

https://dspace.org/

Literacy teaching by television in Central Africa

Kenneth R., Cripwell

1966
Johannesburg College of Education
https://hdl.handle.net/10539/27428
Cripwell, K.R. (1966). Literacy teaching by television in Central Africa. Symposium: A Journal of Education for Southern Africa, pp. 41-47.

Downloaded from a DSpace repository. https://dspace.org/

Literacy Teaching by Television in Central Africa

by KENNETH R. CRIPWELL

Sometime Research Fellow in Educational Television at the University College of Rhodesia and Nyasaland Consultant in Audio-Visual media for Education and Training, Union Minière du Haut-Katanga.

Mr. Cripwell was educated in Salisbury at St. George's College and graduated in 1954 *at the University of Cape Town as a Master of Arts and Bachelor of Education. He was particularly interested in the use of sensory aids in the teaching of English and during an eight year period as a teacher of English at Churchill School, Salisbury, worked in this field.*

Television had always been an interest of Mr. Cripwell even while he was at University. He attended a training course at NHK in Tokyo in 1961 *and wrote scripts for commercial television. In* 1963 *he was appointed as Research Fellow in Educational Television at the University College of Rhodesia and Nyasaland and directed the Television Centre in Kitwe for two years. In* 1965 *he accepted an appointment as Educational Consultant in the use of audio-visual media for education and training to Union Minière du Haut-Katanga in Elisabethville Democratic Republic of the Congo. He is at present engaged in setting up educational television for Union Minière.*

I INTEND, in this article, to refer to previous articles which have appeared in *Symposium*. My reason for doing this is to try to provide continuity. I am very grateful to the Editor for giving permission for quotations.

Teaching a language by television is possibly the most difficult task that can be demanded of the medium. The main drawback to the use of television in language teaching is that it is so impersonal. There appears to be very little contact between the master and the student and this rapport is the basic requirement of language teaching. How, then, can this main problem as well as the smaller related problems be resolved? This is an account of a project to see how television could be used for language teaching.

In 1962 after the Rome Conference of the European Broadcasting Union, which was concerned with educational broadcasting and television, the Director of the Institute of Adult Education at the University College of Rhodesia and Nyasaland, Mr. E. K. Townsend Coles proposed that it was time that research was started in the Federation of Rhodesia and Nyasaland to see how television could be used for educational purposes. Specifically, he suggested that the investigation should be concerned with adult literacy among the African population. His proposals were accepted by the two Copper mining houses, Anglo American Corporation and Roan (then Rhodesia) Selection Trust, who agreed to donate £5,000 each over a period of two years for this research. It was suggested that the investigation should take place on the Copperbelt where the mines were engaged, at that time, in a vast literacy programme among their own employees.

At the beginning of 1963 I was appointed as Research Fellow by the University College to direct the investigation. In August 1963 the work started in earnest at Rhokana Corporation in Kitwe. Previous to this the two Copper Groups agreed to purchase closed circuit television equipment for £12,500. This consisted of three vidicon cameras — two mounted on dollies and one used as a caption scanner — with the necessary mixing unit. The necessary sound and lighting equipment was also provided. The video and sound signals were piped into two classrooms and also into the studio so that the teleteacher could monitor his own performance while the lesson was in progress. The total cost for the equipment was just over £10,000. The remaining £3,500 was used for overheads such as salaries and rentals. The equipment was installed in an old building which had started life in the 1930's as the Mine Club. One thing that was lacking was adequate air-conditioning. This was a great drawback especially during the hot months of October and November. The life of the Television Centre ran from May 1964, when the equipment arrived, until May 1965.

Before the Centre could start television programmes, staff had to be trained. Apart from the Research Fellow and his assistant, who had had some training at Rhodesia Television in Kitwe, the rest of the staff was recruited from already existing African staff of Rhokana Corporation. Two teachers — Enoch Shamatutu and Aaron Kaphiya — were seconded from the Adult Education Centres. At the time these two teachers were

rated as T3 — two year's secondary education and two year's teacher training — and had had no experience of television. The same could be said of the rest of the staff. In fact, one of the five technicians had been working underground as a driller six days before we went on the air.

