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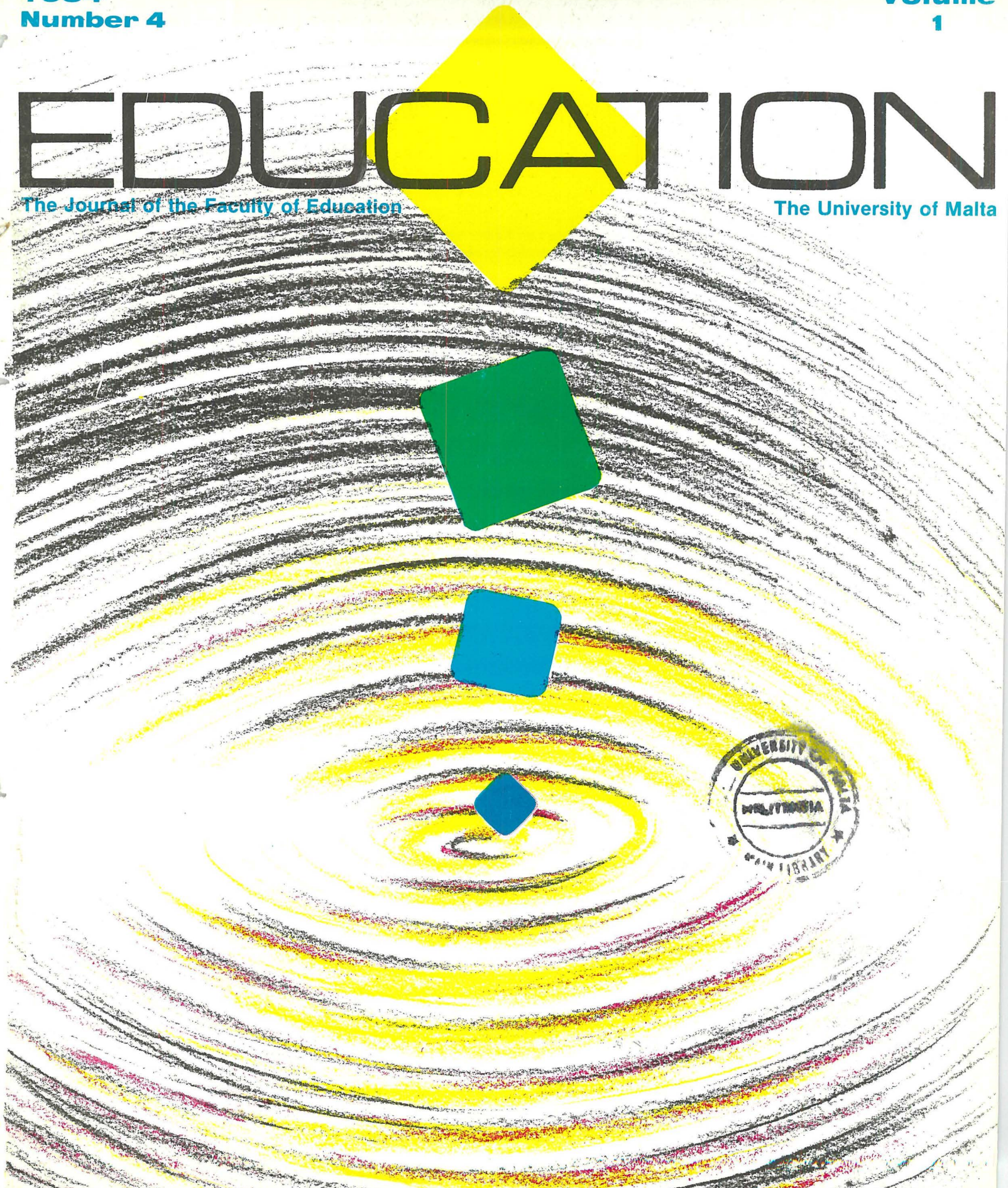
# EDUCATION

The Journal of the Faculty of Education

The University of Malta



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## INFORMATION FOR CONTRIBUTORS

*Education* is published twice yearly as the journal of the Faculty of Education at the University of Malta.

The Editorial Board welcomes articles that contribute to a broad understanding of educational issues particularly those related to Malta.

Submitted articles are referred at least once and copies of referees' comments will be sent to the author as appropriate. The editor reserves the right to make editorial changes in all manuscripts to improve clarity and to conform to the style of the journal. Photographs, drawings, cartoons and other illustrations are welcome, however, authors are responsible for obtaining written permission and copyright release when required. A manuscript, including all references, charts, figures and tables must not exceed 12 double spaced typed pages. Notes and references must be kept to a minimum and should be placed in single quotation marks but long quotations should form separate, indented and single spaced paragraphs. Notes and references must be numbered and the bibliography at the end should contain the following:

a) Authors' surnames and initials;
b) Year of Publication;
c) Title of Publication;
d) Place of Publication;
e) Publishers.

Authors should submit brief biographical details with the article.

Communications should be addressed to:

**The Editor,**
**Faculty of Education,**
**The University of Malta,**
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**Malta.**

# Introducing Poetry through the Japanese Haiku

*Christopher Bezzina*

*After the bells hummed*
*and were silent, flowers chimed*
*a peal of fragrance.*

Basho

## Imagination

Teachers believe that each child is a creative individual possessing an active imagination. The imagination is both a seeing and shaping power. In children, the imagination is a marked capacity for the intent, absorbed seeing of the actual, accompanied by strong responsiveness of feeling. Whenever the imagination is stirred concentration is heightened. Facts do not necessarily absorb and interest young children, nor are they inevitably excited by their own environment. One needs the catalyst of an active imagination in the teachers, to relate the facts to the child's experience, to bring the environment to life in the child's mind. One of the major purposes of education is to bring children as far as possible to true 'seeing', to make them capable of honesty towards fact and feeling. All teachers want their pupils to be responsive to experience, to develop in sympathy and understanding so as to express themselves fluently in speech and writing.

## Choosing the right approach

There are many ways of stimulating children's writing and every teacher has his own methods. The moodiness and unpredictability which indicate the emotional changes going on in many children are familiar to all teachers.

There are various approaches which in several ways will help children to cope with their own growing-up. As I see it the teacher should first of all make use of their increasing awareness of themselves by inviting them to write poems which require them to sort out their own feelings and attitudes towards experience. Secondly, the teacher would provide topics for discussion and writing which give children the chance either to show a wider social awareness or to come to terms with more complicated ideas and feelings. Thirdly, the pupils should be encouraged to write free verse. Free verse enables the child to say what he feels and means and to use the full range of his imagination without being cramped. Seeking the correct rhyme and manipulating the words to produce will often kill the original spontaneity and feeling. However, it would not be a bad idea, once the pupils are thoroughly familiar and at ease with poetry, for the teacher to introduce them to the discipline of writing in regular patterns.

### *Stimuli*

There are various stimuli which the teacher can use in his poetry lessons. Pictures and photographs are invaluable as 'starters', particularly in that they focus attention on detail and help children to *see* as well as to *look*. Paintings can also be useful. There are many good photographs available in magazines which are easily mounted, and may be used as starting-points for original writing. A file of these can grow rapidly. The introduction of unusual and interesting objects may help to develop awareness and sharpen the senses. This helps to make writing more detailed, more exact, and above all, more spontaneous. Some examples which can arouse a strong response: oddly-shaped branches, twigs, roots and tubers are all particularly effective both visually and in stimulating a desire to *touch*. Textures are often strongly felt and pebbles, shells, conkers and bones may also be used primarily for the tactile response, though there is obviously much else besides. Leaves, feathers and pine-cones are natural objects which are easily obtainable.

## Teaching the skill of thinking

It is a fact that poems cannot be written on demand, especially for our Maltese pupils who have to think and write in a foreign language. Thinking is a very important process, and a delicate one too, especially when thinking in another language. Children have many thoughts in their minds, ideas which they want to express, even in English, yet find difficulty to transfer their thoughts into words. The main reason behind this is not that

the children cannot find the words but simply when they try to speak or write down the thoughts, the thoughts just vanish. Thoughts are just a flash, then they are gone. So when a child tries to express these thoughts they seem out of reach. There is the inner life which is the world of final reality, the world of memory, emotion, imagination, intelligence and natural common sense, and which goes on all the time, consciously and unconsciously. There is also the thinking process by which we break into that inner life and capture answers and evidence to support the answers out of it. That process of raid, or persuasion, or ambush or dogged hunting, or surrender is the kind of thinking we have to learn. It is important to develop the skill that enables us to catch those elusive or shadowy thoughts and collect them together and hold them as much as possible so as to get a good picture. Setting one's mind on something, hence concentrating on it will bring to life various thoughts and images which can be put to writing. English lessons on concentration can be of great help. In fact practice on simple concentration on a small, simple object is the most valuable of all mental exercises. Any object will do. Five to seven minutes at a time is long enough and two minutes is enough to begin with. If the exercise is repeated every lesson, the results will show. The writing exercise follows from this. The pupils take any small, simple object and while concentrating on it they describe it in a loose verse form. Emphasis should here not be on the syllabic pattern of the poem. Far from it. The teacher should do his best to create a situation where the pupils express themselves freely and naturally without being restricted to the strict boundaries of the syllabic pattern. The description should be as detailed as possible, scientific in its objectivity and microscopic attentiveness. After some exercises of this sort, the pupil should be encouraged to extend the associations away from the object in every direction, as widely as possible, keeping the chosen subject as the centre and anchor of all his statements. Once the pupil has grasped the possible electrical connections between the objective reality and some words of his, this exercise, which at first might seem dull enough, becomes absorbingly exciting. Even where it produces poor results, the effort towards this kind of perception and description affects the way the pupil looks at, and attends to everything. I myself have tried out haiku with pupils of various abilities in Forms I and II. The following samples of feedback from the pupils show a very encouraging response.

*A long thin flower*
*sitting high among its leaves*
*looking like a queen.*

*(aged 10)*

*There it stood all alone*
*long, long and long*
*Among the peace of God.*

*(aged 11)*

*Wild, living her own life*
*enjoying the beautifulness of this world*
*stood a red wild flower.*

*(aged 12)*

Each haiku shows an expression of personal feelings and ideas which is extremely important for developing the creative within a child. The right stimuli will help to arouse the child's imagination and help him to put down his thoughts in writing.

*Working with verse*

The teacher and his pupils should work on different verse forms. The main objective of working with poetry should be that the pupils enjoy writing the poems and that they are able to express themselves freely and naturally in verse. Unless there is some content, form matters little. Yet, one should not neglect form altogether particularly since the structures of a given form, if not insisted on too rigorously, can be a valuable discipline for the young poet.

One form which the pupils and their teacher may enjoy experimenting with is the haiku. These Japanese poems reflect the simplicity and beauty of nature. As pupils learn to appreciate the craftsmanship of haiku, they will more readily understand and respond to the imagery and symbolism of much modern poetry in English. I consider the haiku as an ideal way of initiating pupils, irrelevant of their ability, to poetry.

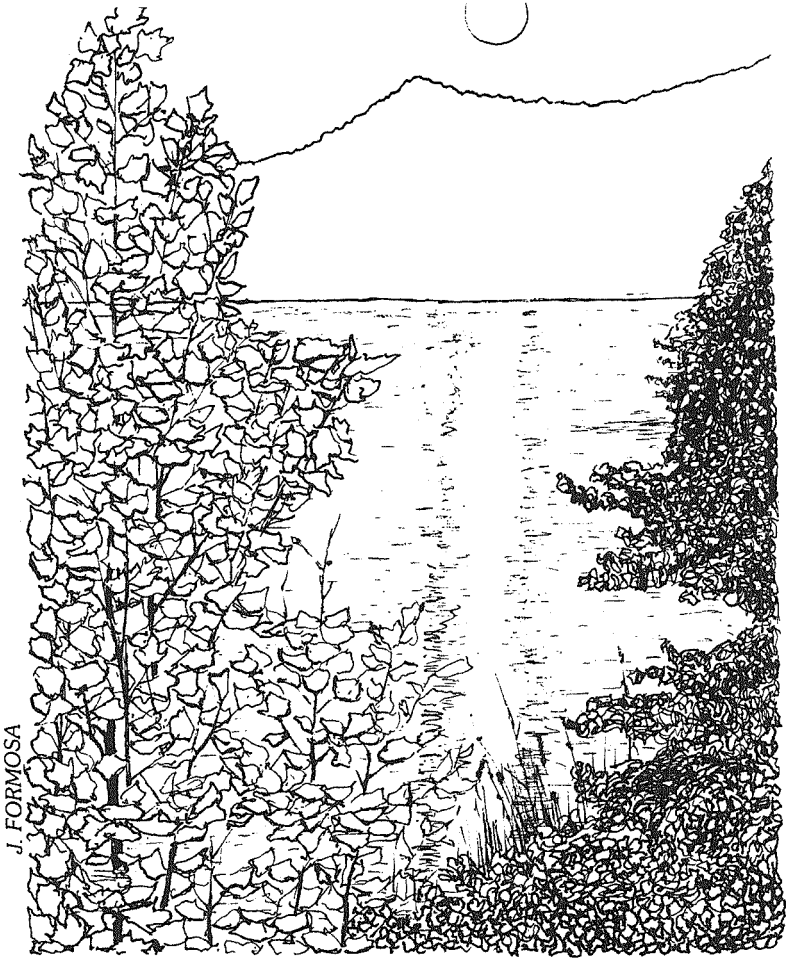
In recent years teachers abroad have been inviting pupils to compose haiku. Haiku are unrhymed poems that follow a strict syllabic pattern. A haiku is of just seventeen syllables that pattern in three lines: 5 - 7 - 5. These three-line verses in the hands of the Japanese poetmasters of the seventeenth century become delicate instruments for expressing feelings and pictures about nature and especially about seasonal variations.

**Summer Night**

*A lighting flash:*
*between the forest trees*
*I have seen water.*

*Shiki*

Through their haiku the early poetmaster attempted to grasp the "essential or essence of reality", and to achieve "direct and lucid expression" of this reality. As Edward Putzar, a historian of Japanese literature, has explained, "the power to reach this goal of understanding lies



J. FORMOSA

within a child."[1]

Sometimes called an atmosphere poem, a haiku is a poem of mood and symbolism and of emotional significance. Its structure helps limit the writer to one main thought. Haiku poems are thought of as just a flash of a picture. To convey its full implications the poem must be repeated many times.

*Listen! What stillness!*
*Cicadas buzzing in sun,*
*drilling into rock.*

*Basho*

Haiku help teach pupils to be observant and to notice and react to beauty in everyday things. The pupils should be exposed to a number of examples of haiku and then the teacher should encourage them to generalize about the content and form of these poems. That is, some of the information given above should be brought out by the pupils themselves. At first it would be a good idea to work with the pupils as a class in composing the first new haiku. Together you can agree on a beautiful thought concerning things as trees, leaves, flowers, bird or insect life, the sun, the moon.

