EDUCATION FOR PHOTOGRAPHY

HISTORICAL ASPECTS AND ITS DEVELOPMENT IN ENGLAND

1839 - 2000

by

Ian R Smith PhD Cert Ed FRPS ABIPP IIP Final (Med)

Last Revised 17 August 2016

Dedication
This review is dedicated to Mr Robert Charles Cowdrey of Littleton Panell, Wiltshire who encouraged my interest in photography.

First edition published in 1995
Second edition in 1998
Revised in 2010 and 2016

Published by Photolink International™
Audley House
19 The Croft, Harvest Lane,
Bishopstone
Salisbury
Wiltshire SP5 4DF
England

Acknowledgements

The author is grateful to all those who willingly rummaged through dusty files to find material on which this account is based, and in particular:

Professor Margaret Harker
Mr Frank Hawkins OBE, HMI
Mr Derek Stirling, Salisbury College of Art
Mr Frank Blackwell, Berkshire College
Mr Charles Fraser, Ealing School of Photography
Mrs Benda Weeden, University Archivist, University of Westminster

EDUCATION FOR PHOTOGRAPHY - HISTORICAL ASPECTS AND ITS DEVELOPMENT IN ENGLAND

INTRODUCTION

It was not long after the earliest experiments in fixing a photographic image proved successful that there was sufficient motivation to explain the process to others.

Early workers were motivated, firstly perhaps by the desire to ensure an acceptance and appreciation of their achievement and later, in an entrepreneurial style typical of the age, out of a desire to make money from it.

Like so many other aspects of the development of photography, an exact chronological review of educational proposals and schemes is almost impossible, as so many events occurred simultaneously. This account therefore aims to identify and describe a group of major influences upon its development.

These are classified as:

1 Early entrepreneurs

2 Individual institutions and in particular The Regent Street Polytechnic

3 The City and Guilds of London Institute

4 The British Institute of Professional Photography

5 The armed forces and war time activity

6 Public education and government policy

7 Other organisations

To further assist in gaining a perspective upon developments, a simple chronological list is used to illustrate some key dates.

Note: Many individuals in many organisations have made huge and valued contributions to the education of photographers. Colleges and universities are rightly proud of their programmes and staff, of their individual practice and contribution to debate; rightly so. This paper does not attempt to identify all such practitioners but acknowledges their expertise and intellect which has enriched the lives of so many young people.

SOME KEY DATES IN THE DEVELOPMENT OF PHOTOGRAPHIC EDUCATION.

1839	The Daguerreotype process was announced in Paris, France (Aug.).
	Mr. J.T.Cooper gave lectures at Sir George Caley's Institute in Regent Street (Nov.).
1878	The City and Guilds of London Institute founded. Photography was one of the first subjects examined.
1880	The Regent Street Polytechnic opened by Quintin Hogg. Syllabus for City and Guilds Examinations were published.
1881	First City and Guilds examinations in photography were held.
1882	Classes in photography for those employed in the trade were given by Mr. E. Howard Farmer at the Regent Street Polytechnic.
1889	Technical Instruction Act. Local authority rate support for technical education.
1897	Annual report of the London County Council Technical Education Board acknowledges 'highly successful classes at the Polytechnic' and also puts the number of institutions teaching photography at eight.
1901	Formation of the Professional Photographers' Association (P.P.A.)
1905	P.P.A. prepare a scheme for granting certificates of competency to operators and assistants.
1909	A full time course for photographers started at the Regent Street Polytechnic.
1914	First use of photography for military intelligence by the Royal Flying Corps.
1915	Specialist training school for servicemen opened at Farnborough.
1920s	Classes held in photography for the printing industry, at the School of Photo-engraving, Bolt Court, London (near Fleet Street). The course later became a photography programme in its own right and the Institution became The London College of Printing at Elephant and Castle.
1926	HMI's inspection critical of one year courses.

1930	Pattern of courses at the Regent Street Polytechnic included a full-time one year course with an optional second year and specialist evening courses. Early courses started at provincial colleges such as the School of Printing at the Manchester Technical College.
1931	A committee to advise on examinations in photography was set up by City and Guilds. The Professional Photographers Association (P.P.A) was represented.
1933	A new City and Guilds syllabus was published.
1935/36	The Guildford School of Art offer full time courses in photography (The first of the art schools to include photography in the curriculum.)
1936	P.P.A. introduce new 'Proficiency' certificates designed at the Regent Street Polytechnic. Local P.P.A. branch help set up classes in Nottingham.
1937	The independent Reimann School which opened in Regent Street offered courses in photography based on the Bauhaus principles. The founder being a refugee from the Nazis.
1939	Second military school of photography opened at Blackpool.
1940	Special two year full time cinematography course for the armed forces started at the Regent Street Polytechnic. (These continued throughout World War Two)
1942	Institute of British Photographers (I.B.P.) (formerly P.P.A.) introduce a 'Preliminary' examination as part of a new programme.
1943	I.B.P. introduce an 'Intermediate' examination.
1944	Report by the I.B.P. on the recruitment of ex-servicemen.
1947	I.B.P. introduce a correspondence course (discontinued in mid 50s)
1948	Ministry of Labour suggest an apprenticeship scheme. Rejected by I.B.P. as retrograde step.
1949	I.B.P. introduce a 'Final' examination.
1950s	Beginning of many part and full time courses in provincial colleges.

1959	New three year Diploma course at the Regent Street Polytechnic, geared to the profession.
1960	Coldstream report from the National Advisory Council on Art Education (advanced level study)
1962	Second Coldstream report dealing with vocational courses.
1964	Industrial Training Acts.
1967	First degree course in Photographic Science and Technology approved at the Regent Street Polytechnic. The validating authority was the Council for Academic Awards (C.N.A.A.)
1967	Institute of Incorporated Photographers (I.I.P.) (formerly I.B.P.) withdraw the 'Preliminary' examination and introduce the 'Professional Qualifying Examination' (P.Q.E.) and Vocational Examination. (Thereby beginning the process of divesting the Institute of the responsibility for conducting its' own examinations in favour of the 'approved' schools or colleges).
1970	John Hedgecoe (Head of Department of Photography at the Royal College of Art) appointed to Professor.
1971	First Degree course in Photographic Arts (C.N.A.A.) approved at the Polytechnic of Central London.
1972	Beginning of a period during which C.N.A.A. approval given for degree courses at a number of institutions, including Harrow College of Higher Education and Napier College (Edinburgh). Approval was also given to a part time course at the P.C.L.
1973	First Professor of Photography appointed at the Polytechnic of Central London. IIP 'Final' examination ended.
1973/5	Courses in photography start to be validated under the new Design and Art Board of the Technicians Education Council, (D.A.T.E.C.)
1980	Business and Technicians Education Council (B.T.E.C.) take over all D.A.T.E.C. and T.E.C. activities. B.T.E.C. Higher National Diploma and National Diploma courses became available in photography at many centres throughout England.

