

# Photography in Art and Design Education

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It is only during the last few years, since the advent of larger schools with more staff and specialist equipped rooms that photography has been seriously considered as an integral part of the secondary school curriculum in art and design.

When any practical work in photography has been taught in schools, it has often been in the form of a photographic or camera club, generally taking place after school hours and in many cases organised and supervised within one of the science areas of the school. In some instances the values of these clubs have been the traditional values of the amateur photographic clubs with considerable emphasis placed on the equipment, the skills and the scientific aspect of the subject. The value of photography as an art form in its own right has often been neglected apart from brief discussions on the pictorial quality of the prints.

A part of art is the selection and rejection of images and the manipulation of these materials and methods. If this statement is true then photography must have a claim to be represented as a part of the body of knowledge embraced by the term art and design, but in too many cases not only has equipment and technique been over-valued, but the only use of photography in the school has been that of a recording device.

Many art and design departments in schools are now beginning to evaluate and investigate, as part of their syllabus, the fine art and the applied art attitude, that is problem-solving approaches in which either the artist sets himself the problem, or he is set a problem as a design brief, this is, of course, in addition to the limitations of the media in which he chooses to work.

In addition to this, some art and design departments are structuring their courses so that students have experiences of art and design work in terms of:

*Media* — two, three and four dimensional.

*Intention* — Illustration recording, social

comment or social use, or even making new images.

*Visual concepts* — Shape, form, texture, tone, colour, with the introduction of other ideas of line, transparency, scale, etc.

Within the context of the departments operating in either this way, or perhaps with a more loosely structured syllabus, photography has a firm place. It uses the light-sensitive surface and the unique way in which it responds to quantities of light as a part of the two dimensional media area, the photographic work can have many intentions apart from its recording aspect, and black and white photography is particularly concerned with tone as an art concept. A particular aspect of photography is that it uses the idea of negative and positive images as an intrinsic part of the process.

In terms of both cost and the time that it takes to produce any worthwhile result in terms of photographic printing, it is unlikely that most schools would be able to do anything other than a small amount of experimental colour photography. The materials and equipment are expensive to buy, the basic chemicals are expensive and difficult to use in the working conditions of a school darkroom, and the time taken to produce satisfactory colour print is out of scale to the normal school double period, or even a whole morning or afternoon session. Monochrome photography, using relatively cheap, easily obtainable and simple to use materials is a very reasonable proposition in terms of cost, resources required and the period of time within which the average art and design department works.

## Photography without a camera

I believe that students should be introduced to the photographic medium in a direct way with as little as possible of the 'craft mystique' being emphasised at the beginning. The initial experience should be one of

the uniqueness of the response of the photographic material to light, together with an introduction to the positive/negative/positive process used in monochrome photography. The manipulation of even the simplest of cameras seems to introduce a technical barrier to these initial experiences and interferes with the immediate response to the media.

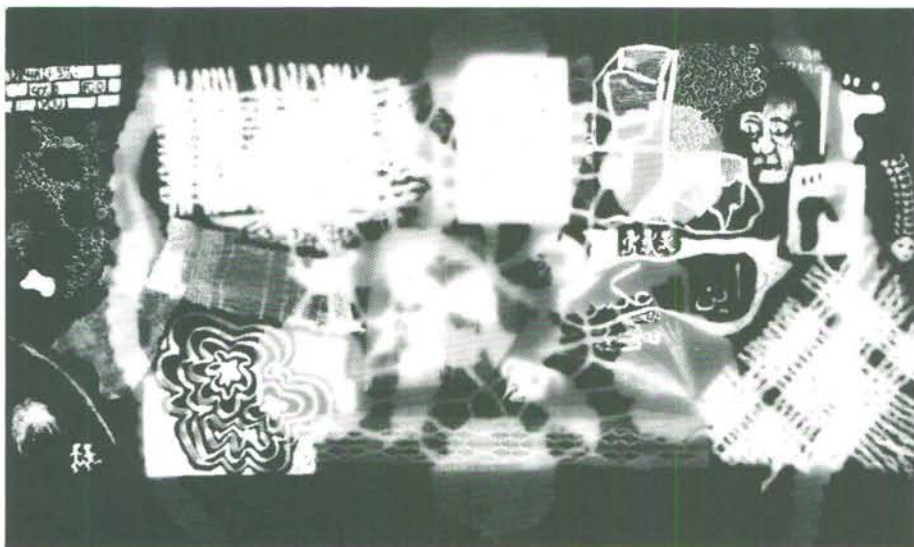
The first experience of photography can even be accomplished without the aid of a darkroom. Ordinary photography bromide paper can be brought into daylight conditions, drawn or painted with diluted developer with the darkening process observed as it happens, and the paper then fixed in the usual fixing bath. If this process can take place under safe-light conditions in the darkroom, paintings using a range of half-tones and full black and white become possible.