*As the cuckoo flies,*
*Its singing stretches out*
*Upon the water lies.*

After you have worked through several haiku together, let your pupils, in groups, or individually, try their hands at the haiku form. The teacher must not forget to state clearly the subject; and the location, time of day, and season are either mentioned or suggested. It is a fact that children cannot master all of the intricacies of the professional poet, but they can get the feel of an aesthetic moment. Children are most successful with the brief verse forms if emphasis is placed on the thoughts they are expressing rather than on the confining form. It is only after they have experienced the haiku form well that the teacher should emphasize that there are few articles or pronouns in these brief poems, and that they do not rhyme. In time the teacher can also encourage the pupils to try for the right number of syllables in each line but allow them to be a little irregular if necessary in expressing their thoughts.

*Fallen flower I see,*
*Returning to its branch -*
*Ah! a butterfly.*

1. Hennings, D.G., *Communication in Action.* Chicago: Rand McNally, 1978, p. 247.

# Overcoming a Difficult 'Area'

*A.P. Calleja*

## Clearing the Air

One of the problems of the young teacher in the primary school is to find the middle-of-the-road course between what mathematics his pupils need to know and that mathematics which is prescribed in the syllabus for the examination. In an ideal setting there should be no conflict really and this is chiefly for two reasons: (a) the primary school teacher should teach *mainly* mathematical concepts and later someone else will teach the necessary arithmetic rules and techniques; (b) a satisfactory treatment of primary mathematics is achieved if the teacher has clearly in his mind the correct balance and treatment of the separate topics to which the prescribed syllabus is an approximation.

In order to teach mathematical concepts successfully the primary school teacher should be equipped and guided. Equipped with preparations, plans, notes, aids, language, situations, activities, skill, expertise and knowledge in order to impart these concepts. And guided by syllabii, schemes and organisations that best suit the particular children in his class so that the learning is maximised.

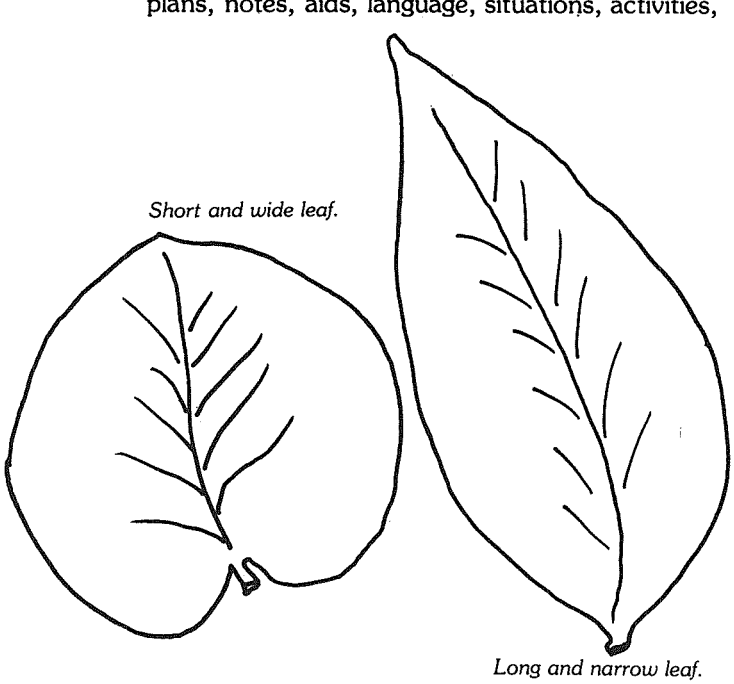



*Fig. 1.*

## Identifying a Difficulty

Many student-teachers in primary schools have encountered difficulties when teaching certain topics like *area*. Also, older teachers readily confess that their pupils become confused when "finding area". What causes these difficulties? Firstly there are certain difficulties inherent in the topic itself. Secondly difficulties will certainly arise if the teacher rushes to do formulae-arithmetic on area too early.

During a teaching-practice visit I observed a student-teacher starting a lesson on area with pupils in Year III and I overheard the following introduction:

*Teacher:* Who can tell me what is area?

*Class:* Dumb silence.

It happened that there was a Year V pupil in this class whose regular teacher happened to be absent. And this boy answered:- 'It's length times width, Sir.'

Honestly, at first I thought that this was some sort of a conspiracy by the student-teacher who, I suspected, was in league with the pupils so as to compel me to deliver the lesson myself. However, I continued to listen and then I made my comments to the student at the end of *his* lesson. This article is therefore the result of my observations of what had taken place during that lesson. It is hoped that identifying the difficulty will help to clear the air a bit.

## Lesson Material

How much time should the teacher spend on concept formation? How should he plan his lessons on area? Secondary school experience with its stress on formulae should not be brought to pupils in primary schools. Instead *activities* should be planned to give the pupils an intuitive understanding (based on messing about with scissors, pencil, objects, etc) of (i) the flatness of plane surfaces; (ii) the amount of plane surface enclosed by a boundary; (iii) conservation; (iv) two-dimensional property; (v) the understanding of the

practical language-words; (vi) scope for experimental work or workshop sessions; (vii) scope for discussion, communication with emphasis on the use of clear expression; (viii) for making accurate estimation; (ix) for reinforcing the knowledge of length (perimeter) and the multiplication tables and finally (x) for the beginning of computational work. As you can see, therefore, far more time should be devoted by the teacher to lessons on concept formation during these early years of learning.

### Planning the Lesson

A careful teacher should have clearly in his mind both the assumptions and the objectives. Assumptions are those ideas, skills and concepts which the pupils need to have covered with the teacher before they are ready to receive their first lessons on area. Some of these assumptions are experience with numbers less than hundred, experience with counting and with measuring, knowledge of the practical language words such as short and wide, long and narrow, irregular shape, one-half, more than, less than, etc., and knowledge of the basic Euclidian shapes — the square, the rectangle and the triangle.

A natural choice of objectives would be some of the items listed above in the section under Lesson Material, for example (i) to understand the property of flatness of a plane surface; (ii) to give pupils the experience of measuring, in a practical way, the amount of plane surface enclosed by the boundary of an irregular shape.

### Developing the Lesson by Steps

a) Teacher asks some of his pupils to bring with them to school the following objects: a poster, two post-cards of the same size, a few used stamps, mosaic pieces, some jigsaw puzzle pieces. Also each pupil is asked to find two leaves (from the garden) of unequal size. (Fig. 1)

b) These objects are then placed down flat on the surface of the table. "Let's feel them between the fingers." "What can we say about them?" They are thin and flat. Their surface is flat and thin. "Can you name some other flat objects?"

c) "Look at these two leaves. How can you describe them? Very good, thin and flat. One is short and wide, the other is long and narrow. Which is the bigger of the two? We shall soon find out.

d) This coloured paper (see Fig. 2) is covered with many similar shapes. Triangles, right. All are of the same size. Now will put the two leaves onto this paper and will trace out their boundary, their outline, their *perimeter*. Next, let's cut out their shapes using the scissors.

e) Which is the bigger of the two leaves? Which has the more triangles? The rule for counting the number of triangles is to count more than half of a triangle as one whole and ignoring less than half of a triangle. The more triangles that are enclosed by the boundary (or *perimeter*), the bigger is the surface of the leaf. Now we can easily tell which leaf is the larger. We have measured how much surface is enclosed.

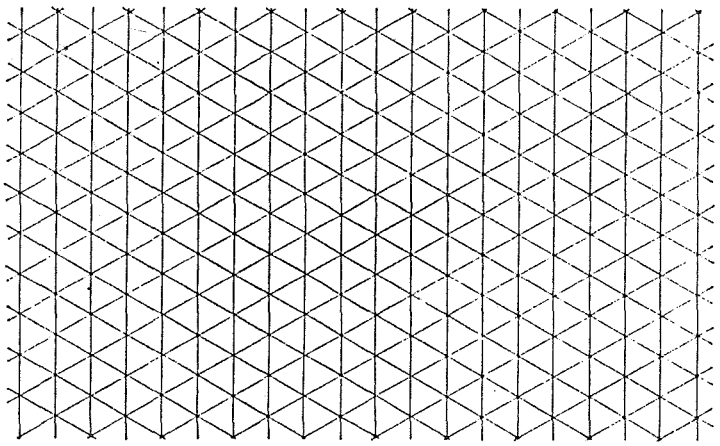
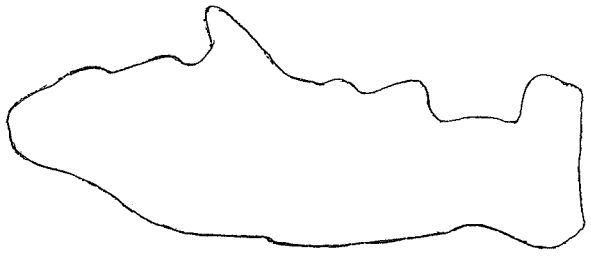
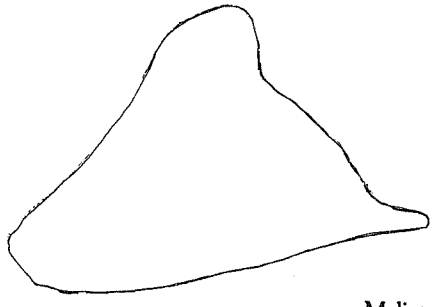


*Fig. 2 Isometric Graph paper*



Marfa



Mdina

**Fig. 3**

f) Take another sheet of these coloured papers with triangles. Measure the amount of surface covered by your foot (or shoe). Next, here we have the outlines, the boundaries or perimiters of two districts, Marfa and Mdina both are taken from a map of Malta. (Fig. 3). Let's find out which is the larger of the two districts Marfa or Mdina and by how much.

g) We have been finding *the amount of surface covered or enclosed* by a leaf, by a shoe, by a

*Cont. on p. 15*

# Making Teaching a Profession: a comparative view

*J.R. Webster*

*The Two Nations of Teachers*

The traditional role of a 'teacher is that of the guardian and transmitter of spiritual wisdom. Thus in the Christian-west, teaching was originally the prerogative of the priest; in Islam that of the *imam* or *mullah*; in India that of the *guru*. In Europe, despite the growth of humanism and the gradula secion of education during the sixteenth centuries, the teacher in grammar school, *gymnasium* or lycee retained a special status. He may no longer have solely been concerned with the world of the spirit, but he still had esoteric and professionally useful knowledge that he could pass on to a privileged elite, a status that has been retained to the present century by teachers in universities and selective secondary schools.

There is, however, another more lowly tradition of teaching: that of the 'dame' or 'minding' school, where, as the English poet Crabbe noted

> '. . . a deaf, poor, patient widow sits
> And awes some thirty infants as she knits.'

In the late eighteenth and early nineteenth centuries, in both Europe and America, schools for the 'infants of humble, busy wives' were kept, not only by widows, but also by disabled soldiers and the like, who were incapable of other work. In countries that were, at this time, being industrialised there was an urgent need for the large scale provision of elementary schools that would, not only provide for child minding, but would make working class children literate while, at the same time, teaching them to accept their station in life. For an adequate elementary school system, teachers were needed in large numbers, and, as in third world countries that are today trying to provide universal primary education, the most lowly qualifications had to be accepted. Elementary school teachers remained, in Macaulay's phrase, 'the refuse of all other callings'. Teaching also became one of the first professions to welcome women, so that it soon became, after nursing, the major women's profession. To provide a modicum of training, most countries introduced an apprentice 'pupil-teacher' system in their elementary schools, although many who failed their apprenticeship continued to teach; unqualified teachers remained a significant element in the teaching force of most western countries well into the present century. However, in order to improve standards, most states in Europe and America had by the mid-nineteenth century, established 'normal schools' to train the best of their elementary school teachers. As these 'schools' were monotechnic institutions, providing for qualifications of sub-degree standard, they did not have the status of institutions of higher education. Their curricula comprised three areas taught concurrently: the continuation of the student' personal education; pedagogy and methods of teaching; practical experience in schools. This is a pattern that has continued to the present day, although the balance of the three elements has changed from time to time.

It was thus that the creation of parallel school systems, secondary and elementary, precipitated two 'nations' of teachers: the predominantly middle class graduates, few in number, who taught in universities and secondary schools; the very much larger number of non-graduates who had themselves been educated in working class elementary schools and then returned to teach in such schools. Members of the two nations of teachers, therefore, came to be distinguished by their social origins, the schools they had attended, the length, organisation and content of their post-school courses, the qualifications they obtained, the salaries and status they achieved, and the professional organisations, if any, to which they belonged.

In Germany, the distinction between the two types of teacher goes back to at least 1696 when Francke created separate *seminare* in Halle for the training of elementary school and *gymnasium* teachers. This German example was ultimately to be followed by the rest of Europe. In France a gulf has long existed between the elementary school *instituteur* and the secondary school *professeur*; Napoleon created the *écoles normales* for the former and the *écoles normales supéreures* for the latter. In Britain training colleges for elementary school teachers were established from mid-century onwards. It was not until the last decade of the nineteenth century that universities in England and Wales had teacher training departments. Although

these departments initially only trained elementary school teachers, after the first world war they concentrated on providing a year's training for secondary school teachers. However, it was not until 1974 that it became obligatory for graduates wishing to teach in secondary schools to train; it is still unnecessary for graduates in science and mathematics to do so.

### The Mingling of the Two Nations

In countries that have achieved elementary education for all, but where secondary and higher education remains confined to a small elite, the gulf between the two nations of teachers remains. Most advanced countries, however, realise that, for their industrial and commercial development to continue, an increasing proportion of their population must have secondary and higher education. Such countries aim at least to provide education for all to the age of 15 or 16. When this is achieved, elementary and secondary schools cease to belong to parallel systems, but become stages in everyone's education. The expansion of secondary education results in many former elementary school teachers being moved to secondary schools, and non-graduate certificated teachers from teachers' colleges being appointed to teach younger secondary school pupils, or the less able, or to be in charge of physical education or craft subjects. Thus the distinction between the two nations of teachers begins to be blurred.

The United States was the first country in the world to create a fully comprehensive schools system. In the post-war period when most European countries were striving to provide secondary education for all, while, at the same time, coping with a bulging birth rate, the United States was ensuring that at least half its population continued full time education after the age of 18. To achieve such a target many more teachers were needed. The U.S.A.'s remarkable achievement was that, while producing these additional teachers, it also increased the length of teacher training courses. The old style normal schools have long since disappeared in America; some were upgraded to teachers' colleges, while others became the nucleus for multipurpose state colleges and universities. Today it is only a small minority of American teachers who are educated in monotechnic colleges; the majority attend either liberal arts colleges or departments of education on university campuses. It is now usual for teachers in both primary and high schools to have followed a four year course leading to a degree, although high school teachers are increasingly expected to take a further year's course leading to a Master's degre. Although different states have different salary scales, almost everywhere there is a basic scale for all teachers, but with higher qualifications and extra duties earning additional pay. There is thus no difference in kind between high school and primary school teachers. The former do not come from families with a higher social status than the latter, and are not regarded differently in their local communities. Both the major teachers' unions, the National Education Association and its much smaller rival, the American Federation of Teachers, represent teachers from every type of school (and the former, educational administrators as well). The United States has thus gone much of the way towards achieving a unified all graduate teaching profession.

