# APPENDIXTEN A Situational Analysis of the Use of Educational Radio 

This appendix includes a full version of a report compiled for the SABC when conducting strategic planning for a schoolbased educational broadcasting service for South Africa. It has been included in this report as it gives a thorough and clear overview of educational radio in South Africa. Even though the research was focused on the launch of a schoolbased service we believe the findings have relevance to all planning processes related to the use of radio to support education.

This report looks at how radio has been used for educational purposes in South Africa in the past and how it is currently been used. It examines the orientation of SABC radio station managers towards educational broadcasting and looks at emerging possibilities for a schools service.

## METHODOLOGY

The findings made in this report were formulated on the basis of information collected from the following sources:

- Interviews conducted with the head of Educational Radio at the SABC, Fakir Hassen, and his Executive Producer, David Moloto, as well as managers at each of the SABC's ten radio stations which broadcast educational programming under the Learn ' $n$ Live banner (see appendix for interviews conducted).
- Interviews with Dr Sue Goldstein, Research and Development Manager for Soul City, and Gordon Naidoo, Director of Olset.
- Anina Maree et al, AMPS Diaries October - November 1997, Radio Research, SABC
- Radio broadcast schedules for 1998
- Fakir Hassen: "Educational Radio in South Africa: The Challenge of Eleven Languages". Paper prepared for the Africa Telecom 98 Forum, 10 May 1998, Johannesburg
- Documentation from Edutel, the educational broadcasting wing of the Bophuthatswana Broadcasting Service, established in 1984 and disbanded in 1996.
- Denzil D Russell: Learning to Listen, Listening to Learn: Experiences from a South African Radio Forums Research and Development Project, University of the Witwatersrand Centre for Continuing Education, August 1992
- A Arnott, J Mansfield and M Mentis: A summative Evaluation of OLSET's "English in Action" Radio Learning Programme, Johannesburg 1993
- A Gordon and C Julie: An Evaluation of Olset's Radio Learning Project: The Pre-pilot Primary Mathematics Programme, Johannesburg 1994
- Hope Madikane-Otto \& Associates, Research Report on Educator Programmes for Radio, SABC, January 1998
- Kim Barker et al, Draft Report on Evaluation of ECD Radio Programmes, prepared for the SABC by CASE, April 1998
- SABC Adult Education Study, prepared by Social Surveys, March 1997.
- Discussion with Jackie Phaka, station manager of Motsweding FM and formerly manager of Edutel from 1994-1996.


## THE DEVELOPMENT OF EDUCATIONAL RADIO IN SOUTH AFRICA

The long history of support which the SABC radio provided to apartheid education (and formal schooling in particular) bred deep resistance among African language radio stations to the inclusion of formal educational programming on their line-up. Their hostility was compounded by the tightly centralized way in which programming was de veloped, the lack of initiative and autonomy at station level, the absence - for many years - of black personnel in the schools radio service, and the low status accorded to radio in relation to television.

Over the years the African language radio stations produced their own informal educational programmes and today they still feel most comfortable in this field. However, the SABC's explicit commitment to education as an intrinsic component of its public mandate in 1995 prepared the ground for its education broadcasting activities to be restructured. The partnership forged with the Department of Education created a new environment in which a considerable amount of airtime is being devoted to educational programming on each of the ten African language radio stations.

The Edutel experience (1984-1996) provides an example of a holistic approach to educational broadcasting. Considerable investments were made in infrastructural development (ie. the installation of power sources and playback equipment in schools), in the provision of print support materials to teachers and learners, and in the creation of a media utilization network for schools. A schools radio service was one component of the venture and programmes were broadcast on Radio Mmabatho, the public broadcaster in the region. The service targeted audiences at different levels during school hours and a general audience in the evenings.

Although Edutel was an initiative of the Bophuthatswana Department of Education and funded by this department (and later by the Bop government in general), it seems that the broadcaster was solely responsible for all implementation - from production through transmission to training and infrastructural support. Furthermore, the tension between educational and broadcasting goals is reflected in the fact that the radio station presenters did not associate themselves with this service, possibly because they did not consider it to be 'good radio' since it was targeting a niche audience. Although the experience provides a very useful model, two crucial areas of information are missing: the nature and extent to which the service was used, and the extent to which it was 'owned' by a wider constituency of educators.

Over the last decade organizations such as Olset have attempted to find ways of using radio in formal education and this experience provides some useful lessons in regard to the opportunities and constraints in using radio in schools.

## FEATURES OF CURRENT EXPERIENCE IN THE NEW DISPENSATION

The analysis of the Learn ' $n$ Live initiative on radio suggests the following:

- The airtime which has been made available for educational programming on each station is considerable (an average of 241 minutes per week).
- There seems to have been an accommodation between the stations' need for flexibility in their scheduling, and the requirement that they incorporate a certain amount of educational programming into their schedules.
- Stations are extremely concerned that listeners will react negatively to educational programming and that they will switch off or switch over to other stations if the programmes are branded too obviously as being educational. The fear of losing listenership is particularly acute in the increasingly competitive environment in which stations are under great pressure to build audiences and to become self-sufficient. Nevertheless, at least one station manager recognized that falling audience figures may be related to the quality of the programming.
- Given the pressure to build audience share, the stations are struggling with the notion of broadcasting for niche audiences in the educational field: their tendency is to make programmes generally attractive rather than to segment the target audience for education and to cater for its needs in a more focussed way. From an educational point of view the difficulty is that if the goal of keeping the general listenership is prioritized over educational effectiveness, then some of the programme goals for educational radio may not be achieved.
- This dynamic is supported by the approach to promotion and marketing of the educational programmes. Although programmes are promoted on air, the promotional strategies tend to target the general listenership. It does not seem that the stations are presently able to invest the resources necessary to take specific educational programmes to niche audiences.
- Nevertheless, some of the station managers are clear that the challenge is to build audiences for educational programmes and are open to support in this regard: "How do you make these programmes so interesting that you can capture the audience?'
- There seem to be few models in the SABC of educational programmes which make for good radio. The programme formats generally take the form of talk-shows or interviews with the occasional recorded component.
- In order to accommodate past and present sensitivities about the SABC in Johannesburg dictating to the stations, scripts are developed centrally in the SABC and are then disseminated to the stations which are at liberty to adapt them as they wish. However, it would seem that in most cases programmes ae produced according to the format developed in Johannesburg. This is understandable, given the amount of airtime that needs to be filled, the low levels of educational programme production capacity at each station, and the low levels of resources available for these programmes, The 'local' component is introduced through the use of local studio guests. Nevertheless, this approach does not make for innovative and exciting programming.
- It is not clear where the responsibility for educational quality control resides in the radio division. For example, although the scripts for the curriculum support programmes are produced with the help of advisers, they seem to be purely informational and do not appear to contain any other educational goals.


## SUMMARY OF FINDINGS AND RECOMMENDATIONS

## Findings

The SABC's Education Radio Department has gone a long way towards developing a substantial body of educational programmes as part of the daily schedules of ten African language stations round the country.

Resistance to educational programming is reducing somewhat, although stations are extremely concerned about losing listenership during the flighting of these programmes. Their solution is to integrate the educational programmes more closely into the general schedule, but in so doing are stressing that programmes need to be entertaining and informative in general terms so as not to drive away audiences. At the same time, some station personnel are concerned about whether the programmes are being effective in educational terms and are keen to find ways of improving the quality of their output.

Some niche programming is being broadcast, such as the programmes for early childhood development and for educators, but here the eva luations point to the need to define the audiences more closely, to segment them rather than treating them as homogeneous, so as to better cater for their needs.

The ECD programming is the only case of programmes being broadcast directly into the learning environment, but more promotion and marketing is required in order for caregivers to start using the programmes in their centres. In general, marketing to the specific target groups would be an important area for development.

The present developments suggest that the educational programming is increasingly being conceptualised as 'informal programming' - an approach with which the radio stations have always been most comfortable, but which downplays educational effectiveness in favour of edutainment.

The response of the radio stations to the possibility of introducing a schools service is very cautious and is coloured by their previous experience of Schools Radio under the old dispensation. Although some see opportunities in a venture of this kind, most are concerned about losing listeners, about whether schools will in fact have radios in order to receive the broadcast, about possible conflicts with their existing language policy and about the venture being prescriptive and enfringing on their autonomy. They argue that for the service to work well close consultation with the stations will be necessary, the quality and relevance of programming will need to be improved, ongoing research will be required, radios need to be in place, and vastly more resources need to be made available for production and implementation. They also identify teacher training as being a critical component of the proposed initiative.

## RECOMMENDATIONS

1 The Edutel experience provides an important model for how a schools service could be conceptualised. It was run in conditions which are very similar to the conditions in which schools find themselves today, except that in the changing policy environment the demands of Curriculum 2005 mean that there are more opportunities for the use of media in education than was the case during Edutel's lifespan.

2 The attempts made by organizations such as Olset to use radio and audio in formal education need to be more closely examined in order to learn more about what works (for the radio stations and for the educationists) and why.

3 It is important to demonstrate, both to radio stations and to educationists, what is possible in schools broadcasting and how radio can be used best in formal education. Current experience is extremely limited in this regard.

4 More research is required to gain a more specific understanding of the nature of the audience for a schools service and for the specific needs of target audiences.

5 Programme quality needs to be improved. This will require a better understanding of what works on radio in educational terms, and will also require capacity building and resource allocation. An important issue in this regard will be how to deal with the issue of where to locate programme production (some may need to be centralized while some could be decentralized), and how this will relate to the radio station language policies currently in place.

