NOTE TO STEERING COMMITTEE MEMBERS

This is a preliminary draft of a work in progress. It is envisaged that, once the document has been read by Steering Committee members, it will be circulated among representatives of a range of key training organizations in order to receive their feedback. This will be followed by a process of consultation with these people, at which time the document will udergo final amendments. The process of consultation will also act as a process for devising short term and long term implementation plans for the development of training initiatives for the electronic media in education. These will hopefully be ratified at a workshop just before the E.M.E. Conference.

If you would like to contribute ideas to or comment on this document please consult me as a matter of urgency before the 6th of December. At this time, a preliminary draft will be sent to all people attending the conference in January.

Many Thanks

Neil Butcher

TRAINING PEOPLE IN THE USE AND PRODUCTION OF THE ELECTRONIC MEDIA IN EDUCATION

by
Neil Butcher
South African Institute for Distance Education
P.O. Box 31822
Braamfontein
2017
Johannesburg
Tel: [011] 403-2813
Fax: [011] 403-2814
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NOTE: This document contains suggestions, needs, and ideas gathered and developed throughout an intensive period of research. There is, however, no claim that it functions as a policy document or a blueprint for training in the field of the electronic media in education* or indeed any ambition for it to function as such. Rather, it is intended to make a contribution towards current debates in this field and to initiate discussion around the issues it raises. Thus, the document should only be seen as a small part of a process which has already been taking place around South Africa and will continue to develop and evolve in the short and long term futures of education in this country.

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Preamble

In March of 1993, the *Electronic Media in Education Conference* brought together several of the key players in the field of the electronic media in education. One of the resolutions arising out of this conference pertained to the need for training. It stated that,

> to address issues such as state monopoly, biased information and racial imbalances in training, development needs to take place in a more considered and structured fashion in areas such as:
> ● programme production, including both technical and educational development;
> ● research, and specifically curriculum development;
> ● teacher training for the use of electronic media materials;
> ● audience research;

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*This document works on the assumption that, if used as one part of broader educational processes, the electronic media in education has a vital role to play in South African education. It is realized that, given the cost of electronic media production and problems of access (as well as other potential problems), the issue of whether or not the electronic media does have a role in South African education at all is potentially contentious. This document does not intend to deal with such issues, but it should be noted that an educational broadcasting policy proposal produced by the *South African Institute for Distance Education* and the *Electronic Media in Education Forum* does provide a rationale for the use of the electronic media in education in South Africa.

- special training for trainers and instructors;
- presentation and management skills;
- policy and planning, etc.

There needs to be some form of co-ordination between training institutions, broadcasters and projects to ensure that training flows in with the restructuring and developments of the media, and also in redressing the imbalances of the past.
Key sites identified for training include: -
- Community based training projects.
- Internships and on-the-job training with local and foreign broadcasting schools, and in the independent sector, with the SABC and other organisations.
- University and technikon-based training, or in conjunction with other schools or projects.
- The involvement of teacher training institutions.[1]

On the basis of this resolution, a task group focusing on training and research was set up at the end of the conference, which had, as one of its main functions, research into training needs for the electronic media in education. The first phase of the research project initiated by this task group, and funded by the *South African Institute for Distance Education* (SAIDE), involved an identification of current training initiatives in the related fields of the electronic media and education*. Several issues emerged in respect of training needs in South Africa as a result of this preliminary research. Prior to identifying in greater detail what these issues are, however, it is necessary to outline the parameters which governed the research conducted, because they have had a direct connection to the analysis which will follow.

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Research Parameters: Some Definitions

The research which has been conducted and which feeds into this document has been governed by certain parameters which, as will become clear later, have had a direct influence on the ideas which have emerged. These parameters include the following:

- **Education**
  The sphere of 'education' has been approached in the broadest possible terms, covering both formal and non-formal education. This is because the electronic media can be used effectively in all educational fields, including the following:
  ◆ Preschool education and educare.
  ◆ Primary school education.
  ◆ Secondary school education.
  ◆ Tertiary education:
    ✿ University education.
    ✿ Technikon education.

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*For a fuller description of this research procedure, see Appendix A.

        ✪   Technical college education.

        ✪   Pre-service and in-service training of educators.

◆   Adult education, including:

        ✪   Adult basic education.

        ✪   Corporate training.

    (Both of these would be informed by the concept and principles of lifelong learning.)

◆   General education:

        ✪   Health education .

        ✪   Literacy education.

        ✪   Political/social awareness education.

It is important to note that, although these are distinct fields within education, they should not be separated by rigid boundaries. Looking at the various educational fields in isolation prevents meaningful interaction that can take place between them*. Thus, it is always important to keep a holistic view of education in mind when considering various educational fields. There has also been a balanced focus on distance education and on contact or 'face-to-face' education, because educational media materials can play roles in both. Again, the approach has been to avoid rigid separation conceptually, in this case particularly because of the importance of face-to-face contact in distance education.

●   **Media**

Below are listed various types of media which have been taken into consideration in the research project. Nevertheless, as with the educational parameters, it must be clearly stated that the various types of media should not be considered as disparate, self-supporting elements, but should be viewed as forming parts of a greater whole. This is vital because initiatives which rely on only one medium will inevitably be less effective than those using a variety of complementary media materials. To take this further, it should also be realized that educational media cannot be considered in isolation from the broader processes of education. It is now widely accepted that the electronic media will never be able to function as an educational panacea, but are and will be most useful as educational aids. Indeed, "the lesson of a thousand-fold experiences from almost everywhere is that the media can be useful...but only when it belongs to a system which has strong organisation on the ground and encourages face-to-face contact"[2]. Thus, in order to be effective, all considerations of the use of the electronic media in education must be driven by an awareness of the broader framework into which these media will fit.

◆   Television.

◆   Video material.

◆   Radio.

