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THE TEACHING OF ART IN SCHOOLS

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Emphasis on Pattern,
Rhythm, Harmony
and Unity

PARADOXICALLY the best teachers of art are those who realize that art cannot be taught. Art, like poetry, is a form of creative expression and, as far as I am aware, just as there are no known rules or methods by which one can teach the creation of poetry or produce poets, neither are there rules or methods by which one can produce artists or create art.

I believe it is just at this point that the good teacher of art is born. No one attempts to produce poetry or poets by setting up examples of good poetry for mechanical imitation, yet in the teaching of art there are so many who suffer from the misconception that art can be produced or developed by some form of mechanical imitation of nature, artificial objects or plaster casts. No doubt it is natural to assume that direct imitation of nature will result in art or in beauty, since our first awareness of visual beauty comes to us from nature, but the invention of the camera and coloured photography should disillusion us.

Much of the poor teaching of art in schools comes from confusing art with nature, and beauty with art, and from assuming that the imitation of nature will produce art. What seems to be basic in the good teaching of art is the recognition of its true nature. Art is not a form of imitation, but a form of creative expression—a form in which line, shape and colour are the basic language of the artist, who uses them to create symbols, representational or abstract, to communicate his feelings, ideas and emotions in a specific way—in a rhythmically designed and coordinated visual form involving balance and harmony. The successful teacher of art has an either instinctive or cultivated awareness of this quality of art, and the unsuccessful has not.

Paradoxically, though art cannot be taught, the good teacher of art is indispensable, and it is around the good art teacher that the most

encouraging results are obtained. Children left to themselves often produce interesting work; but without the guidance and encouragement of an enlightened teacher, the spark of talent soon fizzles out.

It seems to me, therefore, that the first condition for a true development of art in schools is the proper education of the teacher. Teachers can either make or mar the innate abilities of children. Some teachers have never had their ideas on art clarified. Almost instinctively they have assumed that the business of art is the imitation of nature, or the representation of nature. Their training through laborious exercises in imitating natural and artificial objects, in increasing degrees of complexity, has only helped to establish this assumption. The principles of perspective involved in three-dimensional representation have been given undue importance. It should be realized that perspective, a very convenient method of suggesting recession on a flat surface, is a condition of our mechanical vision, and is not a basic principle of art. The lens of the camera automatically obtains the same condition in a photograph.

There has also grown, through this system of training, an awareness of only one type of technique in art—the photographic, naturalistic and representational type. It is therefore of the utmost importance that teachers should be made aware of the many techniques used in art. Techniques vary according to the ideas expressed and the media used. A two-dimensional form of expression found in Byzantine, Persian or Oriental art may be just as perfect as a three-dimensional form of expression in Renaissance or modern painting. If technique is the means by which an artist expresses his vision in terms of a specific medium we must not only know how to use the medium, but leave room for its personal use in terms of the artist's vision. The proper development of technique then is not in terms of mechanical exercises in imitation of mechanical vision, but in terms of the artist's creative vision. Only this way will technique be truly integrated with creative vision.

Teachers should be led to discover the basic principles common to all types of art, two-dimensional or three-dimensional, from primitive to modern—the principles of rhythm, pattern, unity and harmony, which are also found in good Child Art. These principles give aesthetic vitality and aesthetic quality to any true work of art. The ability to recognize these qualities in different types of work, including Child Art, is indispensable to the good teacher.

Another confusion that should be clarified in the minds of teachers is the confusion of art with the expression of beauty. Art is not only concerned with the expression of beauty in the Greek sense of the word, the sense of finite, formal harmony, unity and proportion characteristic of classical art. Art may be tragic, dramatic, romantic, decorative, descriptive, religious. It may express the ideas of terror and horror, just as it may express the feelings of peace and calmness. It may depict the glories of heaven or the horrors of hell, the peace of the

countryside or the terror of war, and yet it may be good art. Failure to understand this often leads to the imposition of one concept of art and the inability to recognize any other.

The good teacher should also be aware of the stages through which a child passes and the manner of drawing natural to the child. The child has a non-photographic manner of drawing. He does not use light and shade and perspective, nor does he use natural proportion. His is a linear symbolic style much more akin to primitive art. He lives in an imaginative world of his own, and he draws as he knows and visualizes mentally, and not as the mechanical vision of his eye records. Proportions in his pictures may vary according to his interest in individual objects and the space available for them, and yet his pictures, lacking in technical skill of a representational kind, in natural proportion, perspective, light and shade, may have an abstract proportion and an aesthetic quality, in terms of pattern, balance, rhythm, unity and harmony that is even more powerful than the skilful work of an adult. A child uses line, shape and colour to communicate his feelings directly. Child Art can be pure and very moving. An understanding of Child Art will help in the appreciation of primitive, modern, and folk art, and an appreciation of such forms of art will help in appreciating and understanding Child Art.

The good teacher next requires an experimental and practical knowledge of the different media children generally use—pencil, charcoal, crayon, pastels, powder colours, water colours, lino-cuts, potato-cuts, coloured papers and waste materials, clay for modelling, and combinations of these media; and together with these an understanding of the difference between creative methods and exercises, and mechanical methods and exercises; the value and use of each, and their relative values. It is essential that the teacher encourage the expression of the child by giving him interesting subjects within his experience of life and the necessary freedom to interpret them in his own way. This recognition of the child's personality and individuality, this acceptance of the child's natural method of expression, this respect for individual freedom, is essential for any true development of the child and his art. The growth of the child cannot be forced by mechanical methods any more than we can mechanically force open the petals of a bud to make it flower without destroying both bud and flower. We must accept the child's natural pace of development and work in terms of it.

The wise teacher knows how to adapt his teaching, his media and his methods to the needs of each stage through which the child passes. Young children live in an imaginative world of their own, they draw not as their eyes see but as they know, and they are not capable of the fine, delicate work of the adult. Consequently such work as model drawing and intricate line drawing have no place in the class. What children require are large, inexpensive papers, proportionately large brushes and liquid colours, or thick crayons or coloured chalks with which to swiftly and easily record their ideas, in large, bold and may be

crude drawings. Inexpensive papers that will allow easy replacement and a generous usage, and at least seven or eight colours—yellow, red, ochre, blue, green, brown, black and white.

Children sometimes prefer drawing to painting. Soft pencils, charcoal, crayon, coloured chalk, or a brush with one colour may be used. Some children prefer coloured or tinted papers to pure white. They find warm greys, buffs and creams more attractive and sympathetic to use. There is no reason why they should not try out combinations of media in both pattern and expression work—crayons with water colours, paper-cuts with pastels or powder colours and so on. Children enjoy using these media and mix them very well.

REFRESHER COURSES FOR TEACHERS

The language of art is line, form and colour, and the artist uses them as a writer would words, or as a musician would use the keyboard of a piano to express his feelings, ideas and emotions, not in imitation but in expression. And the simplest approach seems to be through the abstract form of pattern and design to two-dimensional expression. Letter-writing patterns, with Devnagri, Dravidian, Sinhalese or English letters, are very useful to begin with. These can be used in repetition or drawn large to cut up the surfaces of large papers into convenient areas for decoration. One of the results of such work is to remove art from the realm of the imitation of nature and to emphasize pattern, rhythm, harmony and unity, the basic principles of any art. These abstract exercises in pattern liberate innate powers of expression very quickly.

Two-dimensional picture-making in terms of coloured paper-cuts emphasizes the decorative element, the necessity for selection, rejection of the unnecessary, simplification of the essential, the need for arrangement in terms of the picture space, and helps the teacher to work within the limitations of a medium. This exercise makes the next step of two-dimensional linear expression easier. With teachers who have no knowledge of figure drawing the first step is an imaginative flower piece of still life, either seen and drawn from memory or drawn entirely from imagination. Once again the emphasis is upon simplicity, composition, decorative quality, unity and harmony, and the expressive use of line and colour. It is seldom possible in a refresher course of a few days to do much more in practical work. Three-dimensional painting requires much more time, but it is hoped at least through illustrated lectures on art and the use of creative exercises in the expressive use of line, form and colour, and in the expression of ideas, feelings, and emotions, to introduce teachers to the creative and expressive stream of art as a means to understanding the child's attitude to colour and line.

In some of our schools good use has been made of group work by intelligent teachers. In one school particularly, large murals incorporating information derived from other subjects have been a feature of

art education. The children have been free to paint on panels of brown paper, 15' or 20' long and 4' wide, pasted on one wall of the classroom during their lesson times, and whenever they chose during their free time. The results have been most stimulating. It has led to wider and deeper reading to acquire an intimate knowledge of plants, animals and the various details required, and has developed a lovely, large, bold type of painting. Education through art is a practical possibility, and can lead to fuller development of the whole personality of the child.

W. J. G. BELING

MUSIC AND SINGING IN SECONDARY SCHOOLS

** Music as an Aid to
** Discipline, Interest and
** Understanding
**

*There is music wherever there is harmony, order and proportion;
and thus far we may maintain the music of the spheres.*

Sir Thomas Browne.