Training, necessarily, was brief. The two teachers who had to arrange and present the programmes had three weeks to get used to the new requirements and the studio assistants had six days. Some of this initial training took place while the equipment was still being installed but time was running out and if some indication of the effect of television was to be gained it was essential to try out the programmes as often as possible in the remaining time. The fact that we were limited to only two classroom outlets also made it imperative to squeeze in as much testing as possible.

No attempt was made to record the programmes. Equipment to record programmes was well out of the range of the budget for the project. It was only in 1965 that the small semi-professional video-tape recorders became generally available, ranging in price from £1,000 to £5,000. As a result the only record of the programmes left are the shot-lists and visuals which are now stored at the Institute of Adult Education in Salisbury.

During the period July 1964 to May 1965 three sessions of 10 weeks each were presented. There were 5 sessions per week consisting of one lesson in English and one in arithmetic per day. The average duration of programmes was 18 minutes. Each session consisted of the tele-lesson followed by 30 minutes of follow-up work in the classroom with a break of 5 minutes between subjects. In the first two series the two teachers alternated as classroom and tele-teacher but in the last series Mr. Shamatutu presented all lessons on television while another teacher — Paul Komeka — worked in the classroom.

Results of the first two series indicated that students who learned by television learnt four times quicker than students in the conventional classrooms in the Adult Education Centres. This backs up what Lawrence Stolurow says in dealing with teaching machines, "Time shows up as one of the bonuses one gets from more effective teaching methods". However, one must beware of these figures as it proved practically impossible to create tests which were really effective enough. This same difficulty is reported by Bundy in a research to compare the teaching of Spanish verbs by conventional methods with teaching by television.

The third series was noteworthy for two reasons — the variation of treatments and the higher standard of presentation. The latter was the result of the two previous series. The variation was achieved when four classes were matched as closely as possible and were subjected to various different treatments over the same period of time and with the same material. The first group was taught by the tele-teacher and television. This teaching was backed up by a classroom teacher. The second group was taught through television by the tele-teacher only. The third group was taught by the classroom teacher who taught the first group. The classroom teacher used the same materials and techniques which the tele-teacher used but there was no television. Finally, the fourth group was taught in the Adult Education Centres by conventional methods. This group was a statistical group and came from the Standard One intake. All groups had been drawn from this intake originally.

The results indicated that in progress there was little to choose between the groups although the results did indicate that, in general, the effectiveness of the various treatments descended in order from Group One to Group Four. Obviously, the Hawthorne Factor may have caused this. However, one of the most interesting results was the effect of the various treatments on attendance. Subjects attended classes on a voluntary basis, and over the 40 weeks of schooling in 1964 the Standard One intake at the Adult Education Centres dwindled from an initial figure of 192 students to 36 who finally completed the course at the end of the year. Over the 10 week period of the final series there was 87 per cent attendance in Group One, 62 per cent in Group Two, 86 per cent in Group Three (this group attended as part of an in-service training course and should therefore not be counted) and 42 per cent in Group Four. These figures, I think, indicate the relative "holding-power" of the various different treatments.

A more detailed account of the research will be available when the final report is published by the University College of Rhodesia and Nyasaland.

From the account of the practical side of the project I will now turn to a consideration of the problems facing any programme which intends teaching literacy by television.

The first problem is to define what is meant by literacy. Generally, it is applied to the teaching of the home language — and, in particular, reading and writing of the mother tongue. In different parts of the world it means vastly different things. The differences in definition are usually the result of certain environments and their needs. In Zambia, and, more precisely, on the Copperbelt, literacy has come to mean the teaching of English rather than any particular mother tongue. Apparently there are more than 70 dialects spoken on the Copperbelt and the only lingua franca — apart

from Bemba and Chikabanga — is English. Bemba has the disadvantage that it is not suitable as a means of communication for an industry such as the copper industry and Chikabanga is the language of "baaskap". Africans have found that it is necessary to learn English to progress and so if they learn anything it has to be English.