1986	National Council for Vocational Qualifications (N.C.V.Q.) introduced to bring comparability to vocational qualifications.
1990	Education Act resulting in the acquisition of university status by many higher education institutions. A growth in the number of B.A. degree courses consequently occurred, many in partnerships with local F.E colleges.
1992	Salisbury College offers a B.A (post HND) top-up in partnership with The Southampton Institute and Nottingham Trent University. This pattern was repeated in many provincial colleges.
1996	BTEC, now a self funding business, merged with the London Examination Board and re-named itself as The Foundation for Educational Excellence. This was abbreviated as EDEXCEL but the name BTEC was retained to indicate the area of business covering their original range of qualifications.
1997	The Dearing report is published. A report by a committee under the chairmanship of Sir Ron Dearing recommends the development of Higher Education provision, up to HND level within Further Education Institutions, thus encouraging an existing trend. This may impact on the number of HNDs available around the country, existing franchising arrangements and the development of new links between F.E and H.E. institutions.
2001	Two year Foundation Degrees were introduced.
2010	The BIPP Professional Qualifying Examination (PQE) was replaced by a Professional Qualifying Programme (PQP) approval scheme, limited (originally) to a maximum of twelve institutions offering education for photography with a vocational ethos. This was later amended to a more general Approval Scheme.

PHOTOGRAPHIC EDUCATION - THE EARLY DAYS

Experiments leading to the earliest reliable photographic processes were revealed around the mid-1830s and it is an indication of the rapidity of early educational developments that the first recorded classes in photography, at The Royal Polytechnic Institution in London (Sir George Caley's Institute), were advertised just three months after the announcement of the Daguerreotype, in Paris, on the 19th August 1839.

These classes, dedicated to the new process developed by Jaques Mande Daguerre were given by the resident chemist at the Polytechnic, Mr J.T Cooper.

By 1842 these classes were under the control of a Mr. Claude and a Mr. Beard; the later having his studios at the Institute.

The other process announced to the public at this time was the negative positive process developed by William Henry Fox Talbot at Lacock in Wiltshire and like the Daguerreotype, quickly found itself in commercial use.

The manager of the Polytechnic, Mr Nurse, was granted a licence in 1841 by Fox Talbot to use his patented Calotype process for experiment and research.

Nicholas Henneman, manager of Fox Talbot's studio at Reading, firstly gave ad hoc lessons to anyone buying sensitised paper from his establishment. Later, around 1853 when he had parted company from Talbot, he conducted classes at the Royal Panoptician of Science and Art in Leicester Square. Instruction was given apparently in 'every branch of photography, for taking landscapes and portraits', and covered the technicalities of manipulating the process.

Such classes were not cheap, with each lesson costing an amount near to the equivalent of a week's wage for an average worker. Separate lessons were given for men and women and were clearly aimed at the more affluent members of London society.

By 1862 photography had become remarkably big business with a reported 105 million photographs being produced. With the techniques involved still being a long way from the capabilities of the hobbyist, we must assume that this must have provided an occupation for a considerable number of people. Indeed, by 1861 there were estimated to be 200 portrait studios in London alone. Studios were also large single employers with individual establishments supporting a staff of 50 or more.

If one considers the number people engaged in the business against the limited amount of tuition available it would suggest that the majority of those employed in photography at that time would have received no formal education in the subject beyond the training offered by individual employers.

There were two events that were to bring change to this situation and influence the direction of the organised training available. One was the opening of the Regent Street Polytechnic by Quintin Hogg, and the other was the establishment of the City and Guilds of London Institute.

INDIVIDUAL INSTITUTIONS AND THE REGENT STREET POLYTECHNIC.

The degree to which individual institutions have been able, not only to control the design of their own curriculum, but to influence the development of photographic education in general has varied considerably. Undoubtedly, several of the early centres in the British Isles were able to make representation to examining bodies and professional organisations, but there can be few who can claim to have been so much at the centre of major events as the oldest and most famous school of all, The School of Photography at the Regent Street Polytechnic. It is for this reason and because of the availability of records that the Polytechnic has been chosen to illustrate the involvement of a single institution in the evolution of photographic education.

The Royal Polytechnic Institution

In 1880, The Royal Polytechnic Institution, home of those first lectures on the early processes, closed because of financial difficulties.

The buildings were bought by the educational philanthropist, Quintin Hogg who re-opened them as the Regent Street Polytechnic. In its prospectus for 1882 it advertised a technical class in photography given by E. Howard Farmer, whose former private school (held in the adjoining premises of Messrs. Claydon and Bell, manufacturers of stained glass windows) had been incorporated into the Polytechnic.

Farmer who will be long remembered, not least because of his prescription for 'Farmers Reducer' (a silver image reducing agent), was later to become the first head of the School of Photography where he remained until 1919. The first classes were given on Saturday evenings between 7.00pm and 8.30pm at a cost of six shillings for a series of thirty lectures. Clearly, considerably better value than those of Henneman some thirty years earlier!

By 1895, 472 students were enrolled, with photography being the largest of all the workshop classes at the Polytechnic.

A statement of Polytechnic policy in 1882 gives an indication of the relationship of such education to the trade itself. Classes were described as .. 'designed to supplement knowledge acquired during working hours... '.

By this time apprenticeship schemes had become the principal means of education, or more properly training, in photography, especially by the portrait studios. It is obvious therefore that these classes at the Polytechnic were aimed solely at those already engaged in the trade, rather like the day-release classes in later years, and did nothing to prepare those wishing to enter the trade from outside.

By 1896 the situation had improved somewhat and in the annual report of the London County Council Technical Education Board the classes were not only described as 'large and successful' but were no longer restricted to those already in work. Interestingly, also mentioned in the report were other institutions now teaching photography (including process work for reproduction) which had risen to seven.

By the 1930s there were courses throughout the country but the Polytechnic still led the way, and its history serves as a clear indicator of general trends.

Even though photography was now approaching its centenary, the process of producing satisfactory images was still relatively complex and to many of its practitioners, to produce a technically acceptable picture was all. Perhaps this is one of the reasons why the emphasis within education was still on the teaching of the craft of photography and the acquisition of technical skills.

