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Teacher Development Through Distance Education: Contrasting Visions of Radio Learning in South African Primary Schools

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1. Introduction

This chapter focuses on shifts in vision which took place over the seventeen year life of the South African Radio Learning Programme, from an initial product based conception of curriculum to one which was process based. This was accompanied by shifts in implementation theory as well as implementation strategies, which are described and then analysed.

The initial aims of the programme were based on an interactive radio model originally applied in Nicaragua in 1974 (Perraton, 2000) and then replicated in a number of other developing countries in Latin America, Africa and Asia. Its initial radio curriculum was based on a teaching approach developed in Kenya, which was designed to raise the quality of English teaching in the first three years of primary school (Imhoof & Christensen, 1986).

In Kenya, the curriculum involved a series of daily half hour audio lessons, which were used to introduce English to primary school children. These audio programmes were interactive in involving children in a variety of activities, which required to responses using English.

The radio lessons also involved music and movement, and were carefully designed to introduce core concepts and vocabulary. The programme was based on behaviourist principles, using distributed learning and repetition to ensure that concepts and vocabulary were internalised. The Kenyan radio learning programme can thus be characterized as a skills-based distance education programme, based on use of radio as a medium of instruction.

Like its Nicaraguan and Kenyan predecessors, the South African Radio Learning Programme (called "English in Action"), was introduced to Southern Africa using funds provided by USAID. The grant was provided to a South African NGO (the Open Learning Systems Education Trust) on the condition that technical advisers funded by USAID would train staff in radio lesson development as well as in programme implementation. The sponsors also required an evaluation design which included use of pre and post tests of English language competence, in line with the type of summative evaluation used to monitor previous implementations of interactive radio programmes in other countries.

However, a number of shifts took place from this initial conception of a programme originally designed to implement an approach which had been tried and tested elsewhere in the world. Shifts initially took place from a purely measurement-based summative evaluation design, towards a more contextual, holistic, formative and multimethod approach to programme evaluation (Potter, 1993a; 1993b). The programme's behaviourist assumptions were also challenged (Leigh, 1995; Perraton, 2000), being replaced with a more responsive and process approach to curriculum development and evaluation (OLSET, 1995; Potter, Dube, Kenyon et al., 1995).

These changes are traced in the initial sections which follow.

2. Initial implementation of the programme

This section provides an overview of the implementation of the South African Radio Learning programme as outlined in its funding contract with USAID. The programme's brief was to offer direct support to the South African Department of Education in improving the quality of teaching in primary schools. This would be achieved by targeting the development of English language competencies in the junior primary phase, through the medium of interactive radio.

After an initial pilot (Leigh, 1992), 118 radio lessons were scripted in 1993 to support the teaching of English at Grade One level. These were implemented with 14 500 learners in five regions of South Africa in 1993 (Potter & Leigh, 1995; Leigh, 1995). This was followed in 1994 by the development of 130 radio lessons at Grade Two level. The lessons were of half an hour duration, and were recorded on audio-tapes.

As radio broadcasting in South Africa at the time was controlled by the national broadcaster (the SABC), initial implementation of the programme took place through the medium of audio-cassettes. These were packaged in cardboard boxes and delivered to the participating schools in each region by a regional coordinator, together with a radio tape-recorder and other classroom materials. These included a teacher's manual and printed classroom posters and alphabet friezes to support the radio lessons. As the tapes and materials were developed in stages over the year, the regional coordinator was able to establish ongoing personal contact with the teachers and principals of the participating schools.

The regional coordinator was also able during her visits to the schools, to act as adviser on matters relating to programme implementation. Her roles included observing lessons, suggesting ways of supporting the programme at classroom level, as well as ways of linking the programme and other facets of the curriculum. Participating teachers were encouraged in the process to make contact with each other, and to form teacher support groups. Workshops on use of the programme and on primary school teaching were also organized regionally, and then implemented through the school visiting and teacher support group structures.

By the end of 1994 when the initial funding grant provided to the programme by USAID came to an end, a network of teacher and school support had been set up across five provinces of South Africa, centred around materials distribution, teacher support groups and in-service training workshops to support the teaching of English at lower primary school level had been established. At the Grade One level, 118 radio lessons and supporting

classroom materials, and at the Grade Two level 130 radio lessons and supporting classroom and print materials had been developed.

Plans were in place for the scripting of 180 radio lessons and the development of supporting learner materials to support Grade Three level implementation. Structures for curriculum development and for consultation with national and provincial Education Departments around curricular issues had also been established.

Underpinning these programmatic structures was a programme implementation theory (Weiss, 1998; Potter, 2005) reflecting a vision of educational change (Potter, 1992). This chapter focuses on a shift in this vision from a product to a process conception of curriculum (Hamilton, 1976, Stenhouse, 1975, 1980; 1981; Walker, 1969; 1971). As this shift took place in response to evaluation and is also reflected in the evaluation reports on the development of the programme over this period, the next section of this chapter focuses on the role of formative evaluation over the initial implementation phase.

3. Changes in vision of the project team: Responses to formative evaluation of the programme during the initial funding phase

3.1 Evaluation design

Like its predecessors using interactive radio in other parts of the world, the South African Radio Learning Programme was subject to evaluation for developmental and accountability purposes. The initial evaluation design was conceptualised as based on measurement involving development of a test of English language vocabulary which would be applied in pre and post-testing of learners in a number of schools involved in the programme. The performance of these learners would then be compared with pre- and post-test performance of learners in a similar number of contrast schools not involved in the programme. If learning gains could be demonstrated using audio-cassettes, this evidence would then be used to make the case to the national broadcaster to provide a national radio footprint to support national implementation of the programme.

At the time of the time of the programme's inception in 1992, a number of other projects in South Africa were also working to develop procedures for teaching English at the lower primary level (such as the Molteno project; MAPEP) and at the upper primary level (such as SELP; TELIP; TOPS; the Molteno Project; READ). In a context of rapid change in South Africa in its transition to democracy, the evaluation design was criticized as insufficiently responsive to context of South African schools, as well as the changes occurring in South Africa on both a socio-political and educational level. A broader contextually based evaluation design was then developed (Potter, 1993a), in which pre-and post-testing would form one element or strand. The design was evolved consultatively and responsively (Stake, 1983), and addressed six questions through use of multiple data sources and multiple methods (Potter, 1993a; 1993b), as follows:

Is the "English in Action" programme effective in teaching primary English?
Are teachers who use the programme empowered, supported in their jobs and assisted in professionalisation?
Is there acceptance of the programme by the community, inclusive of teachers, parents, principals and other stakeholders?

Are radio and cassette efficacious as a delivery medium?
Is "English in Action" having an effect on the school environment?
Is the programme cost-effective, and are there economies of scale for national implementation?

Table 1. Focusing Questions used in the 1993-1994 Formative Evaluation of the South African Radio Programme

To answer the evaluation questions, evidence from a number of sources was utilised. Qualitative data were gathered from school visits, classroom visits and observation of lessons, the reports of teachers, principals and parents concerning pupil progress, observation of teacher support groups, interviews with project staff and with teachers, and narrative case studies of the programme in the schools (Potter, Arnott, Mansfield, et al., 1993). Focus groups were also conducted in all regions in which the programme operated, involving a range of community stakeholders (Nene, 1993).

Quantitative data were also used to answer the evaluation questions, based on pre- and post-testing of learners (Arnott, Mansfield, & Mentis, 1993a; 1993b) conducted in 71 schools (36 project and 35 matched comparison schools), and yielding evidence of significantly better performance on English language tests favouring the project schools ($F = 118,31$ (70); $p < ,0001$; $R = 0,39$). In addition, an economic analysis was conducted, projecting the costs of radio learning in relation to different scales of implementation in terms of learner numbers, and comparing these data with alternative forms of instruction (Cobbe, 1994).

3.2 Issues raised by the evaluators

In their initial review of the programme in 1993, the evaluators focused on both product and process issues (Hamilton, 1976; Stenhouse, 1975; 1980; 1981, Walker, 1969; 1971). They reported that after a shaky start with respect to credibility, the programme had been successful in establishing an infrastructure and a body of materials which could form the basis for future work. The intervention was also regarded positively by both teachers and parents. However, it lacked a coherent conceptual and curricular framework in terms of both the classroom and teacher support sides of its work. Many of the staff also lacked qualifications and experience in second language teaching, which reflected in the approach to and type of materials being developed (Potter, Arnott, Mansfield et al., 1993).

Despite quantitative evidence of advantage among learners in the project schools in 1993, it was evident that there were major gaps both in the way in which the project's curriculum was being conceptualized, as well as a lack of relationship of many of the activities included in the radio lessons with the South African lower primary school curriculum. Recommendations were made that the team involved in the radio learning project should place emphasis on the development of a coherent theoretical, policy and curricular framework, which could guide its future work.

The initial evaluation report (Potter, Arnott, Mansfield et al., 1993) was critical of the programme's assumptions, its conception of curriculum, its behaviourist view of learning, and the technicist vision of educational change implicit in an attempt to improve education through increasing the English language skills of learners in the absence of focus on the context of school and classroom. A broader vision based on both product and process issues

was necessary. At the same time, however, the evaluators commented that the infrastructure developed by the programme had promise.

Specific criticisms were that, while individual members of the project team were highly skilled in the technical side of materials writing and production, these activities were taking place in the absence a coherent policy framework as regards language teaching. There were similar gaps with respect to the teacher development side of the project's work. In both areas, there was a need for the development of a guiding programme theory, which would provide the necessary framework within which the work of the staff, and the overall innovation would take place.

The project team's response to an unfavourable initial evaluation was to focus on both teaching and learning issues, and to change its view of curriculum from a focus on the skills development of learners, to include focus on the professional development of their teachers in the context of school and classroom. This implied a focus on issues relating to classroom teaching and learning relative to teacher development (OLSET, 1995). As these involved major shifts within the programme's vision and focus, recommendations were made for ongoing internal, formative and process evaluation, in addition to external and summative evaluation (OLSET, 1995; Potter, Dube, Kenyon et al., 1995).