Britain is moving along the same road. Until the creation of secondary education for all with the implementation of the 1944 Act, there was a clear distinction in Britain between non-graduate certificated teachers, who had taken a two year course in a training college, and university graduates (an increasing number of whom were taking a fourth year postgraduate initial training course). As in the U.S.A., once the secondary sector expanded, so elementary school teachers moved to secondary schools, and teacher training colleges began to prepare students to teach in secondary schools. Again, as in the U.S.A., all teachers now shared the same basic scale, but with further payment being made for extra training and qualifications, and for undertaking special responsibilities. The difference between the four teachers unions that had once represented the separate interests of grammar school headmasters, headmistresses, masters and mistresses, and the National Union of Teachers, with its overwhelming elementary school membership, lost its edge. In 1960 the teachers' certificate course was lengthened from two to three years. Even more significant, on the recommendation of the Robbins Report in 1963, suitably qualified teachers were enabled to take a four year course leading to a B.Ed. degree validated by a university. The decline in the birth rate in the seventies made a dramatic reduction in the number of teachers required in Britain. As a result, some colleges of education were closed, others merged with other institutions of higher education, and almost all the remainder became multipurpose institutes of higher education. Therefore, by today in Britain, as in the United States, almost no monotechnic teacher education college remains. The decrease in the number of teachers required made it possible to demand higher entry qualification from those intending to teach and, in 1980, the three year certificate course began to be phased out, and replaced by three and four year courses leading respectively to general or honours B.Ed. degrees. So Britain, too, was beginning to achieve a more unified all graduate profession.

The effect of comprehensivisation on the structure of the teaching profession has been very different in France. Comprehensive schools for pupils between the ages of 11 and 15 were achieved in France in 1959, and in 1975 these became, as a result of the Haby reforms, non-streamed *colleges* providing a common core curriculum for all pupils. The second 15+ cycle (*lycée*) provides both a three year course leading to the Baccalauréat (for university entrance) or technical diploma, and shorter courses leading to vocational or technical certificates. To meet these needs there has developed, from the viewpoint of a foreign

observer at least, a bewildering hierarchy of teachers. At the top of the status pyramid are the *agrégés*, elite graduates who are qualified to teach in either *lycée* or university, and who now tend to concentrate on the final year of the *baccalauréat*. Next in the status hierarchy are the *professeurs* who have been awarded the CAPES (*certificat d'aptitiude au professorat des enseigment de second degré*) or, for teachers of technical subjects, the CAPET. On completion of their three year university course, students take a further year to prepare for the theoretical CAPES/CAPET examination, and then go on to a year's practical training in one of the regional centres attached to universities. Both the *agrégation* and CAPES are competitive examinations with a very high failure rate. Those who succeed have permanent tenure with defined hours of work: 15 hours a week for *agrégés* and 18 for CAPES. Because of the shortage of secondary school teachers in the fifties, new monotechnic institutes (IPES) were created in 1957 specifically to educate teachers for secondary schools. Students were recruited to IPES at the end of their first year in university, when they sign an agreement to teach for ten years and are then given a small salary; they are then prepared for the *licence* and then for either the *agrégation* or CAPES.

At the base of the status pyramid there remain the *instituteurs* who now need a *baccalauréat* to enter an *école normal* where they take a two year course followed by two years' probation in school. *Instituteurs* teach 27 hours a week. When secondary school teachers were in short supply in the fifties and sixties, some *instituteurs* were appointed to teach younger pupils in secondary schools. Today, after three years in a primary school, instituteurs can take a year's cours at a centre annexed to an *école normal* and sit the competative CAPEGC examination which enables them to teach in a *college*. This course leading to the CAPEGC is also open to students who have successfully completed two years at university. Technical instructors in *lycees (professeurs techniques adjoints)* take a two year course in a training centre. Even all this provision has been insufficient to supply the manpower needed by secondary schools, and one of the features of the French system is the number of non-tenured and part time assistants that are employed. Each category of teacher has a different salary. In France, the salaries of all government employees, including those of teachers, are calculated according to the point at which they are placed on an index classification system. As a result differentials are difficult to change, especially as each group of teachers has its own association to protect its intersts. The effect of the extension of secondary education in France, therefore, unlike that in America and Britain, has been to create a more diversified, rather than a more unified, teaching profession. Over the years, the two nations of teachers have become a federation of small states.

## The Teacher's Roles

The variation in the response of the United States, France and Britain to the need to provide more teachers in secondary schools illustrates different views about the nature of education and of the teacher's function. As these represent a range of views that are replicated in many other parts of the world, reference will continue to be made to these three countries.

In America, the world's richest country, it has been possible to take a more leisurely and expensive approach to education than in Europe. The vastness of the country, and the recent history of the moving frontier, has resulted in American education being decentralised. The appointment of teachers, the running of schools and determining the content of their curricula are matters for local communities. The certification of teachers is the concern of individual states. It is therefore difficult to generalise about American education. During the first half of the twentieth century, the period of the melting pot, the need to weld people with a variety of backgrounds into stable and democratic communities was a paramount American concern. It was necessary to look to the future rather than to the past. It is little wonder, therefore, that Dewey's pragmatism was so attractive to American educationalists, and that, until recently, the emphasis of American schools, both primary and secondary, has been, not on the transmission of knowledge for its own sake, but rather on developing the pupils' intellectual, practical and social skills within a democratic atmosphere of working together: of 'doing' and 'sharing'. In implementing such a policy the need of the American teacher was, not so much to have detailed knowledge to transmit, but rather to have acquired a numnber of practical, 'research' and social skills: to be able to combine the roles of teacher and community worker. Consequently the emphasis of teacher education courses in America was on methodology, school organisation and ways of dealing with pupil problems, rather than on the subject matter to be taught.

The ethos of French education could not be more different. Teachers throughout France have to teach curricula and prepare for examinations, that are prescribed in detail from the centre. French schools have always given the highest priority to instruction: to the transmission of knowledge and to intellectual development. The view of French educationalists, unlike that of their colleagues in the United States and Britain, is that social skills and education in its wider sense are matters for the family, church and the community rather than the school. The particular role of the teacher in France is illustrated in an extreme way by the *agrége*. Having triumphed through years of competitive examinations to reach his position of eminance in the education system, the *agrége* is superbly well qualified to transmit knowledge. Until recently, at least, his most cherished teaching method was the *cours magistral*, a series of formal lectures given without interruption from the class. Even today,

having taught his specified 15 hours, the *agrége* need not have any further contact with the school or its pupils. Both holders of the agregation and CAPES are regarded as 'visitors' to schools; they need not concern themselves with the marking of books and supervising duties; these are matters for assistant teachers and part-time *surveillants*. It is not surprising, therefore, that, despite Durkheim's signal work as Professor of Education at the Sourbonne, that 'education' is not a well developed subject in France, and that, traditionally, courses for the education of teachers are more concerned with the content of the subjects to be taught, than with methodology, or even with the psychological aspects of teaching.

In Britain, it is local education authorities who appoint teachers and they also, in law, control the curricula of schools. In fact, however, except on the rare occasions when there is a public outcry, headteachers and their staffs have complete freedom over the organisation of schools and what is taught. The freedom and power of British headteachers, in particular, causes astonishment in foreign observers. In secondary schools the greatest curricular constraint is the necessity to prepare pupils for external leaving certificate examinations. With the disappearance of the 11% secondary entrance selection, primary schools are not constrained in the same way as secondary schools, and primary school teachers, if they wish, can experiment at will. There is, therefore, a great variety of practice in British primary schools, although the majority tend towards informal 'child centred' and group activity methods: a tendency encouraged by teacher training courses and, until recently at least, by official reports.

English secondary school teachers tend still to be influenced by the traditions of the great nineteenth century public (i.e. independent) schools where it was the teacher's duty, not only to teach in the classroom, but also, through the residential 'house' system, to initiate pupils into the gentlemanly speech, dress, manners and attitudes of the English upper classes. Group solidarity was also encouraged by team games and extra curricular activities in which all teachers were expected to participate. The organisation and ethos of the public school was emulated by state grammar schools, and an attempt is made, even in some comprehensive schools, to continue in the same tradition. British secondary school teachers tend to be more concerned than their American colleagues about conformist pupil behaviour (some comprehensive schools still insist on school uniform), and in Britain it is still legal to use corporal punishment. British teachers in general are also more concerned than their French colleagues with involvement in games and extra curricular activities and acting *in loco parentis*. In this they are carrying on in a cultural tradition for which no formal training is required. Postgraduate teacher training courses for secondary school teachers tend, therefore, to concentrate on methods of teaching specialist subjects, although the more radical courses do question the social assumptions on which the British educational system is based.

**Response to Change**

Change within education tends to be slow and intermittent. Even government policies can be thwarted by conservative teachers and administrators. Fundamental change often only happens as a result of a crisis precipitated by a public outcry. There had been a developing reform movement in the United States before the agitation that followed the Russians launching Sputnick in 1957, and in France before the student riots of 1968, but these events gave the reform movements a new momentum. After Sputnick, academic critics of American education were joined by politicians, the military and the public in general. Criticism was aimed primarily at the curricula of schools and teacher training courses. In schools, there was a demand for a 'return to basics', for a concentration on mathematics and science rather than on life adjustment courses. There were also attempts to make teachers more accountable; there were even schemes to introduce 'performance accounting' whereby teachers were rewarded according to 'productivity', but these were successfully opposed by the teacher associations. Thus in the sixties the emphasis of teaching in the United States veered somewhat from the social to the academic. There was a parallel movement in teacher education. Courses for intending teachers were criticised because, unlike those in France, not sufficient time was spent on learning the subjects that were going to be taught. One of the results of this criticisms was to provide a new route to teaching to liberal arts graduates who, having completed their four year degree courses, could now take a one year postgraduate teacher training course. A further criticism was that in teacher training courses, there was not a proper study of psychology, sociology and philosophy as disciplines in their own right, so that a consideration of curricula, methodology, school organisation and the like lacked intellectual rigour. This latter criticism was also much voiced in Britain in the sixties. The introduction of the B.Ed. degree led to a demand for the replacement of courses on the 'principles' of education (which R.S. Peters described as 'undifferentiated mush') by a study of the psychology, philosophy, history and sociology of education as separate disciplines. During the period, both university departments of education and colleges of education appointed specialists in these areas, and the study of education was transformed as a result. Not that this transformation improved the quality of teaching in the schools. In the late sixties there was so much criticism from primary school teachers about the lack of practical understanding of new recruits to the profession, that the government established a committee of enquiry (the James Committee) in 1971 to study the question.

In France, the reform of education after the events of 1968 took an entirely different direction from that of the United States in the sixties. The students had demanded greater participation and a lessening of the traditional concern for the narrowly intellectual, so that more attention could be given to personal development: physical,

aesthetic and social. The reform movement, culminating in the controversial Haby reforms of 1975—77, attempted to provide an education that would meet the differing needs of pupils; that would link school with work and with the life of the community; that would provide for guidance and counselling. Such a programme required the teacher to be an educator in the American or British sense. To make such a change possible, the Joxe Report of 1971 suggested that more time should be given to the professional, as well as the academic training of teachers, and that within this professional training an attempt should be made to integrate educational theory with practical experience. Thus, although educationalists in America, France and Britain had started with different assumptions, their views, by the seventies, were converging in their concern for a more balanced curriculum in both schools and institutions that trained teachers.

**Inservice Education**

The results of changes in initial training take time to affect schools, if they ever do so. The need for curriculum reform in the sixties was so urgent that a new significance was given to inservice education. In Britain, the James Committee recommended that inservice education should be given priority over initial training. This was a view that gained force during the seventies. The fall in the birth rate in western countries resulted in a sharp decline in the number of teachers required, and initial teacher training courses were cut severely. Schools would therefore, have to depend largely on existing staff for any innovative policies.

Inservice courses had long been a feature of teacher education in most European and American states. They were provided by a number of agencies including the teachers' professional associations. In America teachers' courses were well developed because teachers are salaried for ten months in the year, so that those attending summer courses are paid to do so, and, furthermore, have the possibility of having their salaries increased if they can improve their qualifications as a result of their attendance. Nowhere, however, until the late fifties were teachers' courses part of an integrated movement for curriculum reform. In the U.S.A., dissatisfaction with the school curriculum in the fifties resulted in the establishment of a number of curriculum development projects, particularly in the sciences, and these were given an added impulse as a result of the increased funding made available by the 1957 National Defence Education Act. These projects were based on subject departments in universities and colleges rather than on education faculties or teachers' colleges. Eminent scientists acted as consultants, and materials were developed by teams of subject specialists on secondment. The American experience was the inspiration for Nuffiedl Science Teaching projects in Britain, which, like their American counterparts, were based on subject disciplines, but with the main object of producing reformed 'O' and 'A' level certificate courses. Curriculum projects in America and Britain lacked central control and co-ordination: a situation that remains in the United States. In Britain, in the early sixties, an attempt by central government to concern itself with the curriculum aroused such opposition from the teachers' unions, that the best that could be achieved was a Schools Council to foster curriculum research and development, funded by central government and local education authorities, but with a majority of teacher members. In France, of course, government involvement presented no problems. Curriculum development is the concern of a series of curriculum commissions, which, in addition to specialist administrators and school inspectors, include senior teachers and, where appropriate, university subject specialists. The commissions prepare national guidelines on the content, methodology and the time to be allocated to individual subjects and, after informal consultation with teachers and others, these are adopted and become binding on all schools.

All the inservice education and curriculum development discussed above is based on the R.D. and D (Research, development and diffusion) centre — periphery model: an authority at the centre (a curriculum development group or government committee) produces guidelines or teaching materials, and teachers at the periphery are encouraged or obliged to accept them. During the seventies it became clear that such a strategy does not work. In Britain, the Schools Council was much criticised and began to question its own strategy. In France, there was a well orchestrated grass roots opposition by groups of teachers to the central control of the curriculum. In order to improve the diffusion of innovations, curriculum development agencies in many parts of the world established local teachers' centres, so that teachers could see and discuss the use of new materials. Sometimes these centres concentrated on one subject area such as mathematics; more frequently they covered a variety of materials prepared for a range of ages. In the later seventies the activities of teachers' centres began to change. Teachers began to initiate research and curriculum development themselves, so that curriculum development became school based. In Britain, the Schools Council, in addition to carrying on with some of its major projects, now gives financial aid to development work by local groups of teachers. Teachers are moving to the centre of curriculum development; the inspector, advisor and teacher educator are moving to the periphery. This development is in its infancy, but it holds out a hope for a new professionalism amongst teachers in every type of school.