6 Close engagement with radio people, educational practitioners and policy-makers will be necessary to work out how to manage programming and publicity in ways which work for radio and for education.

7 Considerable thought needs to be given to the options of live broadcasting into schools, broadcasting for recording and an audio cassette distribution service. The options are not mutua lly exclusive and may complement each other.

8 The development and distribution of support material is likely to be one of the key components of a schools service, and media utilization training will be one of the greatest challenges in this regard.

9 A strategy for the effective distribution of radios will be essential if stations are to be convinced that the programming will be received.

10 A successful schools service will depend in part on changing the criteria against which a radio station's performance is judged. At present the size of the listenership is everything and this will militate against any initiative which requires stations to make available airtime for schools programming. The only alternative is look at the possibility of putting the schools service on to a separate radio station, but Olset's experience is that this makes it very difficult for the audience to access.

The research report concludes with some suggestions on how a service for schools, using radio, could be conceptualised.

## A SITUATIONAL ANALYSIS ON THE USE OF EDUCATIONAL RADIO

## Introduction: South AFrica's Experience of Radio andschooling

The past 34 years in South Africa have seen radio being used in a number of different ways in relation to schooling:

- The longest experience lies with the SABC where, until 1995, the use of radio for schools was closely tied to the apartheid agenda. Since 1995 the SABC's use of radio as a support for schools has been restructured in order to support the new educational dispensation within the context of South Africa's democratic order.
- A different, but very intensive, schools radio service was launched in 1984 by the Bophuthatswana Broadcasting Corporation as one component of the output of Edutel, the corporation's education broadcasting wing. Edutel sought explicitly to support the access of black schools to high quality educational materials - audio, video and print - and devoted a considerable section of its programme to setting up the reception infrastructure in schools and the support systems necessary for the use of its programmes.
- A third experience was initiated by the Open Learning Systems Education Trust (Olset) - an NGO which developed radio learning programmes in English and mathematics and which supported these with printed materials and training for teachers.


## The SABC Experience

The use of radio as a support for education in South Africa has come a long way since 1960. In that year, a single radio station was introduced to cater for the information, entertainment and educational needs of the black majority and it was on air for an hour per day, alternating between isiZulu, isiXhosa and Sesotho. ${ }^{1}$ From 1962 onwards, radio stations were phased in for each of the African languages with the last two, Radio Swazi (now Ligwalagwala FM) and Radio Ndebele (now Ikwekwezi FM) going on air for the first time in 1982 and 1983 respectively.

The system was intended to support apartheid's grand plan whereby the black South African majority was to be divided into ethnic groups, each being allocated its 'homeland'. Fakir Hassen, Head of Educational Radio at the SABC, argues that "the irony of this situation was

[^0]that while the government of the day had planned... to divide and rule and promote ethnic divisions even further, the (radio) stations played a major role in unifying communities and in becoming the catalyst for cultural revival and survival, through assuming the role of custodians of the language, music, folklore and culture.,"

Thirty-four years ago, in 1964, a Schools Radio Service was established on the African language services. It provided support material in a range of subjects, primarily language and literature, and was clearly intended to use radio to support the aims and ideology of apartheid education. Fakir Hassen's paper describes the political dynamics as follows:

Although the presenters were largely African, all the programmes were planned and produced by white staff and educational advisors.

Initially received quite enthusiastically over the years, the programmes began increasingly reflecting State ideologies about education, such as that the Black communities should not be taught Science or Mathematics, an idea espoused by the founder of Apartheid, Hendrik Verwoerd.

This resulted in a shift of audience loyalties, and the start of a culture of resistance to educational radio programmes from both within and outside the SABC. Internally, station staff reluctantly participated in these programmes at the risk of losing their jobs. Externally, listeners and more progressive educationists realized that the programmes were an attempt to indoctrinate and support the policies of separate and supposedly equal, but in reality very unequal, education. ${ }^{3}$

School Radio, funded by the Department of Education and Training, continued well after 1976 when the enforced use of Afrikaans in the education system sparked the Soweto uprising. In 1984 the DET claimed to have distributed 4500 texts and 6000 audio cassettes to schools - this at a time when popular resistance to apartheid was building to new heights in all black communities. According to Fakir Hassen, a range of discussions were held around expanding the use of radio to support formal education, especially in relation to higher education (using distance education). The possibility of introducing non-formal educational radio programmes to provide life skills support for adults was also explored. However, none of these were introduced.

At the same time, the African language radio stations introduced their own informal education programmes. These covered issues such as literacy as well as economic, hygiene and manpower issues ${ }^{4}$. This did not represent support for schools per se since these programmes aimed to provide public education to the listenership in general. Nevertheless the initiatives indicated that the stations were aware of the importance of education to their listeners and were keen to do something about it. They also represented a significant move on the part of the stations to produce educative programming on an autonomous basis, independent of the corporation's apartheid-skewed education agenda.

[^1]However, the stations were not left with much room to develop their own educational programming, especially in so far as schools were concerned: in 1984 the SABC Television Division started an educational unit and, according to Hassen, the small radio team which looked after school radio was absorbed into this unit: 'This further increased resistance from radio stations, especially since the priority for the producers at the unit was television rather than radio, and production was now centralized even further away from the radio stations, which had in any event rarely been consulted in the making of these programmes. Hassen continues: "To the credit of the television unit and the more progressive producers in the unit, it began looking at more educational programmes on radio rather than just school radio. In the years that followed, programmes on agriculture, health and related issues were introduced. Production, though, remained centralized and input from station management and staff was still very restricted." ${ }^{5}$

One other initiative which came to light during this research is that which was launched by the SABC in conjunction with Star Schools around examination time. It would seem that the primary purpose of this venture was to provide revision material for schools and for individuals. Broadcast schedules were printed in The Star and reprinted in City Press.

While these developments may have generated new approaches to the use of radio for educational purposes, capacity still remained extremely limited. "Staff remained exclusively white and the first black producer was only appointed in 1994 when the future of the entire television unit was under review. At that stage there were 29 staff in the unit, of whom only two worked exclusively on radio projects. Of the 148 external people who were used by the unit in various freelance capacities on a regular basis, only twenty were involved in radio production: this for educational programmes across... eleven radio services."

In the early 1990s, broadcasting was the first aspect of apartheid's elaborate infrastructure to be transformed in relation to the country's new democratic, non-racial and unitary dispensation. This is perhaps not sur prising given the critical role which broadcasting plays in any society and particularly in societies in transition. The Independent Broadcasting Authority (IBA) was established to provide the means whereby a diversity of interests could gain access to the airwaves and this in turn generated a wealth of initiatives which, together, held the potential to spawn a broadcasting renaissance in South Africa.

The public broadcaster's mandate to inform, educate and entertain seemed to offer unique opportunities $\mathfrak{b}$ serve the needs and interests of a wide range of audiences previously marginalized under apartheid. It also raised, for the first time, the potential for new types of educational programming to be produced and aired, and for partnerships to be struck between public, private and non-governmental organizations in the delivery of these ventures.

The IBA's triple enquiry into the protection and viability of public broadcasting, local content and cross-media ownership during 1994 and 1995 provided the opportunity for educationists to express new ideas about the role of broadcasting in education. These included the need to revitalise the learning and teaching context, support life-long learning, develop critical thinking and problem-solving skills and support the growth of a multi-lingual environment.

[^2]The Electronic Media in Education Forum (an advocacy group which drew together a diverse range of organizations with an interest in education) played the key role during this period in developing policy proposals for educational broadcasting in the public interest. On the basis of initial representations to the IBA, it conducted consultations in all the provinces. This process subsequently culminated in the formulation of a national framework for the transformation of educational broadcasting by a Task Team comprising the SABC, the Electronic Media in Education Forum, the Department of Education and Edutel, the education wing of the Bophuthatswana Broadcasting Corporation.

The report of the Task Team provided the SABC Board with the basis for a new formulation of its role in education. In 1996 consultations between the SABC and the Department of Education culminated in the release of an Education Broadcasting Plan in terms of which the SABC would provide airtime on radio and television while the Department of Education would provide funds for the production of programmes. The vision outlined in this document for educational broadcasting was to:

- change perceptions of what education and training is all about and motivate the public to participate in ongoing learning
- offer high quality resources which can support educators, trainers, teachers and learners
- distribute educational materials cheaply to users around the country at times that are convenient
- provide feedback and encouragement as open learning programmes get underway. ${ }^{6}$

Significantly, the Plan stresses that broadcasting can play but a limited role in education: 'Education and the development of South Africa's people is the ultimate responsibility of government (which in turn looks to parents, educators and learners to play their part). The responsibility of the public broadcasting system is to support government in this task." ${ }^{7}$

In order to implement this vision and the Plan's specific aims and objectives, a new Education Department was established in the SABC at the end of 1995 with separate operational units for radio and television. Against the background of the SABC's previous experience of educational radio, the Radio Unit established the following premises for its operation:

- counter the culture of resistance to educational programmes
- decentralize programme production to station level
- involve station management and staff at all stages
- reflect the local culture and idiom of each language
- develop innovative and entertaining programme formats
- recruit and train a core of educational radio producers.

The experience of schools-related radio since then is further analysed below.

## The Edutel Experience

In 1984 Bop Broadcasting launched Edutel as a 'national service' on television and radio

[^3]which targeted schools in Bophuthatswana specifically. The service aimed to support the educational needs of the region and targeted schools, in the main. Other target groups included the general public, adult learners involved in literacy programmes and students in higher education.