In their second interim report in 1994, the evaluators were thus able to report that the programme had moved to address the conceptual and curricular issues raised in the initial 1993 report. This was evident both in the setting up of mechanisms in the programme for staff to meet and discuss the form of the materials and their usage, as well as in the appointment of a number of persons with qualifications and experience in second language teaching to assist with the development of the classroom side of the programme's work.

The teacher development side of the programme was also being addressed through the appointment of a teacher development coordinator to provide conceptual direction to the school and teacher support provided by the programme. The programme was thus developing an increasingly coherent curricular framework, and had also produced evidence of learning gains at school and classroom levels, both with respect to Grade One as well as Grade Two children (Potter, Arnott, Hingle et al., 1995).

For the reasons that these changes still needed to be implemented and their viability tested, the evaluators cautioned in their final evaluation reports (Potter, 1994a; Potter, Arnott, Hingle et al., 1995) that, despite evidence of significant learning gains favouring project learners at both Grade One and Grade Two levels (Arnott, Mansfield, & Mentis, (1993b; Arnott, Mentis, & Mansfield, 1994), both the radio learning project's classroom and in-service training curricula were not ready for wider implementation. It was suggested that what was required at the next stage should involve revision of the materials base, and implementation of the existing materials via various delivery media (e.g. via radio; via cassettes) in line with the open learning principles recommended in the project's blueprint (OLSET, 1995).

This would need to be accompanied by evaluation of the support processes and transactions necessary to successful implementation with teachers and in schools (Potter, Dube, Kenyon et al., 1995). It was thus envisaged that the development of both the classroom-based and teacher support curricula would need to take place simultaneously with revision of the project's existing materials base and ongoing materials evaluation (OLSET, 1995).

Even at this early stage in the project's development (end 1994), the evaluators also noted that there was overwhelming evidence that teachers were supportive of "English in Action", and had used the materials to the benefit of their teaching, and their learners. With respect to in-service training of the teachers, there was value in the teacher support group structure developed by the project. With respect to the evaluation, teacher support groups had provided observational, focus group and case study data, suggesting a potential for interactive radio as a framework for teacher, school and community development, as well as wider possibilities for educational technology in curriculum development in the primary school. The teacher support groups also provided the project with a broad-based and country-wide basis for developmental work directed at both networking and empowerment (Potter, Dube, Kenyon et al., 1995).

4. The end of the first funding phase

The 1992-1994 evaluation of the programme culminated in the publication in 1995 of a file of the evaluation reports as well as a book of case studies of the work of project schools in the different different regions in which the programme was operating (Potter, 1994b; Potter & Leigh, 1995). The evaluation documents included a curriculum blueprint developed by the project team at a workshop at the end of 1994 on which it was envisaged that the subsequent development of the radio learning programme would be based (OLSET, 1995).

Up to the end of 1994, the programme had been assisted by USAID funding, and by external technical consultants funded by USAID. Subsequent to the publication of the 1995 evaluation report, the external USAID-funded technical consultants returned to America. This marked a turning point from externally assisted to internally driven development in the project.

At the beginning of 1995, the programme moved forward based on new principles. These were based on a vision of interactive radio as involving a process of open learning focused on teacher and school-based development, which would accompany the provision of audio and print materials for learners in the classroom. This reflected a fundamental shift in the programme's theory from a skills-based or content-driven view, towards a product and process view of curriculum (Hamilton, 1976).

While these principles have relevance within the programme's implementation, they may have also have broader relevance to educational development and change more generally. The notions of product and process may have particular relevance to the planning of new interactive radio programmes based not only on issues relating to programme content, but also the processes through which curriculum materials become accepted by teachers and used. These issues are thus discussed in more detail in the sections following, as a basis for describing the South African Radio Learning Programme's subsequent growth to scale, and an overall evaluation of its large-scale implementation in schools.

5. The programme's implementation theory post 1994

5.1 A shift from a product and skills-based conception to both a product and process conception of a radio learning curriculum

Peter Buckland has provided an analysis of the influence of technicism on apartheid education, focused particularly on the assumptions underpinning the work of the de Lange

Commission in the early 1980's (Buckland, 1984). Buckland draws on the work of Apple (1979) and Giroux (1981) to characterize technicism as applied in South African education in the apartheid era as:

"The treatment of social issues as technical problems open to technical solutions, the componential thinking implicit in the division of education into eighteen separate areas, the ahistorical approach and the orientation to the future all serve to rule out consideration of how schooling has been used to further political and economic ends. Knowledge is seen in terms of skills, with an 'appropriate value system' serving to legitimate the differentiated acquisition of such skills" (Buckland 1984, 383).

Buckland's analysis is pertinent to the behaviourist conception of the South African Radio Learning Programme's curriculum between 1992 and 1994, as well as the shifts in conception of curriculum which took place in the programme at the end of its first funding phase (OLSET, 1995). The assumptions of the project planners in 1992 can be characterized as technicist in the sense that the South African Radio Learning Project was initially planned with a focus solely on the form and content of the radio lessons, and their role in developing the skills of learners. It was assumed that English would be improved using principles of distributed learning in scripts applying principles of educational technology (Rowntree, 1974; 1982) with judgement of programme success being based on evaluation through pre and post-testing.

The problem with this vision was its simplistic and mechanistic logic (Stenhouse, 1975; 1980). Essentially, despite evidence in 1993 and 1994 that learners in project schools made greater learning gains than learners in non-project schools, the programme was heavily criticised by the evaluators for its behaviourist and technicist assumptions, the application of similar content to the Kenyan scripts by the scriptwriters without reference to the South African primary school curriculum or the needs of teachers who had borne the brunt of the apartheid struggle, and the project team's acontextual way of working as evidenced by lack of contact with others working in South African education (Potter, Arnott, Mansfield et al, 1993).

Given the conflict which had taken place in schools and in South African education over an extended period prior to the project's inception in 1992, the need was for a coherent intervention strategy based on the needs of teachers and schools over South Africa's transition to democracy. The programme's intervention model, however, did not focus on issues relating to the teaching of English as a second language. Nor was there mention of the skills of teachers, and the need for in-service training and support of teachers (Potter, Arnott, Mansfield et al., 1993).

In response to these criticisms, curriculum development took place in the project, and the programme was remodeled. The project team developed a curriculum blueprint at the end of 1994 (OLSET, 1995), reflecting very different assumptions. The project team was guided through the process by an experienced facilitator with considerable experience in teaching English as a second language in South African schools, who was versed in the literature on second language teaching and the bilingual classroom (e.g. Langan, 1992; Willig, 1985), and who was able to juxtapose the needs for support and empowerment of teachers against a view of education focused on skills development in learners (MacDonald, 1990).

The curriculum document developed through this process (OLSET, 1995) reflected a vision of educational change as not only skills-based but person-centred. To undertake teacher

development, a shift to a more process oriented view of curriculum as involving both teachers and pupils was necessary. The process of development envisaged would involve in-service training and classroom-based support for teachers as well as audio lessons and print media which could be used as a framework for educating learners. Linked to these elements would be formative evaluation, based on a vision of the developmental and empowerment possibilities in programme evaluation (Potter, Dube, Kenyon et al., 1995)

The shifts envisaged were in line with indications in the literature on process views of curriculum development (Hamilton, 1976; Stenhouse, 1975), in which curriculum theory and practice needed to be linked to be coherent (e.g. Grundy, 1987; Schwab, 1962; 1969; 1971; Walker, 1969; 1970; 1971). The view of curriculum in the programme's curriculum blueprint can be characterised as based on both a product and process view of curriculum development (Hamilton, 1976), in which education was assumed to be an interactional process, in which curriculum content was developed and curriculum change took place through the active participation of teachers (Hall, 1978; Hargreaves, 1992).

At issue was not only how teachers could become instrumental in changing both their practices as well as the quality of education in their schools and classrooms (Stenhouse, 1975; 1980; 1981). Also at issue was how democratic and empowering environments could be created at school level as well as within the broader educational system which were conducive to as well as directly supportive of change (Fetterman, 1993; 1994a; 1994b; Fullan 1982; Fullan & Stiegelbauer, 1992; Hargreaves & Fullan, 1992; MacDonald, 1971; 1977a; 1977b; Simons, 1987).

5.2 Broadening conceptions of the radio learning curriculum: A teacher and a pupil curriculum

Two contrasting conceptions of curriculum were thus evident in the way in which the work undertaken by the project team was conceptualised and implemented pre and post the end of apartheid education in 1994. There were also shifts in the vision of the project team, from a vision of educational change as dependent on well presented product (well conceptualised content and curriculum materials), to a vision of educational change as dependent on both product and process. The process issues not only influenced how interactive radio was conceptualised, but were also fundamental to the type of support provided by the programme at school and at classroom levels.

The initial(product) conception of the curriculum was as a set of distance education lessons which targeted learner skills and competence in English. The lessons were based on radio scripts, and the trials of the programme were conducted using tape recorders, initially in one area, and then over the next two years in five regions of South Africa. The aim of the programme was to provide a daily half an hour lesson which was both entertaining and interactive, through which English language competence would be developed. The audiotaped lessons formed part of a package of materials which included a radio tape-recorder and supporting print materials. The print materials were a teacher's manual and classroom posters, as well as alphabet friezes to support the radio lessons.

The product and process conception of the curriculum was far broader. On the level of materials development, in response to the evaluators' criticism of the project team's initial conception of the curriculum as a set of audio/radio lessons in which the teacher played

only a tangential role in the instructional process, the staff of the South African Radio Learning Programme revised their conception of the role of the teacher in the radio lesson. Work was undertaken both on the development of more open-ended audio lessons in which the teacher played a far more central role in supporting and supplementing the instruction provided, as well as on developing the teaching abilities and classroom organisational abilities of the participating teachers.

The project team also broadened the basis of the supporting print materials, which were designed for multi-use in other areas of the curriculum. By the end of 1994, it was evident that the project team had shifted from an initial conception of the learner curriculum as a set of half hourly distance education lessons, to a view of the usefulness of lessons and supporting materials in the context of classroom teaching received by learners in other areas of the curriculum and at all times in the day.

In addition, other process dimensions were added. Equally important in the teacher development process was both networking and personal support of teachers at school level. The issue in materials development was how to provide materials which would not only support a daily radio lesson, but would also be able to be used by the teacher as a basis for improving quality of teaching in other areas of the curriculum, as well as classroom organisation more generally. Materials provided by the programme would need to form a basis not only for learner usage, but also for broader support of teachers in the classroom..