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*As an example, adult basic education could interact with educare to encourage adults to take some responsibility for the educational needs of preschool children.

- ♦ Audio material.*
- ♦ Printed media (specifically for use in multi-media packages and for distance education).

- ● **Electronic Media in Education Practitioners**
  It is becoming widely accepted that, in the field of electronic media in education, undue emphasis has been placed on the production process of materials at the expense of the reception process (the process of making effective use of media materials for educational purposes). There also needs to be renewed emphasis on the broader process of educational programme design and on the way in which the electronic media in education fit into this. In an attempt to restore some balance in these regards, it has been necessary to distinguish between various types of electronic media in education practitioner:
  - ♦ People involved in the conceptualization, planning, and design of educational programmes and of multi-media packages which will be used in such programmes. It is important to include this group of people in order to restore a sense of the way in which the electronic media in education should fit into broader educational media packages and educational processes.
  - ♦ People involved in the production of electronic media in education materials (this category covers a wide variety of job definitions, which will be outlined in more detail below).
  - ♦ Users of electronic media in education materials - it is important to bear in mind that this refers to two groups of people;
    - ✿ Educators†.
    - ✿ Learners.

    This distinction is important because electronic media in education initiatives must keep the needs of the learner (who should be the focus of all educational activities) uppermost. Thus, it is vital that the learner is included as an electronic media in education practitioner.

With an understanding of some of the basic parameters governing both the primary research and this analysis, it is now possible to examine the current state of and needs for electronic media in education training in South Africa at present.

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*A distinction needs to be made between audio/video and radio/television. In brief, the former are media materials designed specifically for non-broadcast purposes, while the latter refer to media materials designed specifically for broadcasting. This distinction has important implications because, in the field of education, audio and video have several advantages over broadcast material. This is because they are more flexible media which can be any length, can be specifically designed to allow for regular pauses, and which remain under the control of the educator or learner (who can, for example, pause or rewind whenever necessary). Thus, audio and video lend themselves more readily to use in multimedia packages and as educational resources which function merely as one part of wider educational processes. (this is not, however, to suggest that there is no role for broadcast media in education, which can still play a vital role, particularly in raising educational awareness in society). This has important implications for training, which must distinguish clearly between these various media types.

†This is a blanket term, referring quite broadly to the full range of educational fields, from educare workers through the full range of formal and non-formal teachers at primary, secondary, and tertiary levels, to adult educators.

Why Focus on Training?

Despite differences of opinion on the exact role that it should play, there is a growing consensus on the importance of the media in the field of education in South Africa. According to John Samuel,

> in the short term, traditional educational delivery structures alone cannot begin to remove the backlogs created by apartheid. Creative intervention is needed and there is widespread consensus that the media could and should provide a vehicle for education reconstruction[3].

Although this provides a starting point, however, it provides no guarantee that media materials will be effective or useful educationally, as John van Zyl makes clear;

> to have access to a technology is not necessarily to use it in the most effective way. There is a need to train the teachers and students who are going to use it, and as a further need to train writers and producers to make useful and usable programmes.[4]

Thus, a focus on various aspects of training is vital for the effective use of the electronic media in education.

Research undertaken in the last few years has, however, shown clearly that the quality of existing electronic media in education materials is often not adequate for educational purposes[5]. In relation to television, for example, Liz Dilley estimated that "about half the locally produced educational programmes evaluated were unimaginative and lacked interaction"[6]. Similarly, Wilna Botha found that

> progressive organizations have tended to get the process right while battling to deliver a quality product, while 'establishment' media were strong on production, but often ignored the need for a process that involved learners.[7]

This would suggest that people involved in electronic media in education production often lack the skills necessary to produce quality educational materials. David Seligman pointed out at the SAIDE Launching Conference that "what is often taken for granted and under valued is the human resource, the training needed for technicians, materials developers and producers"[8]. It is clear that there is a need to focus on what skills are necessary for electronic media in education production and on ways in which people can be equipped with these skills. Without this focus, it will remain very difficult to provide quality educational media resources. Thus, "there is a...need to train scriptwriters and producers who can develop a range of educational programmes for the varied learning constituencies that exist"[9].

Research also shows that electronic media in education initiatives have tended to focus on the production process of such materials at the expense of the reception process. One of the main reasons for this is that "it is most difficult to get the feeding-in mechanism and the on-the-ground logistics, support, monitoring and evaluation right"[10]. Nevertheless, if there is not a focus on the reception process governing the electronic media in education, its impact will

always be adversely affected, as John Gultig makes clear;

> [Technology] will be resisted by teachers if they feel it is replacing them, or if they
> feel disempowered by it...It must be unpacked...and it needs to be interactive, and
> it needs to be accepted by teachers on educational, and not economic terms.[11]

There can be little doubt that the most effective method of dealing with this particular problem is to provide pre-service and in-service training in the use of the electronic media in education to educators. Any educational media initiative which does not take the needs of educators into account and provide training to cater for those needs will always remain restricted in scope and achievement.

This is not, however, the only type of training which needs to be offered within the reception process of electronic media in education. In addition, there needs to be a focus on the needs of learners, who are ultimately the most important group of all. Unfortunately,

> in the present situation the process of media production is highly mystified with the
> result that media users in South Africa are very passive...it is necessary to educate
> media users in order to create media awareness.[12]

Unless learners are trained in media literacy skills, electronic media in education initiatives will inevitably be limited in their potential impact.

It is, therefore, necessary to focus on a wide variety of training needs if electronic media in education initiatives are to achieve their full potential in South Africa. To summarize, these training needs fall into two major categories:

- **Training programmes in the production of electronic media in education materials** - this refers to programmes which would equip people with the educational and media skills required for effective production of educational media materials (including those people involved in the conceptualization, planning, and design of educational programmes and of multi-media packages which will be used in such programmes).
- **Training programmes in the use of electronic media in education materials** - this refers to pre-service and in-service training programmes which would equip educators with the skills required for effective use of educational media materials in whatever educational contexts they might be working. In addition, it refers to training programmes which would equip learners with a critical understanding of such media materials so that they can also make effective use thereof.

