Narrowing the gap: Using aided language stimulation (ALS) in the inclusive classroom

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Positioning the programme within South Africa’s current educational landscape
It is recognised that current strategies and programmes have largely been insufficient or inappropriate with regard to the needs of children and youth who are vulnerable to marginalisation and exclusion. When analysing barriers to learning and development in South Africa, the NCT-SCET and NCESS, stated that inequalities in society, lack of access to basic services and poverty are factors which place children at risk, and thus contribute to learning breakdown and exclusion of children with disabilities. According to the Education White Paper 5: Early Childhood Education, approximately 40% of children in South Africa grow up in conditions of poverty and neglect. It is well known that children raised in such conditions are at risk for low birth weight, delayed development, poor adjustment to school and learning problems. When taking cognisance of these numbers it becomes clear that it is imperative that the early learning experiences of such children are optimised, in order to minimise the effects of early deprivation and exclusion.

The South African Government’s strategic plan, the National Programme of Action for Children, focuses on the delivery of appropriate inclusive and integrated programmes for all children, but in particular for those from poor families, those who experience barriers to learning and those affected by the HIV/AIDS pandemic. In addition, Education White Paper 6: Special Needs Education describes how policy will systematically move away from using segregation according to types of disability as an organising principle for access to schools and services. Current legislation mandates that teachers meet the needs of all learners and this implies inclusion of all learners in mainstream contexts. Firstly early identification of barriers to learning and secondly, effective modifications to teaching environments, curricula and methods. Thus inclusion is seen as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education.

The aim of inclusion is therefore to provide education environments where diversity is seen in a positive light by both teachers and learners, and accommodations are made for all. According to Pendlebury and Enslin “marginalized people must have authentic opportunities to influence [their] outcomes” (p. 46). Furthermore they stated that educational exclusion, for example for learners with disabilities, serves not only as a barrier to inclusion and participation, but also inhibits self-development. They conclude by stating that “without educational inclusion, individuals are deprived of opportunities for developing those capabilities essential to living a fully human life” (pg 47). Mitter echoed this sentiment and stated that inclusive education is an essential building block in cultivating a more inclusive society where diversity and difference are integrated into the experiences of all who form part of a community.

South Africa’s progressive legislation supports inclusion, thus providing a potential vehicle for change. However the greatest challenge to implementing inclusive practices arose as a result of cumulative changes in both the context in which education takes place, as well as changes in the process of educating learners. Mainstream and special education teachers were trained separately and until 1994, different educational support services in South Africa were managed by racially segregated education departments – thus service provision was characterised by glaring inequalities and inconsistencies. As a result many teachers’ preparation programmes did not provide teachers in mainstream education with the experience to develop the necessary skills and to cope with learners with disabilities in their classrooms. Thus the introduction of inclusive practices in the classroom, whilst benefiting the learners, has impacted on teachers’ stress as mainstream teachers continue to perceive that they are unable to handle the needs of the learners, as a result of the limited knowledge and skills they possess regarding teaching learners with barriers to learning. This has led to feelings of incompetence as well as negative attitudes towards the process of inclusion amongst many teachers.

It is possible to minimise the apparent stressful experience and negative consequences perceived by the teachers, by addressing these areas of concern through pre-service and in-service training. However, it would be insufficient to address issues related to inclusive teaching practice within teacher training without taking into consideration the specific challenges within the South African context vis à vis multi-level teaching in relation not only to various levels of ability, but also in relation to diverse languages, cultures and special needs. Whilst this lack of knowledge, skills and competence to teach in an inclusive classroom is widely acknowledged in the literature, very little data are available in South Africa that document successful inclusive practices and in-service training programmes.

For this reason the activity-based intervention framework was chosen as a point of departure for teacher training on inclusion within this context. Activity-based intervention can be defined as a transactional approach that uses naturally occurring actions and reactions to develop functional skills, by embedding children’s learning in play activities or routines which are often child initiated. The approach emphasizes meaningful, functional and developmentally appropriate activities and recognises the interaction between the learner and environment. The role of the facilitator...
of these identified aspects together with the principles suggested by UNESCO in the presentation method and activities forming the basis of the programme.

**Methodology**

The project consists of two distinct phases and each will be discussed separately before concluding with the evaluation of the project.