# Sex Differences in Mathematical Performance: What do we know about them?

*Carmen Dalli*

It is generally accepted that mathematics is one academic field where male superiority of achievement is well-established. Far fewer women than men go into careers as mathematicians[1] and those who do, generally do not reach equal employment status with men. Such facts seem to be the culmination of sex differences in mathematical performance which begin to appear around the age of 12 to 15.[2] Up till then, the mathematical performance of boys and girls seems to be fairly equal at any of the three cognitive levels of computation, knowledge of concepts and problem-solving ability on which mathematical achievement is most commonly gauged. The change in performance at the secondary level of schooling tends to be in favour of males who are seen to perform better than females particularly on tasks involving visual spatialisation ability and mathematical reasoning. The girls' discontinuity of performance, even when they have had an identical learning background, has prompted researchers to investigate possible explanations for a phenomenon which *Walden and Walkerdine* (1982)[3] stress should not be confused with an "overall failure."

## Suggested Explanations for Observed Differences

These tend to emphasise either

(i) biological/innate differences between the sexes as (hypothetically) resulting in differential cognitive abilities and hence differential mathematical performance, or

(ii) the effect of attitudes and expectations on actual performance, as well as the influence of factors of sex-role socialisation and other environmental conditions on the development of such attitudes.

It will be apparent that the different emphasis echoes the old Nature/Nurture controversy dominant in many areas of Developmental Psychology. Clearly, however, Nature cannot show without some Nurture, while Nurture is in most cases modified by Nature. Thus, the above distinction between explanations reported in this paper is only adopted as a convenient organisational devise. The complexity of the interrelationship between influential variables becomes apparent in the findings of various studies some of which are considered in this paper.

## Some "Biologically-based" Explanations

The investigation of innate or genetic characteristics as potential determinants of sex differences in mathematical performance is often justified through reference to statistical data which show a greater frequency of male geniuses in the field of mathematics. It is also argued that since outstanding mathematical performance appears very early, such a performance is more likely to have a genetic component in either sex than to appear solely as a result of socialisation.[4] A further reason for looking at innate characteristics as potential sources (among others) of differential mathematical performance has been the controversial finding that sex differences in mathematical achievement persist even when differential course-taking is controlled for. The dimension on which such genetic differences are hypothesised to occur is the cognitive one whose development, perhaps because of Piaget's mathematical model of thinking, has come to be seen as occurring parallel to the development of mathematical ability. Along this dimension, sex differences in spatial visualisation ability as well as in basic logical skills have been hypothesised as accounting for many of the differences in mathematical achievement, particularly in geometry where the ability to perceive relations in space and visualise objects in three dimensions is seen to be essential.[5]

## Spatial Visualisation Ability and Mathematical Achievement

At least three theories which stress the biological basis of visual-spatial ability have been proposed.

The first is known as the "X-chromosome theory". Briefly put, this theory holds that a recessive gene giving visualisation ability is carried

on the X-chromosome. The claim is that males, who only possess one x-chromosome, inevitably exhibit the visualisation trait whenever the gene is present. In females, however, who carry two X-chromosomes, the gene would have to appear on both in order to be expressed. The greater probability of males' possessing the relevent gene is held to be responsible for their superior spatial visualisation abilities. A serious criticism of this theory has been made by *Archer and Lloyd* (1982)[6] who point out that the theory rests on the assumption that such genes which influence intellectual development actually exist: evidence from cross-cultural studies of families have failed to produce the predicted pattern of within-family correlations in intellectual functioning. Despite such evidence, the notion that sex-differentiated spatial abilities are genetically-based still persists.[7]

A second genetic theory is the Brain Lateralisation theory which attributes higher spatial ability in males to observed different patterns of hemispheric localisation of mental ability functioning in males and females. Disagreement over the precise link between hemispheric differences and specific mental abilities,[6] however, leaves the claim still open to question.

Sex hormones have also been hypothesised as acting on the brain to produce differences in spatial and other abilities. But, as *Archer and Lloyd*[6] point out, evidence in support of this explanation is again weak. Besides, like the two preceding it, the explanation is inadequate in that it does not consider any possible interaction with the environment in the expression of the traits. Such interaction should certainly be taken into consideration particularly when one remembers that even in more clearly understood genetic traits like diabetes, the influence of environmental conditions may be seen to affect the nature of, and extent to which, the predisposition develops.

It is clear that considerable uncertainty continues to surround the acceptability of biologically-based theories as providing an adequate explanation for differences in spatial visualisation ability. Furthermore, *Fennema* (1980)[5] reports that "although the relation between the content of mathematical and spatial visualisation skills appears logical, results from empirical studies that have explored the relationship are not consistent".

Given this lack of conclusive empirical data on the very existence of a relationship between spatial visualisation and mathematical learning, it appears even more unlikely that any relationship between visual spatialisation and different mathematical performance between the sexes could be readily determined. Thus, while the hypothesis seems reasonable in the light of numerous studies which report sex differences on either dimension as beginning to appear at roughly the same time,[2] studies conducted with the specific intention of investigating the relationship between visual spatialisation skills and mathematical ability have failed to provide supporting evidence for this hypothesis. In a study of grade 6 to 12 students (ages 12-18 years), *Fennema and Sherman* (1977)[8] found, for example, that while a positive relationship existed between visual-spatialisation skills and mathematical achievement, this was not differentiated by sex. A later study by *Sherman* (1980)[9] also reports sex differences in visual-spatialisation ability to have developed from grade 8 to grade 11 (ages 14—17 years) so that sex-related differences found in mathematical achievement by grade 11 (age 17 years) are attributed to the effect of sex-role socio-cultural influences.

In conclusion, it might therefore be said that although there are various indications that a relationship exists between visual-spatialisation abilities and mathematical performance, the nature of this relationship is still unclear. Furthermore, although various genetic theories have suggested explanations for this relationship, no claim may be made that biological factors are to be held wholly responsible for differences in mathematical performance. This, however, does not rule out the possibility of a genetic component in mathematical ability which is indicated by studies reporting the early appearance of outstanding mathematical ability among children of both sexes. Finally, variations in visual spatialisation do not fully accunt for those differences in mathematical achievement which are sex-related.

## Basic Logical Skills and Mathematical Performance

A different level of cognitive functioning hypothesised to be related to sex-differences in mathematical achievement is logical thinking. As indicated earlier, mathematical achievement is seen to depend on the development of computational skill, knowledge of concepts and problem-solving ability. The three conditions are seen as necessarily following one upon the other so that although the conceptual nature of mathematics is present even during the teaching of initial computational skills, conceptual aspects are emphasised in the higher level mathematical courses of algebra, geometry, trigonometry and calculus typically found during the secondary school years. A Piagetian perspective would see this greater emphasis as coinciding with the period when the transition from the concrete to formal operational thought is expected to occur. It is alsc, of course, the perod when sex-related differences in mathematical achievement have been reported to occur so that it has been hypothesised[10] that sex-related differences in mathematical achievement may be a function of later attainment of the formal operational stage by females. *Kaplan and Plake*[10] state, however, that empirical assessments of formal operations by various researchers suggest that this might not be an adequate explanation. They themselves, in a study which investigated the relationship between level of cognitive development and mathematical achievement for college students of both sexes,

found that logical skills measured on a Test of formal operations existed equally in females as in males but without being accompanied by a high level of mathematical achievement. It is therefore suggested that formal operation skills must have developed in females through interaction with non-mathematical problems and materials so that they call for remediation programmes which would attempt to generalise these skills to the mathematics domain. Piaget's (1972)[11] proposal that one is more likely to demonstrate higher level skills in the area of one's special interests is used to support their suggestion that mathematical skills may first be built up in the individual's particular area of high interest and later transferred to the area of mathematics.

The implication of this last suggestion is that mathematical achievement may well be influenced by factors which do not derive solely from within the individual but may also be a function of environmental influences. Various researchers have identified a wide range of such factors some of which are discussed in the following sections.

## The Role of Environmental Factors in Mathematical Performance

Environmental factors hypothesised to affect sex-related differences in mathematical performance may generally be seen to be related to sex-role socialisation and to derive from the two major formative influences in the young child's life: the school and the home.

### Schooling

Differential treatment of boys and girls by the teacher, as for example, in implicitly or explicitly communicating different behavioural expectations from boys and girls (in terms of such things as neatness in work, level of noise tolerated, play activities engaged in, etc.) are seen to perpetuate stereotypical expectations present in society which, among other things, looks on mathematical activity as being a masculine, rather than a feminine or neutral one.[12]

Such expectations, when communicated by such "significant others" as teachers, are held to have an important effect on the child's developing attitudes towards the subject. The conviction that attitudes affect achievement has been behind much of the work done on attitudes towards mathematics itself and on the relationships between self-concept of ability and achievement in mathematics.[13]

Affective factors such as attitudes are reported not only to affect the "amount of effort one is willing to exert to learn mathematics but also (to have) great influence on the election of mathematics courses beyond minimum requirements". *Sherman* (1980)[9] for example, found that although changes in visual-spatialisation ability among girls tested from grade 8 to grade 11 (ages 14 to 17 years) did not occur, attitudes towards learning mathematics were seen to become less favourable and performance to decline.

The hypothesis that attitudes and beliefs are related to achievement in mathematics appears to be consistently supported by research findings. This does not, however, imply that a casual relationship between the two variables may be claimed. Further studies are required in order that this kind of relationship might be demonstrated.

The effect of teacher behaviour on sex-differentiated performance in mathematics has also been extensively discussed. In the report of an observational study of mathematical learning in infant schools carried out by *Walden and Walkerdine* (1982)[3] over a two-year period, the researchers observe that mathematics is frequently referred to as "hard work", "a job", so that they suggest that pupils' perceptions of mathematics might well be prejudiced by the teacher's own feelings about the subject as implicitly communicated through the use of such language. The authors argue that these feelings often derive from the teachers'(generally female) insecurity in their own mathematical ability which at the same time recognises the subject as highly important in society. This compound of attitudes is held to lead to a determination to teach the subject "properly" calling for a greater display of class control lest attempts at re-explaining might result in the creation of further confusion in the pupils' understanding. The further idea that teachers are more likely to focus on the boys in their attepts to keep their class under control is also sometimes held to contribute to the establishment of mathematics as a male domain subject. This idea is supported by *Fennema* (1979)[14] who argues that, being seen as potentially more disruptive, boys become more salient in the teacher's frame of reference and consequently receive more attention, in terms of both praise and blame, than girls. Looking at the mathematical performance of boys and girls, *Fennema* later concludes that "differential standards for mathematical achievement are communicated to boys and girls through differential treatment as well as differential expectations of success". She therefore interprets the teacher's concern with maintaining authority in the class as possibly mediating sex differences in mathematical achievement.

Contradictory findings to these are reported by *Parsons et al* (1982)[13] whose study of classroom influences of children's achievement reports no evidence of sex-discriminatory use of praise and criticism by teachers. *Walden and Walkerdine*'s[3] observations are in agreement with this view. They claim that their observations revealed that in the nursery and primary schools they visited, teachers chose to reinforce or correct behavioural traits regardless of the sex of the child who exhibited them. *Parsons et al*'s[13] study however, does lend support to the view that teacher behaviour influences pupils' attitudes: sex differences were found in the relationship between teachers' use of praise and criticism and pupils' self-concept of ability and expectancies in mathematics. Thus, high levels of teacher praise and criticism were found to be good predictors of self-concepts of

ability for boys but not for girls. The authors, however, point out that the frequency rates of the use of praise and criticism were quite low so that this, coupled with the finding that praise and criticism were not so predictive of students' self- and task-concepts as other measured variables (e.g. students' past performance and teachers' expectancies) indicates that students' self-concepts must be mediated by more subtle processes than the variables of teacher-student interaction observed in their study.

Other school-based variables which have been investigated as relevant to the topic being discussed relate to school organisation. A modern, as opposed to a traditional orientation, for example, is held to affect pupil performance in mathematics with traditional schools producing greater sex differences in behaviour, including performance on intellectual tasks such as problem-solving and coding tasks.[15] Having single-sex as opposed to mixed-sex schools has also been found to be related to performance in mathematics by *Husèn* (1967)[16] in a study in which he compared data from twelve countries. More recent cross-cultural studies do not support this.

Evidence also exists that differences in amount of time spent studying mathematics may also account for some of the sex differences found in mathematical performance. This view is strongly held by *Fennema* (1980)[5] who claims that when amount of course-taking is controlled for, few sex-related differences in achievement are found. Fennema's argument, however, loses most of its strength outside an American context where the situation differs from the British, and indeed the Maltese one, in that American children may opt to stop studying mathematics completely. In Britain, on the other hand, mathematics remains compulsory till school-leaving age so that children of both sexes spend the same amount of time in studying mathematics till that age. It is clear, therefore, that sex differences in mathematical achievement found in British data cannot be interpreted as being a function of different amounts of mathematical study as readily as American data might. Studies which show improvement in mathematical skills following training in specific areas[7] indicate that the hypothesis is a useful one.

## The Home Environment

The role of the home in the development of sex-related differences in mathematical achievement may also be described in terms of sex-role socialisation. Parents are perhaps the most influential role-models in the child's experience so that it is suggested that mathematical performance may be influenced by children's perception of the usefulness of mathematics in the life of their parents. As the structure of our society makes it more likely to be the father rather than the mother who is engaged in activities requiring formal mathematical abilities, it is hypothesised that boys are more likely to perceive mathematics as being useful to their future role and hence aspire to achieve in it. Girls are similarly likely to see mathematics as a male domain subject, yet, since they identify more with their mother, their perception of mathematics is expected to result in the syndrome called the "fear of success". In this situation, the daughter is described as perceiving a conflict in her sex-role which in turn inhibits mathematical achievement. *Sherman* (1980)[9] supports this argument. An earlier study which she conducted together with *Smith* (1967)[17] in the performance of 12/13 year old orphaned girls as compared to girls from "normal" families also indicates support for the parental modelling hypothesis.

In contrast, *Parsons et al* (1982)[13] who also studied parental influences on the development of achievement attitudes as measured on mathematical tests given to 11 to 17 year-old-students, found that parents do not influence their child's achievement attitudes through their power as role models. Rather, parents were found to be influential in the formation of children's achievement attitudes through communicating their expectations regarding their children's abilities. As hypothesised, the study found that parents held sex-differentiated perceptions of their children's mathematical abilities even when the actual performance of boys and girls were similar.