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The Present Situation

The first question to be answered, then, pertains to what electronic media in education training already exists in South Africa[13]. The first point to note is that there are, at present, a wide variety of training programmes taking place in the related fields of the electronic

media and education in South Africa. This is a favourable set of circumstances because it means that a training infrastructure already exists. Research has identified a wide range of organizations involved in training in these related fields, ranging from tertiary institutions (primarily universities and technikons) and large media organizations (such as the *South African Broadcasting Corporation*) to a range of smaller commercial colleges and organizations and non-governmental organizations. Several of these organizations have accumulated considerable skills and resources which are a valuable asset for education in general.

The following general types of training programmes are offered on a regular basis in the related fields of the electronic media and education:

- **Training in electronic media production skills** - many of these training programmes are very practically orientated and deal primarily with the technical side of media production, but there is now a growing tendency to include greater theoretical input and to incorporate a critical understanding of the media in such courses. There is a broad range of courses available, from short courses of two or three days to courses which can last five years. Some are introductory courses which would not, on their own, be sufficient for production purposes, while others are comprehensive and geared specifically towards training people for the production industry. Training in electronic media production skills is also offered on a limited basis through internships at production houses or through other forms of project-based learning.

- **Journalism courses** - media skills training is also offered to people through a variety of journalism courses, offered both at universities and technikons and at smaller commercial colleges and non-governmental organizations.

- **Communications and media theory courses** - this refers primarily to courses which seek to explain how the media function within society (it should be noted that there is often a strong overlap between the content of communications courses and journalism courses). The majority of the courses falling within this category are offered at universities, but there are growing attempts to offer shorter media aware-ness courses to a broader range of people (with a particular focus on those groups in society who remain the most marginalized by an historical lack of access to education).

- **In-service and pre-service training of educators** - this constitutes the largest field of training in the related fields of the electronic media and education, with many tertiary institutions and non-governmental organizations providing some training of this nature. As with media skills training, the length of courses available is variable, ranging from short courses of an afternoon to master's and doctorate degrees which can take six or more years to complete. Some of these courses do include media-in-education components, which are aimed at training educators how to make use of the media in particular educational contexts. Often, these components deal in very practi-cal and technical terms with how to use the media, but some also include theoretical input and an attempt to incorporate a critical understanding of the media in the content. Fewer courses deal with how to teach media studies, but awareness is

growing around the necessity for this aspect of training within education courses.

- **Training in educational electronic media production** - some training is offered in the production of electronic media in education materials. Unfortunately, however, this training is usually offered on an *ad hoc* basis by non-governmental organizations. As a result, they tend to be short courses of two weeks or less which are geared towards specific production needs identified by these organizations. For the first time in 1994, however, some longer courses in educational electronic media production will be offered by training organizations.

Despite the existence of this range of training programmes, the various electronic media in education training needs are not being catered for in anything approaching a comprehensive enough way by this range of training programmes. This is not to suggest that the training taking place currently in the related fields of the electronic media and education is of no value or use; much of it is extremely worthwhile and commendable. The problem is that most of the training taking place is not orientated specifically towards the electronic media in education[*]. Of course, some programmes are, as has been stated above, geared towards the production and use of the electronic media in education. While many of these are very worthwhile, their effect often tends to be localized and fragmented[†], an effect compounded by their nature as *ad hoc* courses run in response to specific needs within a particular organization or sector.

Thus, there are a number of training gaps which exist and a range of training needs which are not receiving the extensive attention required in order to maximize the impact of the electronic media in education. With an awareness of what exists, it is now possible to explore in more detail training needs for the production and use of the electronic media in education in South Africa.

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[*] It must, of course, be realized that most of the training initiatives falling within the various categories outlined above were never intended to cater specifically for the needs of the electronic media in education. Thus, this comment is not a condemnation, but a simply a statement of the current reality, a reality which, as has been argued, needs to be changed if the impact of the electronic media as educational resources is to become as effective as is hoped.

[†] This comment also applies, in many cases, to those training programmes which are not geared specifically towards the electronic media in education. In addition, Wilna Botha has noted this point in relation to the impact of the media on education more generally;

> The effect of media on education is in fact minimal. Intervention is largely localised and fragmented, and much of it is only effective in giving to those who already have...media interventions in education have been singularly unsuccessful in reaching those learners who are most in need"

Reference: Botha, W. 1993, <u>The Role of the Media in Education</u>, Johannesburg, EduSource, p. 24.

Training Needs for Users of Educational Electronic Media Materials*

As has been made clear in previous sections, it is vital that a sense of balance be restored between the production process and reception process of educational electronic media materials. As has been suggested, any electronic media in education initiative will succeed of fail according to the extent to which it is understood, accepted, and used by teachers and learners. These people, then, are the users of educational electronic media materials and it is vital that such people receive training in how to use and understand the electronic media if these media are to become effective resources within education.

What is needed, therefore, is an intensive training initiative which will provide users of the electronic media in education with the skills that they require in order to interact effectively with the electronic media. Various categories of training are required:

- **Training in the use of the electronic media in education for educators** - this is absolutely vital to the success of any electronic media in education initiative. Educators must be equipped with a critical awareness of how the media work, of ideological constructs inherent in the media, of the media's role within society, and of the mechanics of media production. In addition, they must feel comfortable with the concept of using the media for educational purposes within whatever educational context they might be working, as well as understanding which types of media are best suited to which contexts and activities. Finally, they must understand the practical details of exactly how to use media materials. If training takes place along these lines, it will be possible for the electronic media in education to act as empowering resources at the disposal of educators, rather than appearing to be mystifying technological 'teachers'†. If the electronic media are seen as the latter, they will either disempower educators or will be avoided by them. In order to deal with some of the educational backlogs inherent in South African society, it is necessary that training of this sort be offered both as part of pre-service and in-service educator training. It should be noted here that there are a wide variety of existing pre-service and in-service training programmes for educators which could include components of this nature with a minimum of effort.