At this time, although the main course at the Polytechnic was still of one year duration this could be extended with a specialist second year. In addition, there was a range of evening classes. Some of the courses led to a Certificate of the Polytechnic and some prepared students for examinations of the City and Guilds of London Institute.

During the mid-1940s the Institute of British Photographers (IBP) introduced their examination programmes and the full time courses were revised accordingly. The Head of the School of Photography at the Polytechnic at that time was L.J. Hibbert who, with his deputy S.J. Coleman, was directly involved in designing the Institute's new programmes.

One of the criticisms levelled against the existing City and Guilds examinations was their great emphasis on photographic theory and a feature of the new I.B.P. syllabus was the development of practical work and the beginning of a creative element, however limited.

At the end of the Second World War there was a great expansion of the evening class programme following an enormous increase in demand, with, at one time in the early 1950s, up to 600 evening students enrolled for the session.

Classes were conducted in a large range of subjects, from preparation of students for Preliminary, Intermediate, and when introduced, Final levels of the I.B.P. exams, to those of the City and Guilds. In addition, specialist courses were available in aerographic work, retouching and finishing, printing, commercial/advertising photography, fashion, and basic graphic design for photographers.

Together with other similar establishments, the early 1960s saw further developments for the 'Poly' with the extension of the course to a three year Polytechnic Diploma, geared to the profession and recognised by the I.B.P. which ran until 1970.

The first degree in photographic subjects - not only in this country, but reputedly in Europe - in the form of a BSc in Photographic Science and Technology was approved by the C.N.A.A. in 1967.

The three year Polytechnic Diploma soon followed and was successfully submitted to the Council for National Academic Awards (C.N.A.A.) as an honours degree in 1971.

It was an indication of the level to which photographic education at this Institute had now risen - the Institute that at one time claimed it had trained all the heads of photographic departments in the country - that in 1973 the Head of Photography, Margaret Harker, was made the first ever Professor of Photography at the Polytechnic of Central London.

In concluding this review of the Polytechnic's role as an influence in the development of photographic education it is interesting to note the difficulties that had to be overcome from within, to attain a position of status and thereby security for the subject.

The School of Photography from its inception up to the major structural changes which took place between 1968 and 1972 was one of a number of schools within the Polytechnic.

It had equal status with Engineering subjects, the Sciences, Architecture, Environmental subjects, Law and Languages. This was in fact quite unusual as in many other comparable educational institutions it was but one subject in an art, science or printing department or school. This being the case, the fight for survival in the 60s relied on convincing the authorities that there was a future for photography within the new degree course framework.

Polytechnic policy (still the Regent Street Polytechnic) in 1959 changed radically towards the establishment of degree work and the discarding of craft courses. The Art School was transferred to Chelsea School of Art, likewise the Domestic Science School. Motor body building was discontinued. It was considered a major triumph that Photography was retained.

This was possible because by mustering the support of the photographic industry and forming an advisory body, the authorities were persuaded that a successful submission to the C.N.A.A. (Actually the former National Council for Technological Awards) was possible.

A submission was prepared and in 1967 the degree course in Photographic Science and Technology was approved. One of the first courses to be recognised by the C.N.A.A.

THE CITY AND GUILDS OF LONDON INSTITUTE

Set against a background of steadily improving technical education, representatives of the London Livery Companies met in 1876 to adopt a resolution to initiate a series of examinations in some 200 trades.

It is not known why photography should have been chosen at this early stage, but press comments during the 1860s expressing public concern over the quality of commercial photography, may have motivated the Companies to include photography as one of the first seven trades to be examined through the new City and Guilds of London Institute (CGLI).

Photography was scheme number 17 of the CGLI alongside tanning leather (16) and electro metallurgy (18).

The examination structure

The initial syllabus was divided into eight sections: four of which dealt with the chemistry of various processes; one with optics and cameras; one with apparatus; and two with special applications of photography such as engraving, microscopy and lithography. By 1881, three levels of examination were in operation, elementary, advanced, and honours.

Perhaps it was because the achievement of a successful image was paramount or perhaps because almost exclusively the earliest pioneers were men of science, that photographic education found itself so firmly biased in favour of science and technique. It is interesting to

note in this context, the style and content of those early City and Guilds examinations, which ran from 1881 to 1892, only as a theoretical test.

The first Chief Examiner in photography was Captain Abney of the Royal Engineers, twice president of the Royal Photographic Society and holder of the progress medal in 1878 and again in 1890. Abney was the first to show the relationship of light (exposure) to density and was regarded as a leading technologist of his day and who was a major influence in keeping education firmly in the technological camp.

An additional influence must have been that teachers of the syllabus had to be registered and by 1882 possess a Full Technological Certificate at advanced level which included mathematics and a science subject.

The City and Guilds schemes continued with periodic revisions, practical exams were introduced in 1892, as the only public examinations in photography until 1942, when the Institute of British Photographers introduced its own scheme.

By the 1970s a two tier examination structure had been established with a numerical classification. The C&G 344 Certificate in general photography was complemented by the 345 Photographic Technician's Certificate with a higher technical content and less questions relating to studio work. Both the 344 and the 345 had an Advanced level and both were later re-numbered as the 744/744 Advanced and 745/745 Advanced. Other examinations or supplementary papers were offered covering such subjects as the production of audio visual aids and the maintenance of equipment.

For nearly a century the City and Guilds examination system provided a stable basis for the majority of college courses both full and part time. Not until the birth of the Technicians Education Council and its later manifestation as DATEC and BTEC, did the City and Guilds decline in its popularity for colleges and students.

With the general moves in education away from externally prepared syllabuses and remote examining bodies in favour of validated college based courses, the traditional City and Guilds examinations gradually faded away during the late 1980s.

The Institute is still very much a respected body in photographic education however, and has adapted a number of its schemes for non-vocational study and part time courses for amateurs and those wishing to build up qualifications via a modular framework. By 1998 over 395 centres in the British Isles were listed as offering the CGLI 9231 modular scheme.

THE BRITISH INSTITUTE OF PROFESSIONAL PHOTOGRAPHY

There has really only been one professional or trade organisation that has played a significant part in the development of photographic education; that being the British Institute of Professional Photography *.

* Formerly the Professional Photographers Association (P.P.A.) 1901 - 1938, the Institute of British Photographers (I.B.P.) 1938 - 1964, the Institute of Incorporated Photographers (I.I.P.) 1964 - 1984 and presently the British Institute of Professional Photography (B.I.P.P.).

