

EDUCATIONAL MEDIA FOR THE DEVELOPMENT  
OF RURAL EDUCATION

by Helen Coppen  
Institute of Education, University of London.

Introduction

1. Though rural communities are often richer in personal, face-to-face contacts than are urban communities they are poor in other respects. The poverty of personal life in newly urban communities is exemplified in accounts of the loneliness of the families who have been moved from slum buildings in large cities, and in the urbanised women in the Copper mines in Northern Zambia and the migrants on the edges of developing industrial towns such as Kumasi. The town is rich in mineral goods, in diversity of living and in the accessibility of new ideas. In contrast, the poverty of the countryside, in these latter two respects particularly, has been noted by many workers and in the context of this essay it is illuminating to examine the studies of Professor Becker(1) in the primary schools of Nottinghamshire and in the work Tsuji(2) in the isolated villages of Japan. Both writers comment on the stimulating effect of introducing television into the homogeneously unvarying even-toned life of the primary schools.

2. One may well ask however, in what respect the rural school is under-privileged and what aspects of the lives of rural communities should be enriched. If the rural school does indeed stand in need of educational rehabilitation and a widening of its social content, in what way can audio visual aids be expected to contribute? Furthermore, if rural societies are limited in their range of contacts and are poor in creative and intellectual resources what help can educational aids offer towards enriching the quality of life in rural communities?

3. The school in any rural environment is usually under-financed, because the community itself is poor, except in those few situations where farmers are rich, as for example, in parts of Canada and South Africa. Normally money collects in towns.

Secondly, rural schools are small and for these two reasons there are few learning materials to be found in most of these schools - few books, few pictures, few models, no gramophone records, little of the apparatus of learning. The second point to note is that the quality of the teachers in rural schools is usually not of the best. Most rural primary school teachers are undereducated for their duties and lacking in general experience of living, compared with town dwellers. The most able, those who do well at school, those who take correspondence courses in order to better themselves in some way, migrate to the town. Professor C.E. Beeby has pointed out that "The teacher in a village school who has himself struggled to a doubtful grade six or grade seven level is always teaching to the limits of his knowledge. He clings desperately to the official syllabus, and the tighter it is the safer he feels. Beyond the pasteboard covers of the one official textbook lies the dark void where unknown questions lurk"(3).

4. The third point of note is concerned with the quality of life around and outside the school. The background of the children's lives is uniform and unvarying so that the children themselves offer little that is new or stimulating to each other or to the teacher.

5. The life of the community too is limited. Village life and small town life has a uniformity determined by the limited contact with the changing world and the occupational similarities of the people within the community. The events of the great world outside bring only small ripples to the village. The most able, the most competitive, the most aggressive, move to the town and new ideas filter only slowly to the countryside; the ways of working, the values and aspirations of the people tend to be tradition-bound and static.

6. From these arguments it seems clear that the rural school needs more, varied and stimulating materials together with better quality teaching, and the community within which the school functions needs the stimulus to change. Of course these requirements are to some extent already being met. Schools have teachers, books are supplied and there are blackboards. But there are not enough of these and there are not enough schools. The ones that exist are often isolated and under-equipped, and cannot serve as Youth Centres. Consequently there is nowhere for young people to congregate where they can develop social skills, discuss their own concerns and test out their newly acquired "adulthood". As far as the adult community is concerned there are of course agriculture extension officers and health workers but in most countries there are too few of them, their channels of

communication are inadequate and their capacity to serve as agents for change is limited because their work is under-supported. There is clearly a case to be made that an increase in the number of available communications channels will accelerate the rate of change of a rural community and will directly improve the quality of the work that goes on in the school. Some of these arguments are set out in Communication and Change in the Developing Countries edited by D. Lerner and W. Schramm(4). Professor Schramm suggests that the main function of an increased use of communication channels is to help establish a climate in which developments can take place, and this obviously includes a number of subsidiary functions. The second important way in which a communication channel can accelerate the change that is needed in rural societies is that it can serve as a "multiplier". From all the developing regions of the world reports are available concerning the use of mass media to show how to supplement the resources of local schools, to multiply the contacts available to field workers, to speed up learning and encourage people to expose themselves and their children to further learning opportunities. The third use of communications channels is to spread ideas of change, to raise the aspirations of the people so that they will want a larger economy and a modernised society.