- **Training in the use of the electronic media in education for learners** - this is an equally important form of training. As has already been pointed out,
    > in the present situation the process of media production is highly
    > mystified with the result that media users in South Africa are very
    > passive...it is necessary to educate media users in order to create
    > media awareness.[14]

    Thus, it is vital that learners also be imbued with a critical approach to the media, understanding ideological constructs inherent in the media, the role of the media

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*This section has been placed before the section dealing with people involved in the production of educational electronic media materials in cognisance of the fact that, in the past, too much emphasis has been placed on the production process of educational media materials. This, therefore, constitutes an attempt to focus attention back on the reception process of such materials, in acknowledgement of the centrality of this side of the process to the success of educational materials.

†It is also interesting to note that, if training of this nature takes place, it would also be possible for educators to make effective use of educational electronic media materials of poor quality. If the materials is treated as a resource rather than a teaching agent, then poor quality materials can often be very effective in highlighting particular points.

within society, and the mechanics of media production. It should be pointed out that there are strong links between this type of training and that outlined above, particularly because,

> if teachers have not been exposed to education technology, and more importantly, have not become literate in the application of the technology of education during their training, it is unlikely that they will demand such literacy from their students.[16]

- **Training of trainers** - it is, of course, essential that people be trained to be able to run training programmes such as those outlined above. This would entail a large-scale training process for people involved in providing in-service and pre-service training to educators, many of whom will also not be equipped with the type of knowledge required for effective use of the electronic media in education. Efforts to train users of educational electronic media materials cannot succeed unless the training of trainers is successfully undertaken.

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Training Needs for People Involved in Educational Electronic Media Production

> The design and development of courseware* of acceptable quality requires a combination of skills and expertise which is usually not possessed by one person. They include expertise in areas such as: content; curriculum; instructional design; educational technology; translation; media; project management and team leadership.[16]

As has been stated above, recent research has demonstrated that the current quality of electronic media in education materials is often not adequate for educational purposes. Nevertheless, several organizations, recognizing the importance of the electronic media in education, are focusing their efforts on the production of new materials in an effort to tackle some of the educational backlogs facing South Africa. While these efforts are often commendable and necessary, it is of concern that very few seem to take cognisance of the necessity for training for effective educational media production[†]. Those organizations which see training as important struggle to find adequate training courses for the production and use of the electronic media in education. It is such organizations that either develop once-off courses to fulfil their needs or simply avoid involvement in the electronic media in education at all.

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*Courseware, in this quotation, is "a term used to describe learning materials recorded in any medium. So it includes - amongst others - printed study materials, videos, computer programs, and notes on a blackboard".

Reference: Foks, J. 1992, "Vocational Education and Open Learning in South Africa" in Launching Conference of the South African Institute for Distance Education, Johannesburg, SAIDE, ch. 14, appendix B, p. 2.

[†]This is by no means an exclusively South African problem. For example, Bernadette Robinson and Hafiz Wali, from the United Kingdom and Nigeria respectively, suggested at the SAIDE Launching Conference that "a common experience is underestimation of the time, resource and expertise needed to produce [good quality learning materials]".

Reference: Robinson, B. & Wali, H. 1992, "Distance Education for Teacher Education" in Launching Conference of the South African Institute for Distance Education, Johannesburg, SAIDE.

None of these scenarios are, however, adequate solutions if the electronic media are to become effective resources within education in South Africa. Thus, having confirmed the necessity for training programmes in the production of the electronic media in education, it is now necessary to identify in greater detail what those training needs are and to set out some principles on which future training programmes can be based in order to improve the quality and effect of the electronic media as resources within the field of education. An overview of the present situation has, however, suggested that there are already several structures in place which run training in the related fields of the electronic media and education. Due to this wealth of structures and resources, there is no immediate need for heavy investment in new initiatives. Rather, the identification and fulfilment of such training needs must be based on the development and networking of current initiatives, and must build on existing strengths and while eliminating any possible weaknesses.

The biggest problem in training for the production of the electronic media in education is the fact that there has, as a rule, been a division between the training offered in media skills and in educational skills. As a result, when electronic media producers and educationists have consulted with each other in the production of educational media materials, this consultation has generally taken place within a framework of mutual ignorance*. In other words, media producers have not had a concrete understanding of the educational needs of the materials being produced, while educationists have not really understood the parameters governing effective use of the electronic media. This has had a negative effect on the quality of electronic media materials produced. For example, it has often been responsible for one of the problems identified at the *Electronic Media in Education Conference* in March 1993;

> the present processes by which the development of educational programming occurs in South Africa is very much a top-down approach. There is very limited par-ticipation of educators and learners in the development of programmes or even in the consultation about these programmes prior to their development.[17]

Thus, the most immediate need in training programmes for the production of the electronic media in education is to combine media skills with educational skills in the training of people who intend to engage in the production of electronic media in education materials. This, of course, covers a very wide range of overlapping skills, including the following:

- **Educational Skills** - knowledge of education is absolutely central to the successful production of electronic media in education materials. As this is a very broad field, the full range of skills which are required cannot be covered here, but there are certain key elements required:
  - ◆ An understanding of the context for which educational materials are being produced. Without this understanding, it is not really possible to focus on redressing educational imbalances and on fulfilling educational needs. The context can be separated into different levels:

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*It should be noted that this is again not an exclusively South African state of affairs. Conversations with Jim Stevenson and Milton Chen, as well as information gleaned from a *Children's Television Workshop* presentation on 23 September of 1993 (involving Baxter Urist, Laura Martin, Pam Green, Evelyn Payne Davis, and Cooper Wright) indicate that many educational programmes around the world rely on this method of production.