THERE is another kind of music in the sound of happy children's laughter and the measured movement of many feet; but in turning our thoughts to music as a school subject, we must first of all agree on its value in education. Music indeed 'hath charms to soothe the savage breast', and its influence is nowhere felt more strongly than in a school, where all the faculties are developing towards order and proportion, both in individuals and in the corporate whole.

THE UNIFYING INFLUENCE OF MUSIC

Many years ago, in a preparatory school for boys in England, I was one day given a real thrill by hearing a class of small boys *sing* the two-times table. We had made up a tune together, and the novelty proved a great success. Certainly one learns words very easily if they are sung, but the real success was in the unity of the class, and in its rhythm. It is when music and singing can introduce unity and rhythm that its greatest value lies in class teaching.

As for the moral and inspiring influence of music, that is almost immeasurable, for it has very secret and far-reaching consequences. If we judge the value of a subject by results, then I think there are few who do not feel all the better after singing with others. It would be very difficult to foster any hatred or uncharitableness in a room where many are singing harmoniously together, be they old or young. The satisfaction of contributing to a pleasant sum-total of sound, and hearing the result improve week by week, can be every bit as rewarding as a more individual achievement with pencil or paintbrush. Listening to music, or taking part in some kind of music-making, has a strong controlling and guiding influence on us all.

TIME AVAILABLE FOR MUSIC

I do not know how much time will eventually be set aside in the secondary schools of India for the study of music, but I hope that one 40-minute period a week for every class may be the minimum for singing together. Of the arts that express the imagination and appreciation of beauty, music is one of the most rewarding for children to study.

In the primary section, there should be at least one period weekly of percussion band, besides the singing period, and the music classes should contain plenty of variety. Listening is especially important for very young children, and they also quickly respond to the idea of

action to music, including silent action while music is played, or a song sung to them. Music can also be a great help in control and discipline, and the youngest forms readily learn to move rhythmically together in marching or exercises. Singing has the added effect of being physically very beneficial, and some music introduced for short spells in the middle of more 'concentrating' lessons is often very refreshing.

In junior forms, between the ages of about eight and thirteen, it should be possible to allot two periods a week for music of some kind; one to be singing together, and the other either instrumental or appreciative. The teacher should be qualified in the subject and given scope to vary the musical interests of the various classes.

In the senior school, where only one weekly period may be available for music, I would suggest alternate weekly lessons in singing and musical appreciation. This last covers a wide field, for there is much that can be learnt in listening to good music: in analysis of it, in discussion, in discoveries regarding its composition and history—in fact the subject is very wide, whether approached through the Eastern or Western mode. During the years that a child is at a secondary school, any special aptitude will naturally become evident, and specialization may be encouraged as soon as the school-leaving examination is over.

SINGING CLASSES

The songs chosen should be interesting to the children, and if possible connected in some way with their everyday life. They will best enjoy songs about their countryside, the farmers and fisherfolk, and traditional tunes and words; besides songs of action, sung to some routine movement in such occupations as spinning or rowing a boat. Children quickly see the point of singing while they work or play, and they often make up such accompaniment to action by themselves.

One of my memories of Bombay is an evening under the famous Gateway. A colourful circle of Koli fisherwomen were singing as they danced—a fascinating rhythmic movement accompanied by a beautiful repetition of united voices. The unity and rhythm of their dance was universal in appeal, and those of us who knew no Marathi were as charmed and delighted as any who stood watching that happy group of women. Let us learn from such an incident that the spirit of song and rhythm need not depend on words or language. Nonsense is almost as nice to sing as sense, so let us include some old rhymes and number songs in our music for class work. Language difficulties need not stand in the way of enjoyment, and many a melody can achieve new interest when sung to other words or vowel sounds. In the morning assembly, when most schools begin the day with prayer and praise, let there be variety of choice, so that the spice of life may be enriched by the addition of music, which has all the variety of the wide world to offer, surmounting all barriers of boundary, creed or race.

The weekly music period in the senior school can be varied to suit each class. When boys' voices are breaking, for instance, listening might be more enjoyable than singing. In girls' classes, when Western music is taught, it should be possible to include more part songs as they become proficient in singing in harmony. This also contributes towards greater enjoyment, and hence to a happy cooperation and good discipline.

Dullness in a singing class is often a cause of indiscipline, and we must be careful not to ask of our classes an attention that we would not give ourselves, at their age! An important point regarding class control is that the teacher should give the children undivided attention, and in a singing class an accompanist should be available. Another vital condition is that the teacher should never go into class without knowing exactly what is going to be done, and yet in a state of readiness to change it entirely on the spur of the moment. In this way, the responsiveness of a class can be sensed and stimulated, and the art of teaching found to be at its truest and best, because the teacher is taking full part in the unity and activity of the classroom. There are days when something unexpected and entirely new acts like magic in any school.

INSTRUMENTAL MUSIC

'If music be the food of love, play on.' If *not*, please do not encourage a child to play an instrument it does not enjoy. Piano lessons, for instance, are sometimes available at school, but practice at home is essential and many parents regret the expense when progress is not made. I have known a piano class of about six children taken together prove very successful for early tuition, providing an extra stimulus besides being six times cheaper; but that was in a private school where six dulcitones were available in one music room. It proved a most interesting experiment, however, and it might be successful in other ways—the study of an instrument is often debarred by the expense of individual tuition.

Perhaps the easiest and most successful instrumental music class is that of the percussion band. Training in this is often included in a kindergarten teacher's subjects, and it might well be extended further up the school. The natural response to rhythm, the study of musical phrases and modes of expression, are all quickly adapted to this band work, and the instruments need not be expensive.

Another most interesting possibility is the bamboo pipe. Once the teacher has made a pipe and learnt to play it (for the cost of about one rupee) I think the enthusiasm would spread quickly. A school orchestra might eventually evolve, with strings and wind instruments of a greater range and scope. Bamboo pipes are made from ordinary bamboo, with the knots duly bored so that air has free passage. Treble, tenor and bass pipes can be made, the length and size of the bore deciding the pitch. Instruction as to the making of a pipe (and it is a precise and fascinating occupation, needing a few special tools)

can be obtained in books published on the subject, and the children first make their own instrument, tuning it correctly as they go, until the completed pipe gives a range of about ten notes. It is then possible to play tunes by numbers instead of from written music, if preferred, and in about six lessons the musical results can be surprisingly effective and enjoyable to a class, with melodies played either in unison or harmony. Here it should be said again that the best results will be where the teacher takes the fullest possible part in the activity of the class; and it needs careful organization (indeed it is a carpentry class in a way), and preferably with no more than about fifteen children at a time. The pipes made in this way are similar to the old recorders, and they can be accompanied by soft percussion instruments; but their sweet tone is perhaps most beautiful when it is unaccompanied. How well I remember a quiet corner of a playing field where a boy was sitting, playing his pipe, oblivious of anything else for the time being, in that quiet hour between school supper and bedtime on a summer's evening!

THE ART OF MUSIC AS A COMPLEMENT TO OTHER SUBJECTS

•Making music is one of the most satisfactory of the arts because its effects are so direct upon feeling and interest. The development of skill in any art or craft fulfils a vital need in all of us—that is, to *make* something well. Such a skill and achievement does, too, tend to increase the general ability to excel in other subjects. A girl who can sing well is naturally interested in the scientific study of acoustics. A boy who has a practical knowledge of how to *make* a box is somehow more at home with a problem about its cubic content. He will naturally enjoy too designing a possible cover for it in his drawing class.

We all find that a sensible reason and use for our work enlivens the drudgery of routine, and the pursuit of an art or craft seems, above all, to give *point* to life. Music, drawing, painting, carpentry, weaving, making anything useful and beautiful—all add a great deal to our life because *our* achievement will probably be different from all the rest. Whether we complete a sum or not is rarely quite so interesting (though of course we do it obediently) because the answer cannot provide such interesting variety.

Music can add enormously to the efficiency and enjoyment of physical exercise, and every P.T. instructor will agree that marching to music has an added rhythm and exhilaration. The voices of a crowd of human beings can sound discordant and almost frightening in their rough variance; yet the same voices singing in unity and concord can inspire the listener with faith in the potential greatness of mankind. Music can stimulate and control the movements in massed drill so that a new unity and rhythm are achieved. Music can be used as a quietening influence, and as an occasional aid to concentration, in such occupations as sewing and cane weaving. In the study of history and geography, the music of the period or the place can greatly enlighten

our understanding and interpretation of characteristics and facts. In a great many varied ways, music of one sort or another can enlarge and colour the horizon of the student until its light shines on all other study.

OUT-OF-SCHOOL POSSIBILITIES

I have been supposing that the average secondary school is composed only of day-children. Where there are boarders, the scope for activities out of school is much greater and of more variety as regards music, for it is a natural part of life wherever a company of children is gathered together. Musical plays and concerts can quickly be arranged by the children themselves, given the encouragement and the time, either in forms or 'houses', or by individuals. Inter-school competitions in singing and entertainment soon become popular, and a Music Club is usually one of the most keen out-of-school week-end gatherings. There is a never-failing joy in discovering the unsuspected talent hidden in a school (often in the most unlikely quarter, and even amongst the staff!) and the teacher of music will usually find that the items offered for an impromptu concert will be more than can be fitted into the time available.