We have seen how the early City and Guilds examinations remained very much concerned with the technical side of photography, despite the fact that from the late 1800s there was a steady growth in commercial work requiring an increasing degree of creative input.

By 1915, the course at the Regent Street Polytechnic had become aimed largely at assistants for professional studios. The prospectus for 1914/15 reflects the constant changes needed to keep up with current trends with classes introduced for the photography of small articles for catalogue illustration, machinery and motor cars!

By 1920, advertising photography using models had been introduced to the course and there were clear signs of the Polytechnic's determination to train people to the requirements of the trade.

It was perhaps not surprising that by 1926 a drift away from the City and Guilds heavily scientific stance appears to have taken hold. An H.M.I.'s inspection of 1926 admitted that the ". . scientific study of photography was not largely taken up " and by 1931 the City and Guilds themselves set up a 'representative committee to advise on our photographic examinations'.

It was through this Committee that the Professional Photographers Association made its first entrance into the education scene. In fact, the Association's members who were asked to serve on this Committee apparently claimed a good deal of the credit for the new City and Guilds syllabus which emanated from it.

The P.P.A. confined its influence in education to an involvement with the City and Guilds throughout the depressed economy of the 1930s, with the exception of a certification scheme decided upon with the Regent Street Polytechnic in 1936.

Interestingly, photography survived the general depression remarkably well, by finding new markets and new selling techniques. This was achieved against a background of a shortage of suitable training courses with many poorly or untrained people competing for work and the trade body seeking at the same time to raise the standards of photography.

The I.B.P. eventually launched its own examination scheme in 1942 and it is interesting to speculate on the reasons for its introduction. Inadequate provision of suitable courses, the desire for increased professionalism, and trade protection would certainly have been likely.

As early as 1934, a resolution had been put to the Council of the P.P.A. regarding the need for some mark of quality as public evidence of good work. Undoubtedly, the idea was to persuade the public to deal only with photographers accredited with this mark. A special committee was set up to pursue this idea and even into the possibility of setting up its own school. A concept never really viable due to limited funds.

A further determining factor in changing the Association's policy was the change in name from the P.P.A. to the Institute of British Photographers (I.B.P.). This reflected the changing climate towards an enhanced professional image, as did the introduction of the distinctions system of Associate and Fellowship awards. The development of an educational system of its own was a natural next step.

Although jointly represented on earlier committees, there was a growing suspicion at this time between the I.B.P. and the City and Guilds. The I.B.P. had been invited to contribute to help the City and Guilds attract a "better type of student" to its examinations. It is difficult to be

sure of the causes of the problems associated with this move but undoubtedly the City and Guilds became a scapegoat for the inadequacies of several of the schools of the time.

In any event, the move continued towards a separate and competitive stance between the two organisations, the real reason for which could well have been the simple desire for professional status amongst members of the I.B.P.

By 1938 it was the President's policy to establish national examinations as a step towards qualifying or entrance procedures. After all, it was perhaps not unreasonable that any organisation trying to establish itself as the major professional body in its field, felt it could not base its entrance requirements on another body's examinations.

The first Preliminary level examination took place in 1942, the Intermediate in 1943 and eventually the Final in 1949. The examinations were held annually and with steadily increasing numbers were the source of a great sense of achievement by the Institute. Many colleges throughout the country aligned their syllabuses to these examinations and students took them either instead of, or in addition to the existing City and Guilds Certificates.

Many employers were happy to accept either qualification and in fact direct equivalents were specified in such publications as 'The Whitley Council Guidelines for Medical Photographers in the Health Service'. Although there was a common perception of duplication, there were in fact major differences in emphasis. The I.B.P. syllabus set out to encourage a greater amount of practical work and demanded higher standards of submitted photographs at the comparable levels of examination.

It is also important to appreciate the difference in the aims of the two schemes. The City and Guilds examinations were geared towards part time study and were intended primarily for craftsmen and technicians (although not always specified in those terms, this applied to all their subject areas) and assumed that the courses would be taken as a supplement to 'on the job' training. By contrast the I.B.P. examinations were primarily intended to examine students undertaking educational courses in professional photography.

For these reasons the general educational requirements for acceptance by the examining boards were also different. The City and Guilds did not specify a particular level of previous general education whereas the Institute asked for five GCE 'O' levels in the early years and latterly to include one 'A' level.

One rather interesting effect of the rapid adoption of the Institute's examinations resulted from concerns over the inability of the Institute to provide sufficient examiners and of the London Polytechnic to cope as the sole examination centre. In addition, there seems to have been anxiety over the ease and rapidity with which colleges were setting up courses preparing students for them.

"...at the present time, many courses offered in Photography, both full time and part time, fall far short of the standards and requirements considered by the Institute to be necessary to equip students with the knowledge, ability and confidence to make a successful career in professional photography..."

Eventually a number of colleges around the country were designated as examination centres, but in order to address the problem of proliferation of courses, a guide book was published in

January 1962 detailing minimum facilities necessary for a course to receive full recognition by the Institute.

This listed basic equipment needs, such as the number of large format cameras or enlargers which a college must possess before a course could be run. Unfortunately for the Institute this - at least as a mechanism for limiting the number of courses - backfired, as armed with this document, colleges were able to exert pressure on their local authorities to provide facilities hitherto denied. The result was a consolidation of the growth in the number of such courses!

Despite resulting internal misgivings, such was the success of the examination programme that the Royal Institute of British Architects took it as a model. Indeed, the whole Institute was frequently heralded as a suitable professional body to copy.

Despite, or perhaps because of this success with its educational policy, the relationship between the Institute and the City and Guilds continued somewhat uneasily. In 1945, the Ministry of Education was able to enforce a measure of collaboration between the two stating that it was "...anxious that different training should be necessary for the two examination schemes in so far as they cover common ground...". Initial suggestions were that each body should accept the other's examination scheme. In the event a joint examination to intermediate level was agreed, but a separate practical syllabus remained.

During the following years the Institute had its admissions and qualifications policy continually under review, with its desire to raise standards and to protect the status of the profession paramount. Much discussion centred around possible degree courses and the I.I.P. believed that they would never be recognised as a fully professional body until the greater part of its corporate membership was admitted via examination. It was undoubtedly this belief which led to the complete revision of their educational system in the 1960s.

What followed was to lead to the decline of the Institute as a major provider of photographic qualifications and in the eyes of many, its position as a respected voice in educational circles for more than a decade.