✿   The South African context - educational media materials must be governed by a concrete awareness of the current state of South African education in general. This would include a concrete understanding of the effects which Apartheid education has had on the majority of the population. It would also include a holistic awareness of the various fields within education and of how these fields relate to and interact with each other.

✿   Regional and local contexts - for many educational electronic media materials, what works for one context is completely unsuitable for another. As a result, it is vital that an understanding of the specific needs of various regional and local learning constituencies be taken into account and, wherever necessary, different educational programmes be developed to cater for those needs.

✿   The context of specific educational fields - this refers to the specific knowledge required for working in various educational fields. For example, the skills required for adult literacy workers would vary considerably from the skills required for working as a technikon lecturer or as an educare worker. There are also further areas of specialization within each educational field. For example, at secondary school level, the knowledge required for mathematics educationists would vary considerably from the knowledge required for language educationists. Finally, it must be stated that the process of developing knowledge and skills within various educational contexts should include practical working experience.[*]

◆   An understanding of certain key educational principles - in brief, these would include the following (as well as several others):

✿   Education should always be a learner-centred activity.

✿   Education should encourage the interaction of learners and should not treating the learner as an empty vessel into which knowledge is poured[†].

✿   Education should focus on developing problem-solving skills.

●   **Critical understanding of the media** - also vital is that people involved in the production of electronic media in education materials have a critical awareness of the implications of using the media. The importance of this is summarized by Eric Louw:

Emphasis needs to be placed on the need for critical media people. This means media workers who understand:
●   the full range of media theories;
●   their social context (and its mutability);
●   the meshing of existing media institutions into the power relationships of society;
●   possible alternative configurations of media organization/media

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[*] It is hoped that, by starting at the most general level and then moving towards the most subject-specific levels, this breakdown makes clear the fact that, no matter what level a person intends working at, s/he must nevertheless have a concrete awareness and understanding of the holistic picture of education.

[†] This is particularly important to bear in mind in relation to the electronic media because, if used incorrectly, they can lend themselves very easily to didactical education which simply attempts to transmit knowledge from an 'expert' teacher to an 'ignorant' learner, without providing for the interaction of the learner in the process.

> technology; and
> - the relationship between existing media technology and research-development-funding.
> This requires an education in critical theory, where the connectedness of theory and practice is emphasised.[18]

As Louw makes clear, this non-technicist approach to media training does not eliminate the need for technical competence (which remains absolutely vital); it suggests, however, that technical competence alone is not sufficient.

- **Knowledge of multi-media packages** - it is becoming generally accepted that the electronic media will not function as effectively as individual, isolated materials as they will if they form part of broader multi-media packages* (which itself must fit into the broader educational context outlined above). A distinction must, however, be drawn between two categories within this field:
  - ◆ Management of multi-media packages - this refers to a specific range of skills required by those involved in conceptualizing, planning, and designing educational programmes which will make use of multi-media packages, as well as coordinating the development of such programmes. Skills required would include the ability to make informed decisions on which media types would be most suitable in achieving the aims of the educational programme, ensuring that the various media formats chosen interact with each other and with learners, and managing the development of the various aspects of the educational programme and multi-media packages once it has been designed.
  - ◆ Knowledge of multi-media packages amongst a broader group of people - it is, in addition, vital that all people involved in the production of electronic media in education materials have a concrete awareness of the concept of and rationale behind multi-media packages, as well as an understanding of how the various media formats interact with each other and with learners. It is essential that the work of people at all levels is influenced by an understanding of the broader processes into which that work will fit.

- **Scriptwriting skills** - this covers a particularly complex and difficult range of skills required for electronic media in education production. Various considerations within this field of skills would include:
  - ◆ Scriptwriting for different media types - for example, the skills required for writing scripts for radio would differ considerably from the skills required for writing scripts for television. Similarly, there would be differences between writing for television and writing for video.
  - ◆ Scriptwriting for different subjects and educational fields - for example, the skills required for writing scripts for educare purposes would be very different to those skills required for writing scripts for materials aimed at formal secondary school levels. In addition, the skills required for subjects within fields might vary considerably; a script for a science programme aimed at secondary school level would be governed by very different principles to an English programme aimed at the same level.

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*The types of media referred to in this respect cover a wide variety of materials. Multi-media packages could include a combination of any of the following; audio and video cassettes, television, radio, computers, books and booklets, magazines, newspapers, journals, periodicals, newsletters, pamphlets, worksheets, posters, maps, charts, three-dimensional models, photographs, slides, and overhead projections.

◆   Scriptwriting in different languages.
◆   Creating storyboards (only applicable to video and television).

● **Media middle-management skills** - this refers primarily to the following job definitions:
    ◆   Directors.
    ◆   Producers.
    ◆   Production Managers (coordinating and dealing with the logistics of productions).

● **Research and Evaluation skills** - these two skills are important to the success of electronic media in education materials, but they are often ignored or neglected. They refer to two phases of the production process:
    ◆   Research prior to production - if adequate research is not undertaken prior to the production of materials, there can be no guarantees that the materials produced will cater for the needs of the audience at whom they are aimed. Research, therefore, is necessary in order to establish the breakdown of the audience at which various educational media materials will be aimed and to identify what their educational needs are. It is also necessary to establish what the most effective ways of fulfilling these needs would be. It is, however, important to point out that such research cannot be fully effective unless it also takes into account the parameters surrounding the medium or media for which the research is being undertaken.
    ◆   Evaluation - there are two types of evaluation required for educational media materials:
        ✿   Formative evaluation - this refers to evaluations which are conducted while materials are in the process of being made, and which help to shape the final products.
        ✿   Summative evaluation - this refers to evaluations undertaken once educational media materials are completed. Such research examines the strengths and weaknesses of these materials, providing information which can feed into future productions.

