an educational and service point of view and to resolve any differences in a more equitable manner than could members of a purely civilian body.

The majority of these problems lie in the teaching of general studies and more specifically in the administration of the General Education Scheme. While the majority of specialist officers accept the need for the technical training of airmen under their command, far fewer recognise the contribution which the General Education Scheme is able to make to the morale and efficiency of the service. It is often seen as a means by which airmen escape from work and thereby impose extra burdens on their colleagues in the flight or section.

Criticism tends to be less, of course, when airmen are attending classes in preparation for the RAF Education Test for these are recognised as essential to promotion. It is, perhaps, when an airman has advanced beyond his minimum service educational standards that opposition begins, despite the official encouragement given to education in Queen's Regulations and Air Ministry Orders.

The air force has, however, progressed much further along the road to an acceptance of continued study since the inter-war period, when most education was carried on in the airman's own time. Attempts to revert to this idea, although not unknown in the post war air force, are now uncommon, perhaps due to the pressure which can be applied within the service from senior officers in the Education Branch.

Having obtained his students, even though force majeure may have been applied on his behalf, the education officer may be faced with justifying to himself the classes which he holds. He must consider whether they meet the aims of the General Education Scheme and whether they can justify the temporary loss of efficiency in the sections from which his students are drawn, for it is not difficult to imagine these two considerations being in conflict with one another.

If the aims of the General Education Scheme are re-examined it will be found that two are concerned with using education purely as a means to material ends, although this does not necessarily deprive such teaching of a liberal outlook. Furthermore while the first and third aims are largely mutually exclusive, the second aim, which sought to develop "mind and character" must be borne in mind throughout all levels of instruction if the professional status of the Branch is to be maintained. Therefore, before going on to examine the value of the General

Education Scheme in meeting the so-called material ends of education, it is essential that the second aim be examined in more detail to determine by what means mind and character may be developed.

Both these qualities may only be achieved by adopting a liberal approach to the subjects being taught, for it is recognised that it is the manner in which subjects are taught and not necessarily the content which develops a student's intellectual ability. This approach demands a study of the fundamental principles of a subject so that any may be taught in this manner and still contribute to one's intellectual development as it has long been realised that "the liberal element in a course depends as much on how subjects are taught as on what is taught".[1]

Although the student's mind may be developed through a variety of subjects, provided this method of teaching is followed, it is essential if his character is to be developed, that a broad range of subjects be studied in both the Humanities and the Social Sciences. Only by studying these (and in a liberal manner) can he gain the knowledge which will enable him to make moral and aesthetic judgements.

Thus, having established criteria by which attainment of the second aim may be measured, the education provided under the General Education Scheme can be examined to see whether they are applied in meeting the other two aims.

The introduction of the liberal ideal in the assistance given to the "study of educational subject related to service requirements" is a relatively recent innovation. In the inter-war period, the Education Tests for Promotion and Re-classification were restricted to subjects which provided no more than basic

1 Ministry of Education Circular 323 13th May 1957

literary and numeracy. Admittedly in the Promotion Examination, map-reading was included but this was a technical skill, which since 1945 had been undertaken where required by NCO instructors of the RAF Regiment.

Much the same criticism could be levelled at the post-war RAF ET Part I for it provides a basic standard of education and because of its elementary level tends to be regarded as a mechanical process. Attempts have been made to liberalise the syllabus but because of the academic level of the students, the practical approach of most education officers has been to reduce instruction to the minimum compatible with securing passes for their candidates.

This attitude serves two purposes. First it enables those whose academic ability will take them no further to qualify for promotion to corporal, while for those who have the ability and the desire to go on for more advanced work, it does not entail the sacrifice of a great deal of unnecessary time. Therefore although the teaching for the first part of the Education Test achieves its aim in so far as the vast majority of candidates eventually qualify for promotion, it cannot be considered as successful on the grounds of providing the basis of a liberal education.

It is only when preparation for Part II is undertaken that many airmen encounter for the first time in service instruction the true spirit of liberal education. The syllabuses of the constituent subjects are well-designed and meet the criteria of the aims implied in general studies as may be determined by an examination of the Geography syllabus (Appendix 9) which may be regarded as typical. Unfortunately many airmen fail to respond to the challenge and simply see the examination as a barrier to promotion. Their attitude is simply to learn the minimum compatible with passing so that they can dispense with formal education for the remainder of

their service. At the same time many airmen regard the examination as a step towards the General Certificate of Education and beyond. The education officer has classes which have an ambivalent attitude to the examination and this of course will be reflected in his own approach.