Unfortunately, largely due to the continuing growth in the number of courses offered by educational establishments and the demand for them, the Institute found itself unable to cope both in terms of finance and man-power.

Taking as an example a 'recognised course' scheme run by the Institute of Electrical Engineers, the I.I.P. began to devolve responsibility for offering an examination system in photography to appropriate colleges whose courses had been 'recognised' by the Institute and which were thought to be capable of conducting their own examinations.

It was then possible to dismantle the Preliminary, Intermediate and Final Examinations in favour of a quite different scheme with a single examination after three years of study, on a course with 'A' level entry at 18 years. This was seen as a significant advancement towards a convincing degree look-alike, from the old Final Examination it was to replace.

In addition it followed the growing trend in education towards the transfer of course design and assessment on to colleges.

Regretfully the new proposals were effectively diluted and driven off course by a number of subsequent events.

One factor was the concern of the Ministry of Education and its Inspectorate that this would leave a vacuum for the 16-18 age group. Others were the increasing involvement of current educational influences, such as the proposals for a new National Diploma in Design and, perhaps more importantly at the upper level, the thoughts of true degree courses validated by the Council for National Academic Awards (C.N.A.A.).

Eventually, to overcome objections a two-tier scheme was introduced. A Professional Qualifying Examination (P.Q.E) - a devolved three year scheme - and a Vocational Examination. The P.Q.E. left curriculum design very much to the colleges, whilst details of the Vocational Examination were prescribed largely by the Institute.

There seems little doubt that the courses housed in the expanding polytechnics and institutions with substantially high level work were seen by the Institute as the natural home for the new P.Q.E. Indeed the marriage between the two began well enough, but by this time, with significant control over curriculum and course direction, such institutes had their sights set on higher things. Namely, validation by the C.N.A.A. for degree courses.

Now the tide had turned, and the Institute's highest level qualification was no longer so attractive to this select group. Fortunately for the Institute, some of the most prestigious colleges in the further education sector took up the PQE course and it was awarded, albeit in a variously modified form, as an endorsement of the College Diplomas including Salisbury, Blackpool, Bournemouth, Plymouth, Cheltenham and Kent .

The Vocational Examination passed into the history books, replaced - where it had ever been - by the new scheme of the Business and Technicians Education Council (B.T.E.C.).

So, by the mid-1970s, the Institute’s force as an examining body was much reduced, and it concentrated instead on its distinctions system as either independent of the national education provision (members are able to apply directly for Associateship without any formal qualifications) or as a follow-on to the attainment of specific educational qualifications in photography.

In consequence, the Institute might have withdrawn from the mainstream of educational matters altogether, were it not for the determined efforts of dedicated members of the education committee.

After maintaining a low profile for more than a decade the education and training committee was resuscitated in the 1980s due in no small part to the skills of two successive chairmen, Eric Strange and Derek Stirling, bringing with them a wealth of experience from both business and education.

The Professional Qualifying Examination gained stance during the 1990s and by 1998 a number of institutions who were offering some of the newer courses at degree level sought approval to offer the PQE as 'added value' to successful graduates.

During the mid 2000s a number of radical changes took place within the BIPP to enable it to ‘adapt to the ever-changing photographic industry quickly and effectively’.

This streamlined the organization and did away with various specialist committees, including Education and Training which had provided the key link with colleges and universities. Members had traditionally been drawn from educational institutions and the last chairman was David Matthews from University College Falmouth.

During the period of change communications with the educational world was reported as poor and several cohorts of students and a good many new lecturers were unsure about the role or relevance of the Institute and its remaining award for graduating students (PQE).

An ongoing debate concerned the comparison between the Institute's distinctions – Licentiate and Associate – given by the education route by way of the award of the PQE and those given as a result of practicing professional photographers submitting a panel of finished photographs to a professional standard.

The later group perceiving that the education route did not test the capacity of an individual to answer professional briefs in an adequate manner and may confuse customers.

Of course this theme, the tension between the product of full time education verses on the job training, can be traced from the earliest days!

In 2008, the new directorship decided that the PQE scheme was no longer sustainable within a heavily regulated and audited Higher Education regime and launched a replacement. Partly this was due to cost of upgrading the validation of courses and standardizing delivery.

By this time there was considerable variance in the way colleges and universities were delivering the PQE, some as a discernable stand-alone programme or separate evaluation of final portfolios and some as a 'rubber stamp' on their own degree awards.

Called the Professional Qualifying Programme and beginning in 2010, this seeks to approve existing courses at colleges and universities to offer a Distinctions event on their premises at the end of the course. Results from students are judged by the course leader and a visiting examiner and may result in the award of Licentiate or Associate to graduates who join the Institute.

It is believed this will reassure professional members who in the past believed themselves disadvantaged by new entrants to the profession gaining distinctions via the PQE.

Although it is unlikely that the Institute will ever again exert such control over the education scene as it once did, with the new PQP scheme, a comprehensive range of short courses of its own and involvement with various other educational bodies, the influence of the B.I.P.P. appears set to continue.

THE INFLUENCE OF THE ARMED FORCES AND WAR-TIME ACTIVITY

In many ways the development of education and training for photographers within the armed forces has taken place in parallel with, yet separated from, civilian activities. As such, although it is interesting to research its progress, one cannot detect a substantial influence over general trends in education.

Where effects can be seen was in the period after the Second World War, when the labour market as a whole was flooded with ex-servicemen seeking employment and in the reaction of the education and trade establishment to this need.

The Great Exhibition

Perhaps surprisingly, the first uses of photography by the armed forces were associated with the world of art, following the Great Exhibition. In 1851 sappers of the Royal Engineers were assigned to this event. Henry Cole, the organiser, built a studio, employed the engineers as photographers and enlisted Charles Thurston Thompson to arrange their training. Cole then began to circulate photographs of art objects around the provincial art schools as a travelling exhibition, later to become the circulating collection of the Victoria and Albert Museum.

Photographs for Intelligence

It was not long before the technical applications of information gathering were appreciated by the Army and instruction was provided at the South Kensington Museum under Thompson (who was paid ten guineas when each soldier was granted a certificate.)

Photography was used widely by the sappers who were engaged both in this country and abroad in survey work. They were also engaged in making reductions of maps and drawings - the first example of large scale scientific and technical photography.

In September 1914 the Royal Flying Corps took its first air photographs of the war over enemy positions during the battle of the Aisne and in the following year a specialist training section was formed at Pinehurst near Farnborough.