● **Technical production skills** - this field of skills can be divided in two:
    ◆   Television/video - the skills required here would include:
        ✿   Editing.
        ✿   Lighting.
        ✿   Sound.
        ✿   Camera work.
        ✿   Studio-orientated and location-orientated work (including grips, gaffers, production assistants, wardrobe, makeup, set designers, set builders, sound and lighting technicians, runners, and others).
        ✿   Digital effects (where applicable).
        ✿   Broadcasting skills (television only).
    ◆   Radio/audio - the skills required here would include:
        ✿   An understanding of how radio/audio works (microphones, amplification processes, FM/AM transmitters, and so on).
        ✿   Sound editing and mixing.

☼ Tape-recording.
☼ Storage of sound equipment (particularly tapes, compact discs, and other recorded sound materials).
☼ Working a control desk.
☼ Digital skills - it is important to note that the linear, mechanical process of radio production, which involves the above skills is gradually being replaced by digital, computerized methods of radio broadcasting (which are considerably cheaper to maintain). This field of skills is, therefore, growing in importance.
☼ Broadcasting skills (radio only).

- **Presentation skills** - this fields of skills can also be divided in two:
  - ◆ Television/video - the type of skills required would depend on the nature of the programme envisaged, but could include:
    - ☼ Acting.
    - ☼ Voice-over.
    - ☼ Continuity.
    - ☼ Choreography.
    - ☼ Interviewing.
  - ◆ Radio/audio - again, the type of skills required would depend on the nature of the programme envisaged, but could include:
    - ☼ On-air presentation.
    - ☼ Voice-over and script-reading.
    - ☼ Character voices.
    - ☼ Interviewing.

- **Station management skills** - these are skills required by people who will be dealing with a wide variety of media materials, both educational and non-educational. It is, however, vital to the success of educational electronic media materials intended for broadcast that people in such positions are aware of the importance of the electronic media in education*. It is also important that a broader range of people involved in electronic media in education production should have an understanding of the principles of station management, particularly in relation to legal, financial, and administrative issues around the media.

It can be seen from this list that there are a wide variety of skills required for effective production of quality electronic media in education materials (and thus a wide variety of training needs). As the quotation at the beginning of this section suggests, this range of skills would not normally be possessed by one person. Nevertheless, a major problem lies in the fact that people have no real awareness of this wide variety of skills; they simply specialize in one area with no understanding of the needs and parameters governing other aspects of the production process.

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*It should be noted here that one of the most crucial management positions to which this refers is the management of community radio stations. Much has been written about the potential which community radio stations hold for South African society (including a great educational potential), but, without effective management, they will never be able to fulfil this potential.

This is a problem which needs to be tackled at the training level. What is needed is a new approach to training which takes cognisance of the complexity of the production process for electronic media in education materials and of the way in which the various skills must interact with each other within the process. This is one of a number of principles which should govern a new approach towards training for people involved in the production of educational electronic media materials, an approach which, as stated above, should not rely on the creation of new initiatives, but should rather seek to make use of the great number existing structures, skills, and resources.

●   ●   ●   ●   ●   ●   ●   ●

Principles for Training People Involved in the Production of Educational Electronic Media Materials: Building on Strengths and Eliminating Weaknesses

With an understanding of the range of skills which training programmes need to cover and an awareness of the range of training programmes already in existence, it is possible to identify some of the principles on which future training programmes for people involved in the production of educational electronic media materials should be based. The following principles are based on the notion of building on the strengths and eliminating possible weaknesses in the existing training infrastructure.

- **Combine educational and media skills in training programmes** - a glance at the training offered for journalism immediately reveals that people receive training in the specific skills required for using the media for journalistic purposes. Similarly, there is always a clear distinction drawn between various media genres (such as soap operas, comedies, or dramas). Unfortunately, neither of these principles apply, in general, to educational electronic media production. The assumption seems to be that people will be able to use skills learned in disparate training programmes and techniques learned from non-educational media genres for educational purposes. This is simply not the case (see also below). Thus, it is vital that training should be based specifically around the concept of producing media materials for educational purposes.

- **Keep educational objectives paramount** - it is vital that the educational objectives of educational electronic media materials constitute the main focus of attention throughout production. This is, however, only possible if the production of a new 'genre' of educational media materials is encouraged at the training level. Transporting ideas and techniques from other genres wholesale is not an acceptable substitute; it has, for example, led to the concept of 'edu-tainment', where the entertainment of audiences is seen as paramount and, as a result, the educational message is often submerged, lost, or is treated frivolously. Educational media producers are, however, often left with little choice because they have not been imbued with the idea of production orientated primarily around educational objectives at the training level (an idea which would provide an alternative frame of reference). What must, therefore, be encouraged in training programmes is the idea that educational media materials should be educationally interesting and stimulating and should engage the imagination,

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rather than conforming to (predominantly American) notions of the media as entertainment.

- **Encourage key educational principles** - if training is to be built on the principle that the educational objectives of electronic media materials is paramount, then it must also encourage the incorporation of key educational principles into such materials. These would include the concept of learner-centred education, the promotion of problem-solving skills, the rejection of didactical teaching approaches, and the encouragement of interaction with learners. It is realized that there are no simple prescriptive formulae which will guarantee the existence of such principles in media materials, but the process of finding suitable techniques for incorporating such principles will be considerably aided if they are actively encouraged as cornerstones of thinking at the training level. *

- **Locate all training within the South African educational context** - training must build an awareness of the South African educational context in which media materials are to fit if it is to promote the development of quality educational electronic media materials. Most vital in this respect would be a clear understanding of the nature and needs of the learners at whom materials will be aimed (see also principle on subject specifics below).