The aims of the schools service included enhancing the quality of education in schools; installing, maintaining and servicing playback equipment in schools; promoting, through educational quizzes, effective study and revision opportunities for examinations; and supplying pre-recorded audio and video cassettes to schools. Outreach to schools in rural areas was regarded as one of the primary objectives. The service was relaunched in 1991 when the broadcaster became a corporation, and in that year Edutel made renewed attempts to increase its outreach, use and effectiveness. The service ran until March 1996 when it was disbanded within the context of the restructuring of public broadcasting in South Africa.

Edutel was essentially the brainchild of the Bophuthatswana Education Department which financed its operation. With the establishment of Bop Broadcasting Corporation in 1991, the service came to be funded by the Bophuthatswana Government in general. By 1994 the annual budget was running at some R2 million. In regard to the funding, this relationship is similar to that which was established between the SABC and the Department of Education in 1996.

Further evidence of the close relationship between the service and the Education Department lay in the fact that the first manager of Edutel was an inspector seconded by the Department to run the service. According to Jackie Phaka, manager of Edutel in its last two years and currently station manager of Motsweding FM, Edutel always briefed the Department about its plans for conducting workshops with teachers, principals and inspectors, and would never go into schools without informing the Department.

To all intents and purposes, Edutel launched a holistic education support service for the schools. This included

- the production and acquisition of television and radio programmes;
- broadcasting programmes on the public broadcasting service;
- the distribution of detailed programme schedules to schools;
- producing and distributing support material for specific levels of tuition (both teacher guides and student workbooks);
- placing utilization officers in the field with a view to providing guidance to teachers on how to use the programmes and gathering feedback on programme usage; media utilization officers also evaluated programmes so as to advise on their relevance for specific levels of study;
- installing and maintaining playback equipment in schools, especially television sets; where schools had no access to electricity, solar panels were installed as a power source;
- the establishment of a video and audio tape loan scheme for teachers;
- a facility whereby teachers could request the recording of copies of specific programmes which they had heard or viewed; teachers were asked to supply blank tapes for this purpose.

Edutel's service included both radio and television. Electricity was mostly available to the

246 middle and 78 high schools in the region and for this reason educational television programmes were aimed at these schools as a priority. The service looked to radio to support the 812 primary schools which were less well-resourced, but put radio programmes on air for both high school as well as the primary levels. The programmes were broadcast on Radio Mmabatho four mornings a week. An evening programme (mainly in phone-in format) was designed to reach adults with general educative material.

Edutel put in place structures (such as a Television Education Committee and subjectspecific committees) to facilitate consultation on programming, programme content and level, frequency of broadcasts and the function of the programmes within the education process. The structures involved representatives from a range of organizations, institutions and government departments (such as the Departments of Manpower and Training, Agriculture, and Health and Social Welfare). From discussions with Jackie Phaka it would seem, however, that the Department of Education was the key partner in the initiative. In addition to these consultative structures, it also appears that there was a continuous process through which the service tried to get input and feedback from school principals and teachers.

Regrettably, no evaluation of the Edutel experience is available and there is little in the way of statistics on usage and outreach. What is apparent from the available information is that the educational imperatives were very strong in this initiative. For example, producers were not only responsible for programmes, but were also charged with commissioning the development of print materials which would accompany the delivery of the programmes when they were broadcast. Five utilization officers were employed to support schools in 17 circuits throughout the region and besides making recorded information available ${ }^{8}$, they were also responsible for training teachers and principals in how to use the service within the teaching and learning process.

The availability of radios in schools would have been a major factor in determining the extent to which the service was used and, according to Jackie Phaka, schools were responsible for acquiring radios at their own expense. She says that most schools in the region did acquire radios in this way. However, she strongly believes that the availability of workbook materials was the next most important factor in encouraging teachers to use the radio programmes. Making the printed materials available stimulated teachers' interest and motivated them to access the programmes - either live, or by recording them, or by requesting recordings.

Since the Edutel experience was in essence a service for schools, it may be helpful to look in more detail at how the service functioned. A very brief survey of the available documentation provides the following information about the radio service:

## Programming

Edutel produced its own radio programmes ${ }^{9}$ for a range of levels: the lower grades (eg. Grade 1 and Grade 2) as well as for standards 3 and 4, 7 and 9 and 10.

[^4]The programming ranged from support material for language development (eg. in English, Setswana and Afrikaans), literature (eg. English setworks such as Shakespearian plays as well as setworks in Afrikaans and Setswana), programmes on authors who had written the setworks, environmental education programmes (including general science topics) for senior primary level learners, as well as consumer awareness and career guidance programmes. Towards the end of the year the schedules include a number of revision programmes as preparation for examinations. One of the most popular features of the service was a revision quiz which ran on air twice a week for at least ten years.

## Support materials

The printed materials were published for Edutel by a Johannesburg-based publishing house, Via Afrika. Both teachers guides and learner materials were disseminated to schools. ${ }^{10}$

The printed support materials available to this research study were printed in A4 or A5 format, all in black and white. Some - especially those intended for senior level learners were circulated as punched sheets which students and teachers were clearly meant to file. In the case of the lower primary school levels, the radio support materials were published in A4 or A5 booklets - a workbook for the learners and a separate manual or guide for the teacher.

The covers of the printed materials were clearly marked as being associated with the schools radio service: For example "Time with Std 1s (Eight year olds) Teachers' Guide: Edutel Schools Radio Broadcasts 1994". This located the support material in terms of the target audience, made its association with Edutel clear and helped to market the supportive relationship which the radio service was seeking to establish with formal schooling.

No information is available to this study about exactly how many copies were distributed to schools and with what results. It would seem that the Edutel utilization officers played a major role in this regard.

As far as the video and audio tape service is concerned, one graph shows that in 1994 between 100 and 290 videos were requested per quarter in five school districts. Assuming that these were requested by middle -level and/or high schools (of which there were just over 300 in the region), this information suggests that in some districts there was indeed some usage of the facility. However, no information is available about what requests were made, how frequently, by whom, and how the materials were used.

## Scheduling and airtime

The schedules examined during this study were dated 1994. They show that radio programmes targeting schools were transmitted on Radio Mmabatho, the public broadcaster, between 09 h 00 and 10 h 35 , four days a week (Mondays to Thursdays) Four programmes, each of 20 minutes, were transmitted with a five minute break in between each of the programmes. After 10 h 35 there was no further transmission of the educational programmes until the evening slot when a general educative programme (a phone-in) was transmitted

[^5]between 20 h 00 and 21 h 00 .
Despite the considerable amount of airtime set aside for these transmissions, Jac kie Phaka says that Radio Mmabatho's presenters never attempted to integrate the educational programmes into their programme slots. "They never introduced the educational programmes, or acknowledged that they had taken place, or continued interesting discussions where these could have spilled over into the DJ's slot," she said. It would thus appear that the radio station personnel felt that the educational programmes were using the station as a delivery mechanism only, and did not see their role as adding value to the goals which Edutel had set itself. Today some of the SABC radio stations face the same constraints and are actively trying to change this situation (see below).

A programme schedule was developed for the whole year in 1994, and was published in the form of a booklet showing exactly what programmes would be flighted for which target group and on what topic. Making the schedule available for the whole year in this form would have made it easier for teachers to select the programmes they felt they could use. Where support material was available, this advance information would have made it possible for the teachers to plan how to use the programme in their lesson, if they wanted to use it live. Alternatively they could record the programme for use at another time, or could arrange for it to be recorded - at home, or at school - or could purchase it from Edutel. In the absence of hard information about usage, it is impossible to say whether the strategies were successful in encouraging teachers to access the programming on a regular basis.

According to the available documentation, Edutel's schools radio service broadcast 170 hours and 20 minutes of educational programming for schools during. This correlates with the detailed programme schedule develo ped for that year.

## Marketing

The lack of hard information on the usage of Edutels schools radio service has already been mentioned. However, the documentation suggests that the lack of marketing was a core weakness in the operation. In many cases teachers did not know about the service. It is not clear to what extent the production of the detailed programme schedule illustrated in Appendix 2D (of the original report) was a response to this need, and whether it made any difference to the knowledge of the service and what it aimed to achieve.

In general, then, the Edutel example is a useful one as an indigenous case study of a schools radio service which attempted to provide a holistic approach to educational broadcasting. The support materials and the utilization support network provide models from which lessons can be learnt and a more detailed investigation may reveal further insights about the nature and extent of usage of the service by teachers and how problems could be avoided in a different context. The absence of sufficient marketing seems to have been one of the central weaknesses in the programme.

In addition, the following points seem to emerge from this analysis:

- Although Edutel was in a partnership with the Bophuthatswana Department of Education, the broadcaster seemed to be responsible for all implementation - from programme and materials production to transmission, user training, utilization support,
etc. The Department's main role seems to have been to ensure that the service supported its educational priorities and to fund the service.
- The emphasis in Edutel was largely on support for formal education, with some informal educative programming.
- The Radio Mmabatho presenters do not seem to have associated themselves with this educational project; rather it seems that the educational programming was not considered to be 'good radio', possibly because of its niche audience.
- There seems to have been considerable stress on consultation with the authorities and the audience towards whom the programmes were being directed. It is not clear whether, through this process, Edutel succeeded in broadening the 'ownership' of the initiative.
- The absence of hard information on usage makes it difficult to assess the extent to which the schools radio service was accessed by teachers. There is no information about whether or not the service made a difference to the quality of education taking place in the schools which might have used Edutel's programmes.