This is not all of the picture. In addition to English the mines need employees who have reached a certain standard in arithmetic. This is usually defined as knowledge and application of the four operations. Not only do the mines express a need for arithmetic but also the African adult himself. This is not often expressed as something that the African sees that he needs for job promotion but usually as a basic requirement in the Government examinations at the end of Primary school. He wants governmental recognition and this for him is expressed in a desire for English and arithmetic.

Once you have decided what is going to be taught — the subjects — the next problem is to decide where to start and where to end.

The first of these two problems to be answered is what the final objective is. It is impossible to work towards a completely undefined goal. The difficulty is that there has been no research into what would constitute a basic vocabulary and what would be the minimum number of sentence structures an adult African living on the copperbelt should know to be considered literate. This is a problem that faces English teachers not only in Zambia but all over the world. According to Randolph Quirk, "Even at the present time, no grammar-book has been produced that carries the sanction of the professional linguist, and in the United States things are only slightly more advanced." If this is so, then, the way will be strewn with frustrated attempts to create adequate language courses in English. "Despite these complications some language teachers appear fully convinced that they have the answers and that if everyone would adopt their theories and procedures (or better, their textbooks), there would be no further trouble". (J. C. Catford quoting Harold Dunkel in *The Teaching of English*). What is really needed is a huge research programme something on the lines of the research conducted by the Centre du Recherche pour l'étude et la diffusion du français (CREDIF) at St. Cloud under Professor Gougenheim. This research, sponsored by the French Government, has produced a Fundamental French which is the basis of the courses "Voix et Images de France" for adults and "Bonjour Line" for the children. The success of these language courses is almost certainly the result of the considerable research done in this field by CREDIF.

The problem of defining the objective in arithmetic is not so difficult. The mine authorities, the adult African employees and the Government agree that the understanding of the four operations constitute the basic requirements for literacy in number.

With no research to guide a decision, the choice for the language course, as is frequently the case, depended finally on a personal choice by the Research Fellow. The course chosen was *The New Ship English Course* by A. W. Frisby, O.B.E., published by Longmans. This course was originally intended for Chinese children learning English as their second or third language in Malaya. There were several reasons for this choice which will be dealt with later. For the arithmetic course "Zambia Arithmetic" published by Longmans was accepted as the basis for the tele-lessons. This had the advantage of being the accepted Government course in all African primary schools.

The second problem was concerned with where the courses should start. Obviously, if students could be tested accurately for the knowledge of spoken and written English and arithmetic it would be simple (given a certain number of students) to determine where the course should start. Here again we were faced with difficulties. No tests had been validated which could indicate what we wanted to know. John Kemp, the present Head of Training Services at Rhokana Corporation, Kitwe, had constructed a series of tests for English and arithmetic which did indicate, roughly, what stage the student had reached. This indication was related to the primary school scale for easy reference. Obviously, if the end product has not been defined adequately some other scale which has been defined has to be used in its place. Only when adult education can cut the apron strings of child education will it come of age.

The students in the first series, who were attending an in-service training course for Mechanics (tested on Kemp's Educational Attainment Grading tests), presented a considerable scatter in ability in English. They were a far more homogeneous group as far as arithmetic was concerned. It was decided that, like Alice, we would start at the beginning with the English course. This course consisted of four books and Book One was intended for Standard One. In arithmetic it was decided to start with the course at the Sub B level (Grade 2) as, in general, the results of the Kemp tests indicated less knowledge of arithmetic than English. This was probably due to the fact that the students used English in normal life to a certain extent and that they had forgotten any formal arithmetic they might have learnt.

(An interesting sidelight emerged from Kemp's

testing. It was very infrequent that a student scored nil in the English test, showing that they were all able to read and write a little.)