CONCLUSION

To sum up. Let music have but the opportunity to grow amongst children and it will bring unbounded interest and joy to school life, both in and out of class. Each one of us is born with that oldest of all musical instruments, the human voice. Let us train it in youth to sing and speak musically, alone and with others; and where there is the urge to play other instruments, let us encourage that also. Rhythm and musical sound are a natural heritage of every child.

Wherever music can enliven and enrich school life, let us include it as much as possible in the curriculum. The subject itself is so versatile and varied that we have in music a perfect instance of the vital importance of any art in school life. It is so much an expression of the diversity of mankind—in the feeling, imagination and personality of every individual. A school exists for the education and development of that diversity, and to weld it into one harmonious whole.

MARGERY GREEN

MODEL-MAKING

* And the Variety, Value *
* and Use of Models *

ALTHOUGH modelling as a plastic art receives a good deal of attention, the use of models in other ways in education is too often overlooked. This has come about partly because of a common belief that learning must be from books, and partly from certain widespread attitudes to constructive and manual work. Those who can encourage a greater use of models in teaching will contribute to two things: improved learning and more sensible attitudes towards manual work. These ends however will not be achieved unless pupils make, or help to make, the models in question. It is, in other words, not only the model which matters, but the experience of making it. In this lies some training in skill and resourcefulness, the psychological satisfaction of constructive work and the social values of cooperative endeavour and manual experience.

TYPES OF MODELS

In TEACHING (March 1951) I suggested that models can be thought of as falling into three groups: (i) Scale models which are made as nearly as possible to an exact scale and with as much detail as possible. In most cases such models will be smaller than the original object, but this is not always so. It is often convenient to have a full-sized model of some not very large object which is too rare to be handled. Similarly it is often useful to have enlarged models of very minute objects, in order that their structure may be more readily seen.

Scale models can be thought of as of two classes—those with a great deal of accurately reproduced detail and those with only that degree of detail which will help to build up a general impression. The former are examples of 'fine-scale', the latter of 'coarse-scale'.

This type of model finds its most useful application in relation to scientific and technical subjects. Production of such models is exacting and time-consuming and the efforts involved cannot always be justified on educational grounds.

(ii) Functional models which place emphasis upon mode of working rather than on the structural aspect. Thus these models may be excellent working examples of fine-scale work—or they may be highly impressionistic devices built out of 'sealing wax and string'. For specialized training and advanced study functional models are of necessity somewhat complex; but for building a first broad idea, as an introduction, a functional model may be reduced to the barest essentials.

(iii) 'Take-apart' models are, to some extent, a combination of the intentions of the two kinds previously mentioned. The exactness of scale may be reduced to achieve simplification, but there has not been a complete stripping away of all representation—the model looks like the real thing, in a simplified way. It may or may not be functional;

but the fact that it can be taken to pieces easily and quickly (and also put together again) helps to increase understanding of function through structure.

So elementary an analysis of the vast variety of models can only be justified on the grounds that, as teachers, we are concerned rather with their educational value than with their classificatory variables. This being so, attention must now be turned to the question of this educational value. In what does it lie, and in what ways can it be exploited?

THE VALUE OF MODELS IN TEACHING AND LEARNING

In a previous article (TEACHING, March 1951) I referred to the general values of the visual approach in teaching, a point which is more fully explored in a forthcoming book.¹ Models, though they do not share all the attributes of the visual method, are possessed of a number of valuable qualities: (i) They are three-dimensional, thus avoiding difficulties of understanding which sometimes arise through the use of two-dimensional representation or from limited ability for spatial perception. (ii) They can be used to deal with problems of size, by making them at either reduced or enlarged scales. (iii) They contribute to the understanding of structural relationships, especially in the case of those which can be taken apart. (iv) They contribute to the understanding of the mechanics of action and the sequences of processes, when they are of the functional type. (v) They can be used both to simplify the complex and to synthesize actions and ideas into a whole. (vi) They can contribute to the 'illusion of reality', especially where they are to scale and with representational details—and still more so in the case of dioramic models, in which a heightened perspective is achieved. (vii) Model-making, as a pupil activity, not only contributes to the acquisition of skills and the application of theoretical knowledge, but challenges ingenuity and strikes at interest. (viii) By demanding manual skill, it can contribute to a better understanding of and attitude towards the manually occupied. (ix) It provides the psychological satisfactions of constructive achievement and hence contributes to the development of personality.

USING MODELS IN TEACHING

If models are to make a maximum contribution to the educational process it is necessary not only to understand their nature, but also their use, for it is through their proper usage that their potential values are exploited. It may at once be pointed out, almost in axiomatic terms, that those who have helped to make a model will best understand it and derive value from it. The reason for this is the key to the use of models. The making of a model is an active process; not only a physical but a mental activity, which has been presented as a problem and has stimulated thinking.

¹ T. L. Green, *The Visual Approach to Teaching* (O.U.P., in the press).

In brief, the model should pose a problem or answer a problem, and not be the mere object of passive observation. The teacher's approach then should not be, 'Here is a model to look at . . .' but 'Use this model to find out how . . .'. Models have no magic of their own: like most other teaching materials, they depend upon the teacher's ability to clothe them with interest. Within the limits of a short article it is not easy to offer extensive advice on the use of models, beyond the general statement that they should be used constructively. As an illustration of typical situations the following examples are given from the writer's own classroom experience:

(a) Properties of the Circle

When the youthful pupil is first introduced to the relationship of radius and circumference it usually appears as a bald statement which he must memorize and use. Previous experience with beginners having shown that this invariably took longer than anticipated, and that some pupils never seemed to grasp it, led the writer to use a model aeroplane to teach this topic.

English schoolboys build and fly model planes, which are powered with strands of rubber, the unwinding of which rotates the propeller. These models can be tethered by a fine cotton strand between one wing tip and a post round which they fly—rising off the ground under their own power and finally gliding to a stop.

Two boys were invited to bring models, let them be X and Y. Each model was tethered to a jumping stand by using a large button on a strong pin as pivot. The cotton used was of such a length that the distance from the pivot to the centre line of each model plane was seven feet.

After each model had been flown several times I asked which was the faster? There were divided opinions. We did it again, everybody trying to count seconds during one complete circle. Again there were varying estimates—so we borrowed the stop-watch from the sports master. Then we knew that X was quicker than Y. Here I asked a further question: 'How are speeds usually given?' 'Miles-per-hour'—everyone knew that of course. Then a boy providentially asked: 'How many m.p.h. does X do?' Discussion showed that of the two essential facts we only knew one, the time. Then arose the basic question: 'How far is it round the circle, Sir?' Well, I told the class to think how we could find out, and so we got the idea of tracing out the flight circle and measuring its length. One boy said, 'We shall need a curved ruler.' Another replied, 'Don't be silly, we can stretch a long cotton thread around and measure that,' which we proceeded to do, and then worked out the speeds of each model; but we did it in feet-per-second. At this point I started a discussion about other circles, the traffic roundabout, the central macadam circle at the airport—we agreed those could be measured. Then we went on to bigger circles, the Equator being the biggest anyone could suggest.

Everybody agreed that it was not possible to measure that with a piece of string! And yet, as I pointed out, the distance round the Earth was known and was even given in the geography book the class used! More discussion, until a bright boy said, 'Well, perhaps it's like area, if you multiply one thing by another you get the answer in some sort of way.' So I asked what was the 'some sort of way' we could use. Of course, no one knew. Then I at last produced the magic formula. They just lapped it up, and everybody could work out the circumference once I gave them the radius; and the brightest boy of all slyly said 'Wasn't it lucky you chose seven feet first time, Sir!'

Incidentally, we used our model planes for many other purposes: for practice on areas (measuring wing surfaces), for learning about the centre of gravity and so on.

(b) Geography and Geology

The next example concerns a static model and it all began when some boys brought in some sea shells found in a local gravel pit. We soon reached agreement that the gravel was once a beach of some kind and that there must have been a lake. Soon the questions multiplied in number and complexity: Where did the lake go? What held the water in it? How deep was it? and so on. And so we set out to make a relief map model of our local area; on this, which was carefully made to scale, we marked the heights of various key points, especially of the gravel bed from which the shells had come. The school, and the gravel bed, lay in a valley which in one direction ran up into the Cotswold hills in England, and in the other opened out into the Severn Valley Plain. Our model showed that if we dammed up the mouth of our own valley we should make a lake, and in fact we did so. We wondered if, in the Ice Ages, there had been a great ice barrier holding back the waters? Then, from our model, we found a place where there were high vertical cliffs on each side of the main Severn Valley. So, on our model, we joined them together with plasticine and used this as a dam to hold back water. Our valley filled, and when we drained the water out there was a 'tide mark' made of the powdered chalk I had sprinkled on the water—and it was just where our gravel bed was today!

Even if the geologists wouldn't accept our ideas (!) in detail, at least we had proved that our valley would have been a lake if its mouth had been dammed, or if the great Severn Valley had been dammed. What breached the cliffs at Aust we couldn't find out, but we had all learned a lot, and in many years of teaching I cannot recall a class of 13-year-olds which was more interested in local geography and geology. That interest, which led to examination successes later on, also produced at least one very good geographer, and gave to several boys a life-long hobby. And it arose out of using a model as an attempt to solve a problem.