#### PART I. THE TASKS WHICH EDUCATIONAL MEDIA CAN ENGAGE UPON

7. (a) The teaching of skills. In all educational situations some teaching of skills goes forward e.g. the skills of reading and writing, the manipulative skills required in various handicrafts, new farming skills, the more subtle social skills that young people want to learn. Most frequently such skills are taught by means of face-to-face demonstrations with all the limitations that this implies in terms of numbers. Now that we have access to a variety of educational aids, the traditional ways of teaching these skills can be re-examined. We can consider the possibility of not only increasing the number that can be taught at any one time, but also improving the quality of instruction. For example there is a good deal of experimental evidence that film presentations of manipulative skills improve the quality of the demonstration because close-up, subjective viewpoints can be offered at a controlled rate. Films can be shown many times to large audiences, or distributed on television and this certainly has the potential of the "multiplier effect". It has also been demonstrated that gramophone records and tape recordings can help learners to acquire the skills of speech, through listening to stress and

intonation patterns of foreign languages. The recording is unvarying, can be repeated endlessly, does not tire, and radio can provide the "multiplier effect". That these new educational aids can facilitate the teaching of skills is not in doubt. The only problem is that of cost/ effectiveness, which is closely associated with the difficulties of production and distribution of the materials apart from the matter of capital outlay on playback equipment (cine projectors, radio receivers, gramophones).

(b) Imparting information. This is one of the basic tasks of the school, and it is one upon which much adult education work depends. In the past, books and word-of-mouth were the chief means of communication available, but pictures had some part to play, particularly in the formal school. Pictures are needed to give reality and concreteness to words and today pictures are available in many forms, prints, photographs, projected still pictures and moving pictures. There is no difficulty about finding pictorial material; the problem is that of cost of production and distribution. But words are needed too, since words help to clarify experience and provide the wherewithal for the formulation of concepts. Generalizations are of the essence of educational growth, since without them much of what we teach can remain as "lumps of unamenable fact". Once again, there are many ways of distributing the spoken word as well as the written word; the problem is that of production and distribution.

(c) Changing Attitudes, and Aspirations. Values and interests provide the energizing element of all communities, both the formal one of the classroom and the less formally organised community outside it. In order to change and develop, communities need to change their value system and modify or extend their aspirations. The socio-psychological conditions that are necessary for such changes to be accepted will not be discussed here, but it is apparent that the mass means of communication can be effective in bringing about change, because new ideas can readily be disseminated.

8. I have suggested that the educational media, particularly the new ones, can be used to carry out these three educational tasks, given the production facilities and distribution possibilities. But do the new educational media save money? Here I would like to quote from "The new media: memo to educational planners" published by Unesco/IIEP in 1967 (5):

"Do the new educational media save money? We pointed out this is a very complex question, requiring one to

measure quantitative cost against some things not so easily quantified - the quality of education, for example. Media projects will rarely save over present budgets, but often make possible a substantial saving in the context of growth and change - when a school system is planning to change a curriculum, offer new and different subjects, extend its services to persons or places where education has not before been available, or bring more people into the company of literate and educated persons. Even here, however, the saving is usually against possible or projected costs rather than present costs. Very often the media make it possible for a school system to do what it could not otherwise have done, regardless of cost; or to do faster what could otherwise have taken longer. And regardless of the quality of the evidence that they have saved financial resources, there is no doubt that they have contributed to the saving of human resources."

## PART II. THE MEANS AVAILABLE

9. The purpose of considering the means of communication is to examine ways of improving the quality of instruction through better teaching materials, and ways of enriching the quality of community life in rural societies in order to promote change. The means available can be classified in many ways, but in this essay they are discussed from the point of view of administrative action and the allocation of the responsibilities. There are two types to consider. The first is those materials that provide only the substance for teaching. The second type consists of those materials that provide not only the substance for the teaching but also the dynamics of the teaching itself.

(a) Materials that provide the substance of the teaching and thereby the learning, are used by a teacher who initiates the instruction, controls the pace of presentation, directs the activity of the learners and operates in the framework of a class-sized group. Examples of these materials are textbooks, pictures and charts, flannelgraphs, gramophone records and tapes, filmstrips. If they are well designed, the provision of a wide range of these will improve the quality of instruction in both skills and factual information. They can certainly be produced centrally and distributed to schools, but in addition teachers can make their own, provided they are given a certain amount of help. This concept of teacher-made material will be discussed in Part IV under the heading Local Production. It could be a most fruitful

way of improving the quality of teaching, since engaging on these activities in itself raises the capacity of the teachers.