- **Provide a holistic training in all of the various skills required** - as this document has continually made clear, one of the major problems in most current training initiatives is that they do not foster a sense of the broad range of skills and needs which govern educational electronic media materials. Thus, it is vital, in planning new training strategies for the electronic media in education, that training programmes consist of a core base of knowledge in all of the various fields of skills outlined in the previous section. With this core base of knowledge, it will then be possible for people to specialize in certain fields within electronic media in education production (including specializations in different educational fields and specific subjects within each field). This specialization will, however, be based on a concrete awareness of the various parameters and needs governing that production process and an understanding of how that process must fit into broader educational packages and programmes[†]. If this knowledge is held by all people involved in the production process, it can only streamline that process because of the mutual understanding existing between those involved.

- **Promote the concept of multi-media packages** - it is vital for the success of educational electronic media materials that they constitute resources within educational

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*As an example, however, non-broadcast media materials lend themselves more readily to such principles than materials designed for broadcast. This is because they can function more easily as educational resources which allow for interaction on behalf of the learner and which can centre around her or his specific needs (and can also be paused or rewound if necessary). Non-broadcast materials thus fit more readily into broader, learner-centred processes of education. These points make the principle concerning broadcast versus non-broadcast materials (see below) more relevant.

†The scriptwriting process, for example, would be greatly enhanced if it were to be governed by a strong knowledge of the both the educational and media parameters which will govern that script and if it is directed specifically towards the learners at which it is aimed. This requires knowledge of all of the various skills fields outlined in the previous section, including educational skills, multi-media skills, middle-management and technical media skills, and research and evaluation skills. Such knowledge can only streamline the production process.

programmes and packages rather than attempting to stand as self-contained instructional materials. This is linked to the concept that media materials should function as educational resources and not be viewed as an educational panacea. This concept needs to be fostered at the training level.

- **Encourage critical use of the media** - as Eric Louw has pointed out (see above), there needs to be an emphasis on developing critical media workers. This is as applicable to the field of electronic media in education as to any other field. It is vital that a critical awareness of the media being used and of the implications of using such media within society is developed at the training level.

- **Differentiate between broadcast and non-broadcast materials** - this is an important principle because it is vital that people involved in the production of educational electronic media materials understand that there is a great difference between the two types of materials and that each type is governed by very different parameters. This is also important because it is necessary to encourage the idea that broadcasting is not the only way of using the electronic media in education; encouraging this idea at the training level will hopefully restore some balance in this regard.

- **Encourage training at regional and local levels** - it is essential that the training initiatives which are geared towards production of the electronic media in education are not run on a centralized basis. This is because, as has been stated in the previous section, educational electronic media materials must be sensitive to the particular context for which they are designed (and to the fact that different regions often require educational materials in different languages). Thus, although an awareness of the broader educational context is required, training must also gear itself towards specific regional and local needs.

- **Build specifics of different educational fields and subjects into training** - as with the above principle, it is also important to inculcate a sense of the particular needs and parameters which will govern media production for various education fields and for subjects within those fields (such needs, along with those outlined in the principle above, can often most easily be catered for through non-broadcast materials, which can be aimed at very specific audiences).

- **Work towards modular and part-time training** - it is vital that training programmes be developed in modules. This will allow for a paradigm whereby people are all able to gain a core base of knowledge and a holistic understanding of the production process, but will then be able to choose areas of specialization. It is also vital that training should not simply be offered in full-time courses, but that there be part-time options for people already working who are interested in becoming involved in electronic media in education production. If a modular approach is adopted, then it will be possible for such people (particularly those involved in education) to receive training in only those modules necessary for them to engage effectively in electronic media in education production. Similarly, people already involved in electronic media in education production will be able to take different part-time modules to improve their holistic understanding of the educational process. It would not be necessary, or even preferable, for a single organization to build up the resources and skills

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necessary to run all of the modules required for this training. Instead, different modules could be run by various organizations who already have the necessary expertise and resources, with each module forming part of a larger accreditation system (a system which would include non-formal and formal training organizations).

- **Incorporate project-based learning and internships* into training** - it is important that training programmes consist of formal and theoretical input and of project-based learning. It would be absurd to assume that formal training alone could equip a person with the skills required for effective educational electronic media production. Project-based learning, which allows for a measure of trial-and-error, can be the most effective learning tool of all, particularly if it is informed by all of the above principles†.

- **Encourage ongoing training** - training for the production of the electronic media in education should not be seen as something offered at the beginning of a career. Rather, ongoing training programmes need to be provided to people involved in the field. Such training should aim to keep people abreast of educational and media developments and to maintain a holistic approach to educational electronic media production.

- **Redistribute the skills base through training** - although this principle is included fairly low down the list, it should nevertheless be seen as an absolutely vital principle underlying training for electronic media in education production. Training programmes need to focus on redistributing the skills base to those groups within society who have historically been denied access to the range of skills outlined in the previous section.

- **Train trainers** - it is quite obvious that training initiatives of the nature being proposed will succeed or fail on the skills and quality of the trainers running programmes. In addition, it is also vital to the long-term success of such initiatives that new trainers be trained to be able to deal with the growth in

- **Build on existing initiatives** - any attempt to fill training gaps within the electronic media in education must make use of the existing training infrastructure. This could be achieved through coordinating existing efforts and by adapting current programmes to allow for the needs of electronic media production aimed specifically at education. Thus, as has been suggested, various organizations could run various components of such training programmes, while others could contribute by providing project-based learning.

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* It is realized that several problems are attached to the notion of internships in relation to the electronic media in education. For example, commercial production houses are often not strongly involved in electronic media in education production or are not geared towards internship programmes, while non-profit ventures often lack the necessary funding to provide effective internship training. Nevertheless, opportunities do exist for project-based learning and it is vital that the capacity of such channels be increased.

† To take this model further, it could be possible for people to gain formal theoretical input through part-time modules offered by training organizations, while simultaneously gaining practical experience from project-based learning.