The pivotal role of the regional coordinator in both the product and process dimensions is described in the section following.

5.3 Providing a basis for networking and support: The role of the regional coordinator

The initial conception of the regional coordinator's role in the project was product-related, focused on the half hourly radio lesson, with the aim of ensuring that the audio lessons were implemented regularly and as planned. As the programme was implemented in practice in the classroom and as regular contact with schools and teachers evolved, however, a broader and more process-related support role for the regional coordinator emerged over 1993 and 1994.

As the audiotapes and materials were developed in stages, the regional coordinator was able to establish ongoing personal contact with the teachers and principals of the participating schools. She was also able during her visits to the schools, to act as adviser on matters relating to programme implementation. This included observing lessons, suggesting ways of supporting the programme at classroom level, as well as ways of linking the programme and other facets of the curriculum.

The programme's formative evaluation design envisaged teacher support groups as integral to the development of the programme. Participating teachers were thus encouraged by the regional coordinator to make contact with each other, and to form teacher support groups. Visits to other schools and teaching of demonstration lessons then took place as part of the teacher support group structure. In addition, workshops on use of the programme and on primary school teaching were organized regionally, and then implemented through the school visiting and teacher support group structures.

Reflecting the shift to both a product and process-based vision of educational change, the role of the regional coordinator involved ongoing interactions with teachers, as well as

providing support for ongoing interactions between teachers in the schools. These interactions were focused on the audio lessons, which formed the basis for a broader process of teacher support.

5.4 Providing a basis for teacher development: Workshops, classroom visits and teacher support groups

The initial (product-related) vision of the project team was that workshops would be provided to ensure that teachers were able to implement the radio lessons consistently and as intended, using the teacher's manual to do so. Classroom visitation would be provided as a way of ensuring that this took place.

With the introduction of teacher support groups over 1993 and 1994, however, a shift took place to a conception of curriculum in which both product and process were important. The structure of the audio lesson was conceptualised as a framework of content which could then provide a starting point for broader teacher development and support. The project team also focused on developing the types of support structures which could assist teachers to focus on and improve their classroom teaching. These included workshops, school and classroom visits, and teacher support groups.

The first teacher support groups were put in place as a way of enabling teachers to participate directly in the formative evaluation of the project (Potter, 1993a; 1993b). The potential of these for teacher development was then recognised by the project team, and by the end of 1994 workshops, school and classroom visiting, and teacher support groups formed the basis of the support structures offered by the project (OLSET, 1995). The revised curriculum structure thus involved workshops which brought teachers together regionally, visits by regional coordinators to schools and classroom, and teacher support groups as local support mechanisms. These would enable teachers to not only be visited by the project team, but also to visit each others' schools and classrooms, to observe teaching and to be involved in discussion of issues relating to the programme as well as classroom teaching and organisation. Classroom visits by the programme staff would thus complement teacher support group processes at school level.

By the end of 1994 when the initial funding grant provided to the programme by USAID came to an end, a network of teacher and school support had already been created centred around materials distribution, school and classroom visits, teacher support groups and in-service training workshops (eg. Potter, 1994a; 1994b). This reflected the broader shifts in vision which had taken place, from an initial conception based on supporting radio lessons, to a conception in which educational change could be assisted by providing both content and materials support, as well as support for the processes involved in the teaching of English at lower primary school level. Structures for curriculum development and for consultation with national and provincial Education Departments around curricular issues and in-service training of teachers were also established, as a basis for larger-scale implementation (OLSET, 1995).

5.5 A vision of educational change encapsulating product and process: The 1994 curriculum blueprint

At the end of the initial funding phase, a comprehensive statement reflecting these shifts in the vision of the project team was made in a document developed at a workshop at the end

of 1994. This was then developed into a working paper, which created a curriculum blueprint for the subsequent implementation of the programme. Both the curriculum development exercise and the writing of the working paper were undertaken under the auspices of the project's newly established teacher development department, working under the guidance of a specialist in second language teaching (OLSET, 1995).

The blueprint was intended to be a statement of policy for the subsequent development of the programme, based on the experience gained over three years of initial implementation. The document focused on the following areas:

- The radio learning project instructional system
- The project's philosophy pertaining to an educational context in which:
 - a. Available resources were limited
 - b. A substantial number of teachers lacked adequate training
 - c. The curriculum in use was largely inappropriate
 - d. By and large the student/teacher ratio in schools was very high
 - e. Provisioning of material and human resources had frequently been inefficient.
- The type of consultation, research/development and evaluative processes necessary in this and context
- Uses of technology appropriate to this context
- English as second language subject and medium of instruction
- The aims of the OLSET radio learning programme with respect to children and their teachers.

The blueprint specified the type of radio learning curriculum and materials most likely to have influence on the quality of education of both learners and their teachers. A major focus lay on teacher development and support, using the multilingual classroom as a means to achieve a gradual a transition from initial literacy in the home languages towards use of English as a medium of instruction. As a blueprint for development based on the experience of the project team over 1993 and 1994, it went beyond traditional IRI models prevailing at the time (e.g. Imhoof & Christensen, 1986; USAID, 1990; Learntech, 1994), in providing a detailed statement of how it would be possible to develop an interactive radio programme based on the principles and values of open learning.

5.6 The radio learning programme's instructional system: Moving beyond traditional models of interactive radio instruction

In the curriculum blueprint, the radio learning programme was conceptualized as using an audio-assisted communicative approach to teaching English a second language. As a distance educational instructional system, this would involve a number of linked elements.

The development and implementation of the radio learning programme would be based on two curricula. The first curriculum would be for children (learners), and the second for teachers.

The curriculum for the children involved in the programme would aim to:

- Provide a rich English language learning environment
- Create an environment for active participatory learning

- Promote the understanding that learning can be fun
- Encourage creative and critical thinking
- Build on the student's own experiences and practices
- Promote language for personal expression and academic success
- Foster meaningful learning experiences between teacher and children, and among children
- Expose children to multiple models of natural English
- Attend first to the development of effective listening and speaking skills, followed by reading and writing skills.

As Leigh (1995) has pointed out, it was in the introduction of a second curriculum, for teachers, that the radio learning programme took new steps in relation to previous literature and approaches used in IRI (e.g. Imhoof and Christensen, 1986; Olsson, 2004; USAID, 1990). The model of the programme involved providing teacher support and development, as an integral part of the radio learning programme's implementation. It thus targeted teachers and their practices, as will be evident from Table Two below.

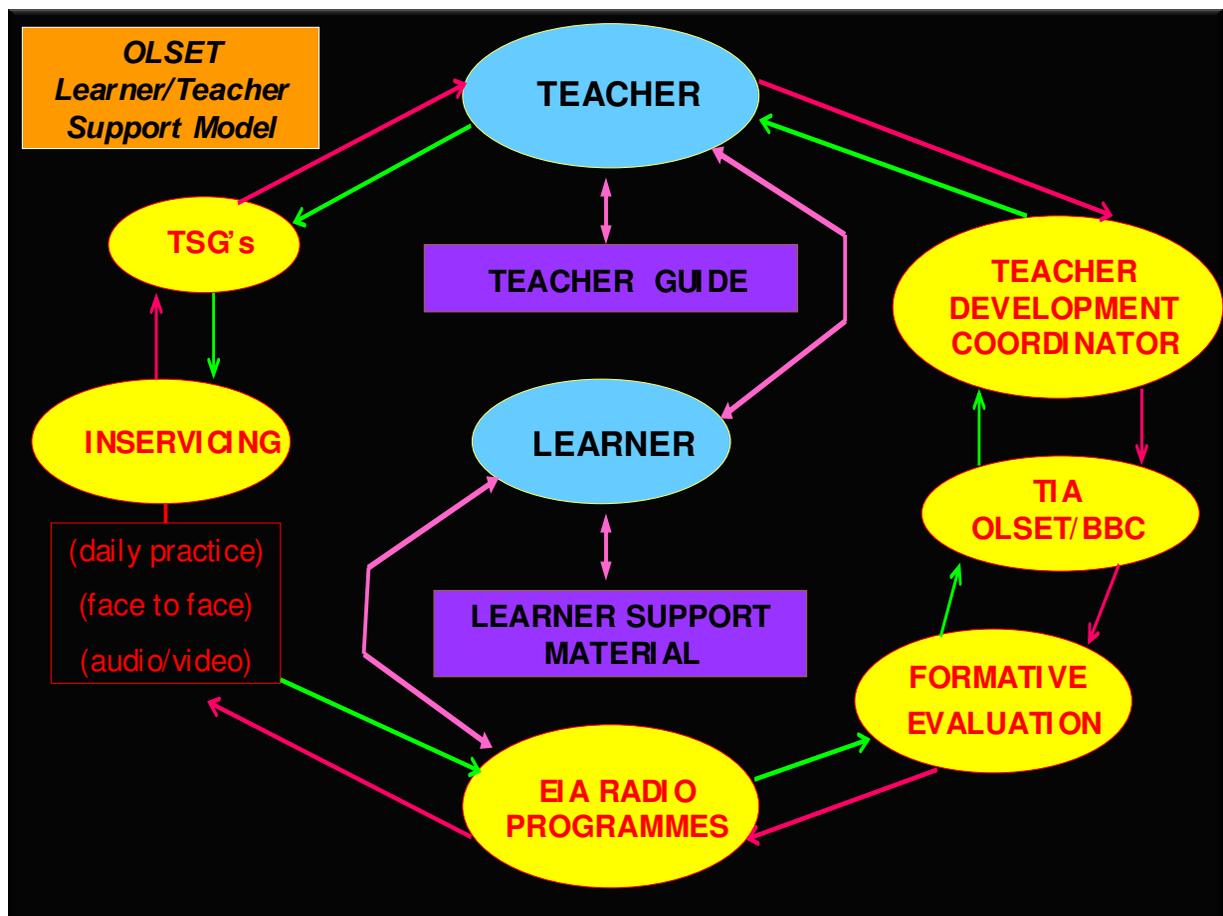


Table 2. The Radio Learning Project Instructional System

5.7 The teacher development curriculum

The curriculum for teachers involved in the programme was related to the following realities in the South African education system of the time (Hartshorne, 1992; 1996):

- 18% of primary school teachers lacked professional qualifications
- 35% were professionally qualified with less than Grade 12
- 47% were professionally qualified with more than Grade 12
- Existing pre-service teacher training was often inadequate
- Appropriate teaching methodologies had often not been disseminated widely within the professional teaching community
- English was not the first language for virtually all the teachers
- Basic equipment and materials were lacking in schools
- Overcrowding was common. Many classes had a learner/teacher ratio of more than 65:1
- Authoritarian methods were still used in many cases to ensure management of large classes
- Rural schools were often understaffed.