## The NGO Experience

Olset is one of the few South African NGOs which has developed radio programmes designed for transmission directly into the classroom environment and which are intended to be used as part of the formal school curriculum. Programmes have been developed to teach English language and communication skills and mathematics. The material targets learners in the foundation and intermediate schooling phase. The programmes are generally 25 minutes in length. They are accompanied by print support, both for teachers and learners, and by teacher training on how the programmes are to be used.

## Evaluation findings

Evaluations of the English language programmes and pre-pilot mathematics programmes were carried out in 1993 and 1994 and hold important lessons for the design of content for a schools radio service. It is significant that out of all the programme evaluations examined for this research, the Olset evaluation of its English in Action programmes was the only one able to comment on the impact made on the learners knowledge and understanding of the content. Although its mathematics evaluation sought to made similar findings, this was not possible owing to a range of factors outlined in the evaluation.

Key insights emerging from the evaluations include the following which are relevant for this situation analysis:

- Grade 1 learners exposed to the English in Action radio lessons (evaluated on cassette) performed on average 20\% better on a test of English receptive vocabulary than did a comparative group of learners.
- Learners in farm schools exposed to the programmes improved the most relative to urban and rural schools: Project farm schools improved by $21 \%$, urban schools by $17 \%$ and rural schools by $14 \%$.
- The use of English in the mathematics programmes limited their usage for pupils whose mother tongue was not English.
- The content of the programmes must be carefully orchestrated with the curriculum. In particular, cognisance must be taken of local, district and school resources to ensure a match between programme needs and the school/community context.
- Teachers' participation is needed to assess programmes after scripts are written and before production is carried out so as to tease out the problems experienced by teachers. This will prevent teachers and pupils from becoming alienated from the programmes/audio tapes.
- Few teachers recommended broadcasting the programmes. All preferred putting programmes on to audio cassette and distributing these together with other, printed, resources so that they could integrate them into their classrooms.
- Drama can provide a way of enhancing pupils' ability to link mathematics learnt at school with their everyday experiences and with other disciplines through crosscurricular activities.

The mathematics evaluation concluded that "audio cassettes and radio can be powerful tools in upgrading classrooms, providing teachers consider that they 'own' these tools. This ownership extends to all aspects of the process - production, dissemination and formative evaluations."

The evaluation also recommended that the use of radio and audio cassettes could be extended beyond the revision of taught concepts and that the two media could be used in teacher development, increasing mathematical knowledge in the public domain and providing forums in which teachers, pupils and parents could discuss topics such as curriculum innovation, innovative school projects and the role of resources in teaching and learning.

## Broadcasting experience

In 1995 Olset started broadcasting its programmes to schools via the SABC's Radio 2000. This station is not familiar to most of the target audience and many focus groups complained that they were unable to locate the station on the dial. Nevertheless, according to Olset Director Gordon Naidoo, some 35000 learners did use the facility during that year. Another drawback was that Olset had to pay for the airtime used, and ultimately this was unacceptable to the organization's funders. In 1996 Olset negotiated transmission time ( 30 minute slots) with three African language radio stations: Motsweding FM, Ukhozi FM and Umhlobo Wenene FM. This arrangement continued into 1997, but was not evaluated. Olset is currently negotiating arrangements for 1998 with Ukhozi FM and Umhlobo Wenene FM, but these are still to be concluded.

The interviews conducted with the station managers as part of this research indicate that most are familiar with Olset's programming, but that in some cases they are not in favour of making available the time required by Olset for transmission of its programmes ( 30 minutes per day). Their reasons include the following ${ }^{11}$ :

## Thirty minutes is too long

[^6]Little is happening on air - it is not easy to tie what is on air with what is happening in the classroom so we are not keen on repeating the experience.

Olset wasn't going down very well because it was going to kids.
Our people didn't like the Olset material: there were problems with presentation, with the music, and the conceptualisation was not good. We had terrible AMPS figures after those broadcasts.

These remarks suggest that the stations concerned do not feel that the programmes are working on air - they seem to feel that in their present form they do not make 'good radio'. Although the comments relate to the English language programmes, the evaluation of Olset's mathematics pre-pilot programmes did show that even from an educational point of view there was room for improvement: "a number of teachers commented that the drama and explanations were too long and DEC (Department of Education and Culture) teachers maintained that the pace of the programmes was too slow, even for the weaker pupils. Depending on the ability of the pupil, the time left for pupils to calculate the algorithms was too long and pupils got bored waiting for the narrator to speak." ${ }^{12}$

One station mentioned that the Olset material had been adapted and translated into mother tongue, which would seem to defeat the purpose since it is designed to teach English skills. If correct, this response would fit with the station's preoccupation with keeping its programming linguistically pure.

Another station mentioned that since the material is primarily targeting schools, Olset's target audience is far smaller than the outreach of the radio station. This would seem to be a major factor in the current negotiations and Olset is being asked to demonstrate that the organization has increased its outreach and that it has trained teachers in many more regions than was previously the case. Gordon Naidoo says that Olset now has some 200000 learners involved in its programme, but the requirement that training and materials distribution should approximate the station's reach suggests that some of the stations are struggling with the notion of using radio to reach into formal education.

The responses from the stations suggests that there needs to be a debate about what constitutes 'good radio'. The comments about presentation, choice of music and conceptualisation suggest that programmes for use in formal education need careful development, preferably with increased participation of the teachers and learners who are to use them. The debate may in fact be one about what, in general, makes for high quality educational programming. Programmes of sufficiently good quality may make for good radio, even though they are intended for use in formal educational environments, and could attract wide-ranging listenerships. ${ }^{13}$ This was acknowledge by at least one station manager

[^7]interviewed during the course of this research.
The bottom line is that Olset's efforts to reach classrooms via radio are being hampered in some cases by the perception that the programmes are not suitable for broadcast because they are too niche-oriented and because their format does not fit with the perceptions of some station personnel about what makes for good radio. At the same time the re may be a need to improve the quality of the programmes if they are to be used on radio. The organization needs to be commended, however, for persevering with its efforts to use audio in education, and for concentrating on the provision of a holistic learning environment (through print support and training) which can make a difference, not merely to usage of broadcast material, but also to learning.

## Current Nature and Extent of Programming Developed for Schools-Related Audiences

## Programme Content

The SABC's educational radio service currently flights programmes in eight different categories: early childhood development, curriculum support, youth and vocational guidance, adult basic education and training, culture of learning and teaching, health and environment, educator development, and science and technology. Of these, six have considerable relevance to the process of learning and teaching in schools:

- Early childhood development. The programmes which target children in the reception year are relevant to a schools audience.
- Curriculum support. These are programmes which cover a range of different topics in the eight learning areas as defined within Curriculum 2005: science and technology, human and social science, art and culture, life orientation, literacy and language, economics and management sciences, natural sciences, and communication. The curriculum support programmes which have been developed in 1998 are listed in Appendix 3 of this original report.
- Youth and vocational guidance. This category refers to programmes which cover topics such as study methods and study time management as well as programmes which assist young people in thinking about their career options.
- Educator development. These programmes target school managers and teachers in regard to issues about professional development, but also seek to draw parents into discussion about the policy changes with regard to school governance and community participation in education.
- Science and technology. This series targets adult listeners but, in the hands of a skilful teacher, would undoubtedly have relevance to the work done at higher primary and secondary schools.
- Culture of learning and teaching. Although this series is aimed at a general audience, it is clearly relevant to what happens inside schools and could be an important stimulus for

[^8]discussion about a range of important issues.
The range of programmes which would be relevant to the learning and teaching which takes place in schools is thus extremely wide and provides ample room for innovation and development.

The two evaluations examined during this research suggest, however, that there is room for improvement in regard to the selection and treatment of programme content in the programmes for young children and for educators.

## Feedback on Programme Content

The evaluation of the early childhood development programmes ${ }^{14}$ recommends that

- programmes should be organized around themes which are similar to those used in childcare centres so as to facilitate their integration into the activities of the centres;
- content should be devised so as to ensure that both rural and urban listeners will find something relevant in each programme;
- sound identification tasks should be integrated into the programme content, or else an entire programme should be devoted to this task on a regular basis; more sound effects should be used in stories.

The evaluation found that there is a popular children's radio programme, Eyentsatshana, broadcast on Umhlobo Wenene FM on Saturday mornings. This is not part of the educational radio line-up but, according to the evaluation report, the programme has a strong following amongst parents, ECD practitioners and children and is widely discussed in all these circles. The presenter (Mrs Vusa/Mama ka MaAsi) visits a pre-school facility and the school itself prepares a programme for broadcast, including songs, rhymes and stories. This suggests that one of the features of the programme which makes it attractive to the audience (see discussion under scheduling below) is that the programme contains material which is both relevant and familiar to the listeners.
'Several of the ECD practitioners discuss the previous Saturday's programme with their learners every Monday morning and find that they are usually able to recall various aspects of each programme." This is a response for which the educational ECD programmes are probably striving. In the case of Eyentsatshana, it would seem that the quality of the presenter and the content of the programme are the ingredients which are getting listeners to tune in - on a Saturday morning - and to use the programme in their work.

Another recommendation made in the ECD evaluation concerns the briefs which guide programme-making. "In developing briefs, intended outcomes of the programmes should be specific and focused rather than broad and generic. It may be useful to specify intended outcomes in various domains such as social, cognitive and affective outcomes. Effectiveness is much easier to assess against clearly specified criteria."