The placing of opaque and translucent objects under darkroom conditions between the light source and the printing paper — the *photogram* — has been a traditional way in

which photography has been introduced, and there is no doubt that there is the possibility of fascinating images being produced in this way. Even older children in the school are surprised to see the images which can be created by placing a hand or a bunch of keys on the photographic paper, while translucent objects such as leaves or even the nylon reel of a developing tank acquire a quality of their own.

The main disadvantage of the photogram is that it is essentially a 'one-off' process. Once the objects have been exposed to light they necessarily have to be moved in order that the development of the paper can take place.

A more useful extension of the photogram is what used to be called the 'cliche verre' — literally drawing on a glass plate — or what might now be named a hand-made negative. Using cheap tracing on grease-proof paper, images can be drawn, coloured translucent or opaque materials can be stuck on to make a negative which can be printed in contact with the photographic printing



*A print from a hand-made negative using stuck on materials and drawn images—  
Brenda Howarth*





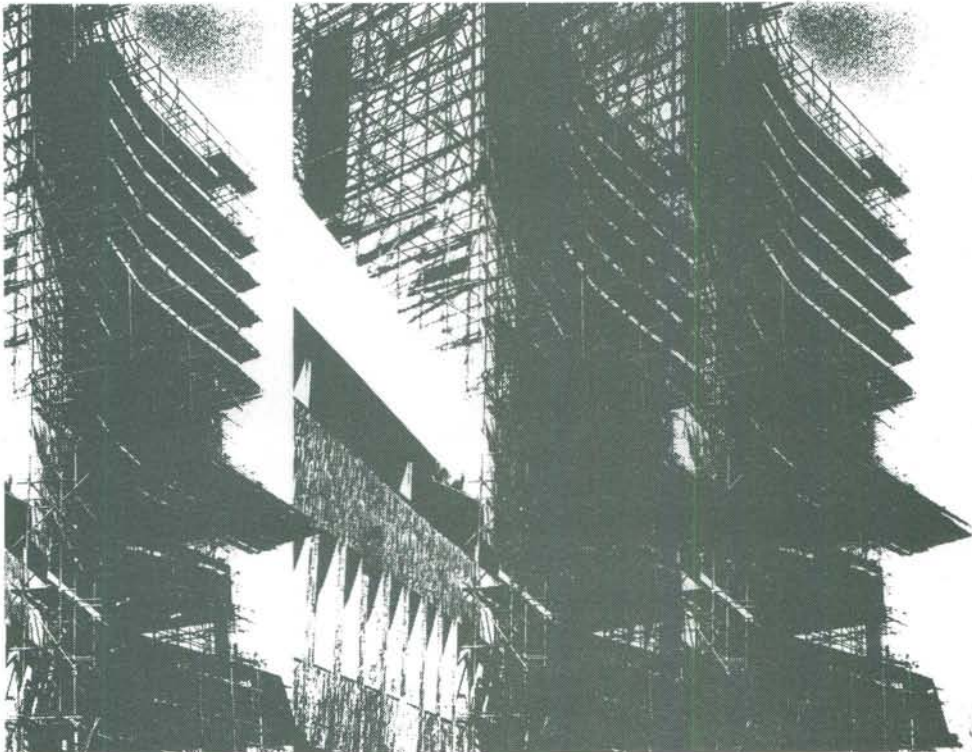
*A pictorial photograph in which some experimental work of printing on various paper grades, dodging and burning in was done prior to the final print.— Bev Sage*

paper. A range of materials can be used for this, felt pens, pencils, wax crayon, coloured inks, coloured adhesive transparent material, and a range of drawing techniques can be used including shading, wax resists or even simple graffito (or scratching) methods. If the hand-made negative is made in the same proportion as the printing paper, usually stocked (10" x 8") – i.e. 8" x 5" or 5" x 4", not only economies in the use of materials, but other possibilities (described later), occur. The hand-made negative is exposed, generally under a sheet of glass for firm contact with the photographic paper, under a light source. It is then developed and fixed in the usual way.