However, this lack of arithmetic ability was soon made up in the classroom. The reason for this was probably that all the students had a practical knowledge of arithmetic in everyday life and as soon as the means to represent this experience in figures was taught the rate of progress increased over the rate of progress in English. Luckily, Zambia Arithmetic Book One repeated in its first 27 pages what had been taught in "My Second Number Book" — the book for Sub B. All we did was to leave out these pages when we reached the end of "My Second Number Book". So in fact the two subjects could be said to have started at the same point.

Proctor, writing about programmes for language laboratories in South Africa says, "The kinds of programme we need for our language groups in South Africa do not exist, so that what we use in this country will, in the main, have to be produced here, tested against South African conditions and take into account the areas of interference from the home language". The same conditions hold for television programmes or any other method of teaching language.

I have mentioned previously the lack of a grammar properly researched from a linguist's point of view, in addition to this there appears to be a lack in Central Africa of material produced for use in this part of the world. For this reason it was possible to use practically any course available on the market. Of course, it would have been far more worthwhile if it had been possible to research and write a course but this was beyond the resources of the research.

The *New Ship English Course* was accepted because, in the first two books of the course at any rate, the situations dealt with were very similar in both Malaya and Central Africa. They dealt with the classroom and the home which, apart from differences in such things as eating utensils, were, to all intents and purposes, familiar situations for Africans on the Copperbelt.

Much criticism has been leveled at the use of this book because of its approach to environment. For instance, it has been said that the illustrations which consist of stick drawings are difficult to understand and are too vague to apply to particular experiences in any one country. This was found not to be true. Adults were tested for comprehension of the stick figures convention and the results indicated that, on the Copperbelt, the convention was acceptable. Also it was found that this very "antiseptic approach at least allowed us to adapt the situations to the environment. With television this is more easily done than with most other media because the live situation, which is illustrated in the pupil's book, can be presented on the television screen by means of dramatisation. In this way what appeared to be a fault with this particular course could be looked upon as credit.

Returning to the requirements of a course for the language laboratory, Proctor suggests that "dialogue is a useful core or starting point". From the experiences at the Television Centre this we found was true. Unfortunately, the dialogues presented in the New Ship English course were too short to be of use. Proctor states that "a dialogue concerning an everyday situation has the advantage that you can introduce a variety of voices, with, if you like, suitable background noises to provide atmosphere and verisimilitude". After working within the confines of the course we had chosen it was obvious that the short dialogues presented would have been more effective if they had been longer such as the sketch used in the CREDIF courses.

Unfortunately, it was impossible to make the necessary alterations under the circumstances. One of the aims of the research was to compare different variables of treatment while keeping the content constant. For this reason it was impossible to change the course material as New Ship English was being used by the control class at the Adult Education centres.

One of the bugbears of many language courses is that they go at such a slow pace that students often become discouraged by their apparent lack of progress. This may account for the enormous drop-out experienced in classes provided for African adults. Often this feeling is caused by the teacher who emphasises correctness rather than fluency. The reason for this is not hard to find when you consider that the teachers are frequently, in Africa, teachers who are teaching a language which is a second language for them. The standard of this language is not high because it is not used fluently. The consequence is that they tend to stress anything rather than fluency. The format of the New Ship English course was also a limiting factor on fluency. The teacher was so busy cutting down trees that he rarely got around to looking at the wood.

Lessons were presented every day as it was felt that a short daily dose of two hours per day was better than a larger dose say twice a week. In this way we were able to provide some sort of cohesion to counteract the "bitsiness" of the course.

However, this fragmentation of the course must not be confused with the breaking up of the material into digestible morsels. Again Proctor says "If language learning is a question of practising and making unconscious habit the mastery of

sound or printed symbols, then no step can be too small, as long as the motivation and the challenge are not removed in the process". We found that as long as the end product — speaking and writing fluently — was clear in the mind of the students then the breaking up of the material could be achieved without damage. By breaking up the material in this way we were then able to consolidate each portion of the whole before going on. What does matter "is the speed and proper sequencing of these small steps".