Parents of daughters expected their child to need to work harder at mathematics in order to do well, than did parents of sons. These stereotypical views among the parents were then reflected in the children's own perception of their parents' beliefs and in their own self- and task-perceptions. Indeed, parents' beliefs were found to be more directly related to children's self-concept of ability and expectancies than to their past performance. Therefore, since parental beliefs were so highly sex-stereotyped, as well as so strongly related to pupils' self- and task-perceptions, it may be inferred that parents could easily be responsible for handicapping girls with lower expectancies for mathematical achievement, and ultimately, career aspirations. Lack of longitudinal data which tests the long-term effects of the reported relationship leaves the question open to investigation.

## Conclusion

The above discussion will have made it clear that the importance of the sex-role stereotyping which occurs in both school and home cannot be underestimated. Studies reviewed in this paper have consistently reported finding relationships between socially-mediated attitudes and achievement in mathematics. Yet, despite the wealth of data which links environmentally-derived factors with sex differences in mathematical achievement, no causal relationships have yet been identified or proven to exist between the two variables. In this respect, it may be seen that the situation echoes that holding for factors which are assumed to have a genetic origin: are the variables simply "related", or does one cause the other? Or is it indeed that they are more intricately interrelated and involved in a complexity of cause and effect as well as other relationships?

No clear answers appear possible. As stated at the beginning of this paper, the interplay between factors is a complex and often subtle one. Studies can isolate only a handful of variables at any one time and indications for further research made by any particular researcher are not always followed up. Thus, the overriding impression that one is left with is that work in this field is still at an exploratory stage and requires both imaginative as well as rigorous research before an answer to the question heading this paper may be more conclusively given.

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# Overcoming a Difficult 'Area'

(Continued from p. 5)

district on a map. For all the words in italics above we can use a single word *area*. So instead of saying *the surface* of the leaf we say *area* of the leaf, or *area* of the foot, or *area* of the district. Which other things on the teacher's table have area? The poster, the post-cards, the tiles. All these objects are thin and flat and so have their *area*. Area therefore is the amount of surface enclosed by a boundary. Let's write it down again

area=amount of surface enclosed by a boundry

The area of one leaf was 18 wholes or 18 units of area. The other leaf was 15 units. What was the area of your foot? Of Mdina?

## Conclusion (for Teachers)

Area is fundamentally a measure of surface and the essential aim of these concept-formation lessons about area is to develop an appreciation of this idea. Rules for finding areas of certain shapes will come later, but under no circumstances should these rules or formulae come first. Children should first be confronted with finding the area of irregular shapes, and not, as was normal until recently, be given the deceptively easy rectangle to consider in the first instance. There is a distinct danger in using the formula for a rectangle too early. It is the concept of area that is required not the rules at this early stage.

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*SMP Book 1*

# Meeting Teachers' Needs (2) Effects of change: In-service education and training (INSET)

*George Bonnici*

In-service education for teachers in Malta is older than initial training. The induction courses for emergency teachers (1957—59), the maturity courses for serving teachers (1962—65), summer vacation courses of the late sixties, the evening courses for teachers and instructors in the trade schools and in further education schools (1965—68), as well as to some extent, the first share of the five year B.Ed (Hons) programme, are all examples of education and training of teachers which is both initial and inservice. In some cases it is difficult to find a line of demarcation between initial and in-service as well as between education and training.

## INSET Modes

Perhaps the major weakness of most INSET courses is that they take the form of single lectures or a short series of lectures. In some cases the lectures are supplemented by workshops and discussion groups.[1] However most courses focus on the teaching of specific subject areas and are mostly content based. There are advantages in this present approach to INSET, and the benefits of existing courses should be maintained. However, a more systematic and scientifically based reform of methodology which relates theory and practice would be more beneficial. Such reforms which will include problem-solving projects[2] [4], school-based[5] and school-focused INSET[6], as well as application of heuristic methods[7] will enhance the reputation of the Faculty of Education as a Tertiary level educational institution concerned with and involved in functional research for the benefit of the local educational community.

## Need of Collaboration

This does not mean that the primary initiative will be that of the Faculty of Education. The necessity for further collaboration of the various government departments, educational institutions and teachers' associations should be given full consideration. There are two main reasons why there should be further growth in the committment to INSET on a national scale in Malta. There are inherent needs and there are needs that are brought about by the effects of change. "Teachers of all people"[8] need to continue their personal and professional education.

## Effects of Change

Change is happening in social, economic, cultural, technological and political life and this has an effect on knowledge and on the curriculum. It is essential therefore for the teacher to regularly review and modify methods of teaching and curricula. The introduction of secondary schools for all (1970), the extension of the school leaving age to 16 years (1971), and the re-introduction of the selective system for secondary education present curriculum problems which are clearly related to the needs of the 10—16 age group. There are new demands on the teacher in the secondary schools which result from the radically changing nature of the relationship of the school community which include the demands for a secondary school to be accountable for its standard. There are also needs associated with particular subjects notably Physics, Arabic and another foreign language, a proficiency in which is required for entrance to the University of Malta via the New Lyceum. These subjects together with science and mathematics present curricular problems especially to the less academic students.

For many teachers who have little understanding of modern practice in special education, the presence of an under achiever or a handicapped child will create problems. The above mentioned problems create needs which cannot be ignored if future 'shock' is to be avoided. These needs make imperative the provision of INSET for both teahers and educational managers at every level. There is an urgent need to focus on managerial, administrative and teacher manpower problems. Perhaps one of the most necessary first steps in bringing about the changes required to provide better INSET is the re-deployment of human and material resources.

## Most Paramount Need

What must be emphasised at this point is that although in-service education and training is in the interest of all educational institutions and of the teaching profession in their contemporary search

for higher status, it is the needs of the children and students in schools and colleges that are paramount. Another point to be emphasised is that, although INSET problems will be identified, this does not imply a criticism of the Maltese educational system or of the teaching profession. The majority of teachers are effective with a clear understanding of their work. Others inevitably are less professional in their approach. However, all teachers, at every level, everywhere, need in-service education. New knowledge and new methods, new school and economic factors lead to a need for in-service education.

## Lifelong Learning Needs

The purpose of INSET can be seen in the concept of lifelong learning which is found in the writings of great educational thinkers.[9] Everyone, not only teachers, need lifelong learning but it is only recently that the concept of lifelong education, continuing education, adult, recurrent or l'educatione permanente has come to be widely advocated as a principle applicable to the whole of education[10]. Teachers need lifelong learning more than others. INSET, within the concept of lifelong learning should however, emphasise with the content of the curriculum and methodology. Teachers need to be involved in discussions about curricular objectives and school organisation, changes in currciular content and new methods in teaching their specialism. The concept of continuing education in generally thought to enhance two broad components — personal and vocational training. It is the latter that is most relevant to INSET but the former cannot be ignored. One cannot ignore that there is also a potential conflict between the needs of the system and those of the individual teacher. INSET activities which improve teacher performance as a whole most likely satisfy the needs of the educational system and those of the individual institution. However, as Henderson states[11], it should be recognised that, although any one INSET course may have several purposes, it is useful to distinguish between the main and incidental pruposes and outcomes of such an activity.[12]

## Needs

The primary need must be to organise all available human and material resources to develop an 'appropriate machinery' to negotiate and agree upon general and specific INSET needs. Teachers should be seen as professional adult learners so that their INSET needs will be better understood. The general agreement amongst both theorists and practitioners is that INSET needs can be more effectively and validly identified if the teachers involved participate colloboratively.

## Specific Local INSET Needs

A colloborated effort will help to identify those demands, tasks and constraints from which INSET needs will arise.

Educational change and innovation, whether brought about by an individual teacher in a school, by a head of a department, by an education officer, a group of teachers in different schools or brought about on a larger scale through the implementation of a national policy decision, will bring with it new needs on the teacher. The following are examples of some of the specific needs for INSET to satisfy Malta. The list is not presented in order of priority. The categories indicate needs for all teachers in general and for a specific group in particular.

### A: All Teachers

1. All teachers should have the opportunity to acquire a better understanding of the principles and methods of educational technology especially if this was not imparted to them in the initial training.
2. All teachers need to keep well informed of the results of educational research and experience.
3. All teachers should be informed about the use of new books, materials and equipment.

### B: Teachers in Primary Schools

1. Teachers of general education in the primary schools will need to widen their knowledge of the content of what they teach.
2. The introduction of new approaches to the teaching of reading, mathematics, science, religious knowledge, environmental and social studies will pose INSET needs.

### C: Teachers in the Secondary Schools

1. Teachers who specialise in a subject need to refresh and extend their knowledge of their specialism.
2. A teacher in the secondary school, who is asked to teach a subject which is not really his/her own field of specialisation needs INSET as induction and orientation into the new field.
3. Sometimes it may be a teacher' own choice to make a change. This should not be encouraged unless the teacher is found competent enough to teach the chosen subject. A choice of subsidiary subject, or of a special responsibility (i.e. remedial teaching) demands participation in INSET activities which will provide the teacher with opportunities to update the pedagogical competence and to upgrade the content of the respective subject.

### D: Teachers of Pupils with Special Needs

1. Teachers who are faced with illiteracy or semi-illiteracy problems in their pupils will need to continue their understanding

and competence of the language arts i.e. language development and the teaching of reading and writing.

2. Teachers of handicapped children are required to possess special qualifications. All the practising teachers in special education follow a one-year diploma course in the UK. The need is now being felt to provide further in-service facilities in Malta for those teachers who need refresher courses. Qualified and experienced teachers from this field may be asked to contribute in the organisation and running of INSET activities.

### E: Teachers who change posts or who occupy posts for which they may have not been specifically trained.

1. In case of a move from primary to secondary school teaching the argument presented in C: 3 also applies.
2. During the years 1981—84 groups of married women teachers have re-entered to teach after an absence of some years. An average of about seven years from teaching has left them out of practice and out of touch with developments in currciulum and method. INSET needs are obvious.
3. There are also specific INSET needs closely related to the existing teacher establishment especially for Post Graduates, Instructors, Kindergarten Assistants and Teachers/Instructors in the various government departments and in parastatal bodies such as the Nursing School, the Armed Forces, Banking, Broadcasting, . . . etc. A number of post-graduates who were automatically established as teachers after qualifying in a one year full time BA General course, would benefit from courses which focus on curriculum development, educational material development and resource utilisation. The same argument applies to instructors who are employed to teach in trade schools and the technical institutes. These are generally recruited from among persons with the required trade qualifications and a period of experience in industry. Although Kindergarten assistants do not require initial training qualifications, they are given accelerated in-service training by Education Department personnel during the summer period.
4. The Education Department also employs part-time teachers and instructors who work for a stipulated maximum number of hours per week. Their term of service can be terminated or renewed at the end of each scholastic year. I came in contact with many such teachers who voiced the need for in-service courses.
5. The organisational changes that happened especially at secondary school level created a considerable number of promotions to heads of schools, heads of departments and various other responsibilities. It is right for these people themselves and for the place in which they work that they should be given adequate and systematic preparation for the larger responsibilities that they have to assume. They would benefit from courses which focus on Staff Management techniques, the co-ordination of Human and Material Resources as well as professionally related kind of training.

### F. Effects of change

1. Curriculum change may result in making certain knowledge obsolete. Other types of changes in the curriculum may make methodological demands which the teachers have to be equipped to meet.
2. There are numerous demands emerging which require further training of other skills which are not normally given extensively in initial education and training courses. Resource management, career and counselling responsibilities, librarianship, general paternal care . . . all require further INSET activities as they would be better developed on the basis of some experience in teaching.
3. Non-graduate teachers who possess a teacher training certificate (up to 1974) are keen on INSET which could lead to degree qualification. The emergence of the transition towards an all-graduate profession has threatened their chance of career development.
4. One of the elements of change is growth which usually implies more growth. Within a few years some of the B.Educ. qualified teachers will voice the need for INSET which will lead to M.Ed. Degree.

The above mentioned examples present, in the writer's opinion, an overall view of the local situation with regard to INSET needs.

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*cont. on p. 22*

# A "School Adaptation Check List"

*R.G. Sultana*

In my experience as a teacher, I have become very much aware of students' problems arising out of difficulties in adapting themselves to various aspects of school life, such as change of institution, friends, teachers, academic level and expectations. Very often, difficulty to cope with life at school creates many emotional problems and scholastic performance suffers. The checklist I have generated will, hopefully, help persons concerned in pastoral or administrative activities in a school to identify students with adaptational problems, and also to gauge specific areas which many students might be finding difficult to cope with in a particular school. Knowing the attitudes of each individual and those characteristic of the group, the school can mobilize its counselling services to help make the adjustments necessary.

**Design of the "School Adaptation Check List"**

The SACL (School Adaptation Check List) is based on a model generated by Ross L. Mooney and Leonard V. Gordon. The operational use of *Mooney's Problem Check List* and the revisions made to it in content and format throughout a long number of years (since 1941, to be precise), have persuaded me to keep as close as possible to what is, in the final analysis, a well-proven model. Credit for the conception of a check list as well as the format presentation are to a great extent due to Messrs. Mooney and Gordon.

The SACL contains a 100 items, 20 in each of the following areas:

1. Academic (A)
2. Recreational (R)
3. Student-Teacher Relationship (S)
4. Student-Student Relationship (S)
5. School as Institution (I)

*Areas:* In my opinion, these five areas or categories cover the basic sources for problems in adaptation to school life. The *Academic* area includes all those difficulties students face with regards intellectual output and input, curricular difficulties, subject matter, and so on. The *Recreational* aspect deals with the non-academic, as opposed to the purely intellectual, classroom interaction. It is a well-known fact that major concern for students and for teachers are the inter-relationships between *teachers and students*, and *students with other students*. Finally, in the area of *School as Institution* I included such items as disciplinary style, general running and ethos of the school, as well as personal difficulties generated in confrontation with the school as an organised, perhaps bureaucratic institution.

The categorization of the items into areas is helpful in terms of presenting a homogeneity of problem content that would facilitate meaningful interpretation by the counsellor or teacher. It is also useful in pointing the data as much as possible in directions which would suggest programmes of action related to the kinds of services which tend to be available in schools.

*Items:* The items displayed in the SACL were generated from a variety of sources, namely:

(a) My own experience as a student, coupled with that of various friends in my Hall of Residence coming from different nations and cultures, as well as from different social backgrounds. They very kindly offered lists of items from their own experience.
(b) My experience in Secondary Schools for boys and girls, which was greatly amplified in 1981/82 when I was intimately involved in the setting up of a new educational establishment in Malta which made students' adaptational problems more evident.
(c) As a teacher of R.E. I had carried out a self-descriptive essay of problems among third form girls in relation to school life and other areas of possible strife.
(d) Research of literature on student attitudes to school and the coping difficulties they encountered.