**Phase 1: Training of a large group of teachers**

**Aims of the training programme**

The aim of the first phase focused on theoretical understanding to increase teachers’ knowledge of inclusive education practices. Inclusion is a relatively new practice in South Africa and established teachers have received little or no training regarding management of learners with disabilities. In order to address the knowledge component the following broad aims were formulated bearing in mind the areas highlighted by Buell, et al.16: a) to present an introduction to disabilities and create awareness for matters of concern for people with disabilities; b) to increase teachers’ knowledge in terms of the different ways in which optimal communication stimulation can be provided, by using multiple communication means, eg, speech, objects, gestures and graphic symbols and voice output communication devices; and c) to increase the scope of teachers’ knowledge of teaching strategies that can facilitate and enrich classroom participation of all learners.

**Participants**

The initial training was presented to a group of 80 preschool and grade one teachers in the North West Province of South Africa. The composition of the participants was 98% teachers and the remaining 2% were therapists. The qualifications of the teachers varied: 8% had a grade 12 education or less, 12% had a one to two year teaching diploma, 47% had a three to four year teaching diploma and 33% had a four year post-graduate teaching degree. All the teachers came from rural, under-developed and under-resourced schools where they experienced overcrowding in the classrooms (average of 45 learners in each classroom) as a result of lack of resources in the area. In relation to exposure to learners with disabilities, 50% of the teachers had no experience, 25% of the group relied on in-service training regarding the management of learners with disabilities in the classroom, while 24% and 6% respectively obtained either diplomas or degrees in the field of special education.

**Content and presentation of the training programme**

The training continued over a two-day period and the time was allocated according to the aims stated above. The percentage of time spend on each area was as follows: 10% - discussion of disability issues and an overview of most prevalent disabilities; 50% - discussion of adapted curriculum-based activities which included play as a teaching medium and the importance of communication for a learner. Here augmentative and alternative communication strategies were introduced to facilitate learning and development of communication of all the learners. The remaining 40% incorporated discussions of strategies to optimise the development of learners with disabilities. Adaptive teaching strategies were demonstrated and practised using curriculum-based activities (eg, strategies to adapt materials, facilitate different learning styles, correct seating)16. These strategies were not only applicable to learners with disabilities, but could also be successfully implemented to facilitate learning for the whole class.

The training was based on adult learning principles17. Teachers’ prior knowledge was incorporated during these discussions and the focus was on realistic problems through the use of video recordings and role-play of real cases. Thus the training consisted of theoretical input supplemented by a practical session, as adults learn best through direct participation. The practical session focused on skill training and included the practice of teaching strategies as well as the development and manufacture of adapted teaching materials for their own schools.

**Phase 2: Follow-up session at identified schools**

**Aim**

A pre-test–post-test over time design was used to evaluate the implementation of ALS by teachers in their respective classrooms. Three specific aspects were included in the training and evaluated in this phase, namely: a) classroom management strategies, b) use of ALS, and c) fa-
cilitation of interaction. The teachers’ performance was plotted during the follow-up sessions.

Development of material for curriculum-based activities
After the initial theoretical training, materials for the follow-up skill development sessions were designed for three distinct activities: sand play, story time, and an arts and crafts activity for the grade R classrooms, and three themes: family, friends and emotions, safe neighbourhoods and healthy eating habits, for the grade 1 classrooms. The facilitator board used in the preschool classroom, as seen in Figure 1, consisted of 16 graphic symbols (Picture Communication Symbols) with their background colour coded according to the Fitzgerald Key approach. The board consisted of four descriptors (orange), four verbs (pink), three prepositions (green) and five exclamations (blue). They were glued to an A1 size sheet of black cardboard and then laminated. Two additional strips of Velcro were attached to the board so that the supplementary symbols for the three activities could be attached. Each activity had a script which incorporated all the strategies of ALS and therefore assisted the teachers in using the boards optimally as well as ensuring participation of the learners.

In the grade 1 classrooms a separate facilitator’s board was designed for each activity to assist with formal curriculum adaptation, maintaining the use of ALS. The vocabulary on the boards and cards was provided in both the home language of the learners (English or Setswana or Afrikaans) as well as the language of teaching and learning (English or Setswana or Afrikaans). In classes where the home language and language of teaching and learning was the same, teachers were allowed to choose which language they wished to have as the additional language on the material. The material and content can be viewed in Figure 1 and Table I.