(c) History and Social Studies

In a village school, in a very rural area, my class of 14-year-olds made a series of models in connexion with history and social studies; but I came in only as a consultant, or when the boys asked me to help them with a tricky bit. This series showed the Saxon village so far as it could be modelled from the existing data, the later feudal village with its manor (still the 'big house', though with many additions), then the Elizabethan scene, next the mid-eighteenth century appearance, then the opening of the twentieth century, and finally the village in 1940. All the models were to one scale and, in making them there was a continuous use of the local library, old books and family heirlooms. The task was physical, but the essence of it was mental activity.

(d) Physics, Chemistry and Biology

At a more advanced level comes the use of models, which may themselves be very simple, to illustrate crystal structure, the structure of the atom and molecule, the behaviour and structure of the chromosomes or the structure of some anatomical organ. These can be built up with plasticine while the subject is being studied.

MAKING MODELS

This aspect of the problem is far too voluminous to be discussed here, but a few useful hints can be offered. First, it must be realized that only very simple resources are needed. One does not need a machine shop nor a training in carpentry: only a few hand tools and a lot of scrap material. Pieces of wood, plywood, cardboard, sheet metal, empty tins, wire, rubber, cork, and the like should be hoarded. All broken mechanisms, like old clocks and watches, electric bells and so on should be preserved, and everything else likely to be of value. So far as tools are concerned there should be a small hand saw, a tenon saw, a fret-saw, a hack-saw and a jeweller's saw for cutting. Then a couple of planes, a series of files, a hand drill and a carpenter's brace and bits, together with soldering iron, squares and rulers, hammers, chisels, gouges and screwdrivers. Boxes of assorted nails, screws and nuts and bolts are necessary. A few of the major items must be bought as a basis, the rest can be added as funds permit.

Clay, from the local pottery, from the river bank or from ant-hills, is an excellent and cheap material for many kinds of modelling. It is a good idea to start with clay modelling simply because it is cheap and a versatile material. It can be followed by work in cardboard, then wood and lastly metal.

In the same way, start with simple models: the history of the house, built in clay, thatched with bits of grass and painted—the later more complicated ones can be built from cardboard or wood. In geography, first a sand table, then a clay relief model 'made by eye',

lastly a scale contoured model cut from sheets of plywood. In science, the same: a simple compass, a simple Morse tapper, a simple electric motor, and then the more complicated things.

When skill has developed, a diorama can be attempted, say a scene from the geological past. The diorama is a three-dimensional picture, solid structures in the foreground which pass through bas-relief into the flat background, the whole thing encased in a wooden box with a glass observation front.

Those who want to build models will find that experiment and experience, trial and error, are the best teachers. These guides can be supplemented by visits to museums and the use of reading materials which deal with model-making from the educational angle.

T. L. GREEN

SOME PROBLEMS IN CHILDREN'S PICTURE- MAKING

** Practical Suggestions to **
** Overcome Common **
** Shortcomings **

INTRODUCTION

CREATIVE work with paint is one of the best means of education according to modern ideas. All small children enjoy it, most children over eight like it if properly taught, and a proportion of adolescents find it congenial. It should therefore be given to all primary classes, at first for one period at a time and then for an hour to an hour and a half to children over eight. Beyond the age of twelve it could be made an alternative to handicrafts or music.

The aim of the painting lesson is to give expression to the child's creative powers with the sense of satisfaction that results from such work. It does not aim at imparting adult skill in representational drawing. If the teacher tries too hard to correct and instruct the child, all self-expression is lost and the child feels frustrated and is afraid to draw for fear the teacher will say the work is wrong. It is now a commonplace in art teaching that we must let a child express himself. But if the teacher does nothing but leave the children alone, the result soon ceases to be child art. Children stop being original, they lose interest, finish too soon, begin to play about in the art lesson and the teacher too becomes bored. The following are a few suggestions as to what can be done in an art lesson and may be found helpful for children from about eight to fourteen years, though some of them may even apply to pupils both younger and older than this. A number of common shortcomings have been taken into consideration. All who have tried to teach children to paint original pictures will be familiar with them, particularly in pupils who were not taught on modern methods from the age of five years to eight. Efforts along the lines suggested may help to achieve progress in classroom art work without demanding very special talents on the part of pupils or expensive equipment for the school.

SPOILING THE MASS EFFECT

An enthusiastic child has a good idea for a picture. He draws and paints eagerly for half an hour and there is a charming result before us. Figures and objects are painted in effective arrangement and the whole makes a delightful mass against the unfilled spaces on the paper. Then, while the teacher is at the other end of the class, he spreads thick brown paint over the lower part of his picture, or attempts to fill all the small spaces in the upper part with strong crimson that lies unevenly on the paper. He does this, he says, because ground is brown or there is a red brick wall at the back. The entire effect of his first composition is lost. Often the background is not painted in such strong colours, but its tone value is exactly the same as that of the

original bit of work, neither darker nor lighter. In both cases, the pattern of shapes that he intuitively created at first is lost because he has not grasped the fact that dark masses must stand out against lighter ones if they are to show up. What can be done to prevent children from spoiling their own good effects? They are right to paint first the portion of the picture that interests them most. The problem then is how to complete it.

One method is to give the pupils light grey, buff or dull yellow paper. When some objects have been painted on it, there are no areas of glaring white that must be filled in. The coloured paper itself is a background and a few light strokes can take away the unfinished look without lessening the effect of the earlier painting. Horizontal painting in light colours will indicate ground, and similar treatment can be used for the sky. Dots, stripes or suggested brickwork will give the effect of interiors. When children want to use a strong blue for the sky, they can be shown how to mix a good deal of white with it and produce a pale colour that they at once think suitable for the sky. This is much lighter in tone than colours that have not been mixed with white and so will not spoil the composition.

A set of paintings can be pinned up at a distance in front of the class and the pupils will soon grasp the idea of making certain objects 'stand out'. They are likely to see the point better looking at the work of other pupils than at their own, for they see other people's work with a fresh eye. This business of light and dark tone values, one shape silhouetted against another, the value of contrast and balance, will form one of the most important things we have to teach in art lessons. The use of coloured paper and the study of tone value raises another point. Water-colours are pale and thin and they are not really suitable for use on a coloured ground. Poster or powder paint is opaque and gives a much more satisfactory effect.

TOO MUCH PENCIL WORK

Many children begin with interest and do good creative work, but it is in pencil. It seems impossible to induce them to work on a big scale with a pencil, even on a large sheet of paper. If they are given a stick of artist's charcoal, the medium seems to encourage them to do bold work. When they have pencil, they are tempted to do too much fine drawing and then merely colour it with paint, filling the spaces with flat washes. This is not really painting. In painting, most of the creative work, the quality of the effect, the drawing of details, should be done with the brush, and the freer the work, the better the result. With charcoal it is impossible to do fine work and pupils soon abandon it and start on the paint, with good results. Small children may start directly with paint, but older ones like to have some means of planning out their pictures and charcoal does well for this. They should also learn that any rubbing out with an india-rubber tends to spoil the surface of the paper for painting. One can

dust off charcoal drawing with a dry rag and not affect the surface. Direct drawing in coloured crayon is quite a good substitute for paint for small children, provided the crayons are soft enough to give a strong coloured effect. Some teachers get a good result by letting the six-year-olds draw quite small pictures with crayons and then dictate a few lines for the teacher to print underneath. In this way they learn oral composition before they can write or spell much and are interested to try to read what they have dictated.

Whether the work is in charcoal, paint, pencil, or crayon, the best work—the most creative—is that which is done once and left, not that which is gone over several times.

WORK NOT LARGE ENOUGH

Most children begin by drawing all the objects and figures too small and they often make them touch the bottom edge of the paper. They are interested in the individual object and have not thought of their whole paper as a space to be filled. The teacher must combat this tendency in various ways. He may lavish praise on the two or three pupils who have begun on a big scale and others will rub out and start again, hoping to win his commendation, and then find how much better their large work is for their picture. Sometimes he may set as a subject a single figure, insist that the paper be used vertically and not horizontally and that the figure shall stretch from the bottom to the top of the paper. It is amazing how hard it is to induce pupils to obey this instruction. Usually he will have to go round the class ten minutes after they have started and say to most pupils: 'I want you to make that bigger. Make your girl as big as that. Your house could come right up here, couldn't it? I think that tree could go right up to the top of the picture. Are you not going to have anything but sky in all this space?' This may sound like undue interference with individual self-expression, but experience shows that much better compositions, much truer self-expression, results from such insistence. Good composition depends on the use of spaces as well as masses in a picture but this can hardly be done unless the masses have a considerable size to start with, so if we urge children to fill the whole space, let one object touch or even overlap another, our reward will be much better pictures. The use of easels may promote large work, but it is quite possible to set the fashion for large bold work even if the class has only ordinary desks to work upon. An important element in every lesson is the pinning up of work at a distance so that pupils can judge the composition as a whole and get an impression of other pupils' work.