(b) Materials that provide both the substance and the dynamics of the teaching are usually designed and initiated by agencies outside the classroom and beyond the parish of the Agriculture Extension Officer. They are given an educational context by the teacher who becomes quiescent or by a monitor or what the French call "un animateur". In some instances these materials are used by the learners themselves for self instruction without the mediation of a teacher or a monitor as in the Radio Farm Forums or in Home Study materials for self instruction. Examples of these materials are the radio, film, filmstrip with tape, television, posters, newspapers, booklets for new literates to read and correspondence course materials.

10. These materials can improve the quality of instruction both in teaching skills and in disseminating information but especially they can contribute to changing the aspirations and values of a community and can influence them in the direction of change. If the materials are made with sufficient sensitivity, they can both re-educate the teachers and re-orientate a community towards new ways of living. In the book The new media: memo to educational planners, Professor Schramm lists five great needs of developing societies for which the new media are being used, namely: upgrading instruction, teaching teachers, extending the school, teaching literacy and fundamental education, and finally adult education and community development. He also points out that an educational medium is very seldom being used effectively by itself to meet one of these priority needs. "When one of them is used in a significant way in response to a serious problem we find it always being used in combination with other learning resources and experiences, such as monitors and discussion groups, special reading materials and exercises, correspondence work and the like. In short, a new educational medium must be seen as a component of a teaching and learning system which work best when all the components of the system are well integrated and balanced."

### PART III. CONDITIONS WHICH MAKE FOR EFFECTIVENESS OF EDUCATIONAL AIDS

11. Whatever programme of educational activity is undertaken by a Ministry some change in behaviour is envisaged and these changes should be clearly enunciated. There should be a specific, explicitly formulated series of objectives, not just a

vague generalisation about "education of youth" or whatever. In greater detail, such changes in behaviour are often expressed in terms of active responses to be made by the pupils, the young people, the farmers, the adults; in other words, the target audience. It should be clear to the designer of educative materials that the children or the adults should acquire a specific skill, or possess knowledge they did not have before, or adopt new attitudes after being exposed to the particular material being designed. Administrators must pay attention to certain aspects of the project, within the framework of the general aim.

12. Within the general aim of, say, bringing literacy to farmers, each project should have in view specific changes to be brought about in a specific group of people whose characteristics are known. Each communicator, each designer of communication material would do well to ask himself the following questions "Who communicates what, with what purpose, by what means, to whom, in what situation, with what effect?" In other words, the administrator with whom this paper is concerned, must pay attention in detail to production, distribution and utilization of educational material. All three of these aspects will probably require special arrangements for the training of personnel and this problem will be discussed separately.

(a) (i) Problems of production are partly technical problems of running a printing press, radio or television transmitter or providing photographic studios. Finding solutions to technical problems is crucial to success, of course, but deeper thought is needed in connection with the problems of the design of such materials. The quality and effectiveness of the materials produced, be they radio broadcasts, posters, booklets for new literates, or whatever, will depend upon the abilities of the people who produce them. Groups of materials should be planned on an integrated basis with a view to the response and activity of the learners in mind. The visual and verbal vocabulary of the target audience must be known to the designer since instruction can only succeed where it is related to the existing knowledge, attitudes, motivations, ways of thinking and communicating of the people, and where attention is paid to their traditions or experience of verbal and visual means of communication. The work of Hudson(6) in Southern Africa, Fonseca and Kearn(7) in Brazil, and of Alan Holmes in East Africa(8), indicate the importance of the cultural threshold in all communication situations. This is of course a familiar problem to teachers who have experienced the difficulty of teaching outside their own

cultural frame of reference. In his preparatory work for the production of basic educational television in Niger, Max Egly(9) studied the audio visual learning processes of seven - and eight-year old children, in order to determine to what extent these children were capable of identifying objects, actions and drawings presented on television without the aid of their native language. The writers and production team were able to use a great deal of the information gathered in these preliminary stages .

(ii) Of equal importance, especially when working with non-captive adult audiences, is the factor of motivation. Motivation is the source of energy which makes the individual act and if change is hoped for in the community it must be linked to that community's basic value system.