Proctor states that his "own experience in the language laboratory suggests that this four-phase technique of master stimulus — student response — master confirmation — student repetition leads naturally to reinforcement". In applying this technique to television you come up against one of the apparent drawbacks in using television for language teaching. How are you going to get the necessary master-student interaction which appears to be so necessary? On the surface it appears impossible. The studio teacher just cannot have this contact with the student. At the Television Centre we were able to overcome this problem in several ways. We considered using an intercom system between the class and the studio so that the tele-teacher could be in contact with the students. This has been tried by various researchers but from the results the indications are that this "open end" technique is not significantly more effective than the "closed-end" technique. (Kumata). For this reason we chose to ignore this system.

It is known from research what the optimum number watching a particular size of TV set is (if the screen is 19 inches then the optimum is 19 viewers and so on). In our case we were using a 12 inch monitor and we limited our classes to 20 students. Each student was given a number. By calling a number the tele-teacher was able to contact individual students. He was also able to introduce response patterns between individual students and also groups of students. The tele-teacher appeared to "hear" these responses. After every response he repeated the correct response. In the classroom the teacher, if there was one, monitored responses. However, this was not often needed once the students had "learnt the rules of the game". Students monitored one another's responses and jealously guarded their own numbers. In the third series of programmes, where there was no teacher in the classroom, responses were often haphazard and it appeared that the most important contribution the teacher in the classroom made was to control the activities. I am certain, in my own mind, that if the teacher in the classroom had been better qualified to work with the television teacher the results from his students would be far superior to those of students without a classroom teacher.

One of the most important factors in the use of language laboratories is that "the student is busy for the whole of the lab. session by virtue of a separate stimulus situation for each student position" (Proctor). Although it would be impossible to claim the same for the tele-lesson we did find that it was possible to obtain 50 per cent more student responses per class compared with conventional classroom teaching.

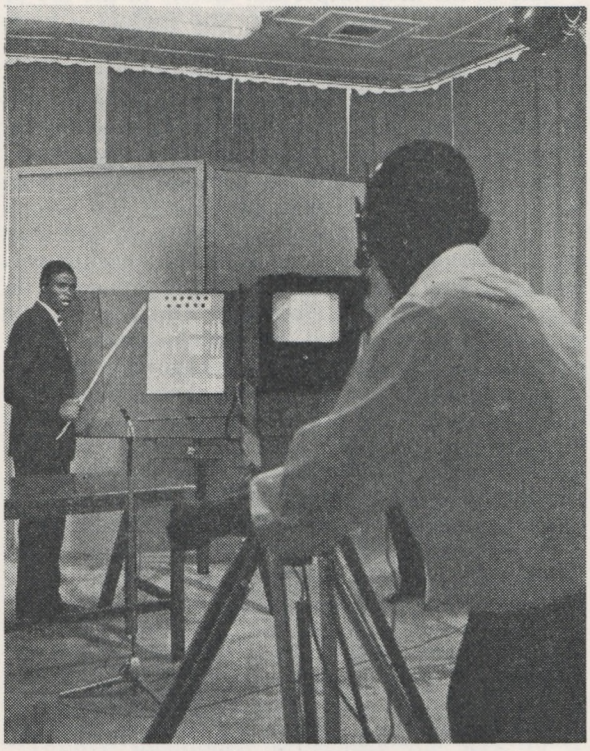
The reason for this was apparently the fact that each student imagined that the tele-teacher was talking to him personally. Every question could be a question for him alone. In this way every question was answered by every student. The grounds for this claim is that whenever a student made a mistake in answering or took too long the other students were quick to prompt. In general, it appeared that the classes at the Television Centres were far more active than the classes in Adult Education Centres.

An important means of reinforcing learning is to allow the student to try out what he has learnt. This is particularly important with adults. How they try it out, however, depends where they feel it is most important. On the Copperbelt not only does the adult want to speak English but he also wants to write it. In fact, in one training centre adults claimed that they were being trained to be "houseboys" because they were not learning to write. It appears that they need to write as soon as the course begins to assure themselves of the value of the course and the progress they are making.