The South African Radio Learning Programme's teacher development curriculum was conceptualised as a response to these contextual conditions. It was based on a theory of implementation involving ongoing support for and interaction with teachers, due to awareness on the part of the project team that simply developing new materials and telling teachers about new methods were not usually sufficient to bring about desired changes in classroom practice. A holistic approach was thus needed, in terms of which explicit links would be forged between radio, teacher, child, print materials, teacher support systems and classroom practice (Leigh, Naidoo & Ramafoko, 1995).

To achieve this, teachers would need to become central to the process of development, through participation as partners in the radio lessons, through engagement in linking the content of the radio lessons with teaching in other areas of the curriculum, and through collaboration as equals in their professional development. A climate of collaboration and partnership would be what the OLSET teacher development curriculum would attempt to achieve (OLSET, 1995; Potter, Dube, Kenyon et al., 1995), through:

- Promoting the use of effective communicative language teaching methodologies in the classroom
- Promoting the use of learner centred teaching methodologies in the classroom
- Empowering teachers to use and extend their own approaches, activities and materials
- Strengthening the teacher's English-speaking skills
- Encouraging creative and critical thinking
- Fostering effective use of the programme's audio and classroom support materials.

5.8 Using open learning principles as a basis for teacher development and support

Robinson and Latchem (2003, 29) define open learning as:

- An organised educational activity
- Whose learners study by themselves for some of all of the time, in which
- Constraints on study are minimised in terms of access, time, pace and method of study, and in which on a concrete level
- Learners (in this case teachers) are provided with access to learning resources, advice, support and in many cases assessment of learning.

In implementing the curriculum from 1994 to the present, the South African Radio Learning Programme's curriculum has been based on a number of the above features, as follows:

- a. The aim of providing radio learning lessons (a distance education medium) provided the central thrust of the curriculum for both teachers and learners. The aim was to provide an organised educational activity so that learners could be supported to learn better, and teachers be supported to teach better.
- b. It was envisaged that a framework would be provided for in-service training and support of teachers. The support provided would necessarily be intermittent, with the emphasis on teachers working to improve their practices. At times the process would evolve through discussion and reflection with the regional coordinator at classroom level, at times by workshops and teacher support group meetings, and at times through self evaluation as an integral part of the process of lesson planning and implementation.
- c. The aim of providing in-service training and support of teachers was not to replace or supplant the system of formal training for teachers provided by the state system. In contrast to more formal state programmes whose aim was to certificate and provide accreditation for teachers, the South African Radio Learning Programme's aim was to provide an informal support system that met current needs of teachers. The aim in this was to supplement what the state education system was able to provide.
- d. The South African Radio Learning Programme did not aim to offer formal certification for teachers, preferring to work non-formally through supportive contact and networking with teachers. The reason given by the programme director for this preference was that schools in the apartheid era were a site for struggle, and an ideological battlefield. The perceived priority for post-apartheid education was to get pupils back into the classroom and teachers back to teaching.
- e. Within the structure of the national curriculum, the priority was to create a climate in which teachers and learners took responsibility for creating a culture of learning in each school and in every classroom. Initially, the project team's vision of curriculum was as a framework of radio lessons aimed at developing content knowledge (based on a one-way process involving transmission of knowledge from script-writer to child). Post 1994, the vision of the project team broadened. The aim post 1994 was to provide a framework for teaching and learning English that involved the teacher as an integral part of the process.
- f. The broader vision of providing a curriculum for both teachers and learners was stated as a dual focus of the programme's work post 1994 (OLSET, 1995). For teachers, the curriculum was based on an agenda of ongoing contact and school-based support that was tangible and practical, as part of a wider project involving sharing ideas on what it meant to teach well. For learners, the curriculum was based on an agenda of low-cost and affordable learning experiences that were structured and focused yet at the same time fun.
- g. The aim was to work as far as possible within the spirit and philosophy of the state curriculum as it applied in the foundation or junior primary phase of education. What was provided on the curricular level was tangible support for teachers in the form of a structured, well-planned, sequenced and carefully graded language programme, which introduced English to pupils whose mother tongues varied greatly.
- h. The radio lessons thus formed a framework for learner and teacher development. Each lesson had specific aims and was designed to be compatible with the tenets of outcomes-based education. The lessons were found to be useful to teachers on a number of levels

(DfID, 2004; Hunter, Nonyongo and Smith, 1998; Leigh, Naidoo & Ramafoko, 1995; Ntshoe, 2000; Potter, 1994a; 1994b; Potter & Silva 2002; Silva, 2008), both in introducing pupils to English through a series of engaging and fun activities involving stories, music, songs, and interactive language applications, as well as in providing teachers with examples of how outcomes-based lessons could be planned and applied.

The revised post 1994 curriculum has been characterized as designed on assumptions of multichannel learning (Anzalone, 1995; Dodds, 1995; Leigh, 1995; Leigh, Naidoo & Ramafoko, 1995). It is, however, also possible to describe the programme as providing support in both product and process terms (Naidoo & Potter, 1996; Potter, Naidoo & Kenyon, 1998), as follows:

“The aim of OLSET’s in-service training and support of teachers is not to replace or supplant the system of formal training for teachers provided by the state system. In contrast to more formal programmes whose aim is to certificate and provide accreditation for teachers, OLSET’s aim is to provide an informal support system that meets the current needs of teachers and supplements what the state is able to provide. OLSET does not offer formal certification for teachers, preferring to work non-formally through contact and networking with teachers. The reason given for this preference is that schools in the apartheid era were a site for struggle, and an ideological battlefield. The perceived priority for post-apartheid education is to get pupils back into the classroom and teachers back to teaching. Within the structure of the national curriculum, the priority is also to create a climate in which teachers and learners take responsibility for creating a culture of learning in each school and in every classroom.”

(Source: Potter, in Perraton, Robinson & Creed, 2007).

In the remainder of this chapter, evidence will be presented that this more broad-based vision of educational change provided the basis for the wide-spread acceptance of the programme by teachers, principals and educational officials over the period of its implementation up to the end of 2009. It will also be argued that one reason for the programme’s wide-spread uptake was that the programme focused on providing tangible support to learners and teachers at school and classroom levels; another was that it focused on enabling teaching improvement in a context in which there have been demands on teachers to change their teaching practices and align their lesson planning and assessment practices with the outcomes-based national curriculum; a third reason was that the programme has applied open learning principles as the basis for its ongoing contact with teachers and their schools.

6. A vision of educational change involving product and process: Implementing the radio learning programme blueprint over the period 1995-2001

6.1 Funding and donor support 1995-2000: Issues of sustainability

The initial three year development of the radio learning programme was made possible through a grant from USAID in 1991. This was provided for purposes of undertaking a pilot phase to assess receptivity and impact of Interactive Radio Instruction (IRI). The yearly grants were made with the aim of developing of the skills of the project team in content

development, materials production, teacher training, and independent formative and summative evaluations. Capacity to reach large numbers of schools and teachers was, however, limited by funding, which was an ongoing constraint.

The 1996 termination of USAID support for radio learning in South Africa negatively impacted the programme's organizational capacity through staff turnover. As Creekmore (2010) suggests, this tension was perhaps inevitable, given the nature of projects as temporary organisations (Turner & Muller, 2003) linked to donor practices of periodic reassessment and prioritization of country strategy and attendant programme support.

After the USAID grant came to an end in 1996, the programme was fortunate in obtaining a grant from the Norwegian Embassy, which provided assistance to the programme through the NORAD basic education support programme. The budget was a generous one and linked to the scale that the programme was operating at the time. It provided for a degree of restaffing, as well as a modest expansion of radio learning programme services to schools.

6.2 Growth in numbers of participating schools, teachers and learners

Priority was initially placed on maintaining project visibility and credibility among the core constituency of radio learning programme teachers with whom the programme had previously had contact (ie teachers in schools which were already using the English in Action broadcasts for daily additional language teaching). What was unforeseen was that beside the need to focus on existing schools, there would be a continuous pressure and rising demands from teachers in other non-OLSET schools to be included in the programme. This was the case in each of the eight provinces in which the radio learning programme was working and is reflected in the exponential growth in teacher and pupil numbers reflected in Table Three below.

Year	Teachers	Pupils
1993	319	14 249
1994	995	42747
1995	1440	72 000
1996	2496	125 000
1997	4540	227 000
1998	4297	301 124
1999	6257	312 000
2000	6240	325 000

Table 3. Growth in Teacher and Pupil Numbers in the Radio Learning Programme over the Period 1993 - 2000

There were thus a number of tensions in relation to the scale on which the programme was implemented, versus the increasing demand for the programme's services in the schools. These tensions related to the reality that the budget, though generous at the outset, was not sufficient to meet the increasing demands for the project's services

In the circumstances, all available financial resources were put into the project's distance education intervention, with priority being placed on supporting schools in poor communities. One effect of this was that there were minimal resources available for

ensuring the ongoing evaluation process central to content development and training. The project evaluation continued, albeit on a reduced scale, in the absence of resources. The internal evaluation function was performed on an ongoing basis through the interest of the consultants involved, on the basis of goodwill.

Thus, despite generous support from the international community, project sustainability remained tenuous over the period from 1995 to the end of 2000. There were also tensions in implementation which characterized OLSET's work during the five year period of Norwegian support. Increased numbers implied constrained financial resources. This, in turn, meant reduced external implementation. At the same time, there was a need for internal reorganization, as well as content and materials revision consistent with the demands of the Outcomes Based curriculum.