(iii) Professor Arthur Lumsdaine maintains that the more general features of the programmed learning concept should be incorporated into the development of all educational programmes. This should be provided for in the initial planning stages and include:

- the detailed specification of behavioural objectives;
- the analysis of the learning tasks based on research for delineating initial characteristics of the learner; and particularly
- the empirical tryout of the programme, followed by revision based on test data which show the extent to which the specified objectives have or else have not actually been attained.

(b) (i) Problems of distribution are partly technical and partly a matter of logistics. The needs will vary from place to place and many of the problems of distribution are already familiar. One can quote a film library held in the capital city in a country without a regular postal service so that only the schools in the capital city could in fact make use of the films held there. One has heard that in some cases 90% of television receiving sets in one particular region were out of commission so that distribution of programmes simply broke down. One has heard too of radio programmes the contents of which were closely linked to a large printed picture which arrived at the school at the end of the term instead of the beginning, thus negating the use of the radio as an educational aid in this case. The technical staff of any

enterprise will have to consider many details such as the power available in a transmitter, where the receivers should be placed in a classroom and how posters are to be protected from the weather. Most frequently overlooked or under-estimated is the matter of the maintenance of the receiving sets and projectors. This requires a special organisation and again is a matter of logistics related to the peculiarities of a particular region. Possibly a special training programme is necessary to develop a sufficient cadre of technical personnel and this may require overseas aid in many instances.

(ii) A particular problem arises in the case of non-captive audiences such as farmers and each area will have to develop solutions peculiar to itself. For example, the Ministry of Agriculture in Tanzania discovered that the readership for its newspaper, directed to farmers, increased by fifty percent as soon as the extension officers carried stocks of the newspapers for sale in their jeeps. Once it became easy for the farmers to buy the papers they did so. While the problem of distribution remained unsolved, the sales were poor, although the paper was popular among those who actually read it. Another example comes from southern France where communal viewing points, provided through the creation of "téléclubs" in some isolated villages, made it possible to disseminate new ideas to these rather static communities.

(c) (i) Problems of Utilization. All educational media must be used in an educational context which may be created by the teacher in the classroom, a youth leader in a community centre or an agricultural extension officer, or a community development village-level worker. The effect of even the most excellent material can disappear like water in desert sand if it is not given an appropriate context. Television, radio, film, flannelgraph, textbooks are only pipe lines; they are likely to be only as interesting as what goes into them and as effective as the learning activity that can be generated around them. These materials work best with the informed and active participation of the classroom teacher at all stages in the process of learning. In fact, they are but one component in the teaching-learning process. The learners must be prepared for a broadcast, since they can only perceive that which they are ready to perceive, and after a broadcast the learners must practise the skills that were demonstrated, learn the facts that were presented, apply the principles and concepts that were offered, or express the stimulus that was given to their imaginations.

(ii) Only when a learner is highly motivated and skilled in the strategies of learning can he conduct his own study activities arising out of viewing or hearing a broadcast or receiving correspondence course materials. When the learners are not highly motivated and not skilled or experienced in learning activities it has been found that study in a group helps to sustain each member and the presence of someone who acts as leader, guide, monitor, "animateur", or teacher makes a significant difference. The social climate in which learning goes forward is dominant among the factors that contribute to successful learning and this is true of formal education, literacy classes, agricultural extension work or community development activities. The implication is clear - for the newer educational media to be effective and yield a reasonable educational return for money and human resources invested in them, care must be taken to organise reception or discussion groups at village level, and to see that teachers integrate the programmes into their classroom activities.

#### PART IV. LOCAL PRODUCTION

13. In the main, the production of radio, television, film, textbooks, newspapers, i.e. the mass media, requires expensive plant and skilled personnel to operate the equipment and are therefore appropriate undertakings for central or national government. This need not be debated here, though attention should be drawn to the importance of maintaining close liaison between the central production team and the field workers or class teachers. Administrative machinery is needed to ensure participation in planning and devising educational materials, and continuous consultation with those who actually use the materials. This requires a reliable flow of information in both directions - information and technical assistance from centre outwards and feedback or evaluation data from the users to the centre.

14. There is a case to be argued for an alternative to central, large scale production of educational materials, for three main reasons. First, capital outlay and recurrent costs are relatively small and therefore starting such centres does not have to wait upon external aid. Secondly, there is in most countries a real need to cater for local variations, and, thirdly, local centres of production can harness the creative talent and inventiveness of the teachers and field workers - not an inconsiderable contribution to the overall development of education.