In 1917, by which time air reconnaissance photographs had become indispensable to intelligence, the section took over new premises specially constructed by German P.O.Ws and was officially designated the Number One School of Photography at Farnborough.

After the war a regular programme of peacetime training was established until 1935 when, mindful of the potentially vital role that photography would play in any future conflict, rapid expansion of the school was initiated.

The Second World War

Soon after the inevitable happened, a second school was opened in Blackpool where, interestingly, the training of airwomen photographers first started. Throughout the Second World War the Schools were at the forefront of changes in technical developments needed for taking and processing huge quantities of aerial photographs taken under the most difficult

circumstances. By the end of hostilities the two schools had trained a total of 6,500 photographic personnel.

Labour problems of the mid 1940s

With the war over there was no longer a need for such frenetic activity and a large number of photographers trained by the forces were looking for work in the profession. Unfortunately, the training given to these men and women was at best rather specialised in nature and at worst rather rudimentary for commercial applications.

Concerned by this problem, the I.B.P. prepared a report on the resettlement of ex-servicemen which was circulated to all Government departments. Their main concern was that many service photographers unable to find employment were trying to set up businesses on their own, with the result that the Institute was receiving both requests from them for help and, at the same time complaints from their members regarding undercutting and poor quality work.

In its report, the Institute suggested a temporary control on the opening of new businesses by the granting of licences only to those who were suitably trained. This idea, possibly seen as a rather loosely camouflaged trade protection which could not be justified, was not taken up. Instead, the Institute prepared and distributed large quantities of literature giving resettlement advice aiming in part to discourage those wishing to join the trade. Although this may have had some success the number looking for ways to earn a living in photography was clearly far greater than could be accommodated.

The problem continued despite the Institute's efforts to expand the uses of photography until the 1950s, when many of the immediate post war unemployment difficulties began to ease.

Modern Peacetime Arrangements

Gradually, with the expansion of day release courses available at colleges, the broadening of the use of photography away from purely technical applications and the increased use of civilian photographers, the Ministry of Defence developed a position that had much in common with any other large employer. Because of its size, however, it could still have a considerable influence over local educational provision.

For many years the need for training of both military and civilian personnel resulted in day release classes being established at many centres. Typically, the department of photography at Salisbury College came into being in the late 1950s largely as a result of such a demand. However, following the reduction in staffing and training levels within M.O.D. establishments in the late 1970s, a number of day release classes - once reliant on a steady flow of trainee photographers - became unviable and closed.

Fortunately by this time colleges had developed other full time courses and were well able to sustain the loss of part-time provision for this group, although it would be wrong to dismiss the end of these classes as insignificant. Links with MOD establishments brought access to some of the latest technical equipment and students on release were always well supported with supplies of materials, especially welcome in a cash struck educational environment!

Ironically by the late 1980s, the recruiting situation in the MOD and other employers improved and in some areas a shortage of part-time vocational courses existed. A provision which has never been fully restored.

THE PATTERN OF PUBLIC EDUCATION AND INFLUENCES OF GOVERNMENT POLICY

As with almost every other major influence, the early pattern of public education succeeded in isolating the teaching of photography from the potential influence of the visual arts and placed it into the hands of technicians.

The First School of Design

The School of Design, set up with a public grant in Somerset House in 1837, was the forerunner of the 13 provincial art schools established by 1851 and the 120 which existed by 1873. These institutions were founded on fine-art principles and were physically isolated from technical education.

The Government funded School of Design became the Department of Practical Arts of the Board of Trade in 1852. The Science and Art Department (S.A.D.) began life in 1853 with Henry Cole as Secretary for Art and Lyon Playfair as Secretary for Science. The art side ran the provincial art schools and the National Art Examinations quite separately, even with its own Inspectorate and did not merge with the Board of Education until 1901.

The National Art Examinations continued until the mid 1960s when the Dip.A.D. was introduced and the first official encouragement was given to the introduction of photography within the art curriculum.

Technical education was treated quite separately. The Society of Arts ran examinations in technical subjects until 1878, when the schemes were transferred to the newly formed City and Guilds of London Institute.

Government support took the form of payment by results paid to the providing institution. One hundred percent for a first class pass, 50 percent for each second and 33 percent for each third!

Improving educational standards

The considerable improvement which took place in technical education during the 1870s must, in part, be accredited to The Forster Education Act which led to the provision of universal elementary education. This may not seem directly relevant, but one of the short-comings of the technical educational system up to that time was the inability of students to cope with relatively involved concepts due to a lack of previous education.

The Growth of Provincial Colleges.

Many local colleges of art and science began life during the 1870s and in 1889 further progress was made following the Technical Instruction Act which enabled local authorities to levy up to a one penny rate to provide public education.

In 1901, the Department of Education sanctioned grants for teaching practical technical subjects and the specialist printing schools were established in London and Manchester, now the London College of Printing and U.M.I.S.T.

From that time, the number of colleges throughout the British Isles continued to grow steadily and in the 1950s and '60s, during a time of national prosperity, many of the specialist courses in photography were established. This was undoubtedly due, not only to the educational systems ability to fund them, but because of an increasing demand for photography from industry and commerce.

Influence of the Ministry of Education

Much of the influence of the Ministry of Education during the following years was through the I.B.P. Discussions took place concerning a number of topics such as the introduction of an apprenticeship scheme linked to day release classes. This was considered a retrograde step by the Institute and their arguments won the day - a victory which was to have considerable significance as the Ministry then agreed to reclassify photography as 'further education' rather than simply 'vocational training' as it was before.

It was in the late 1950s that Government policy really started to have a significant effect on photographic education and to bring about changes that set the scene for progress to the present day.

In 1957, the National Advisory Council on Art Education produced a series of recommendations known as the Coldstream Reports. The first, in 1960, concerned art education at advanced level which up to that point had been devoid of any photographic content.

It recommended a Diploma in Art and Design (Dip.A.D.) which was ". . to be of sufficient breadth and significance to give art students an education with the equivalent discipline and the same sort of stimulus as a University course should give an undergraduate..." Their quality and standard was to be the same as a first degree and to give a "... liberal education in art..." Significantly the I.I.P. were not consulted.

The Dip.A.Ds, although not initially offering an option in photography did acknowledge photography as part of the course, bringing the subject for the first time into art education. What is also significant is the level of these courses. As they were considered of degree level it was a natural progression to reclassify them as B.A. degrees under the C.N.A.A., taking photography up to a new academic height, albeit cocooned within another discipline.