ADMIRING THE WRONG THINGS IN A PICTURE

Teachers of child art aim at artistic values, good composition, good use of colour, varied tone value, interesting shapes. Many children and their parents and other adults admire conventional prettiness, they like drawings resembling cartoons, fashion drawings

and illustrations in magazines. The teacher will have to fight this demand, which is the opposite of creativeness and leads nowhere. A closer inspection will show that such figures and scenes are not the fruit of observation. They do not express appreciation of the forms of real things. A true artist, even a young child, is seeking to record something that he feels and wants to express, but these young people are already learning to 'give the public what it wants'. They turn to other people's pictures and not to reality for their inspiration and we soon realize that all their pictures are made to a pattern, the faces are alike, the hands and feet are too small, the poses have little variety, trees, mountains and buildings are conventional and have no individual shapes. The child whose work has real merit may draw clumsier figures with no pretty faces, and stick-like legs, but there will be something in his picture that is truly original and creative. We must learn to look for that something and not condemn a picture because it is not as we would have drawn it. Child vision is very different from conventional adult vision and quite often records some aspect that we have not noticed till we see it in a child's picture. To insist on a correction according to our ideas would alter the character of the work and probably spoil the composition.

It takes patience and skill to learn to appreciate children's pictures. It is also quite hard work to keep on inspiring them, for even good pupils tend to lose inspiration and repeat themselves so that soon their pictures degenerate and have nothing fresh and original in them. A good class listens to the teacher's preliminary suggestions and then sets to work eagerly. The pupils work quickly and soon have a picture planned and begin to paint it. They will go on working for a good long time—the older ones will go on longer than the younger ones. Then, after an hour perhaps, several will say that they have finished and soon all but a few will have done. An hour and a half or 80 minutes will prove a convenient length of time for the class, allowing for beginning and clearing up. Some few may want to finish later, but this is usually done quickly. Then we may believe that we have achieved good work. The majority of the class have expressed themselves with zest and diligence and go out happy. 'What are we going to paint this week?' is the question that will be asked as soon as Monday comes round, and we shall then know that we have opened a way of enjoyment for children. 'I think the art lesson is the best in the week,' will be the comment.

GAY HELLIER

DRAMATIC ACTIVITY IN SCHOOLS

* Dramatics should be *
* an Integral Part of the *
* Educative Process *

PLAY-ACTING in schools is viewed in different ways. There are 'progressive' teachers who believe that if education means imparting a zest for life, creating an imaginative understanding of our fellow beings, and developing noble human values, such as love for things beautiful, charity, graciousness, and a desire to alleviate the suffering of others, then there is no more effective way of doing so than through dramatic activity in school. But 'practical' teachers think that in actual fact it teaches nothing substantial, but only indulges the fun-loving instinct of the young. These people hold that teaching should be a serious business, demanding discipline from both the teacher and the taught. And by discipline they mean a strained effort, a quietness of atmosphere, tackling something which is difficult; and they argue that play-acting is the negation of all these.

We have to be clear in our minds about this question of discipline, and what is called substantial teaching, before anything is said about the place of dramatics in schools, because this question keeps on cropping up and holding back much that is otherwise accepted as educationally sound. Surely equating education with a mere drilling of information into the young, and discipline with graveyard silence, is a fallacy. We learn more through interest, mime, and doing things than through merely listening and memorizing. Lecturing and dictating on the part of teachers, and listening and memorizing on the part of the young, may be a quick and an easy way to impart information, but it is not an effective way to relate this information to life, or to develop human values. And after all, it is experience that is related to our lives, and the human values that we have formed when young, that matter more than anything else in life.

If this fact is accepted then play-acting should form an integral part of the educative process of the young. Doing a play in the classroom or outside it will not then be an occasion of apology, or an object of criticism, but an act of high purpose. A teacher will turn to it not merely to while away his time, or allow boys and girls to amuse themselves, but he will plan the acting of a play with some definite and significant ends in view.

What are these ends of which the teacher should never lose sight? First and foremost, it is to develop a child's imaginative conception of the part played. Dramatic activity is an opportunity for him to identify himself with the character that he is playing, and learn to think and act like that character. It is only by playing the roles of different human beings that he will realize the greatness and smallness of their lives and learn a lesson from them. Secondly, the acting of a play should minister to the growth of a child's critical faculty and

aesthetic values. Children should learn to distinguish good acting from indifferent; clear and effective speech from speech that is inaudible or which arouses a wrong response; to form ideas of what a beautiful *décor* is, and what movements and groupings on the stage are pleasing. Thirdly, children should all along feel that they are creating something and that the play is more important than they as individuals. If this is realized then they will learn of their own free will to merge their individualities in the play as a whole, and experience that supreme emotional satisfaction that comes from viewing something that is the product of one's own creative urges.

These are broad objectives, but how to achieve them? How to get an entire class interested in a play, and not only the gifted few? How to organize dramatic work during one's lessons so that it brings the maximum benefit to all, and the least wastage of time?

Dramatic activity in schools may consist of work done in classrooms, or it may be playlets produced by masters or a particular language department, or a variety programme put up by a section of the school (junior, middle or senior) or a hostel, or a performance put up by the school dramatic society. Then there may be School plays or Founder's Day plays for the public. Whatever form the dramatic activity may take, it is the business of the teacher to see that this work is undertaken with a view to furthering the growth of the child, and not allow anything to happen that may cause him frustration or anxiety. In school dramatic work, it is not the play (the technical efficiency of its production) which should be the centre of the teacher's interest, but the child. The acceptance of this principle lays a heavy responsibility on the teacher, and demands from him a great degree of tact and preparation in introducing dramatic work in his class.

Young children have an innate talent for mimicry which makes a teacher's task easy, only they tend to feel shy and to withdraw into themselves. That is why the teacher has to be very tactful, and know how to give discriminating praise, and hold back criticism that may defeat its own purpose. Dramatized versions of popular folk-tales or nursery rhymes arouse great interest in children, such as 'St George and the Turkish Knight' (*Plays for Boys and Girls*: Dent), 'The Swineherd', 'The Pied Piper' (*Community Plays*: Thomas Nelson), and 'The Hungry Tiger', 'The King Who had No Clothes' (*Drama Highway*: Dent). The fact that young children are familiar with the story of these plays allows them much scope for improvisation in acting; also, these stories have a big cast, which allows many members of the class to act all together. Children of 8 to 11 years enjoy doing plays written in the Chinese style in which the property man and the chorus play an integral part. There are two such plays in *Community Plays*, called 'The Stolen Prince' and 'The King of Nomania'. They also like doing dramatized versions of their favourite books, for example scenes from *Alice in Wonderland*, *The Wind in the Willows*, or James Thurber's *13 Clocks*. The period between 12 and 15 years

clamours for things more ambitious and romantic but with a greater semblance of reality. Thrillers such as *Shivering Shocks*, *Thread of Scarlet*, *The Grand Cham's Diamond*, or even scenes from Shakespeare's *A Midsummer Night's Dream*, *Julius Caesar*, *The Merchant of Venice* or *Macbeth* have a great appeal. Above the age of 15 boys and girls are not satisfied with short dramatic pieces, and prefer full-length plays. The whole world of drama now lies in front of them, and nothing is beyond their reach.

Some teachers point out the danger of arousing a feeling of frustration and envy in children if, while a play is in progress, they are dropped in favour of those who are better actors. This is likely to occur in schools where there is not enough dramatic activity, and the only solution is to organize so much dramatic activity that no one is left out. At any rate, this is how we attempt to solve the problem at the Doon School, where I am a master. We are a residential school with about 320 boys between the ages of 11 and 18 on the roll, living in four Houses; also all the masters live on the school estate. Dramatics is an important part of our life. We have an indoor as well as an open-air theatre, where numerous plays are performed every year. Some of these are the outcome of dramatic activity in the classroom, and some are produced by the boys themselves. Each form does a book of plays as part of its course of study, besides doing poetry and prose. Boys between 11 and 12 do one of these: *Junior One-Act Plays*, 1st and 2nd Series, or *Plays of Adventure* (Harrap); 13 to 14-year-olds make a choice out of Shakespeare's *A Midsummer Night's Dream*, *Plays for Middle Forms* (Dent), *Modern Plays* (Dent) or *Badger's Green* (Dent); the next age-group chooses out of *Julius Caesar*, *As You Like It* and *Macbeth*; 15 to 16 year-olds can read *Henry V*, *Twelfth Night*, *Hamlet* or a modern play—*Strife*, *The Rivals*, *She Stoops to Conquer* or *Richard of Bordeaux*. For Cambridge School Certificate, boys offer both a Shakespeare and a modern play. Sets of all these plays are available in the school store, and are given out to the forms whenever asked for. Masters do not attempt to do these plays critically, unless set for a public examination: their approach is through the 'play way'. Parts are allotted to boys by the teacher, and the reading of the play begins, which is often great fun. Sometimes the teacher himself takes a part to set the tone, or reads out instructions that are given in the play. Important speeches or lines are then set for mid-week homework, and these portions of the play are re-done, and different sets of boys tried for the parts. Quite often boys want to perform plays for the school 'Saturday Entertainment'. Some form of entertainment is provided every Saturday evening, in the way of a film, a musical concert, or a play, and of these the plays performed by the boys are the most popular. A master is generally associated with the production of such plays, but the production, stage management, collection of property, make-up, light effects, *décor*, etc., are all planned by the boys, and usually by boys of the same form that is doing

the play. Then there are plays done in each hostel for the last night of the term, called by the boys 'Golden Night', to which they invite parents and friends from the town. There is also the School play, sometimes more than one, in May, and a play for Founder's Day in October. In short, there are numerous opportunities for boys to experience the joy of doing a play. More than one full-length play has been done in May when the boys have so desired: sometimes these have been rehearsed simultaneously and performed within a couple of days of each other, as were *The Winslow Boy* by Terence Rattigan and *Hassan* by James Elroy Flecker. One was performed in the open-air theatre and the other at the Music School.