On the one hand he has an education duty to encourage his students to think about their subjects and to attempt to arouse in them a much wider interest than that merely required for examination purposes. On the other hand, however, he has a duty to assist the less able (who are usually the less willing) to qualify for promotion - and those having neither the ability nor the inclination must perforce be taught in a mechanical way: a mere cramming with facts to satisfy the examiners. One may say that such an attitude is not consistent with any professional standards, but when one realises that a potentially good sergeant who is otherwise well-qualified for promotion is being held back and realises what this means to the NCO personally, the decision is not one which can be discounted lightly because it offends the educational purist. Wherever possible, however, the education officer attempts to conform to the ideals of liberal education and the spirit in which the syllabuses for Part II were prepared.

Turning to the third aim of the General Education Scheme, most of the preparations which the airmen take for release involve the education officer in some way - either in an administrative capacity, arranging for the provisions of correspondence courses or attendance at a local technical college, or teaching subjects to GCE Ordinary and Advanced level. As far as the former courses are concerned the vast majority are of a vocational nature and because of the time element involved, the general studies element, unless it happens to be an examination requirement, is largely ignored.

Where instruction on the station is concerned, teaching at GCE level, and before the second World War at the level of the Higher Education Test, has tended to follow a liberal pattern even though the airmen themselves may simply be aiming at some paper qualification. The circumstances of service teaching at this level virtually compel an airman to accept a liberal approach to his subject.

First he is much older and because of this has involuntarily acquired more knowledge than the grammar school pupil who is preparing for the same examination. This being so, he can see the subject in much better perspective not only in relationship to other subjects but also in its value to society. Secondly the relatively small size of most classes of this level allow the formal class discipline to be laid aside and the discussion technique to be used (and because of the experience of the students, it may be used productively).

Finally, the comparatively little time allotted to any GCE course, normally one period per week for about ten months, coupled with enforced absences owing to service commitments means each student is required to do a considerable amount of work - particularly reading - on his own. In such circumstances he is almost bound to encounter problems which can only be solved by further reading and his own logical analysis.

At the apex of the pyramid must stand the residential courses provided by the Services Education Committees which seek to arouse in those attending a genuine appreciation of a large variety of subjects. With the exception of Staff College preparation seminars, no courses are designed to help in preparing for examinations. Nonetheless nearly all courses are invariably over-subscribed and would be even more so were more airmen able to obtain permission to attend.

Obviously instruction at this level fulfills the liberal ideal, and airmen do return from university courses realising the much wider implications and applications of the subjects discussed.

There is thus in the General Education Scheme a genuine attempt to provide at three levels education which seeks the two goals of liberal education. Here, however, one must make a distinction between the ideal of liberal studies and that of general studies. It was seen earlier how liberal studies were more concerned with the approach to given subjects than with the content.

General studies, although, to a large extent synonymous with liberal studies, denote something which is at the same time both narrower and wider than liberal studies; narrower in that they are traditionally restricted to the social sciences and the Humanities, wider in that to justify the term a number of subjects must be studied in concert in order to understand the development of society as a whole.

In the General Education Scheme, these two requirements are not met - many of the subjects taught, like Mathematics and Physics, are certainly not learned for vocational purposes and may be regarded as coming within the orbit of liberal studies in this respect although they could never be included in the traditional definition of general studies. Conversely where traditionally general studies subjects are taught, they are often, because of the demands of time, studied only as individual subjects so that the airman never appreciates their true position in the educational cosmos.

The teaching of general studies can never really be achieved in the Air Force if the above definition is accepted because of the circumstances involved in teaching a constantly moving population. Despite the obstacles inherent in

service life, the RAF has provided and continues to provide education of a liberal character for all ranks in the belief that it cannot but benefit by an increased level of education. Where full advantage is not taken of the General Education Scheme one must not look for defects in the facilities but at the potential clientele who still remained to be convinced of their need or who lack the determination to use the facilities.

It is at the Training Schools that the air force is able to demonstrate its ability to provide a liberal education through an integrated general studies course. At the schools many of the subjects which may be taught in an academic (and therefore liberal) manner on stations, such as Mathematics or Physics, no longer retain this independence but simply become "tool" subjects of the technical training. There will always be a dichotomy of purpose in teaching these subjects, for although the education staff responsible attempt to arouse an interest in these subjects for their own sake, they also realise that their purpose is to train technicians and that this can only effectively be done by integrating the theoretical subjects with their practical application, so that in practice it is very difficult to distinguish the frontier between education and technical instruction.

In the general studies element there is no need for this integration and in fact, this part of the syllabus is kept separate from the scientific side. The aim here is not to produce technicians or craftsmen but to make the trainee aware of society and his part in it and also to develop his powers of self expression, so that the potential NCO produced at the end of the course whether it be of Air Apprentices or Boy Entrants will have a well-rounded personality.