1. EME Forum, 1993, Summary of the Electronic Media in Education (EME) Conference Discussions and Resolutions. p. 3.

2. Young, M. "Distance Learning is More Than Just Turning on the TV" in the Educational Supplement to the Weekly Mail, March 1993, p. 11.

3. Botha, W. 1993, The Role of the Media in Education, Johannesburg, EduSource, p. 1.

4. Van Zyl, J. 1992, "Radio and TV Education" in McGregor's Education Alternatives, Cape Town, Juta & Co, p. 436.

5. For a full list of research materials consulted, see Bibliography. In addition, comments are also based on conversations with a wide variety of people around South Africa (see Acknowledgements).

6. Dilley, L. 1993, An Evaluation of Educational Media Initiatives in South Africa, Johannesburg, SACHED Trust and Argus Group, p. 2.

7. Botha, W. 1993, The Role of the Media in Education, Johannesburg, EduSource, p. 24.

8. Seligman, D. 1992, "The Challenge of New Technology" in Launching Conference of the South African Institute for Distance Education, Johannesburg, SAIDE, ch. 6, p. 8.

9. Naidoo, K. & Galombik, N. 1993, Key Issues Facing the Democratic Movement with Regard to Electronic Media in Education in the Period of Transition and Beyond, Discussion Paper presented to Electronic Media in Education Workshop, p. 7.

10. Botha, W. 1993, The Role of the Media in Education, Johannesburg, EduSource, p. 31.

11. Gultig, J. 1992, "Educating Teachers for a 'New' South Africa: What Role can Distance Education Play?" in Launching Conference of the South African Institute for Distance Education, Johannesburg, SAIDE.

12. FAWO, 1992, Information on Film-Media Education Context in S.A., Unsourced Document, p. 1.

13. Comments in this section are based on conversations with a wide variety of people involved in the related fields of the electronic media in education and on the findings contained in:
Butcher, N. 1993, SAIDE Directory of Organizations in the Related Fields of the Electronic Media and Education, Johannesburg, South African Institute for Distance Education.

14. FAWO, 1992, Information on Film-Media Education Context in S.A., Unsourced Document, p. 1.

15. Van Zijl, P. 1989, "Educational Technology as a Development Agent" in First Southern African Conference on Educational Technology: Papers Delivered During the Conference, Pretoria, Human Sciences Research Council, p. 217.

16. Foks, J. 1992, "Vocational Education and Open Learning in South Africa" in Launching Conference of the South African Institute for Distance Education, Johannesburg, SAIDE, ch. 14, p. 15.

17. Naidoo, K. & Galombik, N. 1993, Key Issues Facing the Democratic Movement with Regard to Electronic Media in Education in the Period of Transition and Beyond, Discussion Paper presented to Electronic Media in Education Workshop, p. 6.

18. Louw, E. 1991, "Media Education - A Contemporary Cultural Studies Perspective" in Media Matters in South Africa, Eds. Prinsloo, J. & Criticos, C. Durban, Media Resource Centre, p. 236.

APPENDIX A
RESEARCH PROCEDURE

In May of 1993 the training task group of the *Electronic Media in Education Forum* initiated a research project on current training initiatives in the field of the electronic media in education (a project which forms the basis of this document). When this research was started, it was envisaged that two types of training programmes would be identified:

- **Training programmes in the production of electronic media in education materials** - this refers to programmes which would equip people with the educational and media skills required for effective production of educational media materials.

- **Training programmes in the use of electronic media in education materials** - this refers to pre-service and in-service training programmes which would equip educators with the skills required for effective use of educational media materials in whatever educational contexts they might be working. In addition, it refers to training programmes which would equip learners with a critical understanding of such media materials so that they can also make effective use thereof.

It was, however, discovered before long that, due to the paucity of such programmes, this research would yield very little and would, therefore, be of minimal value. As a result, the scope of the research was significantly broadened in the following way. There are two fields in which skills, and therefore training, are required for effective production and use of the electronic media in education, namely education and the media. These two fields of training were, therefore taken as opposite poles of a spectrum, the middle point of which would constitute the ideal area of training for the electronic media in education. The aim of the research was to gain a comprehensive overview of training programmes which would fall somewhere between these two poles*. The rationale for re-constituting the research in this way was as follows:

- By identifying existing training programmes within this spectrum and through conversations with a wide variety of people, it would be possible to identify where the gaps existed in terms of the training programmes defined in the original brief.

- Analyses of the existing gaps in training programmes for the production and use of the electronic media in education would, therefore, be based on a strong awareness of what already exists in terms of training in South Africa. Consequently, attempts to fill those gaps would take cognisance of existing initiatives, thus attempting to work with such initiatives (using existing skills, structures, and resources) rather than creating new initiatives. It is hoped that this will prevent unnecessary duplication of efforts, hence streamlining ongoing processes.

- Because of the nature of the reports on each organization (with introductory information on each organization, more in-depth information on training programmes run in the related fields of the electronic media and education, and contact details), it was hoped that the research would play an additional role in facilitating broader networking processes between the various organizations themselves. This would take place through the sharing of the information with any interested parties.

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* Because this covers such a wide range of training programmes, it is not claimed that the research has identified every such training programme; it is believed, however, that the resulting directory gives a comprehensive impression of the range of training programmes currently available in the related fields of the electronic media and education.

The research procedure has involved visiting one hundred and sixteen organizations to gather information about the work in which they are involved and to discuss in more general terms, wherever possible, issues around the electronic media in education. To make the process as participatory as possible (given time constraints) and to ensure accuracy of information, each report drafted has been sent to the relevant organization for correction of factual errors and omissions. It should also be noted that the intention is for more organizations to be included in the directory in the future, as well as for information to be updated regularly. The SAIDE Directory of Organizations in the Related Fields of the Media and Education is currently available to anyone interested in purchasing a copy from the *South African Institute for Distance Education*.

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