All this entails much planning so that no time may be lost and the pupils' work in other spheres may not suffer. Our experience is that if boys have caught the spirit of the drama, and tasted the joy of creation and corporate effort, they do not mind a great deal of labour in order to give of their best. It is generally understood by the boys that they will not be excused from any school work on the ground that they are taking part in a play. Boys sacrifice much of their leisure so that they may do a play, and so do the masters. Those who think that interest in dramatic activity is frivolous and inconsequential, and that it is the resort of the idle and the irresponsible, do not know what they are talking about.

S. P. SAHI

INSTILLING THE APPRECIATION OF ART

* Active Participation, *
* Observation and *
* Environment *

AN AVERAGE child is naturally attracted towards pictures. A good school can do a great deal towards the building up and encouragement of this natural inclination existing in every child. There are many ways of doing it—by 'active participation', 'observation', 'environment', etc.

Active participation means the practice of drawing, painting and graphics by the child. According to Professor Cizek, the father of child art, active participation helps a child to develop a love of art. This is the first step towards making a child art-minded. School authorities however should bear in mind that a Department or at least a room set apart for art work will have to be provided if any appreciable result in fostering the love of art in children, through drawing and painting, is to be expected. This point cannot be over-emphasized. We all know that it is ridiculous to have a practical chemistry lesson without a laboratory. The same applies to a practical art lesson also. The lack of interest shown by our school authorities towards this issue is alarming. I do not intend quoting statistics here as a criticism; but the fact remains that in the whole of South India, where students at the secondary school level can take up a bifurcated course in art and where the authorities are seriously talking about the possibility of introducing advanced studies in art and art appreciation (Pre-university course), there are only three schools which can boast of art departments.

Next comes the question of having the right type of teacher for teaching. If the idea is to develop our young boys and girls into citizens who will show a refined keenness and understanding of fine arts, we must have art teachers who are not merely professional painters but also inspiring teachers capable of planning and organizing art activities in schools. In India we still do not have an institution for training art teachers. The Drawing Teachers' Examination conducted by the Department of Industries in South India is old-fashioned and obsolete. It has so far produced only draughtsmen who are neither teachers nor artists, and to expect them to instil the love of art into children is asking too much. In the American schools and universities, students can take up Art as a major subject with other subsidiary subjects such as History and English. Most of the students who graduate from the universities as Art Majors make first-class art teachers or professional decorators. The scope of the training is so extensive that it often produces artists of great merit.

Before we can plan things on such a big scale, the professional art schools and a few of the public schools with well-equipped art departments should be approached to start a one-year refresher course in

practical art and art appreciation for those teachers in secondary schools who may be teaching other subjects, but who are talented in art and who show refinement in art appreciation.

In most of our schools the environment is certainly not conducive to the better understanding and appreciation of art. We cannot expect children who grow up with cheap prints of political leaders and pictures cut out of commercial calendars to develop any love for the works of Michelangelo, Raphael, Cézanne, Van Gogh, Picasso, for the Ajanta and Bagh frescoes, the Mughal and Rajput miniatures or the magnificent bronzes of South India. Unesco has published catalogues which give detailed information (with small black-and-white reproductions) and prices of reproductions of paintings by famous European old masters and contemporary painters. Schools wanting to purchase these reproductions should contact the Delhi office of Unesco.

The Publications Division, Government of India, and the Lalit Kala Akadami, New Delhi, in collaboration with the Ministry of Education have brought out very good albums and portfolios of Indian painting (old and contemporary), sculpture and architecture.

It should be easy for a school to make a good selection from these for decorating classrooms, corridors, libraries and dormitories. Some Indian museums sell exquisite replicas of bronzes and bas-reliefs, and a few of these will add considerably to the artistic environment of the school.

Schools within the limits of big cities have the advantage of being able to take their children to periodical exhibitions of paintings. The organizers of these exhibitions should be requested by the school authorities to arrange simple talks to introduce the exhibitions to school children. Similarly, periodical visits to museums and art galleries will do a lot of good in making the children art-minded. Isolated schools should contact the Kala Akadami or All-India Fine Arts Society, New Delhi, for loan exhibitions of paintings. These associations are always keen to help educational institutions.

Schools having facilities for audio-visual aids can get a very fine selection of films and filmstrips on art from the United States Information Service, the British Council and Unesco. These films and filmstrips have a profound effect on children, especially when they are followed by a discussion initiated by the art master. A large number of our schools are becoming more and more keen on organizing educational excursions. Tourist offices started by the Government supply information about places of interest and travel facilities. The Railway Board allows several concessions to groups of students going on educational tours. This is a very healthy sign indeed, even though many of these excursions end up merely as picnic trips.

Almost every inch of India is fascinating from a historian's or artist's point of view. Properly organized tours to such places as Madura, Mahaballipuram, Chidambaram, Hampi, Ajanta, Ellora, Bagh

and Nalanda are a thrilling artistic experience to children and certainly go a long way in shaping their subconscious appreciation of art and culture.

I should like to add here that parents also can help a great deal in making their children art-minded. To do this, however, the parents themselves will have to cultivate an interest in art. The American universities have introduced extension courses in art and art appreciation. The classes are usually in the evenings so that they can easily be attended by parents and workers. This is a wonderful way of educating the parents in art, and it should be copied by our universities and educational institutions, with modifications to suit our conditions.

SUSHIL KUMAR MUKHERJEE

ARTS IN RELATION TO OTHER SCHOOL SUBJECTS

* Provide Rich *
* Experiences through *
* Creative Activities *

TODAY, education is not conceived to be merely textbook-centred instruction in the so-called academic subjects. The prevailing view is that 'Education is Life,' and as such, emphasis is being laid on the need for providing rich experiences for children through creative activities and opportunities for expression and exploration. The activity principle, i.e. the principle of learning by doing and learning by living, is gaining increasing recognition. In practice, this principle has revolutionized the place of Art in the school curriculum so that it can no longer be thought of as an isolated subject, but has to be recognized as an integral part of the curriculum.

The object of this article is to bring out how art enters into other school subjects such as Social Studies and Languages. Arts and crafts, when taught as isolated subjects, tend to be looked down upon by the pupils, who feel that as they are not examination subjects they can be safely neglected. But when arts and crafts are made the medium through which the important subjects (from the pupil's point of view) are themselves vitalized, the students' attitude is bound to change. Of course, this approach calls for a high degree of co-operation and co-ordination between the art teacher and the subject teachers.

Let us consider the place of Dramatics in the school. I would like to point out in this connexion that, in many progressive schools abroad, Dramatics is taught as a separate school subject under the guidance of an expert. For instance, in the Elmwood School, Ottawa, where I was teaching for some time, two periods a week are allotted to Dramatics in each class. The pupils are trained under expert guidance not only to act well, but also to direct plays. The school as a whole is divided into four or five Houses, each House consisting of pupils from all the classes. During the Drama Festival—an annual feature in the school—each House stages a play selected, practised and directed by the pupils themselves. I was astonished at the excellent quality of the performances as well as the choice of plays during one such festival. I was told by the teacher in charge of Dramatics that many pupils who were initially shy and were poor actors showed very great improvement after some training. I was also told that initially third-rate plays tended to be chosen for the festival, and good taste had to be gradually cultivated. Special mention must be made of the gay posters publicizing the festival well in advance and the decorations which had all been made by the pupils themselves. Prizes were given for the best plays as well as the best actors.

Experience as a teacher has led me to recognize clearly the immense scope that Drama offers for enriching the curriculum in school subjects, particularly in Social Studies. An appreciation of the past (or the

present) and its significance for us can best be aroused through this medium by enabling the pupils to live through the past. I have found to my great surprise and satisfaction that pupils not only enjoy acting dramas written by others, but also exhibit great talent in attempting dramatizations of significant historic events by themselves. To cite a few instances, the story of Asoka and the Kalinga war had such a great appeal for a pupil in Form III (8th std.) that she dramatized the events which led to the renunciation of war and the adoption of Buddhism by Asoka. Her denunciations of war through the mouth of Sangamitra who declined to choose for herself a gift from the spoils of Kalinga, but instead chose to go out as a Buddhist mendicant, still echo in my ears. Another pupil in Form V decided to dramatize events from the life of Harsha and Rajyashree. A pupil in Form IV dramatized the story of Columbus in which she skilfully brought in all the relevant factors, such as the invention of the mariner's compass, the discovery that the earth is round, the rise of Turkey in the fifteenth century and the consequent fall of European markets for Indian goods. This dramatization showed her clear grasp of the various developments which led to the discovery of the New World.