The second report appeared in 1962 and dealt with vocational courses in Colleges and Schools of Art. This time it addressed photographic education directly, acknowledging its application in all branches of advertising and design.

Government policy was now directing educational changes with little or no reference to the I.I.P. through which it had previously negotiated change, and continued in its revision of the further and higher sector.

Hugely significant was the Gann report of the 1970s which led to a complete rationalisation of further education with the setting up of the Technicians Education Council (T.E.C.) and then later, for art and design, D.A.T.E.C. This was to change the system of externally set and examined courses (as was the norm), in favour of a college syllabus and assessment scheme designed along set guidelines. Courses were then moderated externally.

This was followed by the Business and Technicians Education Council (B.T.E.C.) which encompassed all T.E.C. and D.A.T.E.C. courses under one organisation.

The results of this Government-led reorganisation were a complete revision of vocational photographic courses. The independent College Diploma, City and Guilds and B.I.P.P. examinations were rapidly replaced in many centres by the B.T.E.C. National Diploma and the B.T.E.C. Higher National Diploma. Many of the new B.T.E.C. courses were primarily concerned with photography, either still or moving image, but also some which included photography only as a part. Significantly, the actual award - even for those in the mode of the conventional photography course - is 'Diploma in Design' with the specialisation 'Photography' appended to it.

An effect of these changes was the proliferation in the number of courses, particularly at National Diploma level. Photographic studies, once offered as part of another discipline such as graphic art were seen by some institutions as ripe for hasty expansion into 'stand alone' courses.

It is perceived that following the dismantling of the Regional Advisory Councils (R.A.Cs), which at one time had a firm grip on the establishment of new courses, market forces alone acted as the limiting factor. If a course can be justified in terms of projected enrolment figures, and B.T.E.C. will approve it, then it may be offered! Presumably, the reasoning is that if the market becomes saturated, courses will be unable to recruit and close.

By 2000, with a greater number of students undertaking further education and the general attractiveness of the visual communications field, courses seem to be continuing without difficulty. As funding in education, due to Government policy becomes restricted and more tightly controlled however, it remains to be seen how long this can continue.

The declared purpose of rationalisation was to make the plethora of different courses and examinations easier to comprehend for potential students and employers alike. This it has largely failed to do although with the introduction of the National Council for Vocational Qualifications (N.C.V.Q.) and other initiatives there is little doubt Government will continue on a path towards comparability and equivalency, not only between courses but between disciplines also.

OTHER ORGANISATIONS

Although the parameters of this review of education were made clear at the start it would be a serious omission not to include for the record at least, some of the other organisations who have contributed to the development of photographic education.

The Royal Photographic Society. Although from a historical perspective it is not easy to detect a specific influence on the structure of education for photography, many of the key players in the educational arena were members and undoubtedly the Society offered a forum for debate and communication.

The Society for Photographic Education and its magazine, Spectrum ran during the late 1960s and early 70s.

The Photographic Education Group (P.E.G.) ran for a number of years in the 1980s and published a quarterly newsletter. It was run by Frank Hawkins OBE, a retired HMI - the only specialist HMI for photography ever appointed - and former Head of Photography at Harrow, with assistance from Sylvia Barnes (Bournemouth College of Art) and Frank Blackwell (Berkshire College of Art and Design) along with others. Hawkins believed in the value of promoting debate and support across academic levels including schools, who in his professional career he had found somewhat isolated.

Photolink International™. An organisation formed to promote overseas links between colleges offering photo education and provider of an education information service for photography called PHOTONET. It began in 1987 a part of a doctoral research project at Southampton University. Although no longer maintaining an active database, its directory of colleges and universities last updated in 1994 is still available as a source for research at www.photolink-international.co.uk. It is credited for stimulating international links between courses in photography at a number of establishments.

Institute of Medical Illustration (formerly The Institute of Medical and Biological Illustration). This organisation was founded in 1968 by several leading practitioners. Its aim was to bring together the several disciplines of medical illustration, and since that time IMI has set and maintained standards for the profession. It has promoted a registration scheme for medical illustrators and is involved in post-graduate education for medical photographers at Cardiff and Staffordshire Universities.

The Photo Imaging Education Association (P.I.E.A.) This international organisation was founded by retired Kodak Director, Ken Lassiter under the umbrella of the Photo Marketing Association International (P.M.A.I). Its aims were similar to the UK based Photo Education Group. It had a significant membership in the United States and Australia and to a lesser extent in the UK. It ran annual conferences and a competition for students. It ran during the 1990s and provided enrichment to many programmes.

The Association of Photographers (formerly the Association of Fashion, Advertising, and Editorial Photographers). An association of professional photographers who have done much since the late 1970s to assist colleges through its affiliation scheme.

The 1990s and towards the new century

During the late 1980s and early 1990s major changes were initiated within education at all levels. In order to respond jointly to perceived inadequacies in the preparation of young people for the job market, the effects of a major and prolonged economic recession and a wish to limit Government expenditure generally, a radical remodelling took place in the way institutions were funded and qualifications structured.

The Higher Education sector was encouraged to expand rapidly and in order to avoid any imagined academic inequality between the traditional universities and polytechnics,

institutions of a specified size and possessing prescribed facilities were all awarded the title of 'University'. This included a number of Institutes of Higher Education which had gone through the most dramatic - and in some cases - traumatic changes, in the scrabble for University status. The C.N.A.A. was dismantled and the new Universities empowered to award their own degrees in the traditional fashion.

For photographic education this too meant many changes. The greatest however was undoubtedly the ability of a greater number of courses to obtain degree status and offer B.A. degrees. Although believed to be of sufficient experience and level, courses in many smaller institutions had been denied this opportunity in the past because they existed within the further education sector. With the ability of institutions to 'franchise' courses to and from one another, and to obtain remote course validation from the new Universities, to join the academic 'lead' players was at last a reality. In some cases the new degree programmes were offered in place of existing B.T.E.C. qualifications and in others, in addition.

In the further education sector a new system of National Vocational Qualifications (NVQs) and General National Vocational Qualifications (GNVQs) were introduced and by 1994 were competing with B.T.E.C National Diplomas for Colleges' attention when considering how to attract the maximum number of students; a prerequisite to financial survival at this time.

For a time it appeared that the National Diplomas would be replaced but their clear vocational ethos was recognised as strength and they are still going strong in many centres! Many however are now taught as broad based art and design programmes with photography as a major option.