6.3 Sustainability over the period 1998 and 1999

Essentially, the programme was in the difficult situation of attempting to meet increasing demand with insufficient resources. In a climate of rapidly increasing numbers, the support provided was in many cases insufficient. In many areas, the programme staff were able to provide only a modicum of support to schools, and the programme was constrained to something of a 'holding pattern' rather than fully fledged expansion in keeping with a growing demand for the radio learning programme countywide.

The numbers of participating schools and teachers reached a ceiling in 1998. Once this ceiling was reached, the situation became increasingly difficult during 1999, especially as the programme's materials posters, readers and workbooks had a limited life, and were reaching the end of their life.

Implementation constraints thus had a severe impact on the ability of the project team to deliver support to the schools, as the growth in numbers had exceeded the financial resources and capacity of the programme. Despite these difficulties, classroom-based evaluation indicated that the programme still had wide-spread support among the teachers (Brand, 1998; Chippendall, 1998; Graham, 1998), while analysis of pretest/posttest data indicated that learners in schools in which the programme was implemented continued to make greater gains than those in matched comparison schools (Jacobson, 2001).

The tension between demand and resources, however, had inevitable effects on individual team members (de Reuck, 1999; Hoosen, 1999). Increasingly during the year 2000, there was a climate of financial insecurity in the programme. As international donor funding is normally provided for a fixed period, there was clarity that Norwegian funding could not be renewed, and attendant uncertainty as to whether the programme's management would be able to secure the financial support from additional donors necessary to continue its work. At the end of the year 2000, the hiatus in funding reached a critical point. As the Norwegian grant period came to an end, contracts could not be renewed, and several core members of the project team sought security of employment elsewhere in the private sector.

6.4 Sustainability over the period 2000 and 2001

It was evident over the year 2000 that the radio learning programme's financial position had reached the point where its sustainability was in question. On the one hand, there was

clear need and demand from the schools for the programme's services, and evidence that the numbers of teachers and learners would increase rapidly were funding available. On the other, the programme lacked sponsorship on the scale necessary to adequately service the schools and teachers to which it was already committed, let alone extend its services to additional teachers.

The climate of financial uncertainty and the flight of critical programme staff members had effects on the quality of implementation in schools (Basson, 2000) and effectively eroded the developmental impetus of the programme. The loss of key staff members, in particular, eroded the programme's curriculum development capacities. Management's heightened fund-raising efforts had to be accompanied by radical deployment of those key staff who remained, into priority areas, while other areas of the programme's support had to be drastically curtailed.

Despite this, evidence from teacher interviews and questionnaires indicated that the teachers continued to support the programme (Masuku, 2000; Ntshoe, 2000). In addition, the programme attracted international attention, and was one of ten distance education projects across the world chosen by UNESCO for detailed case study (Perraton, 2000; Perraton, Robinson & Creed, 2001).

6.5 Increased international funding post 2001 for implementation at large scale

The situation of extreme financial exigency extended over an eighteen month period from January 2000 to June 2001. At this point, British Department for International Development (DfID) took the decision to provide funding to the programme on a large scale. Given favourable international reviews of the programme's work (Perraton, 2000; Perraton, Robinson and Creed, 2001), a grant was provided to the project in July 2001, with the objective of taking the Radio Learning Programme to scale across South Africa.

DfID funding was linked to a set of explicit criteria, based on the programme's logical framework. The criteria were linked to specific aims, intended outcomes, inputs and outputs, reflecting the programme's implementation theory (Weiss, 1998; Potter, 2005).

Within the logical framework, the programme's aims as at July 2001 were to:

- improve the quality of teaching at primary school level
- increase the capacity of teachers to implement the new curriculum
- provide access to educational materials, and
- increase the level of engagement by learners.

The programme's inputs would include resources from direct funding, as well as contributions in kind from the provincial education authorities (eg contributions by seconded staff to in-service training and support of teachers), as well as from the national broadcaster (eg airtime; access to the SABC's national radio footprint). The programme's outputs would be a curriculum for learners, and a curriculum for teacher development and support. For learners at Grade levels One to Three, the programme would provide one audio lesson per day for a total of 180 school days in a year. The radio lessons would be supported by classroom print materials.

The programme's outputs for teachers would involve a curriculum for teacher support. This was conceptualized as involving a number of elements including in-service teacher

training workshops, in-school visits by regional coordinators and teacher support groups. However, it was acknowledged that this was an ideal, and that owing to the scale of the programme, the exact nature of teacher support provided would vary from region to region, reflecting the different skills and personalities of the nine regional coordinators involved in the programme (Potter & Silva, 2002), as well as the inputs in the form of resources and support from educational officials provided by the different provincial education departments.

In terms of the intended outcomes specified in its funding proposals, the programme was working in terms of a number of additional specific outputs, including:

- provision of radios to schools
- providing radio broadcasts for mass access to programme content
- training teachers in implementation of the programme
- training teachers in outcomes based education
- integration of radio learning programmes into school timetables
- production and dissemination of complementary teaching and learning print materials
- broadening and deepening of the contents of the Radio Learning Programme to accord with the curriculum (at present Curriculum 2005)
- scaling up to deliver these services to a beneficiary base of 70 000 teachers and 2 500 000 learners over 5 years, primarily in marginalized and rural areas
- engaging with educational officials in the national and provincial departments to achieve the above outcomes.

These aspects of the radio learning programme were embodied in the programme's logical framework as presented to its funders for the period July 2001 to June 2004, in which it was envisaged that evaluation would focus on the following indicators:

A. Expansion of broadcast coverage of radio learning for teachers

- Decisions by SABC and community radio stations to broadcast the radio learning programme
- Actual implementation of decisions to broadcast the programme
- Expansion in areas of the country able to access the radio learning programme broadcasts.

B. Improvement in classroom practice in line with outcomes-based education methodology

- Records of daily broadcasts in each area
- Comments from teachers and principals relating to timing, accessibility and clarity of broadcasts
- Records of regional coordinators' visits to schools
- Records of numbers of teacher support workshops, content covered and attendance at workshops
- Evidence of changes to radio scripts and learner support and teacher support materials
- Evidence of adequate distribution of materials to schools
- Evidence of usage by learners and teachers of radio broadcasts and support materials at school and classroom levels.

C. Improved rates of learner retention

- Interviews with programme staff
- Classroom observation
- School-based case studies
- Self-reports from teachers
- Self-reports and comments from principals
- Focus groups with parents
- Performance tests
- Analysis of classroom work
- Teacher comments/responses in questionnaires
- Principals' comments/responses in questionnaires
- Analysis of planning documents
- Analysis of materials
- Analysis of classroom environments
- Analysis of timetables
- Analysis of classroom work.

6.6 The programme's logical framework for implementation at large scale

The project's logical framework implied upscaling the Radio Learning Programme countrywide to accommodate and provide material support to the most remote rural learners and teachers. Encouragement was also given to make the programme's experience in South Africa available via the BBC to other developing countries, via radio programmes focusing on issues in teaching.

The funding support provided at this point had the effect of transforming the Radio Learning Programme's way of working, providing it with the financial resources and donor backing to take the programme's implementation to national scale. Organisationally, the optimism and renewed confidence accompanying DfID longer term support, was palpable. It allowed for a four year projection of increased learner numbers and teacher support undertaken in conjunction with the education departments in all nine provinces of South Africa.

Given adequate resourcing, additional project team members were appointed and skills were able to be co-opted focused on increasing field implementation, teacher in-service training and support. In addition, it was possible to strengthen the partnerships with the SABC and the Provincial Departments of Education. In particular, the funding was directed at facilitating access of teachers and learners to increased in-service training and classroom support in both urban and rural schools, and in expanding the programme's outreach to encompass 11% of all schools and 9% of all teachers across South Africa.

Large-scale production of learner and teacher support resources was also possible through the increased funding. These resources were printed, made available for distribution and then disseminated to schools. In addition, increased institutional support from the SABC enabled schools to benefit from an increased radio footprint for EIA broadcasts. This was provided via five SABC regional Stations.

6.7 Acceptance of and positive response to the programme's work

Issues relating to sustainability are common themes in work in educational development (Fullan, 1982; Fullan & Stiegelbauer, 1991; Hargreaves, 1992; Hargreaves & Fullan, 1992). They are also common themes in the literature on open and distance learning (Perraton 2000; Perraton, Robinson & Creed, 2001; Robinson & Latchem, 2003). In the case of the South African radio learning programme, its long-term sustainability was dependent on acceptance of its work by teachers and principals, and positive institutional response to its work by educational officials and bureaucrats.

A feature of the programme post 1994 was its commitment to ongoing internal and formative evaluation. Longitudinal evaluation data indicated that, despite times of financial exigency leading to lapses in quality of programme implementation, teachers and principals were supportive of the programme as meeting the educational needs of teachers and learners. This continued as a recurrent theme in the programme's internal evaluation reports (Brand, 1998; Chippendall, 1998; Graham, 1998; Masuku, 2000; Ntshoe, 2000; Potter, 1994a; 1994b; 1995; 1999; 2000, 2001; 2002; Silva, 2008).

With increased funding, these data indicated that priority could be placed on distributing materials to schools in which teachers were likely to use the programme. Large-scale materials distribution was thus undertaken in conjunction with the educational authorities in the nine provinces in which the programme was working. Owing to the scale at which the programme was operating, many problems were encountered in the process of moving eleven tons of printed materials to individual schools, with the result that availability of materials in the schools was in many areas uneven.

Overall, however, despite comments made by a number of teachers which indicated that the support received at school level from the programme was not as extensive or consistent as they would have wanted, the evidence from teacher self-reports and case studies of participating schools indicated that the support provided by the radio learning programme was both tangible and valued. Of particular importance to teachers was the assistance provided in teaching English, as well as in enabling lesson planning and teaching aligned with the outcomes-based requirements of the national curriculum (Friend, Potter, Naidoo et al., 2010; Potter, Chand, Naidoo et al., 2008; Potter & Naidoo, 2008; Silva, 2008).

Advocacy for the programme was thus wide-spread both among teachers and principals. This was both the case in 2001, when materials supply to the schools was more limited, as well as in 2003 when greater numbers of teachers were involved in the programme, and support to the schools was greater (Potter & Silva, 2002; Silva, 2008).