When students examine this print from their hand-made negative a direct experience of the negative/positive photographic pro-

cess is given – more so than when using the photogram, since the original image is available for inspection and comparison.

Many possibilities occur using this method of introduction to photography. The opportunity to make a representational drawing in negative form presents a stimulating challenge to some older children, the use of resists and scratches become reversed, and the use of coloured materials presents the student with an immediate experience of the response of the paper to coloured light – bromide paper is orthochromatic and is sensitive to blue light but insensitive to yellows and reds. The experience of working with colour to produce a black and white negative could lead to a discussion of panchromatic films and their sensitivity to the visible spectrum of colour in their relative



*A print using Kodalith Ortho Film in which the design has been achieved by multiple exposure of the negative image on to the paper – Ingrid Bugge.*



tones, the necessity to develop film in total darkness (or with a weak green safelight), and the use of orange or yellow/green safelights for the printing process.

The introduction to the photographic process by using hand-made negatives also has the advantage that some of the creative darkroom processes of double printing, multiple printing, serialisation, reverse printing and even repeat pattern making can be carried out with either the original hand-made negative, or a combination of two or more negatives, or with specially produced negatives that have some of these techniques in mind. Parts of the hand-made negatives can be placed in the negative carrier of the enlarger and be considerably increased in size and printed on to the paper.

It is only after a thorough experience of the hand-made negative and its associated darkroom techniques, including the production of test strips, the use of the aperture control of the enlarging lens, and the chemical processes of development, stop baths, fixing and washing the print, that work with the camera should be introduced.

## Cameras

Of all the various types of cameras available for use in schools, the Instamatic type with its fixed focus lens and single shutter speed mechanism has an immediate appeal on the grounds of cost and simplicity in use, but there is no doubt that the single lens reflex camera has very considerable advantages for producing the type of creative work that is of interest to an art and design department.

*The viewfinder type*, either in the simple form of the instamatic or in its more complicated and expensive coupled range-finder type (of which the Leica is probably the best known make).

*The twin lens reflex*, in which a pair of lenses are mounted one above the other, one exposing the film, the top used for illuminating the large viewfinder. Both lenses

share the same focussing mechanism, so that the focus is seen in the viewfinder.

*The single lens reflex*, in which the object is both viewed and exposes the film through the same lens.

Both the viewfinder and the twin lens reflex suffer from the disadvantage of parallax, that is the viewfinder does not show quite the same view of the object as is registered on the film. This problem can become quite a major difficulty when working with moderate or extreme close-up work. The twin lens reflex also presents a viewfinder image that is laterally reversed, and this can present problems particularly for sports and action photography.

The single lens reflex offers a viewfinder image as seen through the exposing lens. The image is not reversed, and, when interchangeable lenses of differing focal lengths are used on the camera the viewed image is exactly as will be registered on the film.

Polaroid cameras, in which the photograph is exposed, developed and printed within the camera have use in school, particularly for the instant viewing of the printed image in comparison with the picture taken. There is, however, little possibility of using any of the creative darkroom techniques and the cost of the film is relatively high.

## Format

Decisions will have to be made about the format that is to be used and while the larger formats (generally 2¼" square) make good quality enlargements possible and make the handling of the negative easier, the range of film, developing and enlarging equipment obtainable for the smaller 35 mm (1½" x 1") size, together with its relative cheapness both for equipment and cameras, make it a more economic proposition for school use. Film can be bought in bulk, and it is possible to buy both film and paper stocks that are slightly out-of-date but still useable. Although



*Darkroom work using the hand-made negative and double exposure— Elaine Imrie*



camera equipment may have to be specialised in terms of film size it is a good idea to have an enlarger (the universal type) that is capable of handling film sizes from 35 mm to 3½" x 2½" for the high contrast work that will be described later.

As well as standardising on film size, for simple methods of working it is as well to purchase one type of film (possibly of the 125 ASA rating), one type of film developer and a paper developer and fixer. A developing tank, a safelight, a thermometer, a clock for seconds timing, a universal enlarger, developing dishes, print forceps and washing equipment complete the basic need of darkroom materials needed.