How far the schools are successful in this attempt is difficult to evaluate but the syllabuses provide the opportunities for this development and despite an exacting time table in normal working time, would seem to indicate that a certain amount of success has been achieved. Thus it is on these stations, and more particularly at the Apprentice Training Schools where the standard of intelligence is higher, that the air force can be said to achieve its aim of developing the mind and character of the airman as well as providing him with an education which meets the service requirements for promotion - and which further provides the basis for his resettlement by allowing him to obtain externally recognised qualifications.

Thus Trenchard's belief "that these mechanics on passing into civil life will have no difficulty in securing recognition as skilled tradesmen"[1] remains as true today as when he published his Memorandum almost fifty years ago.

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1 The Organisation of the Royal Air Force (Cmd 467) November 1919.

EDUCATIONAL ADVISERS AND DIRECTORS OF EDUCATIONAL SERVICES (RAF) WITH DATES OF APPOINTMENTS

Appointment	Incumbent	Date of Appointment
Staff Officer	Wg Cdr I. Curtis	1st May 1919
Educational Adviser	Col. I. Curtis*	1st January 1921
" "	W. M. Page Esq*	1st January 1929
Director of Educational Services	W. M. Page Esq*	1st October 1936
" " "	Air Cdre W. M. Page/	6th January 1940
" " "	Air Cdre A. H. Robson/	17th November 1945
" " "	Air Cdre A. H. Robson	1st October 1946
" " "	Air Vice Marshal A. C. Kermode	28th November 1955
" " "	Air Vice Marshal E. Knowles	3rd October 1960