15. The idea of provincial or district "Teachers Centres" or Audio Visual Centres is not new. For example, in Czechoslovakia Audio Visual Centres have given some stimulus to the wider use of films and filmstrips; Teachers Centres, now being established in many towns of the United Kingdom, are providing focal points for development of new curricula projects, and in Ghana a mobile van for some years provided a sort of itinerant Teachers Workshop.

16. What I have in mind is the establishment in selected village schools of Educational Materials Workshop centres to which teachers and community workers at all levels could come for instruction and help in making their own teaching materials, such as simple wall charts, flannelgraphs, cut-outs, matching cards for language work and apparatus for practical mathematics. None of these materials needs much artistic skill, but most primary school teachers and most adult education workers need help and inspiration to get started and in most developing countries they lack facilities in their own homes where they could make simple educational aids.

17. Because communities even within regions of one country differ in the artifacts they produce, their work habits, their interests, economic and social structure, language and values as well as degrees of urbanization, great stress should be placed upon localizing production and thus meeting the communication problems of particular workers in particular areas. To produce material on a large scale at a central headquarters is not satisfactory except possibly in the case of a national campaign and for certain kinds of textbooks. Many local needs arise, for example in preparing materials for agricultural exhibitions, local women's groups or home craft teaching, or primary school "apparatus"; the design of these materials will have to take into account the purely local flavour of the peoples' perceptual habits.

18. For the community education workers the problem is to find materials with which to convey messages about skills, facts and ideas and it is just in this area that the school and its teachers can help. It is possible to envisage a school taking on a new function, serving the community in an outgoing, extended fashion by providing the focal point for meetings, demonstrations and talk, and also as a "production centre" for the creation of communications materials of the kind that community workers can readily make use of. There is the further possibility that the larger schools could become rural district training centres where

community development workers and voluntary group leaders are trained in making and using communications materials. The school could serve the adult community in three ways; by providing a meeting place for the adults, by housing the facilities for the creation of simple communications materials by field workers in collaboration with the teachers, and by serving as a centre for the training of field workers and voluntary group leaders.

19. It now becomes necessary to consider what kinds of communications materials are appropriate to this task and what equipment is required for the generation of simple materials which adult education workers and teachers unskilled in graphic arts can make and use. Some other practical questions arise, concerning the organisation of supplies, maintenance and servicing of equipment and problems of personnel.

20. We must accept the fact that a rural school will not be able to afford expensive equipment such as, for example, an off-set litho printing press, cine projectors or even a silk screen press. But a certain minimum level of equipment must be available in order to start at all. Gradually it will be possible for the community school to build up its resources so that it becomes a centre serving a large number of teachers, field workers and voluntary group leaders within the community. The materials that can be made with very little equipment include posters, charts, flip-charts, flannelgraphs, and handouts. All of these can be made with the simplest apparatus and can be used effectively by people with very little training. Posters are used for short term campaigns; they are displayed for a week or less in places where people pass to and fro and are usually drawn on cheap paper, with a simple eye-catching slogan, conveying only one idea. Single charts or a group of charts clipped together to form a flipchart, are intended for longer term use in a teaching situation and should be executed on better quality paper than are posters. A typical set of "charts", would for example, carry the picture mnemonics for the first stages in a series of literacy lessons.

21. Flannelgraphs are composed of two elements, the background cloth of cheap fluffy material and the teaching items. The latter are usually drawn on firm paper and backed with a rough textured material such as sandpaper or lint. Flannelgraphs are used in a teaching situation to build up a sequence of some kind, for example, a series of pictures of the kinds of foods needed for health or the key characters in a story for language teaching.

22. "Handouts" may be single sheets of paper or little booklets, which can serve several educative purposes. Single sheets are often given out as reminders to take home after a demonstration and should bear the personal stamp or local flavour of that particular demonstration. Little booklets, often of only four or six pages may carry similar reminding messages, or stories in simple language for new literates to read at home. As with charts, if these have a local character, closely connected with the material used by the teacher, community worker or literacy teacher, their effect is that much greater. In order to make handouts for members of the community to take home, the workers need access to a duplicating machine, preferably one which can yield coloured drawings without repeated printings, in other words, a spirit duplicator. The cost of such a duplicator would be of the order of £50.

23. All that is needed then for the production of these simple educational aids are two grades of paper about 1 metre x 50 cms. in size, drawing materials, some cheap fluffy cloth and a spirit duplicator.