The educator development programme evaluation ${ }^{15}$ suggested that teachers should help to

[^9]select the topics for inclusion in the programme to ensure that they are appropriate to the needs and interests of the target audience. Other suggestions include:

- the prese ntation should be more challenging and controversial;
- presenters should talk to teachers and get to grips with important issues;
- profile more schools in order to show the success stories and the difficulties;
- profile 'best practice' in teaching and learning.


## Extent of Airtime Accorded to Educational Programming and Approach to Scheduling

In 1998 the SABC published a schedule showing at what times the educational programmes are broadcast on each station. The schedule does not provide any programme details, but allocates each of the eight categories of educational programming to a regular slot in the week. An analysis of the schedule reveals the following features:
$>$ The participating radio stations are the ten indigenous language public broadcasting stations run by the SABC: Ikwekwezi FM, Lesedi FM, Ligwalagwala FM, Motsweding FM, Munghana Lonene FM, Phalaphala FM, Radio Sonder Grense, Thobela FM, Ukhozi FM and Umhlobo Wenene FM.
$>$ The educational programmes are generally broadcast from Monday to Friday each week. In eight out of ten cases the stations also put an educational slot on air on a Saturday or Sunday.
> The educational programmes are integrated into the general programme schedules and are thus easily accessible to people who are regular listeners to the station.
$>$ Using guidelines from the SABC's radio education department, the stations each decide how much time to allocate to the different educational programming categories and when they are to be broadcast. Although most of the programme slots are allocated roughly equal time on the different schedules, this does vary to some extent, as do the days on which the programme slots are broadcast. So, for example, Umhlobo Wenene FM devotes 30 minutes to programmes on educator development on Thursdays from 21 h 30 to 22h00; Phalaphala FM gives this slot 55 minutes on Wednesdays from 19h05-20h00; Thobela FM puts it on air for 55 minutes on Saturdays from 07 h 05 to 08 h 00 . At present very little research is available to establish which slots best meet the needs of the target audience.
$>$ The stations devote approximately 230 minutes per week to the educational slots containing programmes which, in one way or another, are relevant to schools. As is shown in the table below, Phalaphala FM has the highest amount of airtime at 310 minutes per week followed by Radio Sonder Grense with 260 and Thobela FM with 255 minutes respectively.

[^10]| Radio station | Minutes of schools-related <br> Programming <br> week |
| :--- | :---: |
| Ikweadcast per |  |
| Lesedi FM | 225 |
| Ligwalagwala FM | 220 |
| Motsweding FM | 230 |
| Munghana Lonene FM | 230 |
| Phalaphala FM | 230 |
| Radio Sonder Grense | 310 |
| Thobela FM | 260 |
| Ukhozi FM <br> Umhlobo Wenene | 255 |
| TOTAL <br> Divided by 52 minutes | 225 |

$>$ Programmes for early childhood development (ten minutes per day) and curriculum support ( 15 minutes per day) are broadcast on consecutive days and this holds considerable potential for building an audience on a regular basis. However, no information was available to establish how the continuity is used to build an audience for this slot. The other categories of schools-related programmes are put on air only once a week.
> The timeslot for the ECD programming is in the morning when young children are likely to be at creche, school or in the care of a caregiver. The scheduling works on the basis that the programmes are to be used by caregivers within the childcare context.

- The timeslot for the curriculum-related programming, however, is mostly in the afternoon after school is out. This works on the assumption that the target audience will be using the programme after school hours, and not in school. Radio Sonder Grense broadcasts the curriculum support material in the evenings from 20 h 15 to 20h30.

In general, an analysis of the schedule suggests the following:
$>$ the ten radio stations devote considerable amounts of time to educational programmes which are relevant to schools in one way or another;
$>$ the ECD and curriculum-support programmes are broadcast on consecutive days; this continuity could be used to build a schools -related audience;
$>$ the ECD programmes are broadcast at a time which suggests that they are intended for use in a structured learning context; this is the only example of this type of scheduling;
$>$ there seems to have been an accommodation between the stations' need for flexibility in their scheduling, and the requirement that they incorporate a certain amount of educational programming into their schedules.

## The struggle to build listenership

Although the educational slots are integrated into the station schedules at different times of the day, the station managers are worried about losing listeners when the educational programmes come on air. They feel this is a real danger when the educational programmes are put on air in blocks of time viz. 15 minutes at a time. Presenters, many of whom have developed a following among the listenership, are in charge of programming over something like a three hour period. When the education programmes came on air there is a change of music, a change of voice, and the presenter is no longer involved; when the educational programme finishes, the presenter comes back on air and does not necessarily refer to what has just been broadcast. ${ }^{16}$ This signals that although the education programmes are integrated into the general schedule, they are not 'owned' by the presenters. The stations feel that this could be a factor leading to a loss of listenership for the duration of the educational programme. What the station managers fear most is that once listeners switch off on account of an education programme which does not interest them, they may switch over to another station and may not return.

Motsweding FM put it this way: "If we really promote something very interesting after the educational programme then we won't lose listeners. At the same time commercial stations will use this time to their advantage, unless the IBA does something about their obligation in which case the competition won't be so fierce."

The education radio department is now revising its approach to the educational programmes: instead of preparing a 15 minute block of curriculum support programmes, for example, the block is now being developed as a series of shorter (5-7 minute) inserts which are to be interspersed within a 30 or 60 minute period of airtime.

Two other strategies for reducing listener 'fall-out' during the educational broadcasts were mentioned in the interviews with station managers: Chris Phephenyane, station manager of Munghana Lonene FM mentioned that the station started 'sandwiching' educational programmes between two very popular programmes, one on either side of the educational slot. He says that, according to the AMPS figures for a specific period, this approach led to an increase in listenership for the educational programme ${ }^{17}$. He acknowledges, however, that the increase could also be attributed to more vigorous promotion of the educational slot. In the second example, Motsweding FM station manager, Jackie Phaka, mentioned that the station is currently training DJs to anchor educational programmes which are broadcast during their slots so that there is no division in the minds of the listeners between general and educational programming. "The solution is to integrate the programmes more strongly, so the DJs

[^11]themselves will be in charge of the educational programming when it comes on air.... DJs will work together with the education producer and we will have one person in charge of the slot on air."

An evaluation of the different approaches will be required $\mathfrak{v}$ establish which works most effectively. It would seem, however, that there could be a danger in fragmenting the educational programming into too many segments. Should the insert approach come to dominate, education producers may find that they have insufficient time in which to deal properly with specific topics. Furthermore, the evaluation will need to examine whether the insert approach is effective in building an audience for the educational programmes (such as curriculum support programmes) from one day to the next. In other words, if keeping the general listenership is the goal and this is prioritized over educational effectiveness, then some of the programme goals for educational radio may not be achieved.

## Listener responses to the current approach to scheduling

In the evaluation of the radio programmes on educator development, listeners were asked to comment on the scheduling of the programmes and programme length. The findings of the evaluation were as follows:

Some rural respondents felt that an 8 pm broadcast was too late and would prefer the programme to be on earlier in the evening. Additionally, many groups felt that 30 minutes was insufficient time for the programme. They felt that little could be explained in a 30 minute programme, especially with a phone-in element.... They would prefer an hour long programme with limited or controlled phone-in element, preferably between 6 and 7pm. (p 73)

The early childhood development programmes are intended to be used by caregivers with the children the $y$ are looking after. In most cases they are broadcast for ten minutes each morning between 09 h 00 and $10 \mathrm{~h} 00 .{ }^{18}$ However, the draft report on the evaluation of these programmes ${ }^{19}$ indicates that the times scheduled for broadcast do not necessarily fit into the current schedules of the caregivers. "For Site 3A the most appropriate time was reported to be 11 h 45 , as this is their scheduled story time, while in Site 3B it would be between 10 h 00 and 10h30 when the learners are having their mid-morning snack." However, one respondent said that "she would make an effort to accommodate the programme".

The two educator development and ECD programmes are clearly different in their orientation and purpose, but the comments show that different scheduling strategies need to be developed in each case, depending on the goals of the programming. The responses also show that evaluation and feedback is critical if the programming is to become effective. However, there is another dimension to the issue of scheduling and reaching the target audience: the relationship between scheduling, content and presentation.

[^12]
## Programme Formats

The interviews with the stations suggest that most of the educational programmes follow a talk-show and/or phone-in format. Scripts are developed in Johannesburg by the executive producers for education and these are distributed to each of the stations. As a result, similar topics are being covered on each of the stations. However, flexibility is provided for in that the stations are at liberty to treat the script as they wish.

It would seem that in many cases the scripts follow an interview format and the education producers at each station generally seek out individuals in the province or the local community who could come on air. In general, stations place a high value on audience participation and for this reason many of the programmes are phone-ins during which listeners pose questions to the studio guest(s).

Given the extent of airtime being devoted to programmes which could be relevant to schools (see above) it is disappointing that the stations concentrate on using one format for the programmes. One would assume that a wider and more exciting range of programmes could do a great deal to attract target audiences in larger numbers to the educational slots, would make it easier to promote the programmes and could make the programmes more appealing for use in learning and teaching. The interviews with the stations suggested that, in general, other formats (such as drama or documentaries) are not used be cause they take more time to produce, are more costly and possibly because of a lack of the capacity required to produce programmes in a wider range of formats.

Furthermore, the scripts which appear in Appendix 4 (of the original report) illustrate the potential problem with the 'insert' approach to educational programming. These short inserts are essentially informational. They are not shaped in ways which are sure to enlarge the listeners' understanding of the topic (eg. by hearing different points of vew on it), nor do they help listeners reflect on what they are hearing, interact with or act on what they are hearing, or apply the information to new contexts. These would be some of the educational goals which one might ascribe to programmes of this kind. There are many other goals which could be set if the programmes were to be used as part of a larger learning and teaching process.