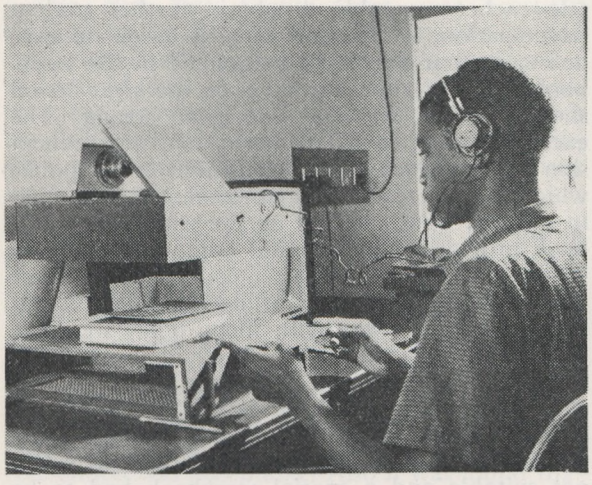
One of the main reasons for choosing the New Ship English course — not only for the television lessons but also for lessons at the Adult Education Centres — was that a Workbook was provided with the course which started with the first lesson. This was the only course at the time which provided this. By means of the workbooks the tele-teacher was able to obtain further student participation. At the end of each lesson he gave out work that was to be completed in the workbooks and at the beginning of the next lesson showed where students had gone wrong. The exercises consisted of memorisation, comprehension and mutation drills. There were many points which we quarrelled with concerning the exercises in the first workbook but on the whole the workbook provided a most useful adjunct to the oral lessons. At the end of each course it was these workbooks rather than the primers that the students wanted to take away with them. They were the certificates of efficiency which could prove to all the world that they had progressed!

In arithmetic we used the primer — My Second Number Book — as a workbook. However, the primer for Zambia Arithmetic — Book One was not suitable and a special workbook had to be constructed for use with the tele-lessons

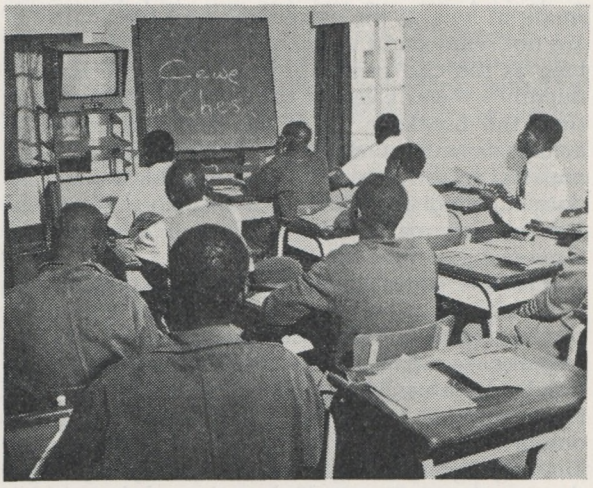
Lawrence Stolurow, referring to programmed



Mr. Aaron Kapihyam, one of the teacher presenter/producers presenting an arithmetic lesson at the Copperbelt Educational Television Research Centre.

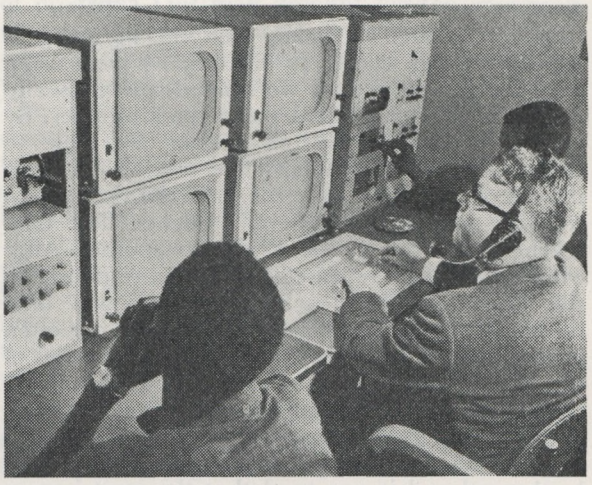


An assistant at the Educational Television Research Studio on the copperbelt operates the reading device during a tuition session.