* indicates a civilian appointment

/ indicates honorary rank

CHARTS SHOWING CHAIN OF COMMAND

CHIEF OF AIR STAFF - DIRECTOR OF EDUCATIONAL SERVICES

a. January 1921

b. January 1925

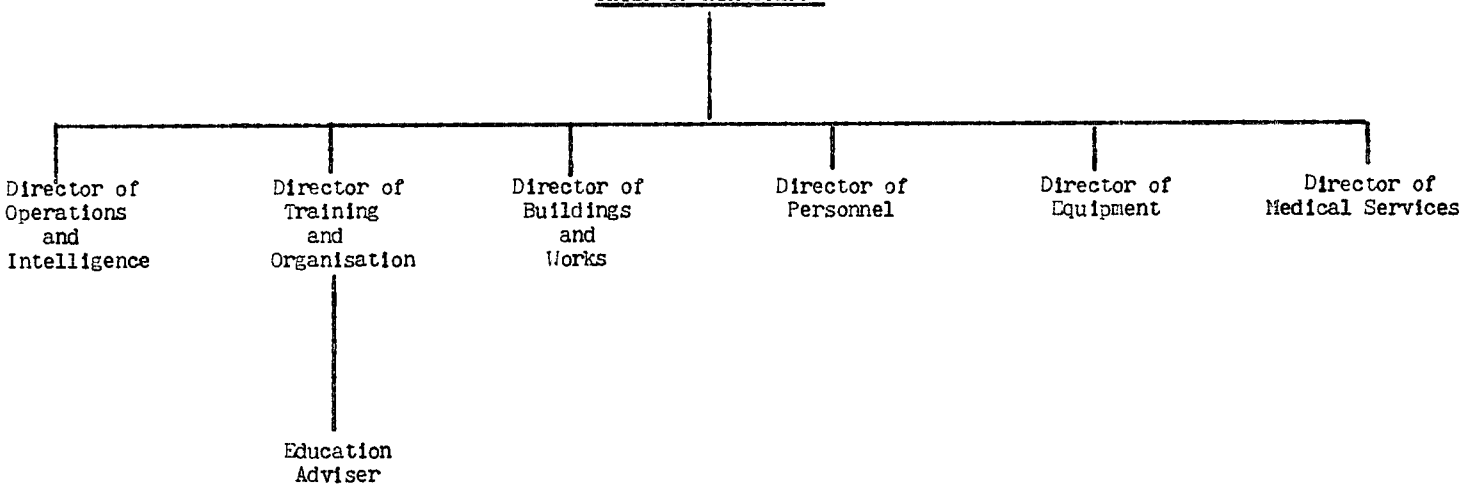
c. January 1937

d. January 1945

e. January 1960

CHAIN OF COMMAND

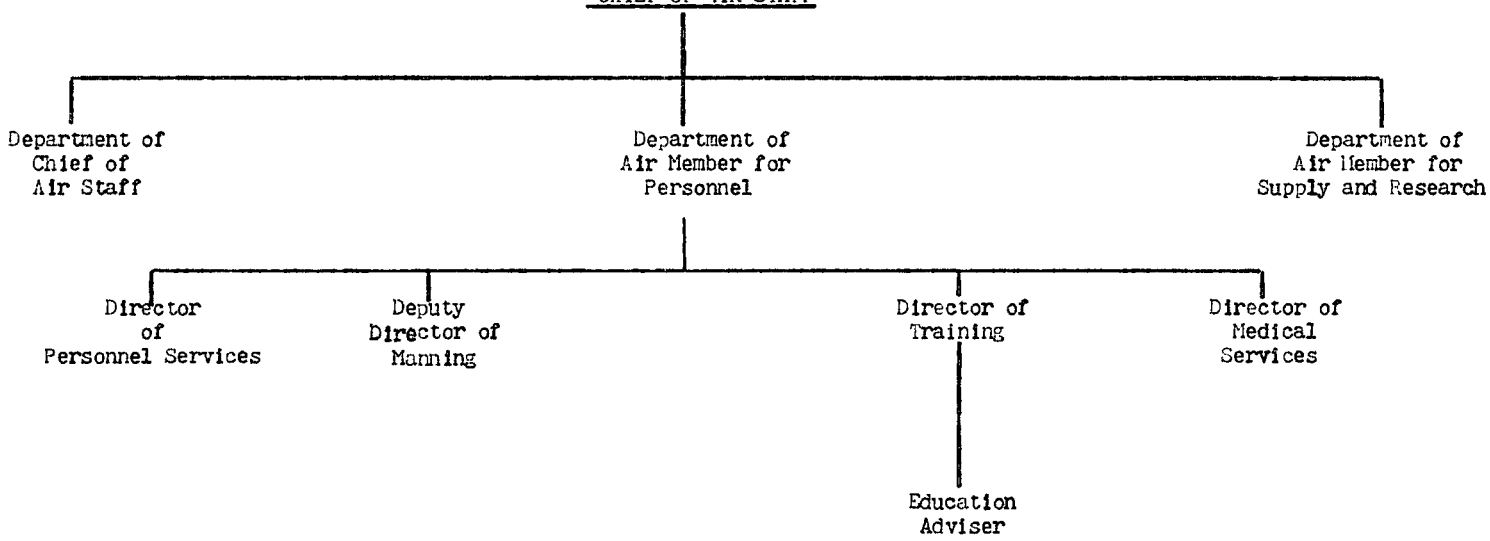
CAS - EDUCATION ADVISER JANUARY 1921



Source: Gray: "A History of the Air Ministry" (1940)

CHAIN OF COMMAND

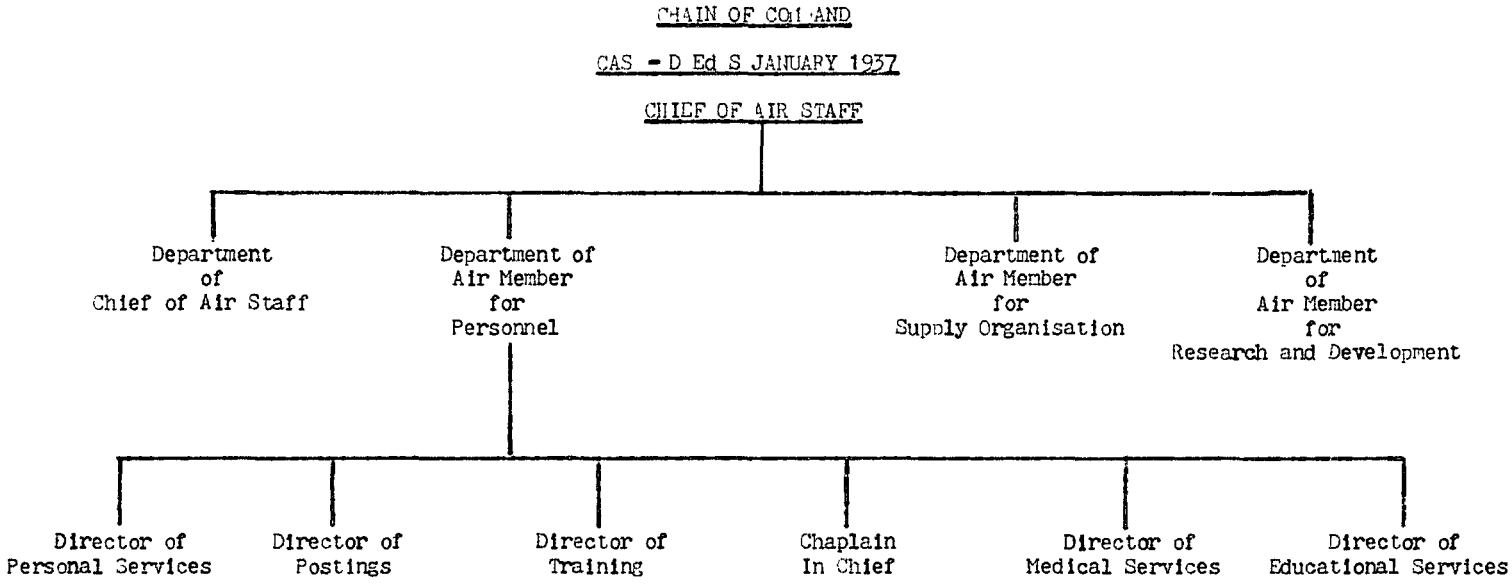
CAS - EDUCATION ADVISER JANUARY 1925



Source: Air Force List (January 1925)