Dramatizations attempted by the pupils themselves not only ensure a clear grasp of the events dramatized but also provide an opportunity for the expression of literary talent. In this there is plenty of scope for co-operation between the language teacher and the social studies teacher. Of course, the scripts brought in by pupils are not always perfect, but they can be made to perceive any discrepancies and shortcomings and to improve the play if proper guidance is given.

Dramatic activities can be a very good means of correlating the different subjects in the curriculum. I was teaching Social Studies in Form V. The topic under discussion was the culture and civilization of the ancient Tamils. The class was referred to the Tamil literature of this period as sources which give us information on the subject. One pupil cited *Silappadhikaram* as an instance. Another pointed out that their Tamil text contained selections from this, a drama in verse written about the 1st century B.C., and that the scenes selected were very interesting. Yet another suggested that they could act the piece and the class readily accepted the suggestion. I suggested that they could request their Tamil teacher to teach the selection first and they could attempt the dramatization afterwards as a joint venture in both the subjects. The Tamil teacher complied readily and the music and the craft teachers helped in composing the music and in making costumes from simple materials. The drama was finally performed under the auspices of the Literary Association of the school, with the entire school as the audience.

Yet another instance can be cited here. When the same class was discussing the Mauryan period, reference was made to the *Mrichchakatika*, a play in Sanskrit which gives us a lot of information about this period.

The pupils who had taken Sanskrit as their second language said that they would like to act a few scenes from this play. I said that I would welcome the idea provided they could get the help of their Sanskrit teacher. Even though the play was not in the textbook, the Sanskrit teacher took the trouble to narrate the whole story to them and teach them a few scenes from the play. The pupils who staged the play finally had certainly a great deal to be proud of.

Activities connected with Social Studies can lend themselves to traditional modes of art expression. A set of pupils in Form V gave a performance of *Swaraj Katha* on Independence Day in the manner of the *Hari Kathas* in Indian villages. The standard of the performance was excellent. Songs chosen from various sources and aptly used for the Katha proved so popular with all the pupils that they were humming them for quite a long while afterwards. What struck me most was that all the essential factors in the struggle for independence were clearly brought out and emphasized, but in a very humorous and entertaining fashion. The average marks scored by the class in a subsequent test on this period were very high.

Celebrations connected with Social Studies such as the U.N.O. day, Human Rights' Day, and Independence Day provide ample opportunities to the pupils for expressing and developing their talent in decoration, preparation of posters, organization of entertainment programmes, etc. The celebration of important festivals such as Christmas, 'Id, Divali or Pongal in such a way as to bring out their social, religious and cultural significance will act as a corrective to a narrowly religious outlook.

Drawing and painting have an important place in the teaching of Social Studies and other subjects. Portraits of great personalities in History, Mathematics, Science, and sketches of historic events such as scenes from the lives of Galileo, Euclid and others, could be made by pupils talented in this art. The school magazine and the class magazine (the latter can be a manuscript one) provide scope for the expression of talent in this direction. Mention must be made in this connexion of a very interesting experiment being conducted in an elementary school (The Hyde Park School, Brooklyn) in New York. Here, an annual magazine is published by the pupils of the school, but what is interesting is that for each number a special project is taken up; Unesco, Science in Everyday Living, The Growth of New York and The Story of the Pioneers who made the United States what it is today, form some of the themes for these special numbers. It is indeed heartening to see contributions from children of Grade I onwards.

Cardboard and clay modelling, the making of toys and dolls, are some of the other activities that can enrich the teaching of school subjects. I was teaching the volumes of solids in a Mathematics class and suggested that the class could study the shapes and make cardboard models of the primitive dwellings of man (the dwellings of the Eskimo,

the Red Indian, the South African, the Indian villager have different geometrical shapes). A similar project is described in detail by Goddard in his book, *School Training of Gifted Children*. Pupils show great interest in making toys based on scientific principles—such as the rocking doll of Tanjore. Dolls dressed in different national costumes would form very interesting exhibits in the school museum. I feel that dolls have a great potentiality in the teaching of very young children from my own experiences with my three-year-old son who loves to think of his animal and human dolls as characters in the stories and rhymes known to him, and moves them like puppets while repeating the relevant conversation with each movement. For instance, two wooden dolls form Jack and Jill who go up the hill (a box) and tumble down.

It is observed that the pupil who excels in Music, Drawing or Dramatics, is not always the one who is academically brilliant, so that opportunities for the expression of talent in several directions give a feeling of personal worth to pupils who might otherwise escape recognition and encouragement. I have always held the view that credit should be given for exceptional talent in any field while deciding promotions, till such time as we can provide diversified courses to meet the varying needs of children. It is only too common to find a pupil who shows rare talent in a field like Dramatics or Music detained for failure in a single subject like Arithmetic. Some such pupils leave school because of failure, with an intense feeling of frustration and worthlessness. The permanent harm that is done to them can well be imagined.

Art experiences form one of the best ways of enriching the curriculum in the different subjects. If the teachers of academic subjects and of the various arts and crafts could plan together and co-ordinate their work, art could vitalize itself and other subjects in the school curriculum.

R. RAJALAKSHMI

TEACHING WESTERN MUSIC

* Vocal and *
* Instrumental *

IN THIS age of psychological strains and stresses and an ever-increasing tempo of living, music has come to be recognized as an extremely important factor in the emotional, intellectual, cultural and spiritual life of man. Man is an essentially rhythmical being, with a definite rhythm and pulse in his act of respiration, the beat of his heart, or the motion of speech. It is small wonder then that singing and the playing of instruments evoke a natural enthusiasm among children, and tend to create a gay and boisterous atmosphere as the class assembles.

Teachers of class singing have entertainments, concerts, festivals and competitions to prepare for during the year. Concerts provide plenty of scope for children with a definite liking for music or those gifted with good voices. Others might be given some work of organization to compensate for their being left out. As for the competitive festivals, it is absolutely essential that the right spirit and an attitude of mind of rigid fairness and justice be present among the judges and the judged. The teacher must be assured of complete co-operation and spontaneous team-work, without which no worth-while results are possible. Opportunities should also be constantly sought to provide for groups of children to sing to an audience, however small.

Without concentration on the work in hand and complete oneness between the class and the teacher it is impossible to have a choir that works as a single unit or entity. With a small choir this is usually successful, but when large numbers are involved it is essential that stands or platforms be provided so that the children may be able to respond readily to the slightest directions emanating from the conductor and that the performance be good, accurate and rhythmical.

That brings us to the question of what constitutes a good performance, the preparation of which is the teacher's concern throughout the term.

Accuracy. Absolute accuracy in words and melody is of primary importance; for even a little uncertainty will often be responsible for bad intonation, tone, rhythm and diction. One or two reliable singers should be chosen from each group and given intensive coaching privately, so that they may be able to lead their sections competently, especially where the attack is concerned and the sustaining of notes towards the end of a phrase. The hangers-on, including the growlers, will thus follow the leaders with much greater confidence and fewer stumbles. In part singing, each part should be tackled separately, gradually building up together from the lowest part. The second part, being the most difficult, should be entrusted to the really musical among the group.

Tone. The next step is the production of a good pure tone, and this can be achieved by deep controlled breathing and by vocalizing on vowels before singing words. If the intonation is weak on a particular

day, be sure the children are either overtired, overeager, the ventilation is bad or there is a lack of interest. The key could be changed either up or down, a quick song could be taken slower or a slower one quicker. An added help is to monotone the words or hum the melody through.

Diction. Diction must be clear and articulation clean; words must be practised separately and the rhythm clapped with suitable expression. Vowels should be light and sustained and consonants instantaneous and centralized in the middle of the front teeth. Rhythmic flow must be free and spontaneous and the conductor must first study the song in advance to decide on the correct tempo. Let the children beat with their hands freely at the commencement of the lesson and thus feel the smaller and the bigger climaxes.

Phrasing and Expression. The niceties of phrasing and expression are the next points to be considered and should be worked out when the item is well known. Suggestions from the pupils regarding this should be encouraged so that the rendering may be more spontaneously beautiful and artistic and satisfaction felt by all concerned.

SOME AIDS TO TEACHING

A very useful aid for widening the musical horizon of youngsters is the gramophone record, both classical and modern. Modern music, which is puzzling at first, will eventually become clearer with repetition; repetition will bring familiarity which in turn will lead to appreciation. Only trite and common music can be grasped at one hearing. Many modern composers have made free use of the dissonant chord. Debussy experimented with the whole tone scale, whilst other composers, including Stravinsky, Bela Bartok and Vaughan Williams, use their own synthetic scales, thus making it almost impossible for the average listener to enjoy and understand their music at the first hearing. Schools in England have their own gramophone societies with weekly or monthly sessions at suitable times. They are managed and run by a committee which, with the collaboration of the teacher, arranges the programmes and procures the records. Genuine music-lovers only are admitted, and absolute silence is demanded. There can be no better way of relaxing keyed-up nerves and of toning down sheer animal spirits and restlessness. If the school budget permits it, a very useful adjunct is the tape-recorder, which can record a rehearsed item so that children can hear their numerous faults. These they will be ready to rectify at the next lesson.