A new medium of education by means of closed circuit television is being investigated by the mining groups at their television research centre in Kitwe. This is a view of the control panel at the centre.

This photograph is supplied by the Public Relations Department Anglo American Corporation (Central Africa) Limited.



A new medium of education by means of closed circuit Television is being investigated by the mining groups at their television research centre in Kitwe. Here a class of mine employees are receiving a lesson in arithmetic.

This photograph is supplied by The Public Relations Department, Anglo American Corporation (Central Africa) Limited.

learning deals with the question of prompting. He says, "the main thing is that prompting can produce more rapid learning". At the Television Centre we were able, through one of the facilities offered by television, a means of prompting. It was decided in view of the expressed needs of the students to provide reading and writing at the same time as spoken English. This was accomplished in the following way: every exercise started with a live demonstration. While the demonstration was going on the oral speech pattern was presented and drilled. Then over the action the written symbol for the action was superimposed by means of a second camera. The speech pattern was drilled in this way for a short time and then finally, by fading the action, the written symbol remained backed by the oral symbol. After the pattern had been learnt the student was sometimes presented with the written symbol first on which the action was superimposed and asked to read what was written. Sometimes the wrong action was imposed to see if the student really understood the written symbol. By using the facility of superimposition offered by television we were able to prompt student responses which, in turn, speeded up the learning.

From all indications it would appear that it is perfectly feasible to offer language courses by television. While not as effective as a true language laboratory course, they are at least as effective as normal classroom lessons.

The advantage television offers is that a good teacher, whose accent and fluency is assured, can be made available as an aid to less qualified teachers and even to students who have no teachers at all.

However, a word of warning. The real problem, to my mind, is not the provision of programmes but rather the training of personnel who can firstly present the lessons and secondly, and more important, who can use a tele-lesson in the classroom. Until these people are available in sufficient numbers it would seem to me that the use of television will always remain a toy in the hands of certain enthusiastic amateurs, and will never fulfill its promise for education so clearly indicated by research all over the world.

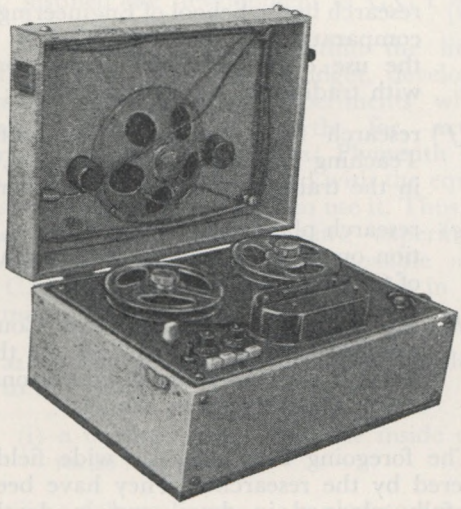
BIBLIOGRAPHY

Symposium 1963–1964 *and* 1965 — published by the College of Education, Johannesburg.

Chapman, Dave, Inc. *Design for ETV: Planning for Schools with Television* Educational Facilities Laboratories, 1960.

Quirk, Randolph and A. H. Smith *The Teaching of English* Oxford University Press 1964.

Kumata, Hideya *An Inventory of Instructional Television Research* Ann Arbor Nichigan, 1961.



OPELEM

WORLD WIDE INSTALLATIONS OF
FULLY AUTOMATIC AND
MINI LANGUAGE LABORATORIES

GORDON-LAYCOCK ELECTRONICS LIMITED
BIRCH HOUSE - CHIPPERFIELD - HERTFORDSHIRE

For Full Details Contact the Sole S.A. Distributors:

G. H. LANGLER & CO. LTD.,
P.O. BOX 3762 - - 251 MAIN STREET, JOHANNESBURG
BRANCHES:— WELKOM - DURBAN - CAPE TOWN - PORT ELIZABETH