CHAIN OF COMMAND

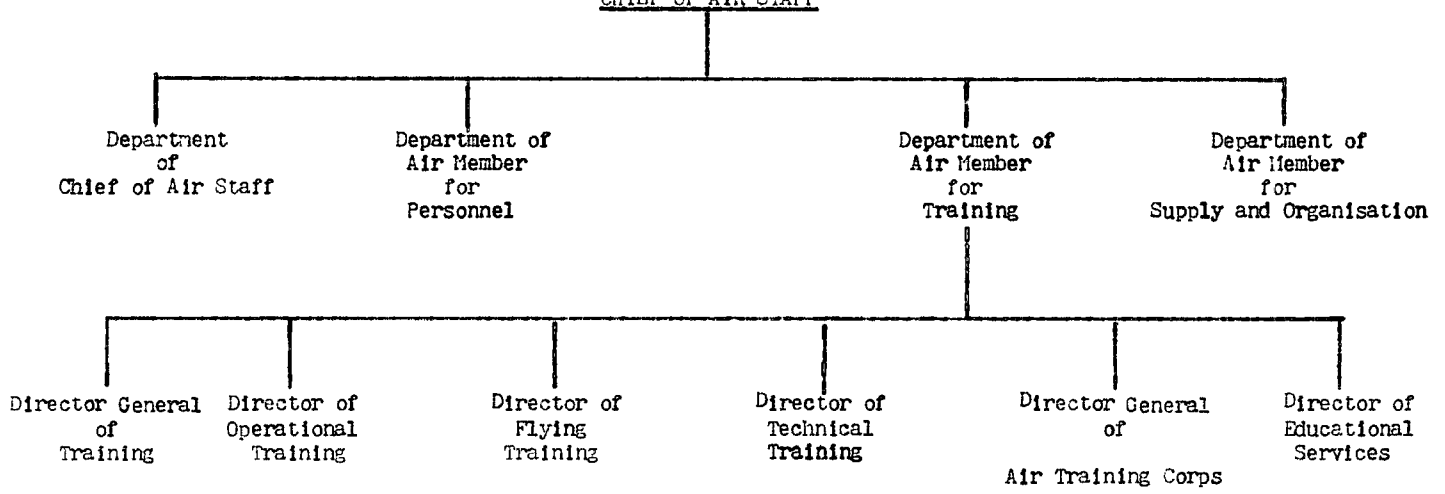
CAS - D Ed S JANUARY 1937



Source: Air Force List (January 1937)