THE PERCUSSION BAND

The percussion band is the pride of the entire kindergarten class, and rightly so, as the little folk get as much enjoyment and pleasure out of their rhythmic strikings on little instruments as adult music-lovers out of a symphony or an oratorio. Children of this age-group should be taught by the play way method: they will imbibe certain rhythmic facts and at the same time work with zest and eagerness.

INSTRUMENTAL MUSIC

Schools in India have made provision only for singing, and for the individual teaching of the piano and violin. The school orchestra or band (except in some boys' schools) is totally unknown. Most students with a reasonably good ear and average ability opt for the piano, to the exclusion of other excellent instruments, such as the wood-wind, the viola and the violoncello. Too often learning music means just the ability to play, and the unfortunate pupil is forced to undergo one examination after another, without having had time to assimilate interesting facts or to develop much technique. The parents are happy over the distinctions gained in the examination and the teacher has enhanced his or her reputation. But the poor child has been bored by the repetition of the grade pieces for six months or more, and has been far from happy. Examinations are milestones to progress, and should only be taken when it becomes necessary to gauge a child's progress, or by way of an incentive to work harder for a particularly lazy child. Very gifted children should be singled out for training as concert performers. For the rest, who show average musical ability, the wise teacher's aim must be to instil a deep love and enthusiasm for music and to produce an all-round musician.

Reading music fluently and at sight is the first concern of a good teacher, without which the vast treasures of music will for ever remain hidden from the pupil. The teacher must refrain from smoothing over rough spots and must let the child grapple with the difficulties himself. The teacher should not play a new piece through to the pupil as he is bound to imitate by ear, and the reading of music will suffer. One does not memorize everything one reads daily, hence it is unnecessary to insist on memorizing every piece of music. Correct memory training can be taken in hand at a later stage when greater experience has been gained. It was Franz Liszt who set the fashion for playing entire concerts by memory; but as very few students eventually take to concert work, the majority should not be made to waste much time actually memorizing. No student should be kept for weeks on a single piece. The fare should be varied.

Independence of all the fingers, co-ordination and concentration should be developed early. Phrasing, dynamic, modulatory effects, change of tempo and pedalling, are the details to be noticed carefully before teaching a new work. The child's musical education is not along the right lines if he is merely being turned into an exhibitionist, thumping his way through difficult passages without a vestige of understanding of the finer points of the pieces, or showing musical sensitivity. It cannot be too much emphasized that a definite method of practice must be shown. If possible a gay poster should be made and hung up with various points set out. Slow practice for long periods, with attention to correct fingering and appropriate touch, eliminates serious faults.

BOOK REVIEWS

H. N. SAUNDERS: *The Teaching of General Science in Tropical Secondary Schools*. Vol. VII of Unesco Handbooks (Oxford University Press, 12s. 6d.), Demy 8vo, pp. xx + 380, 1955.

In recent years the teaching of science from the primary to the university stages has assumed great importance not only for its academic value but to keep pace with the progress of man in the scientific world. It is not enough to train expert scientists and technical staff. It is equally necessary that the common man should know how and what scientists are trying to do. This understanding can only come through sound education. The teacher is entrusted with the responsible task of leading his pupils towards an appreciation of scientific methods and an intelligent grasp of science and its significance in social and economic life. This book has been designed to advise and help teachers of science in methods of teaching and lines of approach.

The senior science teacher in a secondary school is generally a university graduate who has specialized in one or more branches of pure science. After a few years of teaching he settles down to his job and is able to prepare his pupils for the school-leaving examination with a fair amount of efficiency. He is, however, apt to judge the result of his teaching by the number of pupils placed in the first division and to overlook some of the important aspects of science teaching.

This book will not only be a valuable help and source of inspiration to the young teacher or the teacher-in-training, but an experienced teacher will also find every aspect of the teaching of General Science discussed in the light of modern trends in education.

In the first two chapters, 'Science in the World' and 'Science in the School', the author discusses, along with other topics, the values of science in modern life, the limitations of science, the need of science, the place and importance of General Science and the relation of General Science to the specialized sciences. He points out that 'There is limitation in science itself. . . . The teacher and, in due course, the student, must realize that what the scientist produces as an "explanation" is not an explanation at all. The scientist merely

puts similar phenomena into the same pigeon-hole or at most takes the question only one stage nearer solution.' The author has put up a forceful plea for the inclusion of a General Science course for at least three years, between the ages of 11 and 14. He also discusses at what stage General Science must give place to one or more of the specialized sciences—Biology, Chemistry, Physics or Geology.

The next two chapters are devoted to the discussion of 'The Selection of the Subject Matter' and 'The Arrangement of the Syllabus'. Though the teacher has little say in this matter, he will find many useful points of interest, such as 'the place of the textbook', 'grouping of material round a central theme', 'topical interest'.

The next six chapters deal with various aspects of teaching the subject and with the equipment required. The last chapter, 'The Practical Teacher', dealing with the improvising of equipment, should be of immense practical value not only to the teacher but also to pupils. Many pupils show lack of interest in science, because of inadequate equipment in the school. The author has given many hints for the preparation of useful apparatus almost from scrap and many pupils will be able to prepare their own apparatus at home. This would lead to sustained interest in the subject. This book should find a place in the teachers' library of every secondary school.

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R. K. and M. I. R. POLKINGHORNE: *Fundamental Number Teaching* (George G. Harrap & Co., 8s. 6d.), Crown 8vo, pp. 196, 1955.

The authors state in their preface that this book has been written at the request of some two thousand teachers. All teachers of Arithmetic will find how great a need it fulfils.

Its great merit is in its power of stimulating thought; it will make the teacher think and choose the best method of teaching any particular topic to his pupils, no matter how different they be in their aptitudes. The problem in elementary schools in India is the large number of pupils that teachers have to handle. In large classes there are bound to be both clever and dull children. This book gives

valuable guidance in the difficult task of teaching both types of children in the same class.

The authors' remarks about 'the mania for speed' hardly apply to teachers in India. We are by temperament and tradition inclined to go rather slowly. Sufficient drill is not given in many of our schools in speed and accuracy in the fundamental number operations. The authors are quite right in condemning the mania for speed, when speed interferes with the mastery of fundamental facts. For instance, addition facts must be taught slowly till the child can give the correct answer for each combination. But once the child has memorized the facts, he must be drilled till he can do operations in addition quickly and correctly under all conditions. This is a competitive world in which speed is as important as accuracy.

It seems to be the intention of the Union Government to convert, in course of time, Elementary schools into Basic schools. In this change-over, the suggestions given by the authors for doing practical and spatial work and for the use of 'number patterns' to visualize number processes will be found very helpful.

In many of our schools children are not trained to build up their own arithmetic books. The authors have emphasized the great value of this; and have given clear instructions as to how this can be done.

If the teacher uses the methods explained in this book, arithmetic will become the subject that children like best.

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P. GURREY: *Teaching English as a Foreign Language* (Longmans, Green & Co. Ltd., 10s. 6d.), Crown 8vo, pp. viii + 200, 1955.

This book adds one more to a number of books on the teaching of English already written by Mr Gurrey. It certainly cannot be one too many, particularly for us in India where the teaching of English as a foreign language has received a new impetus and a 'new look' since independence.

In *Teaching English as a Foreign Language* the author has covered the essential aspects of language teaching, but the main value of the book lies in his practical advice to teachers, based on his own experience spread over a number of years.

He admits that the teaching of a foreign language is hard work, but he has certainly succeeded in setting the teachers of English on the right road. He helps them to select their aims carefully, to understand the purpose and procedure of their methods, and not only to inspire the pupils' interest by their own initiative but to adapt their methods to the varied and often unexpected reactions of their pupils.

The book does not advocate any new methods of teaching a foreign language. It takes up the well-known methods and principles utilized in the past, namely, the Direct Method, the Chorus Method and the Dramatic Method. What is interesting and valuable in that the author shows by concrete examples both the advantages of the use of these methods as well as their pitfalls and limitations and ineffectiveness in certain cases.

In his chapter on the Direct Method, for example, he admits that 'the Direct Method is the basis of teaching the language', but he takes us a step further in so far as he emphasizes, by a series of examples, how a word or a topic can be taught and drilled in, not merely by associating it with things, but by its use in its full 'contextual situation'.

The chapter on the Teaching of Grammar is particularly good. Grammar has been a problem with most teachers of English. 'Should we teach Grammar? How much? And how best?' These are the questions constantly being asked. The author has realized the basic truth that 'it is not the grammar of English that is difficult but it is English usage. . . . Therefore explanation can do little and practice can do much . . . the main grammar learning should be done through the pupils using the terms learnt'. In this chapter he explains in detail how this can be done.

Sufficient importance has been given in this book to the different aspects of language teaching, including Oral Work, Reading, Writing and Composition.

The Appendices are of great practical value and the Bibliography most helpful.

This book is not only a *must* for language teachers but will be of great service to all those who are at the moment feverishly producing books for use in Indian schools.