Advocacy within the provincial education departments was also high, based on a perception on the part of educational officials that the programme's materials were assisting teachers in implementing outcomes-based education (OBE) at the primary school level (DfID, 2004). The issue of compatibility of the programme's curriculum with the outcomes of the national curriculum was also a recurrent theme in the programme's internal evaluation data (Potter, 2002). Essentially, bureaucratic acceptance rested on the fact that it was possible to justify the time on task of so many individuals engaged in the programme at school and classroom levels, due to the clear conceptual links between the programme's materials and other elements in the primary school curriculum in both years.

By mid 2001, the programme had grown in scope from usage by 290 teachers and 14 500 learners in 1993, to usage by an estimated 14 500 teachers and 680 000 learners nationally. At the end of 2002, the numbers of teachers and schools participating in the programme had increased substantially, as reflected in Table Four below (Naidoo, in Potter & Silva, 2002, 6).

Province	Schools	Teachers	Pupils
Eastern Cape	2 226	2 946	125 332
KwaZulu/Natal	1 133	5 661	229 488
Limpopo	645	991	51 755
Gauteng	473	1 307	71 019
North West	1 163	2 112	83 298
Mpumalanga	1 687	6 094	239 299
Free State	249	2 634	92 707
Total	7 570	21 745	892 989

Source: Naidoo, in Potter and Silva, 2002 p. 6

Table 4. Pupils, Teachers and Schools Participating in the South African Radio Learning Programme across Seven Provinces in 2002

By the end of 2003, the involvement in the programme across these provinces had grown to 30 167 teachers and 1 302 728 learners, in terms of an implementation model in which educational officials in the participating provinces worked side by side with programme staff in providing in-service training and support to teachers at school level. At this point, given changes in funding with the diversion of British resources to support reconstruction in Iraq, DfID conducted its summative review of the programme, using a team of three DfID project officers (DfID, 2004).

6.8 Developing partnerships with the educational authorities and the national broadcaster

The DfID review focused on progress made in the programme over the whole funding period from July 2001 to June 2004, in relation to the objectively verifiable indicators and outputs in the Logframe (refer Table Five above).

As at 2004, The DfID reviewers noted progress made on each output in the Logframe (DfID, 2004). With respect to Output One in the Logframe, the programme had through its partnership with the SABC expanded to reach the following numbers of pupils and their teachers in the schools.

Year	Teachers	Pupils
2002	21 745	892 989
2003	30 167	1 302 728
2004	52 000	1 820 000

Table 5. Estimated Teacher and Pupil Numbers Reached by the SABCs National Radio Footprint in the South African Radio Learning Programme over the Period 2002-2004

With respect to Output 4 in the Logframe, certain problems were noted in implementation with respect to distribution of radios and supporting print materials due to problems in the

DFID procurement process as well as with shipping. This had knock-on effects into other areas of implementation, and also affected teacher support workshops. Based on their reading of internal and external programme documents and evaluation reports and the observations made by their project officers on programme site visits, the evidence suggested that all other outputs had either been achieved or had largely been achieved.

It was also noted that in terms of its sheer scale of operation, strategies for institutionalization of the programme were essential. At this level, the programme had achieved the support of the bureaucracy within the education departments, as well as the support of the national broadcaster. Both provided funding support for the programme's work in kind. The programme also continued to have wide-spread support at school level, both among teachers as well as among principals as key educational officials supporting innovation and change.

From the perspective of long-term sustainability, the 2004 DfID review highlighted the fact that the first and second levels of sustainability (ie wide-spread support from teachers and positive institutional response) had to a degree been achieved by the end of 2001. The third level of sustainability (partnership with the educational authorities and the national broadcaster) had been partially achieved over the period of DFID funding. The fourth level (acceptance and advocacy by the bureaucracy, backed with protracted and sustained financial support) was not yet a reality.

6.9 Funding at large-scale 2004-2009

Over the period between 2004 and 2009, the Dutch government funded the programme. The proposals for funding over this period continued to reflect the principles of

- providing access to the resources provided by the programme, for large numbers of teachers and learners
- focus on urban and rural schools
- focus on teacher and learner development
- work on curriculum implementation for both teachers and learners in partnership with the educational authorities and the SABC.

The proposals for funding over this period also focused on the necessity of the programme developing to the stage that it could provide support to South African schools as a long-term as opposed to a short-term commitment. To achieve this aim, the programme would need to work towards achieving financial sustainability by the end of 2009.

In terms of established trends in the programme's model of implementation, available resources were directed into internal evaluation at school and classroom levels, as well as feasibility studies on the implementation of the programme's approach to IRI in other developing countries. Resources were utilised for:

- a. Development of procedures for observation of teaching in classrooms, using PhotoVoice methodology (Potter, Chand, Naidoo et al., 2008).
- b. Test development (Potter, Liccardo & Naidoo, 2008; Malope, 2010).
- c. Development of training materials for regional coordinators, reflecting the classroom-based evaluation approach advocated by the programme (Potter & Naidoo, 2008).

- d. Feasibility studies on the use of the programme's model of implementation and evaluation in other developing countries (Potter, Liccardo & Naidoo, 2008; Potter & Naidoo, 2009a).

The last-mentioned area of work was undertaken with a view to working with funding agencies and NGO's in other developing countries. It was also undertaken with a view to broadening the funding base of the programme, with the aim of ensuring its financial sustainability. Work was undertaken, for example, in Bangladesh (Potter, 2008) with a view to attempting to ensure a diversified funding base. This was not achieved. Multiple donor revenue streams are difficult to establish and particularly so for the South African Radio Learning Programme as radio learning is variously defined, and also falls outside of the programme focus of most donors.

Some idea of the demand for the programme's services subsequent to the provision of large-scale funding by the international community in 2001 can be gained from Table Six below. Despite tensions between intention and practice, the programme's support was welcomed (Ntshoe, 2000), even in classrooms in which the programme's implementation was less than ideal (Basson, 2000). Based on advocacy from teachers, principals and educational officials, large numbers of schools in the urban, peri-urban and deep rural communities became involved in the programme.

With large-scale donor support from DfID in the United Kingdom between 2001 and 2004, and from the Dutch government over the period 2004 to the end of 2009, the programme was able in the year 2008 to provide support to an estimated 1,3 million learners and their teachers daily. This represented some 6% of all South African teachers working in an estimated 10% of all South African schools, as well be evident from the figures presented below.

Year	Number of Teachers	Number of Pupils
2001	15 557	622 280
2002	21 745	892 989
2003	30 167	1 302 728
2004	52 000	1 820 000
2005	38 782	1 357 370
2006	36 328	1 272 480
2007	34 727	1 389 080
2008	32 530	1 301 200
2009	32 225	1 289 000

Note: Figures based on estimates calculated from attendance at regional teacher support workshops organised jointly with the education authorities in all nine provinces of South Africa.

Table 6. Teacher and Pupil Numbers in the South African Radio Learning Programme over the period 2001-2009

However, despite achieving wide-spread support at school and departmental levels, and despite attempts at undertaking work internationally with the aim of funding the South African Radio Learning Programme, as at the end of 2009 financial sustainability was not achieved. While acceptance of the programme by teachers and its partnership with the education authorities indicated that the programme achieved a level of institutionalization as at 2009, the programme was still dependent on external funding, despite forming an

integral part of the educational departmental structures with respect to in-service training and support to schools.

Given absence of financial support from the educational authorities, the programme's work in the schools came to an end at this point, after seventeen years of operation in the schools.

7. Contrasting visions of radio learning in South African primary schools

7.1 A product-based versus a product and process-based vision of educational change

The remaining sections of this chapter will attempt to contrast the type of responsive, contextual and process vision of educational change developed in the South African Radio Learning Programme post 1994 with the type of skills-based, mechanistic and technicist vision of educational change originally envisaged by the project planners. The reason for doing so is that our evaluative evidence indicates that the product and process vision of educational change based on open learning principles enabled the development of two parallel support curricula involving classroom materials plus informal in-service training and support to schools, which was accepted by many principals and teachers.

Many of the initial radio learning programmes (Bosch, 1998; Dock, 1998) were based on similar assumptions to those that informed the development of the South African Radio Learning Programme over its initial three years. At the outset after the programme's inception in 1992, the curriculum was informed by what can be characterized as a technicist vision of educational change, focused on the development of a package of radio lessons and supporting materials, through which a set of skills were introduced to learners.

Over 1993 and 1994, the vision of the project team changed. Product remained important, but only as a starting point to a process of educational change. The process was conceptualised as involving a flow of classroom transactions between teachers and learners. The role of the project team was to support a process of educational change.

This would be done by providing two parallel support curricula, both of which were necessary to improvement of quality of education in the schools. The one support curriculum was directed at the needs of teachers and the other at the needs of learners. Both curricula involved distance education, and both were informed by open learning principles.

We have already explored the shifts in vision which accompanied changes in conception of curricular principles in some depth. This analysis will be built on in the concluding sections of this chapter, in which the value of both a product and process approach to undertaking in-service training and support of teachers will be highlighted. The reason for doing so is that our evaluative evidence over a seventeen year period indicates that both product and process issues formed the basis for the programme becoming widely accepted by teachers and principals at school level. They also underpinned the perceived value of the programme by educational officials across the South African education system.

7.2 Was a product and process curriculum perceived as valuable?

Post 1994, the South African Radio Learning Programme focused on the development of two curricula, one for learners and the other for their teachers. The aim of the programme

was to provide a framework for teaching and learning English which involves the teacher as an integral part of the process (Potter, 2002; Potter & Naidoo, 2006; Potter & Naidoo, 2010). For teachers, the curriculum was based on an agenda of ongoing contact and school-based support that was tangible and practical, as part of a wider project involving sharing ideas on what it meant to teach well. For learners, the curriculum was based on an agenda of low-cost and affordable learning experiences that were structured and focused, yet at the same time fun.

Our evaluative data from ongoing observation, interviews and school-based case studies suggests that many lower primary school teachers found the support provided by the programme valuable both in providing curriculum materials, as well as in improving their teaching of English. This helped in aligning their teaching to the requirements of the outcomes-based national curriculum. In providing a framework of audio lessons and classroom materials, as well as in providing support on a process level to teachers at school and classroom levels, the programme was well rated by both principals and by educational officials.