CHAIN OF COMMAND

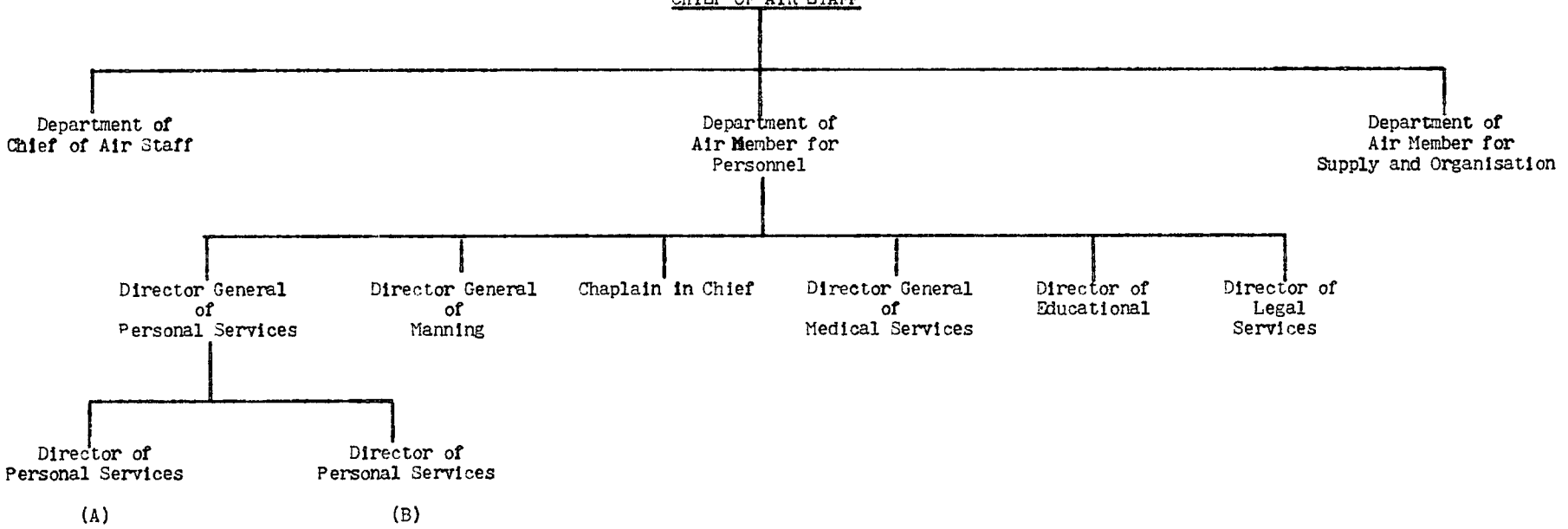
CAS - D Ed S JANUARY 1945



Source: Air Force List (January 1945

CHAIN OF COMMAND

CAS - D Ed S JANUARY 1960



Source: Air Force List (January 1960)

HIGHER EDUCATION TEST

EXAMINATION GROUPS AND CONSTITUENT SUBJECTS

PART I
(compulsory subjects)

a. English and General Studies

b. Elementary Practical Mechanics and Properties of Matter

PART II
(one group only required to obtain a pass in this Part)

GROUP 1

a. English Language and Literature

b. The British Commonwealth: Its origin, growth, geography and government or (from 1933 onwards).

Elementary French or Elementary German or Elementary Spanish

GROUP 2

a. Practical and Applied Maths.

b. General Engineering Science.

GROUP 3

a. Elementary Physiography*

b. Navigation and Meteorology (up to 1932)

Maps and Charts (from 1933 onwards)

GROUP 4

a. Precis writing, Correspondence and Office Routine.

b. Book keeping and Elementary Accounts.

*Up to 1932 Elementary Physiography had included a section on Maps and Charts, which in 1933 was included as a separate subject in Group 3 and replaced Navigation and Meteorology.

PART III

GROUP 5

a. History of the Modern World.

b. Outlines of the Economic and Industrial History of England.

or

Egypt, Iraq, Palestine and India (History, Geography customs and people)

or

Elementary French or Elementary German or Elementary Spanish (transferred to Group 1 from 1933 onwards)

GROUP 6

a. Applied Mechanics and Theory of Structures.

b. Properties of Materials.

GROUP 7

a. Heat and Theory of the Internal Combustion Engine.

b. Mechanism and Mechanics of Machines.

GROUP 8

a. Applied Electricity and Magnetism.

b. Elementary Theory of Wireless Telegraphy and Telephony.

GROUP 9
Up to and including 1932:

a. Engineering Drawing, Paper I.

b. Engineering Drawing, Paper II.

From 1933 onwards:

a. Any of the Paper a. subjects in Groups 6, 7, 8 or 10.

b. Practical Geometry and Engineering Drawing.

GROUP 10

a. Mechanics of the Aeroplane.

b. Theory of Flight.

GROUP 11

a. Elements of Economics.

b. Outlines of the Economic and Industrial History of England.

GROUP 12 (not set until 1933)

a. More Advanced French or German or Spanish.

b. France: Its History and Place in the Modern World or Germany or Spain*

GROUP 13 (not set until 1933)**

a. Navigation.

b. Meteorology.

*There is no evidence that the two papers relating to Spain in Group 1 were ever called for, and for a year or two after 1933 only the "French or France" papers were set.

** Groups 13 was created out of a simple subject in Group 3 ("Navigation and Meteorolgy") when the "Maps and Charts" Section of Elementary Physiography was established as a separate subject within that Group.

TUTORIAL COURSES AVAILABLE FOR OFFICERS ON SHORT SERVICE COMMISSIONS

Courses Available 1925

Practical Mathematics	I and II
Calculus	
Applied Mechanics	I and II
Reading and Writing	I and II
Workshop Drawing	
The Internal Combustion Engine	
Arabic	
Hindustani	

Additional Courses Available 1926

The British Commonwealth

Egypt, India and Palestine

British and European History

History of the Modern World

Physiography

Maps and Charts

Engineering Drawing

Applied Electricity

Elementary Calculations I and II

Source: RAF Education Bulletins No 2 (October 1925)
No 4 (October 1926)

BRITISH WAY AND PURPOSE

(Booklets 1-12)

FIRST SEQUENCE — BOOKLETS 1-5 — SOLDIER - CITIZEN

BWP1 — Citizen of Britain

What is at stake. Parliamentary Government.
Local Government. Law and Justice.

BWP2 — Britain in Action

Britain at Work. The Social Services.
Education. The Information Services.

BWP3 — Citizen of Empire

The Growth of Empire. The Dominions.
India. The Colonial Empire.

BWP4 — Citizen of the World

Britain and the USA. Britain and Russia.
Britain and China. The United Nations.

BWP5 — Review

Government of the People. Government by the People.
Government for the People. Commonwealth and Empire.