24. A typical three teacher village school usually has three classrooms and a room for the headmaster. At least one of these rooms will be able to accommodate a cupboard in which can be kept pairs of scissors, coloured crayons and chinks, cheap newsprint paper, cartridge paper, sand paper, adhesives, fluffy cloth for flannelboard background and, possibly, a spirit duplicator with the appropriate carbons and run-off paper. None of these materials take up much space and can easily be stored in the school. One of the three teachers employed in the school will have to be in charge of the supplies and will conduct practical workshop sessions for four or five (depending on population density of the area) community education workers at specified, mutually convenient times. (See Appendix I(a).)

25. In a larger village, there will be a larger school where a small training centre could be set up to provide periodic short courses for both school teachers and community workers. Here an itinerant training officer can conduct classes in the simple techniques needed for the production of posters, charts, flannel-graphs and handouts and can give demonstrations of ways of using these materials. Once the community workers and teachers have acquired the necessary skills, they can set about making their own materials in their own village-level workshop, with the leadership and under the guidance of their own village teacher. (See Appendix I(b).)

26. The effective operation of these two types of centre, i.e. small village-level workshop and larger village training centre, will be dependent on the existence of some kind of regional or national organisation which will provide the materials and will employ a training officer skilled in techniques of making and using simple aids appropriate to the background of understanding and experience of particular communities. Such a network would be a part of the appropriate Ministry.

27. In the scheme outlined above, trained teachers would play an active part but would themselves not undertake the task of teaching the adults in the community. Their energies would not be unduly diverted from their main task of teaching the children, yet their skills would become available to the wider community through the help they could give to the community workers, whose demands upon their time would be limited to the workshop sessions. In addition, the Training Centres could give assistance to teachers not yet trained in these techniques and the two branches of the education service would thus reinforce and support each other's efforts.

## References

1. Becker, S.L. The utilization of School Television Broadcasts in England, University of Nottingham, 1964.
2. Tsuji, I (Japan) The effect of TV School Broadcasts on Children in Isolated Villages, Japan Broadcasting Corporation, Tokyo, 1964.
3. Beeby, C.E. The Quality of Education in Developing Countries, Harvard University Press, Cambridge, Mass. 1966.
4. Lerner, D. & Schramm, W. (editors) Communication & change in the Developing Countries - East-West Center Press University of Hawaii, Honolulu, 1967, pp.333.
5. Schramm, W., Coombs, P.H., Kahnert, F., Lyle, J. The new media: Memo to educational planners, Unesco: International Institute for Educational Planning, 1967.
6. Hudson, W. Pictorial depth perception in cultural Sub-groups in Africa - The Journal of Social Psychology, Vol.52, 1960, pp. 183 - 208.
7. Fonseca, S., & Kearn, B. Comprehension of Pictorial Symbols: an experiment in Rural Brazil, Bulletin 30, College of Agriculture, University of Wisconsin.
8. Holmes, A.C. A Study of understanding of visual symbols in Kenya, Overseas Visual Aids Centre, London, 1965.
9. O.R.T.F. Report of the Third E.B.U. International Conference on Education Radio & Television Paris 1967 published by Office de Radio diffusion - Télévision Française, 1969, p.196.

## APPENDIX I

### (a) Suggested dimension of cost of a Teachers Workshop Centre (See paragraph 24)

#### Capital

Spirit duplicator	£50
Scissors, rulers and other graphics such as stencils.	30
Cupboard, keys	10
	<hr/>
	£90, or approximately <u>£100</u>

#### Recurrent items will include:

- Run-off paper.
- Cartridge paper.
- Flannelgraph items.
- Crayons, paint, pencils, glue.

#### Personnel

Salary of low-grade technical help part-time.

### (b) Suggested cost of a Teachers Workshop and Training Centre (see paragraph 25)

#### Capital

2 Spirit duplicators	£100
1 Roneo (Gestetner)-type duplicator	100
1 Silk screen press	20
Stencils, rulers, graphics	40
Storage shelves	20
	<hr/>
	£280, or approximately <u>£300</u>

Recurrent items will include:

Run-off paper

Cartridge paper

Flannelgraph items

Paint, ink pencils, glue.

Personnel

Salaries of (a) low-grade technician, and

(b) Teacher-A.V. officer (could be shared between 2 centres).