Our data suggest that advocacy for the programme was based not only on the perceived value of the radio lessons and print materials provided by the programme, but also on the practical guidance provided by the project team on how to work within outcomes-based education. This was operationalized through in-service training directed at how to use the classroom materials provided by the programme for teaching English across the curriculum, and also on how to teach more effectively.

These were recurrent themes in our data. There were also recurrent themes in our interview and focus group data relating to the value of the support provided to teachers at school level, the benefits from in-service training workshops and the value of teacher support meetings providing practical ways of improving quality of teaching and learning in the classroom.

Overall, the evidence presented in this chapter would thus suggest that the product-related and process-related support provided by the programme were perceived by teachers, principals and educational officials as positive. The partnerships developed with the educational authorities and the national broadcaster (the SABC) also enabled the programme to work at low cost with large numbers of schools, teachers and learners. However, given the scale of teacher and learner needs in South African schools, ongoing intervention and support at school and classroom level were necessary.

At the time the programme closed its doors at the end of 2009, the evidence would suggest that the development of the type of open learning envisaged in the project's 1994 blueprint was still very much a task in process. As others may wish to take up the type of process which this particular project team was not able to complete, the lessons learned from the work of the programme will be outlined in the concluding sections of this chapter.

7.3 What roles did evaluation play in the development of the programme?

The South African Radio Learning Programme was subject to formative evaluation from its inception, as well as regular external evaluations over its entire seventeen year life. The external evaluations indicated that the programme was successful in meeting its objectives

over the seventeen year period it worked in different areas of the country (DfID, 2004, Hunter, Nonyongo & Smith, 1998; Potter, 1994b; Potter, 1998; Silva, 2008).

Evaluation was important as there are clear indications that the project team responded to evaluative criticism. Had there not been evaluative criticism of the programme's behaviourist and technicist assumptions (Potter, Arnott, Mansfield et al., 1993), its course post 1994 would probably have been very different.

Would it have achieved as wide support from teachers? It is tempting to claim this, but it would be better to refer to evidence. Our data are filled with reference by teachers to the lack of support provided by the educational authorities. There was thus recurring evidence of need.

In terms of the project's response to teachers' needs, the initial response prior to 1994 was to focus on provision of audio lessons and supporting materials. In-service training and support of teachers were not part of the programme's vocabulary over its initial years of operation, for the reason that provision of well-conceptualised radio scripts and supporting print materials formed the priorities.

Post 1994, the programme continued to focus on provision of materials, but in addition focused on in-service training and support, basing its work in the schools on principles of open learning (OLSET 1995). These were applied in applied in both teacher and learner support curricula. The project's implementation model also focused on developing evaluative capacity among teachers in primary schools from Grades One to Three, using observation and reflection as a basis for improving teaching in the classroom.

The model post 1994 can thus be conceptualized as an extension of an initial focus on product to include a process dimension. Both the product and the product and process models involved both development and evaluation. Both in its initial years between 1992 and 1994, as well as post 1994, there were clear indications that the project team perceived both development and formative evaluation as linked. Between 1992 and 1994, the basis for the development of a participatory approach to teacher development was also laid in the teacher support groups and case studies which provided qualitative evidence on the programme's development at school level. This then developed to form the basis for classroom-based intervention (Potter & Naidoo, 2008), involving project staff and teachers at a number of levels in documenting the programme in the schools (Leigh, Naidoo & Ramafoko, 1995; Naidoo & Potter, 1996).

Classroom-based participatory evaluation was also conducted for developmental and formative purposes (Friend, Potter, Naidoo et al., 2010; Potter, Chand, Naidoo et al., 2008). As part of this process, photographic case studies were conducted (Potter 1994a; Potter & Silva, 2002), as well as classroom-based evaluations using photovoice procedures (Wang & Burris, 1997; Wang, Yi, Tao et al., 1998). These were used to create a base of photographic evidence which then provided a basis for self-evaluation through classroom-based narrative and questioning (Potter & Naidoo, 2008). This added to the types of internal evaluation which had been implemented in the South African Radio Learning Programme over the previous fifteen years (Potter & Naidoo, 2006; 2009).

There were thus many insights which became possible through the variety of implementation and evaluative evidence gathered on the programme's work. Evidence

from classroom observation as well as questionnaires administered in project schools (Potter, Chand, Naidoo et al., 2008); indicates that teachers perceived clear links between the programme's materials, the national curriculum, and the types of in-service training and support provided by programme staff. There were clear indications that continuing advocacy was based on the perceived value of both the programme's teacher and learner support curricula. Advocacy was also based on the wide-spread needs in South African schools for support and in-service training, which is introduced in tangible and practical terms.

7.4 The programme's vision of educational change: Principles of open learning implemented in a circumscribed and limited way

As Weiss (1998) has suggested, central to any programme is a theory. Underpinning the South African Radio Learning Programme's post 1994 implementation was a theory of change which assumed that teacher development could be undertaken through distance education and open learning (OLSET, 1995). In the model, daily interactive radio lessons would be beamed to schools via a national radio footprint provided by the SABC. Additional print materials supplemented by contact between programme staff and teachers would be being used as a means of providing ongoing support at school and classroom levels.

Over the period up to the end of 2004, the programme underwent rapid growth. Our evaluative data indicates clearly that the programme's growth to scale was needs-driven, reflecting a context in which historically, minimal in-service training and classroom support was provided to teachers. After the advent of democracy in the country in 1994, the move to outcomes-based education has introduced increased demands on teachers for change, without providing the day-to-day guidance and support necessary to make the new system workable at the level of the classroom (Jansen, 1997; Kgobe, 2000a; 2000b; Motala, 1997). In this context of underprovision (Chisholm, Motala, & Vally, 2000) there was a high level of demand from teachers and schools for the South African Radio Learning Programme's services.

The project team's response was to attempt to undertake exponential growth in the programme, based on demand for school and classroom-based support from teachers and principals. In the context of a dearth of both educational materials and guidance and support from the educational authorities both for disadvantaged young learners and their teachers in under-resourced schools, the Radio Learning Programme's support activities were limited, applying principles of open learning in a limited way.

It is tempting to claim major successes from the project team's implementation model, given the evidence of wide-scale advocacy for the programme's work. It is perhaps wiser to suggest, as Silva (2008) has done, that the programme was able to meet its objectives, while at the same time providing support which was positively viewed by both teachers and principals for the reason that it contributed to their empowerment on a professional level.

On the positive side, teachers and principals continued to support the programme over its entire seventeen year life. The programme was able to meet its objectives in terms of broadening its schools base, while at the same time establishing contact with departmental officials as well as large numbers of teachers and learners (Potter, 1999). However, the

central tension within the programme remained, stemming from external pressures to respond to expectations of OLSET support, at a time where, even at the time of the programme's greatest resourcing by the international community, access to donor resources was constant (Potter, 2001; Potter & Naidoo, 2006).

7.5 The programme's use of resources: A little to many as opposed to more to few

It is also important not to gloss over the many tensions in the programme, given limited resources and lack of a national radio footprint supporting the programme over the first ten years of the programme's life. Over this period, quality of broadcasting as well as support to schools was in many cases compromised (Basson, 2000; Hunter, Nonyongo & Smith, 1998; Naidoo & Potter, 2007; Potter, 2000; 2001; Potter & Naidoo, 2006).

The ethical dilemma was essentially whether to respond to large-scale teacher and learner needs at a critical juncture in the educational transformation process across the country as a whole, and at a time when other large-scale educational projects in South Africa had had to scale down or cease their work owing to funding and donor constraints (Bot and Schindler, 2000; Naidoo and Potter, 2007).

Despite the compromises, our longitudinal evidence from observation, interviews and school-based case studies indicates that even at the time it was most stretched financially, the South African Radio Learning Programme provided teachers with tangible and practical assistance in the form not only of individual lessons, but also a structure of supporting materials and guidelines on how these could be used for teaching across the curriculum (Potter, 2001; Naidoo and Potter, 2007). Both teacher and learner materials were clearly set out as part of a wider teacher and learner support curriculum, which was introduced in tangible and practical terms which teachers could understand.

Our longitudinal evidence indicates that even at the time when it was most highly resourced, the amount of support actually provided by the programme to the schools was limited. The programme's model was to provide low-cost, focused and clearly defined support to large numbers of teachers. While the in-service training and support provided was based on open learning principles, it cannot be claimed that the programme produced a model for how open learning principles which should be applied by others (unless others also believe in the need to provide low-cost, focused and clearly defined support to large numbers of teachers).

In our work in other developing countries, we found evidence indicating that the South African Radio Learning Programme's approach to teacher development could also be applied in other country contexts besides our own (Potter, 2008; Potter, Liccardo and Naidoo, 2008). However, it should be noted that had we been able to do so, the principles of open learning we would have applied in these contexts would also have been circumscribed and limited.

Our reason for doing so was that this was what we knew best, and also what we felt was ethical. The South African Radio Learning Programme chose the option of working in a limited way with large numbers of schools and teachers, rather than working with few schools and in-depth (Naidoo & Potter, 2007). The choice was to provide minimal support to maximum numbers of beneficiaries. In addition to this circumscribed and limited model of

support, the programme was also prescriptive in defining what teachers were expected to do in terms of providing outcomes-based education.

The model was thus one of a little to many, as opposed to more to just a few. The little included setting out clear guidelines on how to link the tangibles provided in the radio lessons and the classroom support materials to the more general demands for improvements and transformation of their teaching practices which were being made by the educational authorities on teachers.

7.6 Interactive radio in a context of underprovision

The context we experienced over a seventeen year period was one in which there was a dearth of support from the educational authorities. In this context of underprovision, our longitudinal data indicate that the types of limited material support to schools, and the use of these limited resources to support classroom process as well as teaching improvement were highly rated by teachers and principals (Potter, Chand, Naidoo et al., 2007; Silva, 2008). Despite the limitations of its approach to in-service training, the programme was thus able to achieve wide-scale advocacy among teachers, principals and educational officials across South Africa. The advocacy was consistent, even at those times when the programme's implementation was severely compromised.