SECOND SEQUENCE — BOOKLETS 6-12 — REPORT ON THE NATION

BWP6 — The Setting

Who we are. Where we are.
What we are. Whither?

BWP7 — The Responsible Citizen

Spheres of Action. Freedom for Action.
Information for action. Action for Freedom.

BWP8 — The Citizen at Work

Working for a living. What we produce.
What we do with the products. The part of Government.

BWP9 The Home of the Citizen

The Home. The Town. The Country.
Past, Present and Future.

BWP10 The Health of the Citizen

Whose job is health? The mother and child.
The health of the worker. The war - and after.

BWP11 Education and the Citizen

What is the good of education? How is education provided?
What do we learn? How are we taught?

BWP12 What More is Needed of a Citizen

Are Politics and Economics enough? Is Justice enough?
Better than rules. Does it matter what we believe?

RADIO SCHOOLS AND SCHOOLS OF TECHNICAL TRAINING

SHOWING LOCATION FUNCTIONS AND TYPE OF ENTRY

1958

No	Location	Type of Entry	Trade Training
RADIO SCHOOLS			
1	Locking	Air Apprentices Adults	All Radio Engineering Ground Radio Engineering
2	Yatesbury	Adults	Air Radio Engineering
3	Compton Bassett	Adults	Ground Signalling
SCHOOLS OF TECHNICAL TRAINING			
1	Halton	Air Apprentices	Aircraft Engineering Armament Engineering General Engineering
2	Cosford	Boy Entrants	Air Radio Engineering Ground Signalling Photography
3	Hereford	Administrative Apprentices Boy Entrants Adults	Accountancy and Secretarial Supply, Accountancy and Secretarial Catering Accountancy and Secretarial Catering
4	St Athan	Boy Entrants	Aircraft Engineering Armament Engineering General Engineering Mechanical Transport
7	Kirton in Lindsey	Adults	Supply
8	Weeton	Adults	Mechanical Transport
9	Newton	Adults	Missile Engineering
10	Kirkham	Adults	Armament Engineering
12	Melksham	Adults	Electric and Instrument Engineering

Numbers not allocated had been given to wartime stations. After they were closed no attempt was made to renumber the remainder.

Source: HQ TTC (Training 4(b))

Date of Examination	Number		Number of Passes		% age of Candidates passing	% age of Subjects passed	A Level	
	Candidates	Subjects Offered	Candidates	Subjects			Subjects	Passes
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(J)
Summer 1953	o24	1237	421	o94	68	56		
Winter 1953	1099	1961	681	1023	62	52.3		
Summer 1954	1981	3583	1339	1997	67.6	55.7		
Winter 1954	2472	4243	1o50	2414	56.5	56.9		
Summer 1955	3513	o178	2160	3153	o1.5	51		
Winter 1955	3255	5407	2021	2798	52.5	52.2		
Summer 1956	4113	6914	2707	3825	66	55	281	166
Winter 1956	3372	5446	2315	3287	68.7	53.3		
Summer 1957	4862	8031	3479	5003	71.5	62.3	350	190
Winter 1957	3476	5507	2351	3227	58.6	o7.6		
Summer 1958	4483	7318	3080	4406	60.2	68.7	375	217
Winter 1958	3384	5165	2204	2989	65.1	57.9		
Summer 1959	4331	6956	2875	4051	o6.4	58.3	351	180
Winter 1959	3326	4944	2006	262o	60.3	53.1		
Summer 1960	4368	o538	2852	3726	65.3	57.9	343	147
Winter 1960	3211	4404	1884	2353	54.7	52.7		
Summer 1961	4235	6171	2770	3614	65.4	58.5	377	144

NOTE: RAF Candidates were first entered for A level examination in Summer 1956. Statistical extracts do not differentiate between types of candidate. Columns (b) - (J) therefore include A level candidates and subjects.

Source: Relevant AMOs

UNIVERSITY SERVICES EDUCATION COMMITTEES

COMMANDS UNDERTAKING LIAISON ADMINISTRATION

Command	Universities
Bomber	Cambridge Sheffield
Fighter	Durham Hull
Coastal	Exeter Scottish Universities
Transport	Bristol Southampton
Flying Training	Leeds Nottingham Oxford
Technical Training	Birmingham Cardiff
Maintenance	Liverpool
Signals	Leicester

RAF EDUCATION TEST PART II

SUBJECT 10 - GEOGRAPHY

AIMS. The aims of the course are:

(a) to provide a knowledge of map reading and interpretation.

(b) to give the airman an understanding of Man in his environment and his utilisation of natural resources, with special regard to the British Isles.

(c) to provide a grounding in Geography so that a student may expect to reach the standard of Ordinary level GCE Geography after about a further twelve months part-time study.