The list of items extended to a master list of a 160, and following Mooney and Gordon, the selection and phrasing of the items in the SACL were based on the following criteria. The items were to be:

(a) In the language of the students. In my English version, using basic English words the students would be familiar with.
(b) Self-sufficient as individual phrases.
(c) Short enough for rapid reading.
(d) Common enough to be checked frequently in large groups of students, or serious enough to

ENGLISH EDITION

# SCHOOL ADAPTATION CHECK LIST

SECONDARY SCHOOL FORM

RONALD G. SULTANA

READING UNIVERSITY

Age ..... Boy ..... Girl ..... Form .....

Name of School .....

Date .....

## DIRECTIONS

This is a list of some of the problems boys and girls face in school. You are to pick out the problems which are troubling you.

Read the list carefully, and as you come to a problem which is troubling you, draw a line under it. For example, if you generally dislike reading, you would draw a line under the first item, like this:

1."Not interested in books"

When you have finished reading the whole list and marking the problems which are troubling you, please answer the questions on Page 4. You are free to sign your name on the last page if you so desire.

A
R
S-T
S-S
I
TOTAL



DIRECTIONS: Read the list slowly, and as you come to a problem which troubles you, draw a line under it.

| | |
|---|---|
| 1. Not interested in books | 26. Too much homework |
| 2. Poor memory | 27. Most of class better than me |
| 3. General feeling of failure | 28. Textbooks hard to understand |
| 4. Don't like study | 29. Chosen wrong subjects |
| 5. Low marks for my work | 30. Afraid of tests |
| 6. Can't use my talents at school | 31. School not helping me discover talents |
| 7. Little space to run in during break | 32. Bothered by a physical handicap |
| 8. Not enough clubs and club activities | 33. Not enough sports/hobby equipment |
| 9. Often try to miss P.E. lesson | 34. School is all work and no play |
| 10. Breaks too short for me to rest | 35. Wish to leave school during break |
| 11. Teachers are too strict | 36. Most teachers don't like me |
| 12. Prefer to have fewer teachers | 37. Teachers go too fast during lessons |
| 13. Afraid of some teachers | 38. My efforts not appreciated in class |
| 14. Teachers hardly ever notice me | 39. Teachers concerned with lesson, not pupils |
| 15. Never tell my problems to a teacher | 40. Teachers make me feel bad about myself |
| 16. Best friend not in my class | 41. Nobody likes me |
| 17. Laughed at if I speak in class | 42. Class-mates make fun of me |
| 18. Often find myself alone | 43. Students blame me when things go wrong |
| 19. Friends not in my school | 44. Envy some students in my class |
| 20. Treated like an outsider | 45. Getting into arguments |
| 21. I feel lost and not important in school | 46. Rarely show my real self in school |
| 22. School is my main problem in life | 47. Uniform makes me feel bad |
| 23. I don't know my way around school | 48. School makes me miss breakfast |
| 24. School is a waste of time | 49. Frequently arrive late at school |
| 25. I spend more money than I afford in school | 50. School is a prison |



| | |
|---|---|
| 51. No relation between subjects and life | 76. Don't know how to study |
| 52. Difficult to know what to study | 77. Afraid of making mistakes |
| 53. No discussion about things that matter | 78. I work too slowly |
| 54. Made to take subjects I dislike | 79. Can't do work at home |
| 55. Difficult to put to practice things learnt | 80. Don't understand most lessons |
| 56. No opportunity in school to do things I like | 81. Too clumsy and awkward |
| 57. Need to meet students from other schools | 82. Meet teachers only formally |
| 58. School is mainly boring | 83. I'd rather go home for lunch |
| 59. No feeling of togetherness in school | 84. Lessons cannot be fun |
| 60. Learning only takes place in class | 85. Can't stand Assemblies |
| 61. Teachers make fun of me | 86. Shy to ask questions |
| 62. Don't speak to teachers out of school | 87. Most teachers are unjust |
| 63. Teachers not interested in what I think | 88. Teachers too distant |
| 64. Teachers shout and are angry with me | 89. Wish teachers don't notice me |
| 65. Teachers enjoy finding fault with me | 90. Teachers don't understand me |
| 66. Class-mates swear, tell dirty jokes | 91. Getting into fights |
| 67. Never part of the lively group | 92. Called "teachers' pet" |
| 68. Afraid someone will hurt me | 93. I have enemies in school |
| 69. Have less money than my friends | 94. Often want to copy work |
| 70. To be accepted I do things I don't like | 95. Class too noisy |
| 71. No one to help me with my personal problems | 96. Too much violence/theft |
| 72. Travelling to and from school is a nightmare | 97. Dislike style of discipline |
| 73. Would play truant if I got away with it | 98. Classroom too hot/too cold |
| 74. Education not preparing me to earn a living | 99. Have bad dreams about school |
| 75. Students have little say in school affairs | 100. Restless to leave school |

A
R
S-T
S-S
I
TOTAL

DIRECTIONS: When you have finished underlining the problems which trouble you in school, answer the questions on page 4.



## QUESTIONS

1. Which problems in school are troubling you most? Write about two or three of these if you'd like to.

2. Do you know of anybody in the school who would help you adapt yourself better to school life? Would you like to talk to him/her?

3. Which suggestions, if any, would you like to make to head of school and teachers so that life at school would be more pleasant for you and your fellow students?

You can write down your name and surname in this box unless you want to remain anonymous:

.....

Thank you.

be important in an individual case.

(e) Centred within the students' own personal orientation rather than in general social orientation.

Spontaneous rather than deliberate reaction is sought. I decided on a number of 20 items in each area because 20 seemed the number best suited to cover the range of problems in each area without stretching some areas too far and compressing others too much. The final tally of a 100 items is also handy in working out percentiles. Although some items are apparently related to two or more classifications, each of these is listed only under the one area to which it has been found to be most relevant.

With regards to format, I again followed Mooney's and Gordon's model by grouping the items in sets of five horizontally while the students proceed vertically. This is an important feature since, in instruments where the groupings are obvious, students and counsellors report a tendency for the individual to skip entire areas that appear inappropriate to them without bothering to read the items. In such cases there is also a tendency to avoid making too many items in areas that they feel have lower social acceptability. The format of the SACL overcomes these difficulties while presenting groupings of problems which are convenient for the counsellor and survey analyst.

**Anonymity:**

Since all the items in the SACL are formulated in a "negative" or "problem-oriented" bias, many students will undoubtedly feel compelled to hide the extent of their maladjustment. The only way to offset this tendency is to leave ample freedom for the response to be anonymous if they so desire. If the student is filling out the SACL for a counsellor, leading to an individual interview, then the threat situation will be lessened and he will, of course, need to provide his identity. In other cases where the group as against individual survey is being carried out, the students are to be free as to whether they write their name or not. Students are made aware of this option as soon as the Check List is given to them. Often enough, class, age, sex or other educational variables are all that are needed for many survey and research purposes.

**Administration:**

Other elements related to the administration of the SACL are here briefly described. The SACL is self-administering, with all the directions needed printed on the cover page. Indeed, elder students can mark the SACL out of class, although it is advisable that students mark them during a class period.

**Usefulness of the School Adaptation Check List**

Here I intend to set out two different presentations of the usefulness and purpose of the SACL. The first will be a global, general overview, so that the value of the check list is depicted as briefly and succinctly as possible. The second will be a description of usefulness in terms of the criteria of Display, Comparison, Discovery, Clarification, Reassurance, Affiliation, and Orientation.

General Overview of Usefulness:

1. Adaptation of Form I students to a new system: the Secondary school.
2. Helps clarify to students their problems and needs in schools.
3. Used by teachers as basis of evaluation for discussion with parents.
4. Administrators and teachers become aware of of the effect of system on children.
5. Comparative survey of adaptation based on age, sex, social background, time.
6. Comparative survey of adaptation in different schools, stems, countries.
7. Helps client before counselling interview, as well as the counsellor.
8. Indicates clusters of problems for individuals/groups.
9. Indicates areas of change/programme innovation for school administrators.
10. Helps locate students who want and need help/counselling.
11. Helps locate groups of students with particular school-based problems.
12. Indicates discussion topics and group activities in tutor groups.
13. Suggests approaches by which a teacher can meliorate relationships with class.
14. Can measure changes brought about by planned problem-reduction programmes.
15. Reveals student attitudes to school.

**Categorised Presentation of Usefulness:**

A. DISPLAY: The problem tally in the specific areas provides the counsellor or analyst/researcher with a quick overview and display of the variety of problems which are the expressed concern of the student.
It similarly gives the students an opportunity to review and summarize their own adaptational problems and to see the full range of personal matters they might discuss with their counsellor/teacher.

B. COMPARISON: The SACL can be a very useful instrument to gauge the comparative adaptational/coping ability or extent at different levels of the school year. It can be used at an intra-school and an inter-school level, providing clusters of problems faced in various educational institutions which follow different educational principles and philosophies. It would be interesting to compare check lists between forms, between schools in urban and rural areas. A comparative study would throw light not only on which problems young people are concerned with in their school life, but also on a more general, system-oriented level.
When administered at different times to the

same group, the SACL can be used to indicate changes brought about by a planned problem reduction programme evolved during the interim period.

C. DISCOVERY/CLARIFICATION: The SACL is primarily designed to help counsellors or other concerned persons with the well-being of students become aware of coping difficulties faced by individuals or groups. While a competent counsellor can elicit an expression of a counselee's problems over a period of interviews, and observant teachers and form tutors infer adaptational problems from the day-to-day behaviour of students, the check list is a quicker and more reliable method of discovering the attitudes and difficulties faced. Previously overlooked areas needing attention can be brought to light. Discovering the problems of each individual and those characteristic of the group itself, the school can mobilize its counselling services and adapt its curricular offerings to meet those needs.

   The SACL is helpful to the student marking it because the process of going through the list may often be immediately in his understanding what is making him feel uncomfortable. By providing the language or semantic differentiating of various problems, the student is involved either in

   • self-discovery and self-understanding: a quicker recognition and analysis of his needs

   • or clarification, whereby he can see a vague discomfort encapsulated in words. Indeed, as in Mooney's Problem Check List, students attest to the value of merely filling out the check list.

   The SACL is also an educational tool in terms of students realising/discovering the problems other students face in school. It is therefore a "discovery" of the problem world of the students, perhaps leading to greater consideration. It could also be used as a basis for discussion — the analysis of group problems indicates discussion topics and group activities which are related to the personal interests and needs of the students in any given group. It can form the basis for the tutor group sessions, as well as for any course in life skills or human relationship programmes. Vocational Guidance Officers can use the data as a help in drawing parallels between problems faced in school and those in the world of work, and a programme could be built around the clusters of problems underlined.

D. REASSURANCE: Students realise that people are genuinely concerned about their daily needs as members of a system, and that these people are striving towards a better understanding of their needs and aiming for a professional way of providing help. There is perhaps relief in realizing how few problems they actually have.

E. AFFILIATION: The check list helps locate the most prevalent problems expressed within a student body vis-à-vis school as a basis for new developments and revisions in the curricular, extra-curricular and guidance programmes of a school.

   It also suggests approaches by which a teacher can establish a more personalised relationship with each of his students, and by which form tutors can understand better the group they are pastorally concerned with.

F. DIRECTION/ORIENTATION: The SACL presents a clear picture of the cluster of problems students individually and/or collectively have to face within an educational establishment. This is invaluable information to the Administration concerned for the total well-being of students they are directing. The Check-List therefore becomes an orientation instrument in so far as it points towards areas of modification or/and change which will help students feel more comfortable in their daily school life, enhancing personal and intellectual growth. The SACL can contribute to the process of fact-finding which is so essential to an intelligent plan for action in any institution.

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## Meeting Teachers' Needs

(Continued from p. 18)


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# Teaching Art Appreciation at the Fine Arts Museum

*Peter Mayo*

Since its official opening on the 7th May 1974, the National Museum of Fine Arts in Valletta has been regarded as one of the best sources of cultural enrichment on the island. Its contribution to the education of adults and youngsters, especially those interested in the representational arts, should indeed be considerable and local art masters in the secondary schools and higher institutions may fully avail themselves of such a source.

The Museum affords the art master the opportunity of drawing on excellent local examples in order to supplement his lessons in the History of Art. The Museum's spacious rooms lend themselves to 'on-the-spot' lessons which, needless to say, demand preparation. There are different ways and means by which the teacher may organise his teaching points. The method I propose is that of grouping these points under the following headings:

(a) Technique (medium and material used)
(b) Representation (*What* the work represents)
(c) Expression (*How* the particular figure or scene is represented)
(d) Form (Composition and colour)[1]

This method of classification, suggested by Eric Newton in *European Painting and Sculpture*, is rather arbitrary and may be refuted by the reader. However, I consider it quite convenient for the purpose of organising one's teaching strategy.

By the term 'Expression', I mean what is generally referred to as the 'artist's mind's eye', that is to say, the manner in which the figure or scene is conceived by the artist in question — his personal vision.

An inductive approach is advocated throughout, i.e. one whereby the teacher elicits information rather than divulges it. This is very much a personal view based on the conviction that no matter how uninformed the viewer may be, he has an eye and taste which can, with training in observation, be keen enough to appreciate the work in question.

The following lesson plan, relating to the section on Dutch Art, may serve as a guideline to the teacher. Apart from listing relevant teaching points, I have included a few examples of the kind of questions that may be asked in the course of the discussion. The reader will note that I have included, among the teaching points, the most important landmarks of the age. I have also provided a few biographical notes where famous painters are concerned. These points should constitute a brief introduction to the lesson and this should be one of very few instances where the information is to be divulged.

For reasons of space, I shall be confining myself to just two paintings but the approach adopted may easily be applied to other works at the Museum.[2] The first painting is a portrait in oils by William Key (1515—1568) while the second is a landscape, also in oils, by David Teniers (1610—1690).

## Lesson Plan Model

*Dutch Painting*

*Remote Preparation by Teacher*: *Age* — (a) *Pre-Reformation* or period under Spanish domination: Dutch art reflected aristocratic life; personalities include *Van Scorel* and *Sir Antonio Moro; (b) Counter-Reformation* or period following Dutch independence: Dutch art reflected life of the ruling bourgeoisie, i.e. merchant and commercial classes; personalities include *Hals*, *Rembrandt*, *Vermeer* and *Van Ruisdael*.