I have always found that, for both school and college use, the 'one-shot' developer which is used once and then thrown away is preferable to the developers that can be used again and again. In school conditions, the liquid developers and fixers, even though costing rather more than the powdered forms, do save time and patience, particularly in the vast majority of school departments that have to manage without any technical assistance. It is as well to label every bottle with the quantities found necessary for each darkroom session — this can be done on the plastic bottle with a felt pen.

Far too much difficulty and complications seem to surround the use of cameras, light-meters and enlarging equipment by students. Much of this difficulty can be overcome by having simple work cards made for each piece of equipment, and to supplement these by notices in the darkroom for the particular processes being used. It is even a useful idea to print, on a plastic covered card that can be hung over the developing dishes, the times for each part of the processes.

### The photographic syllabus

Projects can be set for individuals or small groups to investigate ideas such as:-

*Movement*, the freezing of a movement, or

the use of blurred images or double-printed images to suggest movement.

*Reflection*, from a variety of surfaces, including water, metal, glass, distorted reflection from curved polished surfaces.

*Texture*, the surface quality of various objects from rough to smooth, with the investigation of the use of light to enhance these.

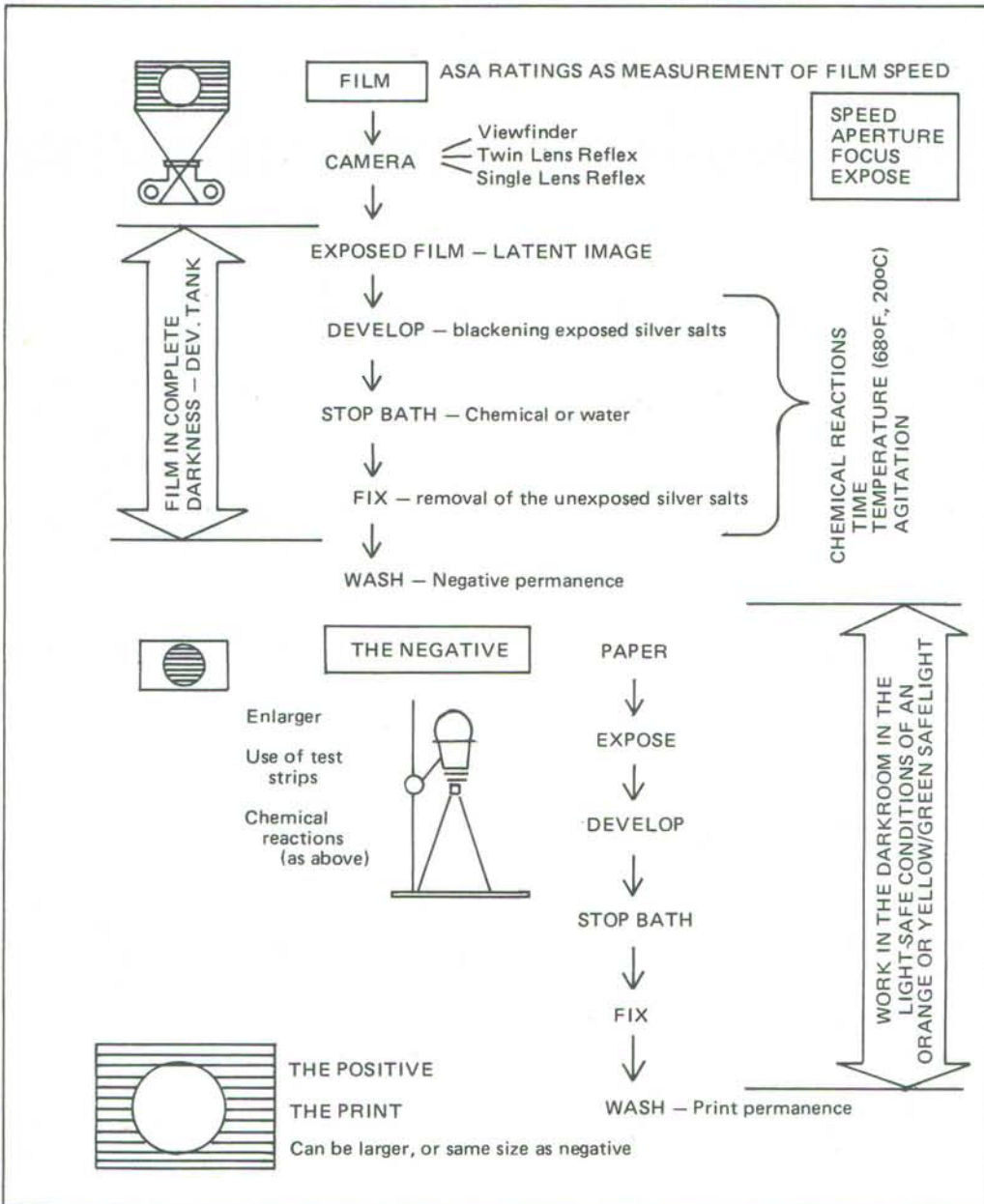
*Scale*, the small object becoming larger than life through simple macro or micro photography, the enlarging of the small negative image to a variety of size.