SECTION A - MAP READING. There will be a compulsory question on the interpretation of Ordnance Survey Maps. Map Extracts on a scale 1" to the mile will be set. Questions may include grid reference, measurement of distances, description of county, reasons for location of settlements, interpretation of conventional signs, influence of relief on routes, orientation, magnetic, true and grid North. The 7th edition of the 1" Ordnance Survey will be used.

SECTION B - MAN IN HIS ENVIRONMENT. Four questions will be set of which not more than two are to be attempted. This section will include the following topics.

(a) The major types of climate, their characteristics and distribution.

(b) The distribution of natural vegetation.

(c) Human occupations and activities in relation to (i) and (ii) and to the major resources in cultivated vegetation, animals, power and minerals.

(d) The distribution of population and the growth of great cities.

(e) The chief communications by land, sea and air.

(f) Latitudes, longitude and time.

A World map question which may be based on Mercator's projection or on the Polar Gnomonic projection may be set in this section.

SECTION C - REGIONAL GEOGRAPHY OF THE BRITISH ISLES. Four questions will be set of which not more than two questions are to be attempted. Questions will be set on the British Isles, designed to test candidate's knowledge of the size, location, physical, human and economic geography of various regions. Special attention will be paid to the candidate' use of sketch maps and queations may include the filling in of detail on outline maps.

Source: AP 3328 Examinations, Regulations and Administrative Arrangements.

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PUBLISHED SOURCES

General Works on Education

Education in Britain since 1908	S. J. Curtis	Dakers
The Schools of England	J. D. Wilson	Sidgewick & Jackson
Education in Transition	H. C. Dent	Kegan Paul
The Education Act 1944	H. C. Dent	University of London Press
A History of Adult Education in Great Britain	T. Kelly	Liverpool University Press

Services Education

British Services Education	C. Lloyd	Longmans
Education in the Forces 1939-46	H. S. Wilson	Evans Bros
Adult Education - The Record of the British Army	T. H. Hawkins & L. J. Brimble	McMillan

History of the Royal Air Force

A History of the Air Ministry	C. G. Grey	Allen & Unwin
Per Ardua	H. S. Saunders	Oxford University Press
The Royal Air Force 1939-45	Richards & Saunders	HMSO
The Central Blue	J. Slessor	Cassell
Trenchard - Man of Vision	R. Boyle	Collins
The Mint	T. E. Lawrence	Cope
Jet	F. Whittle	Muther

UNPUBLISHED SOURCES

The contribution of British Universities to Education in the Armed Forces	F. S. Owen	Unpublished Ph. D. Thesis, University of Bristol

HMSO AND AIR MINISTRY OFFICIAL PUBLICATIONS

King's Regulations and Air Council Instructions	1923-1948
Queen's Regulations and Air Council Instructions	1953
Air Force Lists	1918-1960
Air Ministry Weekly Orders	1918-1922
Air Ministry Orders	1922-1960

AP 3379 Education in the Royal Air Force
AP 3282 The Trade Structure of the Royal Air Force
AP 3328 Examination, Regulation and Administrative Procedure
D. Ed. S Memoranda 1-9

British Way and Purpose (HMSO 1946)

Cmd 467 The Permanent Organisation of the Royal Air Force ("The Trenchard Memorandum") (HMSO 1919)

Final Report of the Adult Education Committee (Ministry of Reconstruction) (HMSO 1919)

AM Pamphlet AM 848870/28. The Educational Syllabus of the School of Technical Training for Aircraft Apprentices. (1928)

Ministry of Education Circular 323/57 (May 1957)

RECORDS AND REPORTS

RAF Education Bulletins 1923-1939

Post-War Annual Reports on the General Education Scheme:

a. of the Royal Air Force
b. of Technical Training Command
c. of Maintenance Command

Minutes of the University of Cambridge Local Examinations Syndicate 1952

MISCELLANEOUS PUBLISHED COURSES

ABCA Pamphlets	1942-1946
"Target"	1944-1946
The Times Educational Supplement	October-November 1961

ORICINAL FILES, REGISTERS, DOCUMENTS AND LETTERS

Miscellaneous original correspondence has been examined at the following locations:

Ministry of Defence (Air) Archives, Hayes
Ministry of Defence (Air) Directorate of Educational Services, Adastral House
Air Historical Branch, Whitehall
Headquarters Technical Training Command, RAF Brampton
RAF School of Education RAF Upwood

RAF Halton
RAF Locking
RAF Hereford
RAF Cosford
RAF St Athan

Ministry of Defence (Army) Stanmore
Institute of Army Education, Eltham
Army School of Education, Beaconsfield

Civil Service Commission
Central Advisory Council for Education in H.M. Forces
National Council of YMCAs

In addition I was allowed access to Air Ministry closed files and other documents at MOD (Air) Archives, and the Air Historical Branch (see note on page 4).