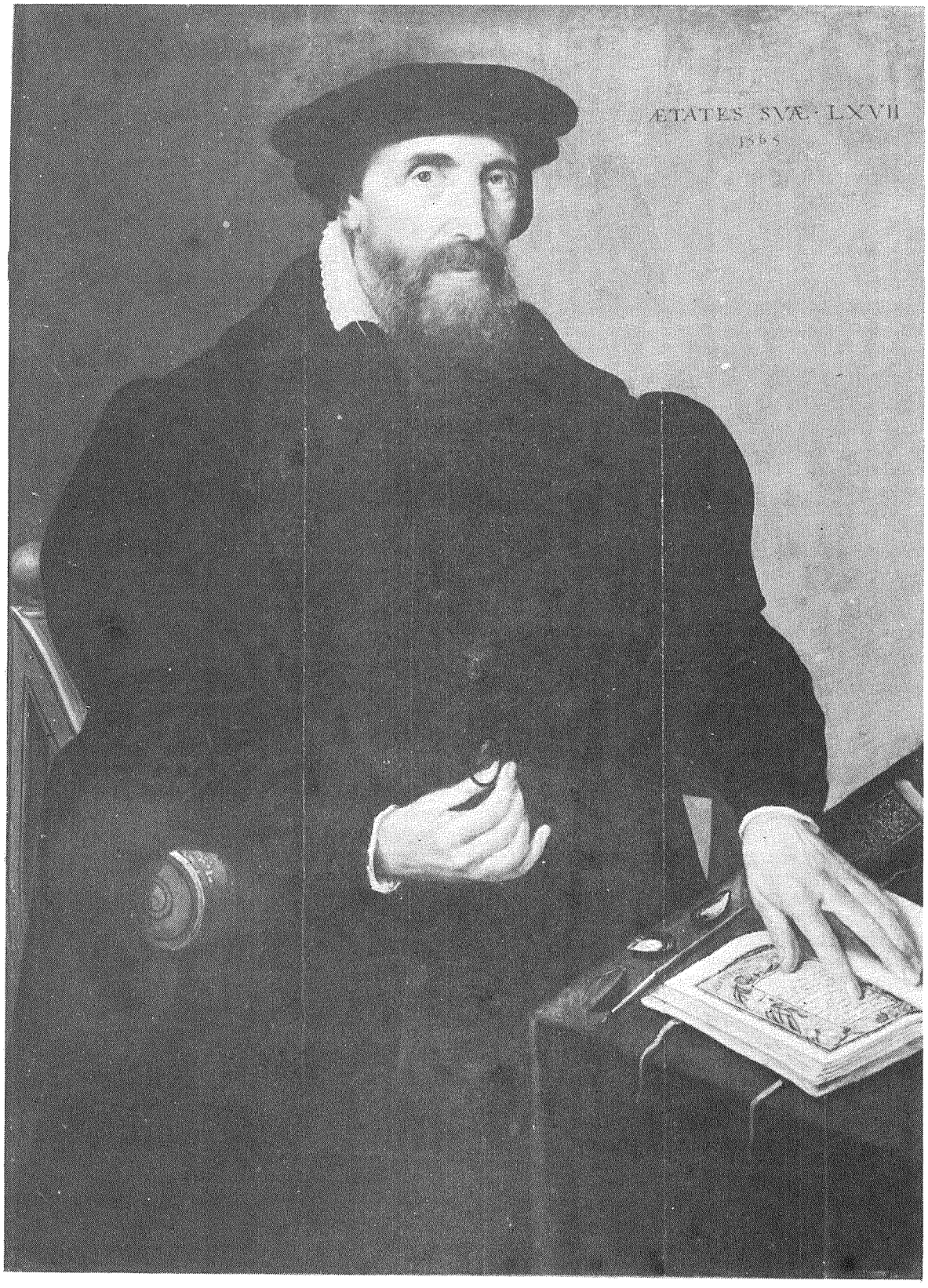
### 1. **An Illuminator of Books** *William Key*

### Technique

(a) *Material*: wood (panel)
(b) *Medium*: "The Netherlands had, until the end of the sixteenth century formed part of Flanders and so it is most natural that the Dutch should have adopted *oils* as a medium of paint. Can anyone tell me why?" — Because the Flemish painters were the first to adopt the oils technique.[3]

### Representation

(i) "How would you refer to this painting?" — As a *portrait*. "What is a portrait?" — A representation of a person or group of persons. "One may add that the *sitter* must be fully conscious of the fact that he is being portrayed. In most cases, it is the sitter himself who *commissions* the work."
(ii) "Is the figure portrayed in this work very true to




*An illuminator of books – William Key*

*Landscape with figures – David Teniers*

life?" — Yes, he appears quite natural. "Everything looks *real*. It is a realistic figure (things are presented as they are) and *realism* is commonly regarded as one of the major characteristics of seventeenth century Dutch art."
(iii) "Now, who is being portrayed in this work?" — An illuminator of books. "Which articles in this painting tell us about his profession?" — Spectacles, shells and the beautifully adorned book. "His job was to illuminate books — a common practice throughout Europe at the time. *Books* were not only admired for their content but also for their *presentation*. "Is this the figure of a nobleman?" — No, a craftsman. "Merchants and craftsmen feature prominently in Dutch works, especially those carried out after the revolution, i.e. after the Dutch rose successfully against their Spanish rulers. Before the revolution, Dutch art was very *aristocratic*. Following independence, it began to reflect middle-class life (merchants, craftsmen, traders, etc) — the class responsible for ruling the country.

**Expression**
(a) *Figures*: (i) "Does the painting tell us anything about the sitter's character? How would you describe him?" — Serious-minded, grave-looking. "Very true. This painting succeeds in capturing the serious-mindedness of the Dutch craftsman or 'man about his business' — very much the kind of serious-minded craftsman who was to have a say in the running of his own country."
(ii) Do not overlook the *expressive hands*. This major characteristic of 'three quarter portraiture' was first introduced to painting by *Leonardo da Vinci*.
(b) *Setting*: Does not apply.
(c) *Colour*: "Is this 'serious-mindedness' reflected in the colour of his dress?" — Yes, he wears dark clothes. "The colour of his cloak renders him rather *austere looking*. It wouldn't do to represent a serious-minded person in colourful, richly ornate clothes." (Point out that dark clothes were quite fashionable at the time and betray a strong Spanish influence.) People preferred to appear *serious-minded* rather than *frivolous*."

**Form**
(a) *Composition*: Enable the students to observe the perfect balance achieved in this painting:
(i) The *hand* is placed towards the *centre* in line with the face;
(ii) The *book's weight* on the right-hand side is counter-balanced by the *chair's weight* on the left.
(b) *Colour*: (1) Note that the colours are also well-balanced. The *pitch darkness* of the *cloak* is set against a background of *olive green.*
(ii) "Which is the most prominent colour in this painting?" — Black. "Is the figure 'black' from top to bottom?" — There are coloured patches in which a face and a hand are drawn. "What about the colour of the face? Does it contrast with the cloak's pitch darkness?" — It is much lighter. "The darkness shows it to better advantage. How would you describe the face?" — Fresh. "Which colour or colours are employed to capture such freshness?" — A rather brownish colour. "Is it kept constant throughout?" — We have different shades of the same colour. It becomes very *light* around the *eye*. ". . . a rather luminous patch. These shades or *variations of the same colour* are referred to as *tones* and the face is said to show different *grades* of the same tone. It has excellent *tonal gradations*."

**2. Landscape with Figures** *David Teniers*

*Biographical Notes*:

D. Teniers II (161C—1690) worked in Antwerp and Brussels, excelled at depicting tavern scenes in the style of Van Ostade and Brower. He later painted a few 'weird' scenes (witches' sabbath, etc.).

**Technique**

(a) *Material*: Canvas
(b) *Medium*: Oils

**Representation:**

(i) "What particular scene is represented?" — A country scene — *Dutch landscape*. "Earlier on, we mentioned the *Dutch Uprising in 1580* during

which several gallant Dutchmen lost their life. What does this reveal about the Dutch in relation to their homeland?" — They must have loved it dearly. "Yes, the Dutch must have loved the land for which they fought for several years. This explains their love of landscape."[4] (Refer to their prosperity after the revolution: a life of leisure as suggested by the two gentlemen fishing by the lake).
(ii) "Does this landscape *surround* or *dwarf* the figures?" — It dwarfs them. "Is it different from the Renaissance landscape?" — The Renaissance landscape surrounds the figures instead of dwarfing them. (Point out that the figures' small size gives the landscape greater prominence).

## Expression

(a) *Figures*: Does not apply.
(b) *Setting*: "What dominates the landscape?" — Crags. "What do they represent?" — Nature. "So what do they enable the artist to express?" — His admiration for nature. "His fascination for the beautiful forms of nature, their *strength* and *movement*. Do they move?" - No, they don't. "But what about those winding passages across the rocks?" — They suggest movement.
(c) *Colour*: The greyish tones reflect mood. The light 'brownish' tone of the rocks and the figures' bright colours serve to capture the gaiety and splendour of country life.

## Form

(a) *Composition*: (i) The teacher should direct the students' attention towards the lower rock which occupies a *central position* in the work — as if it were a Renaissance figure.
(ii) Moreover, the two men fishing are smaller in size than the ones in the foreground. Such differences in size enable the painter to convey a sense of distance.
(b) *Colour*: Underline the aesthetic value of the crags, i.e. the excellent *tonal gradations* achieved under the play of light. The *tones* become *darker* as the eye shifts towards the left side of the rock.

1. Ref: Newton 1945.
2. For further lesson plans and a detailed discussion of works at the Museum refer: Mayo, P. — *The National Museum of Fine Arts: A Guide for Teachers.*
3. The teacher would have already mentioned this point when discussing 16th Century Italian work.
4. Ref: Shipp 1952.

Eikemeier, P., 'Dutch Painting' in *Museum: Alte Pinakothek Munchen* (English edition), P. Winter (ed.), Westermann, 1979.
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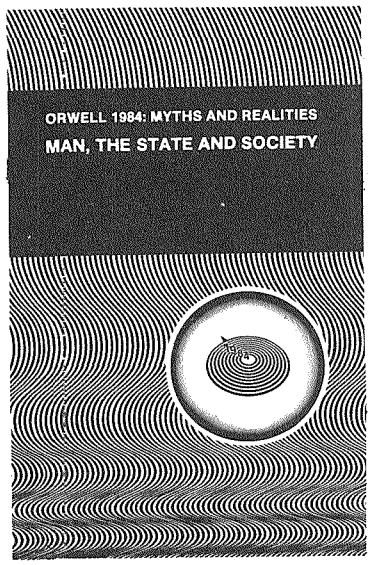
# Events

## Myths and Realities: Man, The State and Society in Question
## The Orwell Conference
## University of Malta, February 23—24, 1984




When George Orwell wrote *1984* towards the end of the 1940s, he had been forewarned of the barbaric exploitation of totalitarian systems in their frenzy for the uniformization of humanity. He had seen the horrors of Nazism and Stalinism, and missed very little of the Holocaust and the Gulag. It was these convulsions that Orwell assimilated, assuming their underlying logic and pushing them to what seemed to him their inevitable conclusion. Was his *1984* an accurate warning or a failed prophecy?

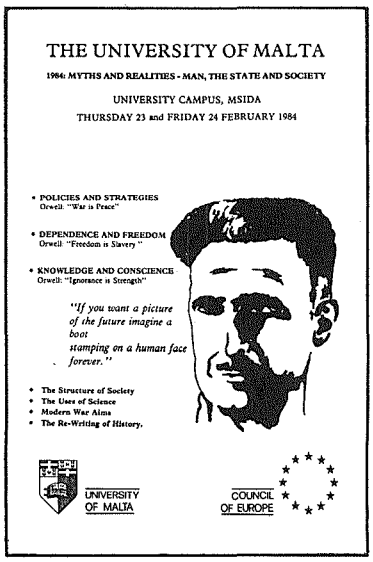
For two very full days in February the University of Malta was the venue for a series of stimulating debates about the role of the individual when confronted by the progress of modern technology. Three main themes were discussed:

Policies and Strategies
Orwell: "War is Peace."

Dependence and Freedom
Orwell: "Freedom is Slavery."

Knowledge and Conscience
Orwell: "Ignorance is Strength."

This important multi-disciplinary gathering brought together academics, students, intellectuals, industrial and media figures to discuss subjects such as Gene Control, Stress, Drug Treatment, Social Control, Privacy and the Computer, Control of the Mind, Human Rights and Future Generations, Creativity, Communication




*Professor G. Xuereb, Rector of the University, giving the opening address. (left to right) Professor A. Cuschieri, Dr. D. Massa (Chairman), Dr. V. Ferrito and Dr. P. Vassallo.*

and the Mass Media.

Discussion panels also discussed the Orwellian anxieties of the day: Modern War Aims, The Uses of Science, The Re-Writing of History, and The Structure of Society with reference to Orwell's predictions. The aim was not to discuss the artistic and literary merits of Orwell's novel. Rather to stimulate valid debate relating to the role of the individual under stress in modern society.

Although, in the main, avoiding the narrow party-political approach, participants raised a number of controversial issues which will continue to be discussed. This was in line with one of the aims of the Conference: to promote the Culture of Critical Discourse.

*Professor George P. Xuereb, Rector delivering the Inaugural Speech during the Orwell Conference.*

## Byron Seminar

The Tenth International Byron Seminar on 'Byron and the Mediterranean' was organized in September of last year at the University of Malta under the aegis of the Faculty of Education and with the patronage of the President of Malta Miss Agatha Barbara. A number of scholars from eleven countries assembled at the University to participate in the two-day Seminar which was organized by Dr Peter Vassallo of the Faculty of Education.

After the welcoming address by Professor C.P. Xuereb, Rector of the University, the following papers were read: Professor Gordon Thomas (University of Utah), *Lord Byron's Iberian Pilgrimage*; Dr Peter Vassallo (University of Malta), *Byron's Visits to Malta*; Dr Susan Bassnett McGuire (University of Warwick), *Byron and Translation*; Professor Erwin Sturzl (University of Salzburg), *Love's Eye view: Byron as seen by the Countess Guiccioli*; Dr David Pirie (University of Manchester), *Byron, Tasso and Switzerland*; Mr John Buxton (University of Oxford), *Byron's Greece*; Professor Ernest Giddey (University of Lausanne), *Byron's Poetic Geography in 'The Island'*; Professor Malcolm Kelsall (University of Wales, Cardiff), *Byron and the Italian Landscape*; Dr Andrew Nicholson (University of Warwick), *English and European Reactions to Byron the Poet and the Man of Action*.

During the Seminar an Exhibition on *British Travellers to 19th Century Malta* was set up with the kind help of Dr Paul Xuereb, Librarian at the University and Mr Carmel Bonavia. A reception in honour of the participants was later given by the Rector of the University. A group of schclars paid a courtesy call on the President, Miss Agatha Barbara at the Palace, Valletta. The President of the International Byron Society has since written to Dr Vassallo thanking him for the "valuable contribution of the Malta Seminar to Byron Studies in general".

The proceedings of the Tenth International

*(left to right) Dr. P. Vassallo, Professor N. Kelsall, Professor V. Sturzl, and Professor G. Thomas.*

Byron Seminar edited by Dr Vassallo will be published by the Macmillan Press.

## Pirandello Conference

Between the 7th and 9th May the University Assembly Hall was the main venue for a conference entitled *L'Attualità di Pirandello* organised conjointly by the University of Malta and the Italian Cultural Institute. After a short welcoming speech by Rev. Dr. Alfonso Sammut, chairman of the organising committee, Prof. George P. Xuereb read the opening address to the numerous Italian and local scholars who participated.