The 'insert' approach is not necessarily at fault. What seems to be more of a problem is the broadcast of three unrelate d programmes which are not contextualised in any way. It may be more beneficial (from an educational point of view) if the three inserts were all related in some way, and helped listeners deepen their understanding of the topic under discussion. The impact of the current approach will need to be evaluated if we are to gain better insight into the strengths and weaknesses of the current approach.

## Listener responses to the current approach to programme formats

Drawing on the two available evaluations (one on early childhood development programmes and the other on programmes for educator development), the responses from users were as follows:
> The early childhood development programme evaluation recommends that the format should ensure that learners become active participants in the programme rather than
passive recipients. "More songs and rhymes would encourage active participation and maintain interest and attention." (p26)
$>$ The respondents in the evaluation on educator development programmes said that "they found the phone-in element disturbing the discussion and found it hard to concentrate. The limited length of the programme exacerbated this." Respondents also suggested that the phone-in sessions be carefully controlled. "It was seen as inappropriate to allow all and sundry the opportunity to call in on a programme specifically aimed at teachers." In other words, listeners would like the calls to be screened and selected more carefully before they are put on air. (p73)
$>$ The respondents also commented on the role of the presenters of the educator development talk-shows."Radio presenters were felt to be absolutely critical to the success of the programme. They should act as a catalyst for the discussion, stepping back when the discussion is vibrant and yet se nsitive enough to draw it back on track if the discussion strays." (p91)
$>$ One further response suggests that a wider range of formats may be appropriate if educator development programmes are to make an impact: "there is a real need to look at practical implementation, and a need to see teachers teaching." (p88) This point was made by the education producers, but is echoed throughout the research by the educators themselves.

## Target Audiences

In the original report, appendix 5 provided a profile of the audience for each of the ten radio stations, based on the information contained in the AMPS Diaries for October - November 1997. Ukhozi FM has the highest number of listeners ( 4,6 million), followed by Umhlobo Wenene ( 2,28 million), Lesedi FM ( 1,93 million) and Thobela FM ( 1,73 million). Listenerships of the smaller stations range from 332000 (Phalaphala FM) to 902000 (Munghana Lonene FM).

In correlating this information with the CASE Baseline Survey of the Education Broadcasting Plan (published in August 1997), the following trends emerge:
$>$ Six out of the ten stations have more women listeners than men while one (RSG) has equal numbers of female and male listeners; the CASE survey found that men listen to the radio more often than women.
> The age profile of the listenership correlates closely with the CASE findings which show that the largest group of listeners are young: "the highest overall listenership is among those who are between the ages of $16-24$ years, followed closely by respondents in the 25-29 year age category'. (p15) In five out of the ten stations, the AMPS surveys show that the 16-24 year age group makes up one third or more of the audiences, while four out of the remaining five, this age group made up between $21 \%$ and $29 \%$ of the audience. This suggests that with high quality and relevant programmes, appropriate marketing and scheduling, there is a young audience to be won over to educational programmes. No
information is available on trends among listeners younger than 16, and this would obviously be required if a schools service were to be launched.

According to one station manager, however, "our experience is that the youth don't want to listen to lessons - they want to listen to music. This makes me suspect that we might be losing out on many children who will then switch over to a music station. How do you make these programmes so interesting that you can capture the audience?" (Phalaphala FM)
> What is not covered in the AMPS information, but is stressed in the CASE study, is that frequency of listenership may be related to income level: "People who earn more tend to listen to the radio more often. Over three quarters (77\%) of those who are in the highest income bracket (R5000+) listen to the radio daily. On the other hand, respondents with no regular income listen less frequently on a daily basis (52\%) while just under a fifth (18\%) never listen to the radio. This trend could suggest that access and affordability may be deterring factors for those in the lower income bracket." (p18) CASE points out that the latter group may be precisely the people for whom the educational programmes could hold greatest benefit.
$>$ Finally, we need to note that according to the latest AMPS Diary Survey, radio listenership is on the increase:
$>$ overall listenership to radio increased by $5 \%$;
$>$ the average daily listening increased by $5.6 \%$ during the week, by $5 \%$ on Saturdays and by $4.7 \%$ on Sundays;
$>$ three of the African language radio stations recorded an increase in the number of hours listened per week: Ukhozi FM, Lesedi FM and Thobela FM;
$>$ although competition for audience share has increased substantially, the SABC stations either maintained or increased their audience levels.

## Approaches to Building Audiences

If more people are listening to radio and, in the case of some stations, for more hours in the day, what then are the strategies for building audiences? Some station managers feel that the pressure to build audience could be met by producing programmes of higher quality: "The research showed that listenership went down. If this is the case, we need to find a better way of doing these programmes to make them more interesting. There is a need for these programmes." (Phalaphala FM)

As has already been mentioned, most of the station managers set great store by interactive programmes and stress the importance of formats such as phone-ins through which audiences can participate. However, the evaluation of educator development programmes suggests that interaction is not necessarily seen as beneficial by listeners, especially when calls are not carefully screened and when the presenters are ill-informed about the issues under discussion.

One of the evaluations recommends that producers and marketing people need to define target audience much more clearly and to cater for their needs. "There needs to be a stronger focus on the needs of the target market. The target market incorporates both ECD learners,

ECD practitioners, parents and caregivers. The target market needs to be made aware that the product is available through the media and any organizations which bring together groups of parents or educators." (p26)

A similar point was made in the evaluation on educator development programmes. Discussing factors which make in-service development programmes most effective, the evaluators argue that "it is important to know exactly who is participating... ie. Is the exact viewership known to the broadcasting body? Morojele's research pointed out the need for knowing exactly who was the target group..." (p61)

What is interesting is that the stations perceive themselves to be appealing to different types of audiences, suggesting that a 'one-size-fits-all' approach does not work for them either: 'You can't judge Motsweding on the same basis as Ukhozi: Motsweding has a very sophisticated listenership. The children of these listeners do have access to better early learning centres and so the standard format is irrelevant to them."

## Reach and Accessibility

The SABC's research shows that, between them, the ten radio stations cover most of the country. Given the outreach of the stations to the areas in which the languages in which they broadcast are most frequently spoken, some overlap in their coverage of, for example, Gauteng, the North West Province, KwaZulu-Natal and Northern Kwazulu-Natal. Although there is no interference between the frequencies, the implications of such overlap need to be examined if programming for use in schools is to be introduced. For example, Umhlobo Wenene FM concentrates its outreach in the Eastern Cape Province, but also reaches out to parts of the Northern Cape, to the area around Durban and to Gauteng. If it were to carry programmes for schools, which provincial schedule would it adopt and how would it attempt to cater for all these areas simultaneously?

What about receiving the programmes? The station managers stress that the availability of radios is the single most important factor in determining whether a schools service will succeed or fail. Unfortunately no recent information could be found on the distribution of radios in schools. According to the Edutel experience, schools in Bophuthatswana were willing to purchase their own radios for use in class, but there are no details about the scale of success, nor of the extent of radio distribution. Olset Director, Gordon Naidoo, says that they have experienced a high retention and usage rate when putting radios into schools.

## Orientation of Stations Towards Current Practice

The background to educational radio in the SABC was described at the beginning of this report and forms the backdrop for an assessment of the attitudes of the stations towards current practice in educational programming. The approach taken to introducing Live ' $n$ Learn on radio stressed the following: countering the culture of resistance to educational programmes, decentralizing programme production to station level, involving station management and staff at all stages, reflecting the local culture and idiom of each language, developing innovative and entertaining programme formats, and recruiting and training a core of educational radio producers.

By and large it would seem that there is today greater acceptance of the inclusion of educational radio programing on the general schedules. The involvement of stations in decision-making has been an important development in this regard. Enabling them to adapt scripts as they feel necessary has introduced a measure of flexibility which seems to be very important, particularly against the legacy of the old dispensation in the SABC. Training has been introduced. However, it would seem that there is considerable room for developing a wider range of programme formats, and for a great deal more attention to be paid between meeting the specific needs of the target audience and making programmes interesting and attractive for a wider range of listeners at the same time.

Having said this, there is still considerable unease about whether the educational programmes may be driving away listeners in a tough, competitive environment, thereby undermining the fina ncial sustainability of the station. Those station managers who feel strongly that education is important for societal development are more inclined to look for creative ways of addressing this problem (such as by improving the quality of the programming). At the same time there are still managers who would prefer to schedule educational programmes very early in the morning or late at night when the risk of losing listeners is reduced.

What did become very clear during the interviews was that stations are setting considerable store by research. Many argued that a great deal more research was required to provide them with the information about exactly how the programmes are being received and used by listeners. Up till now very little of this research and evaluation has been done, but this is changing with the evaluations on the ECD and the educator development programmes. The Education Radio Department is currently planning a large evaluation of all its educational programming and this could throw more light on how listeners are responding. What would be important in such a study, however, is to involve teachers and learners as well as general listeners, and to test for the effectiveness of the programming in educational as well as in 'good radio' terms. In other words, do the programmes achieve their educational goals? Can they make a difference to learning? If not, how could they support learning and teaching processes?