GNVQs however, whilst embraced by many establishments were regarded with some suspicion by academics, as being too broad and being competence based, lacking in educational substance. They were gradually phased out, the last being awarded in 2007

In July 1997 a long awaited report by a committee chaired by Sir Ron Dearing was published. This was presented to a Socialist government although it was originally commissioned by a Conservative administration. Its recommendations, many of which were immediately adopted, promoted the idea of the provision of higher education, at least as far as higher national diplomas, being provided within the further education sector. The rationale being lower costs and greater access.

It also recommended the imposition of a contribution towards fees for full time higher education courses of £1,000.00 per year. A move which was seen as a first step to the cost of higher education being met from personal loans rather than by the state.

The other significant fact for researchers is the number of institutions that have merged or changed their names during this period. In the Higher Education sector many institutions successfully achieved degree awarding status and changed their name as a result. A trend for smaller specialist colleges of art to be swallowed up by larger institutions continued unabated!

This has led to a highly profitable period for marketing companies and sign writers and general confusion for applicants!

2000 and beyond

The first decade of the new century has been one of consolidation and drift rather than radical change in the education for professional photographers.

Government policy is now the dominant factor in influencing change and the further development of the pattern of education of photographers.

Two year Foundation Degrees were introduced in 2001, with the aim of further promoting the accessibility of Higher Education begun following the 1997 Dearing Report. In the subject of photography these may take the form of a programme validated by a university and franchised to a local FE college for delivery or offered directly by the college using a BTEC approved model.

As these two year degrees were equivalent to an HND and similarly have a more vocational ethos it was expected the trend would be away from HNDs. It was not surprising therefore that EDEXCEL came up with BTEC model to avoid loss of business!

The Foundation Degrees have the advantage of a linked top-up course (although not always at the same institution) to convert them to a full BA (Hons) and this makes them particularly attractive to students preferring a less academic demanding start to their degree.

Many academics have never been fully convinced of the academic credibility of this 2 + 1 arrangement when compared with a full three years of undergraduate study at a university!

By 2010 although many Foundation Degrees have been established in photography there is still a perceived preference for a ‘uni’ experience and three years of undergraduate study.

However, many commentators regret the apparent diminution of the practical three year programmes that educated so many successful working photographers who may not have had the high academic entry requirements now required for the three year honours programmes. Equally the necessary shift in the syllabus some require, away from practice in favour of research and debate.

Technological change

The other factor which will no doubt be seen as decisive in influencing educational provision for photographers is that of technological change.

Silver based recording of the photographic image has been a consistent factor throughout the history of medium but by the late 1990s, digital recording using electronic media became established.

This has had wide reaching effects, some obvious such as the change from using film to digital recording media and some less obvious in the practice, business, transmission and final consumption of images.

The education process has changed from a steady incremental progression as techniques are learned and practised to a huge leap between relying on automation (making image capture and processing easier) to taking full control of capture and processing in a professional environment (a great deal more complex)!

It is not within the aims of this paper to speculate how technology will develop during the coming period but it is suggested that divisions within the application of photography, moving image and other visual media in general will diminish and the effects will be detectable by others researching the educational provision in years to come.

SUMMARY

In 150 years photographic education has evolved from an element of Victorian business to an integral part of the current educational system. Its progress has been influenced by individual establishments - typified by the oldest and most influential, the London Polytechnic - and trade and professional institutes such as the City and Guilds of London Institute and the British Institute of Professional Photography. In later years Government stratagem has grown in importance and today almost exclusively dictates educational policy.

To begin with, photography was dominated by technicalities and for many and various reasons stayed within that field. Art education took a different and separate path and having dubbed photography as "...a mechanical art..." would rarely consider photographs for inclusion in exhibitions. Significantly, the Royal Academy only staged a photographic exhibition when prompted by the 150th anniversary of photography.

Largely at the Government's hand, the lateral division between art and science changed to a vertical, albeit less clearly defined divide between academic and vocational. With the C.N.A.A. following on from the Dip.A.D., degrees were at last possible, but from courses developed from art fundamentals. In recent times courses from a wider spectrum have achieved degree status and the first 'vocational' degrees were made possible.

In contrast, B.T.E.C. originally rationalised vocational courses developed from a technical foundation but now includes a number securely embodying principles of foundation levels of art education.

Still today there is debate and division. Photography - art or science, commercial tool or social and cultural provocateur? Photographic education - academic or vocational?

Ironically it is advances in technology as much as strategies of government or professional organisations that may close the chasm.

As purely technical recording becomes simple and no longer dependent upon a photographers skill, the future will be secure only for those who can move to the mid-ground.

Competence with tools of the trade and an understanding and mastery of the medium of visual communication are essential as never before.

J.R.S.

REFERENCES

Bigglestone, J., (1974) *The future of Photographic Education,* Spectrum Magazine, Society for Photographic Education.

Carter, J., (1983) *Photographic Education, An Outline History,* British Journal of Photography. 3/1983.

Carter, J., Harker, M., (c.1979) *Photography at The Royal Polytechnic Institution,* Paper from an unknown source.

City and Guilds of London Institute (1885 - 86) *Syllabus and List of Examiners.*

Cooper, E., (1871) *Art Education of The Future Photographer,* The British Journal of Photographers Almanac and Daily Companion, 1871.

Harker, Prof. M., (1976) *Development of Professional Photography in Britain,* British Journal of Photography. (27.01.76)

Harker, Prof. M., (1989) Personal interview and correspondence.

Hawkins, F., (1989) *The Joint School of Photography 1915-1945* - A short paper in newsletter no.6 of The Photographic Education Group (P.E.G.)

Hawkins, F., (1989) *Photographic Education - Thoughts on the first hundred years,* Photographic Education Group Newsletter 3/89, no.7.

Hawkins, F., (1989) *Personal interview and correspondence.*

Howard,K., (1984 and 1986) *Photography - College and Course Information*, Central London Careers Office.

Hunt, J.L.A., (1962) *Requirements for Controlling the Recognition of Courses,* Institute of British Photographers.

Pope, P., *Minutes of Department of Photography Meetings (circa 1959)*, Historical records library at the Polytechnic of Central London.

Smith, I.R., (1983) *The Development of B.T.E.C. Qualifications in Photographic Education,* Essay for a Certificate of Education Examination.

Stirling, D.W., (1989) Head of the Department of Photography, Salisbury College of Art, *Personal interview.*

Unknown (1948) *The School of Photography at The Polytechnic,* Loaned article of unknown origin.

Various (1906 - 1907) *Prospectus,* The London School of Photoengraving.

Various (1933-1953) *Prospectus*, The Regent Street Polytechnic.