The papers presented during the conference were the following: Professor Enzo Lauretta: *Genesi e odissea del personaggio pirandelliano*; Professor Franco Lanza: *Pirandello a mezzo secolo della morte*, Rev. Dr. Alfonso Sammut: *"Enrico IV" di Pirandello e "Amleto"*; George Zammit: *L'Umorismo tragico di Pirandello*; Oliver Friggieri: *Riflessi pirandelliani nella letteratura maltese*; Anthony Bonanno: *'Ciclopi', un opera atipica di Pirandello*; Joseph Eynaud: *Pirandello e la crisi della coscienza contemporanea*; Joe Friggieri: *Il rapporto tra attore e personaggio*; George Mallia: *Alla ricerca di qualche certezza*; G. Pace Axiaq: *Il romanzo: 'I Quaderni di Serafino Gubbio operatore'*; Joseph Brincat: *Pirandello: il Riso e la pietà*; Adrian Stivala: *Pirandello nell'epoca dei mezzi di comunicazione e la collettività*; Gerald Bugeja: *L'inconscio in alcune novelle pirandelliane*; Frank Boffa: *Calcoli umani e novelle pirandelliane*; Abraham Borg: *L'Enrico IV tra Shakespeare e Pirandello*; Joseph Agius: *'Pena di vivere così*; Prof. Franco Lanza: *Allestimenti, regia e interpretazione degli spettacoli nel dopoguerra.*

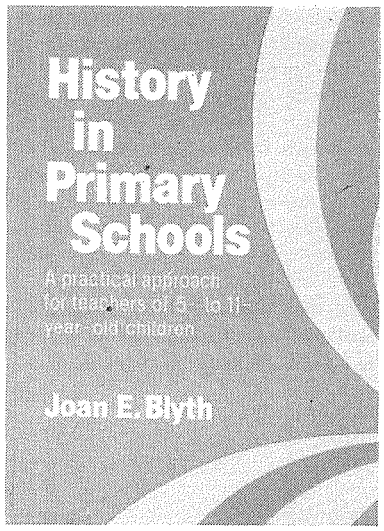
Also present at the conference were the actors Alessandro Quasimodo and Mario Cei who recited excerpts from Pirandello in a dramatic collage entitled *La Stanza della Tortura.*

The conference concluded with an address by Professor Mario Sintich. The conference papers are to be published by the Centro Studi Pirandelliani.

*(left to right) Professor E. Lauretta, Rev. Dr. A. Sammut and Professor G. Xuereb at the opening session.*

# BOOKS NOTICED AND REVIEWED

— a guide to some recent accessions in the Faculty of Education




## History in Primary Schools — A Practical Approach for Teachers of 5— to 11-Year-old Children

*Joan E. Blyth McGraw-Hill 226pp., 1982.*

Following her stimulating article "Young Children and the Past" (*Teaching History*, June 1978, No. 21, pp. 15—19) the author presents readers with a thoughtful and practical book which really lives up to the publishers' blurb on the back cover. Joan Blyth draws on her many years experience in the classroom as teacher and teacher-trainer and offers thorough, realistic and commonsense answers to many a question asked by teachers, both specialists and non-specialists, on the multi-faceted business of teaching History in the Primary School.

The author starts by discussing the place of History in the Primary School Curriculum followed by the unfolding of the background to syllabus planning. It is interesting to see here how various ideas in Britain in the post-war decades have influenced syllabus-makers in our own Island. There follows a chapter on ideas for constructing a syllabus, including one for the infant years. Various frameworks are suggested, both of the compartmentalized and the integrated type. There follows an excellent chapter on the classroom operation which teachers are bound to welcome most as, naturally, methods of teaching are to them more crucially important than the content of the syllabus. Special emphasis is made on the story lesson, the interpretation of illustrations, exposition and questioning, cumulative record-making, organization of individual and group-work, the organization of field-work, art-work, model-making and visual displays, and finally, the construction and use of time-charts. The author next deals with sources and resources which she classifies in order of accessability under four headings: the teacher, the written and spoken word, mechanical aids and resources outside the school. Joan Blyth's final chapter, then, discusses assessment, evaluation and record-keeping which are necessary if teachers are to know if their history teaching is justified and effective.

Joan Blyth's work is intended, of course, for Primary Schools teachers in Britain but the average Maltese teacher in our Primary Schools cannot but profit by a reading of her work and intelligent adaptation of many of her ideas. Though he may rightly envy his British counterpart and bemoan the comparative lack of manoeuvre which is his academic lot, yet Blyth's work cannot but leave an impressive mark on him. The book might inspire, too, our educational authorities, to initiate long-delayed and much-needed reform in the History and Social Studies field in Maltese Primary Schools.

The "Suggestions for using the book" (pp. 215—218) are of the greatest utility to student-teachers and mature educators alike. My only (slight) quarrel with Blyth's work is that it becomes over-repetitive at times, and the style somewhat rambling.

She is also over-generous with her use of quotations. Her exclusive use of the feminine gender in her work, has been somewhat compensated by my constant use of the masculine gender in this review. Like her I do not imply by any means a deliberate distinction between the sexes.

*M. A. Sant*

## Teaching History

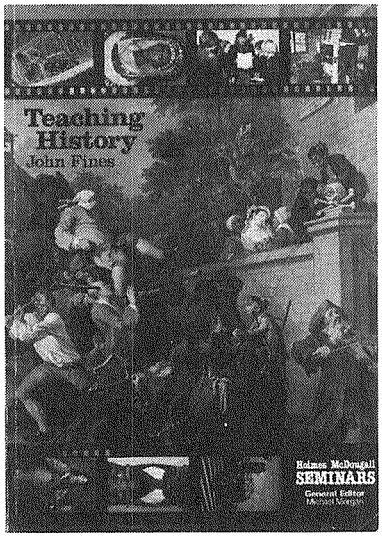
*John Fines (Holmes McDougall Seminars, General Editor Michael Morgan), Holmes McDougall, 1983, 222pp.*

John Fines is no new name to those interested in the teaching of History as he has written

extensively in *Teaching History* and kindred journals as long ago as at least 1969. He has also contributed important pamphlets to the Historical Association Series, but is perhaps best remembered for his collaboration, with Jeanette B. Coltham in their *Educational Objectives for the Study of History, A Suggested Framework* (Historical Association, 1971), an adaptation of the Bloom taxonomy for History teachers. The seminar book under review owes a great deal to the many years the author has spent teaching himself how to teach history and trying to communicate the results to others. The work examines ways in which History is, and can be, taught. As all books in the Holmes McDougall Seminar Series, John Fines's work has been designed specifically as resource material for in-service teacher training programmes in Britain and for professional studies courses in initial teacher education and training. The students wil find a statement of aims which governed the compiler's selection of topics and supporting material. The material is arranged in a series of *Modules* and *Units* of work, and a statement of the objectives for the student studying the material is set out. The seminar book contains a variety of papers, including the compiler's own summaries, lead articles, explanatory material and comment. Household names in the teaching of History are represented: J.B. Coltham, A.K. Dickinson, P.J. Lee, R. Unwin, M. Pollard, B. Garvey, M. Krug, J. Fairley, G. Chinnery, D. Gunning, D. Shemilt — to mention only a few. Various and often contrasting viewpoints are represented. A variety of group and individual *Activities* engage the student in solving problems posed by the material.

Module One of this Seminar book looks at evidence, the basis of the discipline. Books, non-book material as well as documentary sources are closely scrutinized under this heading. Module Two discusses modes, styles and situations in History Teaching. Such topics as organization, narrative, pupil talk in class and writing as a classroom activity are dealt with. Module Three is devoted to the attempt to answer the question "What can be learned and how may it be known?" and units deal respectively with children's capacities, objectives, and assessment. Module Four, finally, examines the nature of the activity, wherein readers are invited to try to come to a position where one can understand what it is one is doing as a teacher of history.

Taken as a whole John Fines's compilation is an immensely refreshing, perceptive and illuminating work. The fastidious will of course find things to criticise: one or two extracts whose authors are only stating the obvious, the odd paper which is too long and too technical (cf., for example, papers on "Assessment"), and the exceptional paper whose objectives for inclusion are not easy to see (e.g. Paper 20). It is also doubtful if the non-specialist Primary School teacher will gain from this work as much as his Secondary School counterpart, although even he will find enough grit for sharpening his skills. There is no shadow of any doubt that the average British




teacher will gain immensely from this professional compilaton. He is already familiar with such experiences as the documentary approach with children, alternative syllabuses to the chronological-thematic, separate history curricula for the slow-learning child, different approaches to the 16+ examination and so on. Above all he has come to accept that the "process" of history is at least as important as its "content". The History teacher in Malta, on the contrary, is handicapped and strait-jacketed. The Primary school syllabus in Social Studies needs to be replaced — evidently it must have been drawn up hastily and by inexperienced hands. New approaches have to be experimented with and restraint from formal examinations has to be considered. History teachers in the Secondary Schools are in an even tighter corner. Even the progressive few are handicapped by over-centralized curricula and methods of assessment, lack of enough periods for history during the week, nearly total lack of published resource files, multi-media kit and the like, over-emphasis on national history to the detriment of the rest, lack of in-service training facilities, and, above all, concern with the content of History to the almost total exclusion of its process. Certain aspects of John Fines's work, therefore, can unfortunately do very little to be of any explicit help to the average History teacher in Malta. Even these, however, cannot but derive much pleasure as well as much benefit from a close reading of the book as other aspects are applicable to any teacher, whatever his teaching situation might be. May the ideas contained in the work under consideration generate interest and stimulation not only among Maltese history teachers, but especially among those in authority. John Fines's book might, after all, be the motive-force for long-delayed and much-expected reforms in the field of History teaching in Malta and Gozo.

*Michael A. Sant*

# NOTES ON CONTRIBUTORS

*RONALD G. SULTANA graduated with first class honours in English from the University of Malta in 1978. He holds a Diploma in Religious Studies, and in 1982 was chosen as a Commonwealth scholar to the U.K. He was awarded a distinction for his studies in Guidance and Counselling at the University of Reading. He is presently teaching at the Junior Lyceum, Blata l-Bajda.*

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*ANTHONY CALLEJA is a Senior Lecturer in charge of Mathematics and other areas of studies in the Faculty of Education. He is an experienced university teacher and has been on the staff of the University of Malta since 1961. His interest lies in the study of comparative methods for the teaching of school mathematics.*

*CHRISTOPHER BEZZINA graduated with first class honours in Education from the University of Malta in 1982. Presently he teaches in a Government Primary School. He also teaches at the International School of English. His article in this issue is partly an excerpt from his dissertation on the Teaching of English Poetry, and an exposition of a creative exercise he conducted with Japanese verse.*

*Professor JOHN ROGER WEBSTER M.A., Ph.D., Dip. Ed. is Professor of Education, and Dean of the Faculty of Education, University College of Wales since 1978. He has contributed in the various spheres of education on both local and national level. He also contributes on education and the arts to collective works and learned journals. He is currently directing new approaches to inservice education and staff development.*

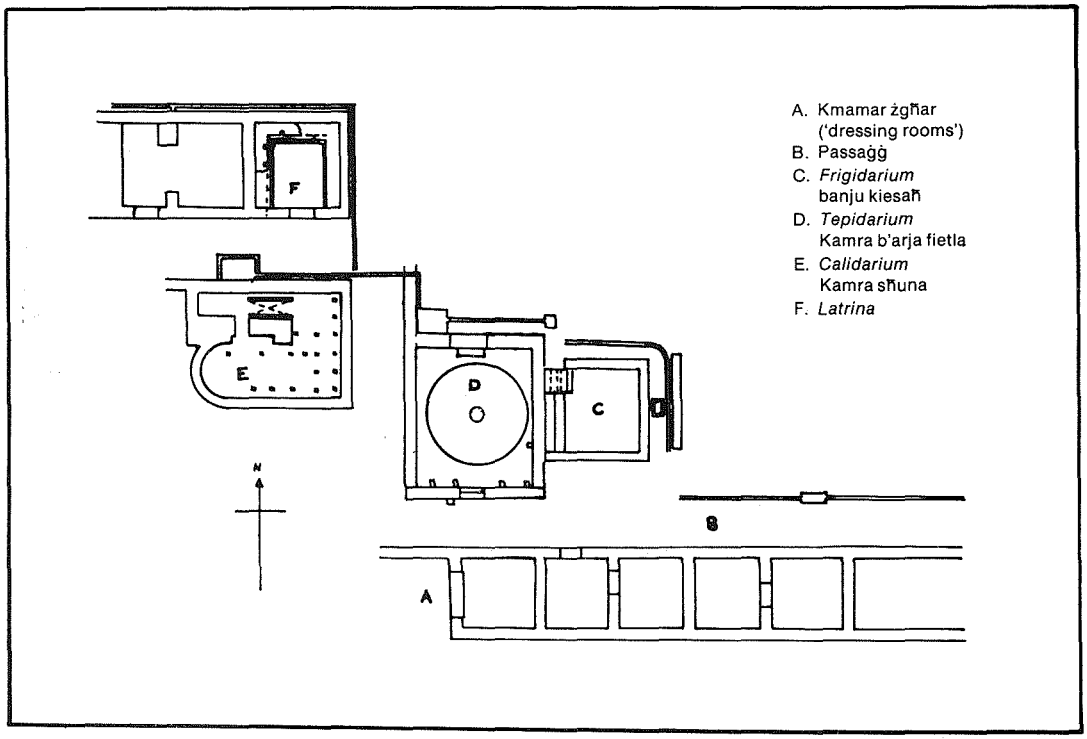
*GEORGE BONNICI lectures in Soico-Cultural Aspects of Education and General Pedagogy in the Faculty of Education of The University of Malta. He holds an M.Ed. and a Diploma in Special Education. As lecturer in charge of the Resource Centre, he is involved in the promotion of innovative learning techniques. His present research interests are in aspects of educational innovation and change in relation to the development of in-service education and training of teachers in Malta.*

*PETER MAYO currently teaches English at the Junior Lyceum for Boys at Hamrun. In 1981, he graduated with First Class Honours in Education. He is the author of several articles appearing in local papers and journals, this article being an excerpt from the dissertation he wrote for his degree. The dissertation includes a comprehensive study of the collection of works at the Fine Arts Museum.*

# BANJIJIET RUMANI — GĦAJN TUFFIEĦA

***ISEM*** _____ ***SKOLA*** _____

***KLASSI*** _____




Pjanta tal-post


ŻJARA *Edukattiva Għal l-iskejjel*

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*Din il-"Work-Directive" hi l-aktar addattata għall-klassijiet għoljin tal-Primarja u l-ewwel snin tas-sekondarja. Xieraq li l-istudenti jimlewha fuq il-post.*

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