*The environment*, the recording and use of urban and rural images, street graffiti, lettering, field and landscape patterns. The photographs obtained from these projects can be used as art objects in their own right, for use as source material for other forms of fine or applied art or as photographic sequences.

In the applied art areas photography can be used as an integral part of a dress scheme, investigating the use of lighting for fashion photography, portrait work, as source material for the design of dress and accessories, or as an adjunct to work in graphics or print-making.

Over a period of time students can be gradually introduced to other skills in photography — the use of lenses of differing focal lengths and the examination of the effects of these lenses on the angle of acceptance of the lens and the differing depths of focus obtainable and not only with the use of these lenses but at different apertures in the same lens.

Other speeds of monochrome film can be used from the low speed 32 ASA fine grained film giving good contrast, to the faster 4000 ASA films giving relatively coarser grain, particularly in big enlargements, and less contrast. The effects of different developers on these films can be explored with their effects on the nominal ASA rating of the film and their effects on grain and acutance





in the negative.

The use of negatives with relatively little contrast and with a high degree of contrast on differing grades of paper when printed in the darkroom forms another and slightly more advanced area of knowledge as the work in photography proceeds. The after-treatment of photographs by 'spotting out' the white marks on the prints and erasing the black marks by careful work with a sharp craft knife, and the mounting and display of the prints are an important later part of the work in photography.

The use of Kodalith Ortho film as a source of black and white images gives a very contemporary and exciting graphic image that is often relevant to students' interests in graphic design and pop culture. The Kodalith film either develops the intermediate tones in the negative as pure black, or remains transparent according to the amount of exposure given to the film. Its use need not be expensive, since it can be bought in boxes of 50 in the 2½" x 3½" size. This means that a 35 mm negative can be enlarged on to this material as a positive (this could also be used for projection in a school slide projector), the positive can be contact printed with another piece of Kodalith, and the resulting 2½" x 3½" negative can be placed in the universal enlarger and used to make a black and white print on normal photographic bromide paper. The only additional equipment required is a red safelight, and the special Kodalith developer for the film.

If larger pieces of Kodalith can be purchased, this material can be used in direct contact with various photo-sensitive screen printing materials to use in screen print-making either as multiple images, or in connection with graphic design — posters and packaging designs.

The use of Kodalith materials can lead to further and more advanced experimental work in the darkroom using processes of solarisation, or converting the original photograph into areas of black, white and one or

two intermediate tones. All this work can lead to the consideration of the original image on the negative in a number of different ways.

Together with the practical work, students can be encouraged to keep a collection of contemporary and historic photography drawn from source such as the photographic press, magazines and colour supplements. Historical theoretical studies for the more academic students might include a study of the history of photography from the camera obscura, the work of pioneer photographers such as Fox Talbot and Daguerre to the work of distinguished contemporary photographers.

Photography can be pursued in the General Certificate of Education at both Ordinary and Advanced Levels with some examination boards, and the Certificate in Secondary Education, particularly in Mode 3 offers opportunities for a course of study to be exhibited and evaluated both internally and by the external moderating examiners.

Even within the limited compass of this article, I hope that it has been shown that there is both a rationale and a place for photography as an area of study within the framework of an art and design department. After the initial expense of equipment both of the camera and the darkroom equipment has been met, the continuing expense of the expendable materials — film, paper and chemicals — bears some relation to the expense of other areas of study. In terms of the time taken to develop and print a negative, the cost of photography is probably of the same order, or even somewhat less, as the cost of textile design and printing or even graphics and print-making.

Certainly in terms of its relevance to the everyday lives of students today, and in terms of its contribution to the visual awareness of these students, photography has every justification to stand in its own right as an art form, or as an important contribution to the area of integrated art and design studies.