## Summary of Main points Made in Preceding Analysis

> The airtime which has been made availa ble for educational programming on each station is considerable (an average of 241 minutes per week).
$>$ There seems to have been an accommodation between the stations' need for flexibility in their scheduling, and the requirement that they incorporate a certain amount of educational programming into their schedules.
> Stations are extremely concerned that listeners will react negatively to educational programming and that they will switch off or switch over to other stations if the programmes are branded too obviously as being educational. The main orientation of the radio stations is now to integrate the educational programming more and more closely into the general programming so as to prevent a loss of listenership whilst the educational programmes are on air. In some cases their response has been to move towards using a
number of inserts, making up the 15 or 30 minutes, which can be more seamlessly woven into the slot by the presenters.
$>$ The fear of losing listenership is particularly acute in the increasingly competitive environment in which stations are under great pressure to build audiences and to become self-sufficient. Nevertheless, at least one station manager recognized that falling audience figures may be related to the quality of the programming.
$>$ Given the pressure to build audience share, the stations are struggling with the notion of broadcasting for niche audiences in the educational field: their tendency is to make programmes generally attractive rather than to segment the target audience for education and to cater for its needs in a more focussed way. From an educational point of view the difficulty is that if the goal of keeping the general listenership is prioritized over educational effectiveness, then some of the programme goals for educational radio may not be achieved.
$>$ This dynamic is supported by the approach to promotion and marketing of the educational programmes. Although programmes are promoted on air, the promotional strategies tend to target the general listenership. It does not seem that the stations are presently able to invest the resources necessary to take specific educational programmes to niche audiences.
$>$ Nevertheless, some of the station managers are clear that the challenge is to build audiences for educational programmes and are open to support in this regard: "How do you make these programmes so interesting that you can capture the audience?"
$>$ There seem to be few models in the SABC of educational programmes which make for good radio. The programme formats generally take the form of talk-shows or interviews with the occasional recorded component. At least four radio station managers expressed the need to improve the quality of the educational programming
$>$ In order to accommodate past and present sensitivities about the SABC in Johannesburg dictating to the stations, scripts are developed centrally in the SABC and are then disseminated to the stations which are at liberty to adapt them as they wish. However, it would seem that in most cases programmes ae produced according to the format developed in Johannesburg. This is understandable, given the amount of airtime that needs to be filled, the low levels of educational programme production capacity at each station, and the low levels of resources available for these programmes, The 'locaP component is introduced through the use of local studio guests. Nevertheless, this approach does not make for a diversity of high quality, innovative and exciting programming.
> It is not clear where the responsibility for educational quality control resides in the radio division. For example, although the scripts for the curriculum support programmes are produced with the help of advisers, they seem to be purely informational and do not appear to contain any other educational goals.

The challenges which this situation generates include the following:

- to raise the quality of programme production so as to develop programmes which are exciting and innovative in radio terms, and effective in educational terms;
- getting better information on the target audiences and their needs so as to produce programmes which cater more directly for audience need;
- improving the information flow to listeners about what is coming on air when;
- promoting educational programmes more vigorously to their target audiences in order to build the niche audiences.


## PROSPECTS FOR A SCHOOLS SERVICE ON RADIO

This situational analysis of educational radio in South African was originally located in the context of the implementation plan being developed by the South African Institute for Distance Education (SAIDE) for the introduction of a schools service on radio and television for the South African Broadcasting Corporation. For this reason, the issue of a schools service was specifically raised during the interviews with the radio stations. The results of this line of questioning - although specific to a school-based service - have been included here as they have lessons for planning a dedicated educational broadcasting service in the country.

## ORIENTATION OF RADIO STATIONS

Hardly any of the station personnel interviewed knew anything about the possibility of a schools service. Responses to the question "how do you feel about the introduction of a schools service?" ranged from I have very little information to I know nothing about it and How will it be implemented? I don 't have the finer details.

Some respondents immediately remembered the earlier experience of schools broadcasting under the old dispensation:

Our schools service used to be too formal.
This project was tried in 1968/9. The Department of Bantu Education tried to distribute radios to schools and we found them in the principals' offices, or else kids were just playing around with them.

Some acknowledged that there had been improvements in educational broadcasting in recent years, but stressed that a schools service would need to be carefully designed because it would need to produce concrete results:

If it is well-done it will be okay. It must be done the correct way.
We will have to do our best to see that the programmes are working, evaluate what we are doing, listen, communicate with the right people and see at the end of the year how much did we do to improve the results in schools.

## EMERGING OpPORTUNITIES

Despite their reservations, some of the respondents did see opportunities for their radio stations in a schools service:

Support for matric students could work, but what could be taught on radio? Mathematics can't be taught on air, nor physics. Biology could possibly, but I'm not sure how it could tie in with the new curriculum. We used to do book reviews, dramatisations, language and communication. We also used to do examination preparation under career guidance.

If they have the equipment they would use the programmes. For example, there are teachers who record our quiz and the following day they tell the students "we will be writing a test on what was in the quiz". They record the programme, write a test using the same questions and then play the programme and let the kids correct themselves. (Ligwalagwala FM)

If you inform them in advance, for example that tomorrow the radio will be discussing this and that, and after that discussion we will write a test about it, then you will find some students taping it at home and studying it in advance. (Ligwalagwala FM)

## CONSTRAINTS

The main constraints were seen as being the threat which a schools service would hold for the station's listenership figures, the absence of radios in the schools, language difficulties, and the fear that the service would be very prescriptive.

## Audience size

As has been outlined earlier in this report, the tension between building an audience and carrying educational programmes is seen to be a major constraint:

Because we have to be commercially viable, we are judged on size of listenership only. If a slot performs badly, people are quick to blame educational programmes. (Motsweding FM)

We don't want to have a time when you are listened to only by learners and teachers and then we lose other audience. If the government is prepared to fund the SABC there would be no problem. But we are expected to make money; so we walk a thin line between looking after the education and culture responsibilities and at the same time trying to appeal to the masses. That's why we need to do edutainment, so that the format appeals to the audience. (Thobela FM)

It is good to broadcast into the classroom if it is on a separate channel. But if
it is to be integrated with entertainment we can't address these issues properly. We can't afford it. We will have to pay for the service, one way or another. Right now we have to sell all the airtime. But the research says you can't isolate educational programming. You need to be entertaining. (Motsweding)

There was one manager who felt that there is a need to cater for niche audiences:
If we need to broadcast educational programmes we need to forget about listenership at that time because it is a niche market. But if we are committed to education we need to sacrifice some of these things. For example, my business programme doesn't attract lots of people, but is allowed to continue. (Ukhozi FM)

## Availability of radios

Following close on the issue of audience size, most respondents raised a concern about whether radios would be made available to schools.

There are no radis out there. (Ikwekwezi FM)
There are no radios in schools - our lay research found only one radio in twenty schools. (Munghana Lonene FM)

The SABC and the Department of Education will have to plan it properly so that at the end of the day someone should provide the radios in all the schools and there should be a way of making sure that all the radios are kept at schools and that all the lessons are followed; the teachers are expected to fill up on what is broadcast. (Phalaphala FM)

## Language

Many of the radio stations presently have a language policy which is fairly inflexible on the issue of broadcasting in languages other than the language of the station. Some say that it is the audience who are unwilling to hear languages other than the African language used on the station. For this reason, the issue of language use was explored in relation to a schools service. Most of the respondents, but not all, felt that this would be something fairly difficult to bring about, but that it was impossible to broadcast for schools unless English and other languages could be used for some of the time.

We could do English setworks or hard content, such as geography, but the target audiences first need to be defined. (Ikwekwezi FM)

Most of our programmes currently take place in English. (Motsweding FM)
If we bring English into our radio station, it will be subject-related; if we have to teach maths in English we will be losing a lot of listeners because most are
not educated. In the old era we had School Radio and tried to teach the children Afrikaans, English and biology, but I don't remember anyone writing in - there was no interaction. I don't think it will be right to teach them English on this radio station. Our children... once you give them English, they have a tendency of saying they did not hear well. It is important that they learn English, but Im not sure if the station can play a role. (Ligwalagwala FM)

If the schools give biology in English and we do it in Tshivenda, we aren't doing anything. It can benefit the target audience by giving them the subject in the language which the schools are using - but this contradicts the station policy and it becomes a problem. As time goes on this kind of arrangement must be accommodated. It is important forkids to learn English as well. This is why a big exodus of children from townships to town - they want children to be taught proper English. We would be interested in broadcasting quality programmes on English language teaching. (Phalaphala FM)

In education we must be flexible - how will you define osmosis in Northern Sotho?. It is important to support kids to learn English. Communication and learning is what it is about. (Thobela FM)

## Scheduling

Respondents were concerned about a schools service being inflexible and prescriptive:
I can't see how to link up with what goes on the classroom because broadcast schedules aren't sufficiently flexible. (Ikwekwezi)

RSG can't allocate day time to educational programmes, only night time. Educational programmes don't make us money; it is a social obligation. Maybe teachers should record the programmes and use them during the day. (Radio Sonder Grense)

It is not feasible to broadcast directly into schools in the morning. (Umhlobo Wenene FM)

The way they are going to introduce it might make stations resist because it may be too prescriptive - "take two tablets three times a day". (Munghana Lonene FM)

How can one cater for all the grades from 1-12? (Munghana Lonene FM)

## Circumstances Under which a School Service might work Well

Given all the reservations, what would it take for a schools service to be successful? The stations listed the following elements:

- excellent producers;
- good research;
- very interesting programmes which focus on applied information, not theory eg. how maths can assist you in your day-to-day life;
- use of cassettes so that schools are able to record programmes which need to be promoted on a daily basis;
- short programmes (eg. 15 minutes) "otherwise some teachers will walk out and leave the kids listening";
- radios, quality programmes, consultation and resources;
- teachers with good skills "who can help to fill up";
- teacher training on how to use the radio programmes.