Despite the tensions with implementation highlighted in this chapter, the programme was able to deliver tangible support to large numbers of schools, ultimately working in 11% of all South African schools. This was possible through the provision of a nation-wide radio footprint by the national broadcaster (the SABC), in a context in which there was reasonably well-developed infrastructure, in terms of roads, electricity and water, telephone lines, hospitals, clinics as well as schools. South Africa has been characterized as both a first and third world country. In this context, we would suggest that it was the combination of different forms of programme delivery using low end ICT's and the programme's provision of tangible and practical school and classroom-based support, which contributed to strong advocacy by teachers and principals at school level (Potter and Naidoo, 2009).

We would also suggest that the emphasis placed on ongoing internal (formative) and external (summative) evaluation contributed to the programme's ability to analyse and document the processes and tensions involved in its development (Hunter, Nonyongo and Smith, 1998; Naidoo & Potter, 2007; Potter, 2002; Potter & Leigh, 1995; Potter & Naidoo, 2009a) This enabled the programme to draw on longitudinal evidence concerning learning gains (Jacobson, 2002; Potter & Leigh, 1995), evidence concerning the ongoing grass-roots support of teachers and principals at school level (Ntshoe, 2000; Potter, C.S. & Silva, 2002; Silva, 2008), and evidence concerning the strong advocacy of educational officials and bureaucrats (Potter & Naidoo, 2009a).

In writing this chapter, we thus had available evaluative evidence drawn on an ongoing basis over seventeen years of contact with teachers, principals and schools. These data suggest that it was the primary advocacy of teachers and principals, supplemented by secondary sources of evidence based on observation of teaching in schools, which contributed to the perception among educational officials that "English in Action" was valuable. It provided in-service training and support for teachers and learners which was compatible with the policy of the South African educational authorities with respect to outcomes-based education (Naidoo, 2002; Ntshoe, 2000; Potter, Chand, Naidoo et al., 2007).

In this context, our data suggest that acceptance of this educational innovation was gradual and incremental, and was based on acceptance of the value of the programme's work on multiple levels in the educational hierarchy (Fullan & Stiegelbauer, 1991). Our data also indicate that there was particularly firm advocacy on the part of departmental subject advisers, many of whom worked with the programme staff in teacher in-service training workshops. Given acceptance of the programme by teachers and its partnerships with the education authorities and the SABC, the programme achieved a certain level of institutionalization (DfID, 2004). It developed to form an integral part of the educational departmental structures with respect to in-service training and support to schools. Nevertheless, sustainability remained a problem, with programme remaining dependent on international donor support, as opposed to financial support from the educational authorities.

8. Drawing the threads together: What are the lessons learned and what can other projects take forward?

As Creekmore (2010) has suggested, projects are transient, and have "a beginning and end" (Turner & Muller, 2003, 1). In the South African Radio Learning Programme, sustainability remained a major tension over its entire life of the programme. The beginning was filled with optimism, while the end of the programme's work was unfortunate, but perhaps inevitable in the context of the funding crisis affecting the work of NGO's internationally.

The South African Radio Learning Programme was fortunate in attracting generous international donor support over a period of seventeen years. There were many areas in which the programme's implementation was limited and the support provided to schools and teachers less than perfect. On the basis of evidence from ongoing evaluation (Potter and Naidoo, 2009a; 2009b), it cannot be claimed that the programme's approach was the ultimate, nor that its work was ideal. Nevertheless, it can be claimed that the South African Radio Learning Programme had wide-scale influence over a period of seventeen years, and played a positive role in improving quality of teaching in large numbers of schools at lower primary school level. It also contributed to increased self-efficacy of teachers in terms of improving their ability to implement outcomes-based education in their classrooms.

On the product level, the programme's influence can be estimated in terms of the scale of the programme's outreach. As at the end of December 2009), over ten million learners in approximately 10% of all South African primary schools had been involved in the South African Radio Learning Programme's interactive radio lessons in the foundation phase of primary school, over a seventeen year period. From the programme's inception at the beginning of 1992 to 2000 the programme grew rapidly. Over period 2001 to end 2009 while the programme was supported at scale, there were an estimated 40 000 primary teachers and 1.3 million learners across nine provinces who utilised the programme's materials annually.

On the process level, the influence of the South African Radio Learning Programme on teachers and schools is more difficult to estimate, for the reason that our data suggest that, despite support and endorsement from educational officials in all nine provinces, there were wide-scale variations in the way in which the programme was implemented at classroom level. It is clear from our data that the teacher and pupil support curricula developed by the

programme were well tested in the field, having been developed, implemented and evaluated in the classrooms of large numbers of teachers.

What other projects can take forward is the evidence of positive response from teachers in large numbers of schools and classrooms to the provision of in-service training and classroom-based support by the project team. There was consistent evidence from our data that this was perceived to be beneficial, for the reason that the programme's model of open learning, though based on limited material support to schools, nevertheless addressed a number of needs, and provided the type of material and in-service training support which was not provided by the education system. A high level of advocacy for the programme's approach thus developed among teachers.

In schools and classrooms, our data also indicate that the influence of the programme on teacher practices took place not only in the half hour daily interactive radio lessons beamed nationally by the SABC, but also in the use of its materials for teaching English across the curriculum. In many classrooms, in addition, there was adoption by teachers of a focus on the type of classroom-based evaluation of teaching practices advocated by the programme over its seventeen year life (Potter, Chand, Naidoo and Friend, 2007; Potter and Naidoo, 2007; 2009a; 2009b; 2010). On the basis of perceived value and relevance, the programme was also endorsed by the principals at school level (Silva, 2008), those educational officials tasked with providing in-service training to teachers at provincial level (Potter & Naidoo, 2010), and by the provincial and national educational authorities.

9. Summary and conclusions

This chapter has focused on teaching, learning and sustainability issues in distance education, by focusing on the development and implementation of an interactive radio learning programme implemented in 11% of all South African schools. It has highlighted changes which took place in the programme's vision, and in its curriculum over the seventeen year period of its implementation in schools. Our narrative has focused in particular on contrasting visions of radio learning and on shifts in the programme's implementation theory which took place over this period.

This chapter has highlighted a shift in vision of the project team from a skills-based view of educational change to a process vision of educational change based on open learning principles. The evidence from our evaluative data would suggest that the shift was from a product to a process view of curriculum (Hamilton, 1976; Stenhouse, 1975; 1980; 1981). This remained the central guiding principle on which the programme's theory of implementation was based over the fifteen year period post the advent of democracy in South African in 1994.

We have characterized this as a shift from a vision of educational change as product and skills-based to a product-based and process-related vision, in which curriculum content can form a basis for supporting teaching and learning in the classroom. We have also traced the programme's growth to scale, and suggested reasons for its acceptance by teachers and learners, as well as its endorsement by principals and educational officials, as it grew from providing support to an initial 360 teachers and 14 500 learners under USAID funding in 1993, to an estimated 45 000 teachers and 1 800 000 learners under maximal DfID funding in 2004, and an estimated 40 000 teachers and 1 300 000 learners across all nine provinces of

South Africa who utilised the programme's materials during its final year of operation in 2009.

Our data would suggest that both the product and process levels of the curriculum were successfully developed and implemented post 1994, in a large number of classrooms. With DfID funding, the programme expanded to implementation across all nine provinces, and in 11% of all South African schools. The programme's implementation over the final five year funding period was based on a model in which programme implementation was tied to use of participatory evaluation methods in providing in-service training to teachers at school and classroom levels. Our data would suggest that this approach had great potential. Our data would also suggest clear longitudinal indications of advocacy on the part of teachers, principals and educational officials. This evidence was tapped through interviews, questionnaires and focus groups, and was consistent over the entire seventeen year period of the programme's life.

In terms of use of radio as a way of reaching large numbers of teachers and schools, we have highlighted in this chapter clear longitudinal evidence of perceptions of the value of the curriculum materials, and of the benefit of the in-service training and support provided by the programme at school and classroom levels. However, sustainability remained a major problem and an unresolved issue in the programme. The South African Radio Learning Programme ceased its operation after seventeen years of implementation on a national level, at a time when it had achieved the advocacy of all nine provincial departments of education.

In terms of lessons learned, the relevance of the programme's work can be gauged not only from the extent of its outreach, but also from the endorsement of all nine provincial education departments across South Africa. Based on the advocacy of teachers, principals, and educational officials, the first level of institutionalization of the programme's work was achieved, involving the departmental and ministerial endorsement of the in-service involvement of large numbers of teachers in the programme's teacher support group activities and workshops, as well as the use of the programme's learner support materials by teachers as an integral part of their classroom teaching. Nevertheless, despite a memorandum of understanding from the Ministry of Education indicating the intention to continue the programme's work in five hundred primary schools, the second level of institutionalisation involving financial support from the educational authorities was not achieved.

On the teaching and learning level, the evidence we have presented in this chapter would thus support the research on school development indicating the importance of developing support and advocacy among multiple educational stakeholders (Fullan, 1982; Fullan & Stiegelbauer, 1992; Hargreaves, 1992; Hargreaves & Fullan, 1992). It would also support the resurgence of interest in radio learning and its potential in teacher development, particularly in developing countries (Bosch, 1997; 2001; Perraton, 2000; Perraton, Robinson & Creed, 2001; 2007; Robinson & Latchem, 2003). On the sustainability level, what is clear from our data is that the discontinuation of the South African Radio Learning Programme's work at the end of 2009 left a number of gaps in in-service training of teachers at primary school level across the South African education system.

It is our hope that the South African ministry of education and provincial education departments will move to address these needs in the future. It is also our hope that other

educational projects will take forward lessons learned from the South African Radio Learning Programme's experience, in meeting the wide-scale needs of teachers for in-service training and support in this and other developing countries.

10. References

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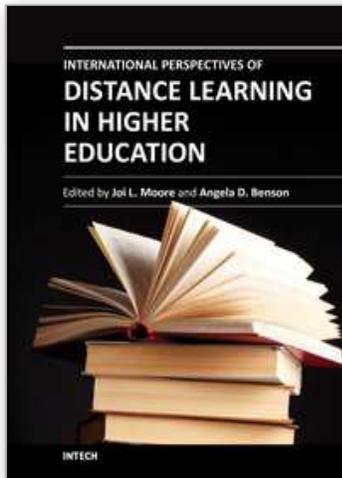
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