## CONCLUSIONS

The SABC's Education Radio Department has gone a long way towards developing a substantial body of educational programmes as part of the daily schedules of ten African language stations round the country.

Resistance to educational programming is reducing somewhat, although stations are extremely concerned about losing listenership during the flighting of these programmes. Their solution is to integrate the educational programmes more closely into the general schedule, but in so doing are stressing that programmes need to be entertaining and informative in general terms so as not to drive away audiences. At the same time, some station personnel are concerned about whether the programmes are being effective in educational terms and are keen to find ways of improving the quality of their output.

Some niche programming is being broadcast, such as the programmes for early childhood development and for educators, but here the evaluations point to the need to define the audiences more closely, to segment them rather than treating them as homogeneous, so as to better cater for their needs.

The ECD programming is the only case of programmes being broadcast directly into the learning environment, but more promotion and marketing is required in order for caregivers to start using the programmes in their centres. In general, marketing to the specific target groups would be an important area for development.

The present developments suggest that the educational programming is increasingly being conceptualised as 'informal programming' - an approach with which the radio stations have always been most comfortable, but which downplays educational effectiveness in favour of edutainment.

The response of the radio stations to the possibility of introducing a schools service is very cautious and is coloured by their previous experie nce of Schools Radio under the old dispensation. Although some see opportunities in a venture of this kind, most are concerned about losing listeners, about whether schools will in fact have radios in order to receive the
broadcast, about possible conflicts with their existing language policy and about the venture being prescriptive and enfringing on their autonomy. They argue that for the service to work well close consultation with the stations will be necessary, the quality and relevance of programming will need to be improved, ongoing research will be required, radios need to be in place, and vastly more resources need to be made available for production and implementation. They also identify teacher training as being a critical component of the proposed initiative.

## RECOMMENDATIONS

1 The Edutel experience provides an important model for how a schools service could be conceptualised. It was run in conditions which are very similar to the conditions in which schools find themselves today, except that in the changing policy environment there are more opportunities emerging for the use of media in education than was the case during Edutel's lifespan.

2 The attempts made by organizations such as Olset to use radio and audio in formal education need to be more closely examined in order to learn more about what works (for the radio stations and for the educationists) and why.

3 It is important to demonstrate, both to radio stations and to educationists, what is possible in schools broadcasting and how radio can be used best in formal education. Current experience is extremely deficient in this regard.

4 More research is required to gain a more specific understanding of the nature of the audience for a schools service and for its needs.

5 Programme quality needs to be improved. This will require a better understanding of what works on radio in educational terms, and will also require capacity building and resource allocation. An important issue in this regard will be how to deal with the issue of where to locate programme production (some may need to be centralized while some could be decentralized), and how this will relate to the radio station language policies currently in place.

6 Close engagement with radio people, educational practitioners and policy-makers will be necessary to work out how to manage programming and publicity in ways which work for radio and for education.

7 Considerable thought needs to be given to the options of live broadcasting into schools, broadcasting for recording and an audio cassette distribution service. The options are not mutually exclusive and may complement each other.

8 The development and distribution of support material is likely to be one of the key aspects of a schools service, and media utilization training will be one of the greatest challenges in this regard.

9 A strategy for the effective distribution of radios will be essential if stations are to be convinced that the programming will be received.

10 A successful schools service will depend in part on changing the criteria against which a radio station's performance is judged. At present the size of the listenership is everything and this will militate against any initiative which requires stations to make available airtime for schools programming. The only alternative is look at the possibility of putting the schools service on to a separate radio station, but Olset's experience is that this makes it very difficult for the audience to access.

## TOWARDS A CONCEPTION OF A SCHOOLS SERVICE ON RADIO

Through the process of compiling this research report, the following ideas have emerged as to how one might conceptualise a schools service on radio. It suggests that the service for schools depends on a number of interrelated strands which need to combine coherently with each other. It seeks to move away from the notion that a radio schools service is purely an issue of flighting programmes on air.

| A radio schools service could involve... | Nature of <br> activity | Responsible agency |
| :--- | :--- | :--- |
| A campaign, piloted in a limited number of <br> areas, to help teachers access and use the <br> material which is already being broadcast on <br> radio - the educational programmes as well as <br> others. | Development of <br> usage of media <br> resources | SABC and the <br> provincial <br> Departments of <br> Education |
| A campaign which supplies radio-cassettes to <br> schools on request, together with training on <br> how they can be used to support teaching and <br> learning. | Infrastructural <br> development | Department of <br> Education <br> subcontracting to <br> delivery agencies |
| A capacity building programme which widens <br> producers' ability to produce high quality <br> educational programmes in a range of different <br> formats and builds their understanding of the <br> fit between programme content, format, usage <br> and results. | Educational <br> production <br> capacity- <br> building | SABC together with <br> international <br> educational <br> broadcasting partners <br> and provincial <br> Departments of <br> Education |
| A dynamic, twoway, information service to <br> schools (initially on a pilot basis). | Information <br> provision, <br> publicity <br> feedback | SABC and <br> Departments of <br> Education |
| The development and distribution of support | Print support for | SABC, Departments |


| A radio schools service could involve... | Nature of <br> activity | Responsible agency |
| :--- | :--- | :--- |
| material, accompanied by training. | a multi-media <br> approach | of Education and <br> NGOs |
| Involvement of users (educators and schools <br> managers) in the development of programme <br> series which support education processes, not <br> only specific learning areas. | Improved <br> production for <br> quality and <br> relevance | SABC and education <br> stakeholders |
| A more closely defined conception of <br> audiences within the schools contexts and <br> research into heir needs for resources and <br> other areas of support. | A better fit <br> between output <br> and usage. | SABC, Departments <br> of Education and <br> research agencies |
| A closer linkage between what is being <br> flighted on television and radio so that the two <br> media can support each other. | Acknowledging <br> and using the <br> multi-media <br> environment in <br> education. | SABC and <br> Department of <br> Education |
| Development of a strategy whereby it will be <br> easy for users to access the programming, <br> either on the current radio stations or on a <br> separate station. | Transmission <br> and delivery | SABC and <br> Department of <br> Education |
| Setting up and publicizing a tape distribution <br> service, particularly of material which has <br> been evaluated and is of high quality; this <br> would need to be backed by media utilization <br> support for schools. | Resource <br> distribution <br> which supports <br> flexible use. | Independent agency <br> contracted by SABC <br> and Department of <br> Education |


[^0]:    ${ }^{1}$ This analysis, also quoted extensively below, is drawn from a paper prepared by the head of the SABC's Educational Radio Department, Fakir Hassen: "Educational Radio in South Africa: The Challenge of Eleven Languages", prepared for the Africa Telecom 98 Forum, 10 May 1998, Johannesburg p 3

[^1]:    ${ }^{2}$ ibid
    ${ }^{3}$ ibid, p 4-5
    ${ }^{4}$ ibid, p 5

[^2]:    ${ }^{5}$ ibid p 5-6

[^3]:    ${ }^{6}$ Department of Education: Educational Broadcasting Plan July 1996 - December 1997, March 1996, p5.
    ${ }^{7}$ ibid, p6.

[^4]:    ${ }^{8}$ Video tapes were available to schools on loan; teachers requested audio cassettes of programmes which had been broadcast. Edutel had a multi-copying system at its disposal and sold the cassettes to schools.
    ${ }^{9}$ The television division produced local programmes and also acquired programmes (and accompanying support material) from institutions outside the country (eg. the Ontario Educational Communications Authority and the Encyclopaedia Britannica Educational Corporation).

[^5]:    ${ }^{10}$ In the case of the television support materials, it is not clear whether the materials acquired from institutions abroad were published in their original form or whether they had been slightly adapted in terms of language use.

[^6]:    ${ }^{11}$ Comments made during interviews conducted for this research project in the last week of April 1998.

[^7]:    ${ }^{12}$ Adele Gordon and Cyril Julie: An evaluation of Olset's radio learning project: the pre-pilot primary mathematics programme, January 1994, p8
    ${ }^{13}$ For example, SABC educational television recently evaluated a successful British series on English grammar with South African teenagers. Despite the dry nature of the subject matter, the treatment of the material was such that the programmes evoked a very positive response from the viewers: "It was my type of programme."

[^8]:    "Very informative and up-to-date. Keeps you glued to the screen and is fast moving." "They make their mark and just get to the point. Their message is well heard. I think it is very good because many teens don't know how to use nouns, proper nouns, etc." From Social Surveys, Project "In Your Face" prepared for the SABC, 17 April 1998, p 48

[^9]:    ${ }^{14}$ Kim Barker et al, Draft Report on Evaluation of ECD Radio Programmes, prepared for the SABC by CASE, April 1998.

[^10]:    ${ }^{15}$ Hope Madikane-Otto \& Associates, Research Report on Educator Programmes for Radio, SABC, January 1998

[^11]:    ${ }^{16}$ This is reminiscent of the approach taken on Radio Mmabatho to the Edutel schools programming in the mornings.
    ${ }^{17}$ From 248000 listeners to an educational slot between 19 h 30 and 20 h 00 to a total of 314000 listeners for the same slot following the implementation of the 'sandwich' strategy.

[^12]:    18 There are two exceptions: Munghana Lonene broadcasts the programme just after 10h00, but Radio Sonder Grense broadcasts it in the evening between 19 h 20 and 19 h 30 .