Follow-up skills training
Four follow-up visits were then organised with six grade R and six grade 1 teachers at six different schools. The focus of these visits was to assist teachers in the implementation of ALS, to identify the challenges to implementing the activities, and to facilitate problem solving of these issues. The procedure for each session included a demonstration by the researchers of one activity, using the adapted teaching strategies. This training and learning opportunity was used to teach and problem solve uncertainties before the teacher had to present the activity to the class. After each session, the teachers engaged in a process of self-reflection and rated their performance on the three aspects discussed under the aims. Each teacher was rated twice on each activity, with a one-week break in between the ratings in which she could incorporate the comments given during the feedback session. Therefore, the teacher had one week to practise her skills before another evaluation was done. A schematic representation of the data collection process and procedures is shown in Figure 2.

Teaching materials
The materials for each activity utilised during this training included facilitation board and supplementary symbols for the activities, scripts indicating the logical sequence of the activity, suggestions on how to utilise the ALS boards, consumable materials for each activity, and teachers’ self-rating scale of classroom interaction patterns.

Data collection instruments used
The teachers completed a self-rating scale after each follow-up session to monitor their own performance. This scale consisted of three items relating to the three aspects mentioned previously. Examples of the

Table I: Grade 1 teachers’ ALS materials and supplementary symbols
types of questions for each aspect are: Is the teacher able to accommodate or adjust her teaching strategies for learners with different needs? Does the teacher coordinate her pointing to the board and speaking simultaneously? Is the teacher able to assist learners who demonstrate a breakdown in comprehension? The format of the scale utilised a four point Likert type scale ranging from seldom, sometimes, most times to always. The teachers and researchers independently completed the rating scales and then agreed upon a consensus score based on feedback. This opportunity for the teacher to compare her self-rating to experienced scales and then agreed upon a consensus score based on feedback. This opportunity for the teacher to compare her self-rating to experienced external raters, provided a learning opportunity regarding objective rating of performance.

Results and discussion

The Friedman test was used to measure differences in the teachers’ performance across the six sessions, for each of the three aspects investigated. The Friedman test is a non-parametric statistical test which is an alternative to the repeated measures ANOVA. The results are discussed according to the teachers’ gains across sessions, as well as the general patterns that emerged regarding each of the three aspects, namely classroom management strategies, use of ALS and facilitation of interaction. The results from the Friedman test appear in Table II. Significant differences between sessions are indicated by the use of the different postscripts “a” and “b”.

Teachers’ gains across sessions

As seen in Table II the difference between first and last performance rating was significant for all three constructs, as indicated by the different postscripts in Table II. Further investigation revealed that for all of the constructs there was a significant difference between the initial rating of the first activity (A₁S₁) and the second rating of the second activity (A₂S₂). In addition, no statistically significant difference occurred between the initial rating of the first activity and the initial rating of the second activity (A₁S₁; A₂S₂) and the second rating of the second activity and the second rating of activity three (A₂S₂; A₃S₃). This indicates that mastery of new skills is developing, as the teachers’ skill levels are reaching a plateau.

This difference between the initial rating of the first activity (A₁S₁) and the second rating of the second activity (A₂S₂) implies that teachers used the successive practice attempts to refine the skills taught. The teachers acquired skills which were maintained, and utilised in subsequent sessions to improve their performance further. This was, however, coupled with a decrease in their performance with the introduction of each new activity, as can be viewed in Figure 3. The nature of the task differed slightly for each activity and therefore required adjustment in terms of lesson materials and outcomes, which may have accounted for the decrease, although the strategy of ALS remained constant across all the activities.

Teachers’ gains across constructs

It is clear that adaptation in teachers’ behaviours with regard to presentation strategies and methods occurred. A distinctive pattern of skill acquisition can be seen in Figure 3 and Table II in which teachers’ classroom management strategies trial facilitation of interaction and use of ALS. This pattern is to be expected, as interaction and use of ALS are focused on the implementation of strategies, which formed the basis of the training. Similar findings were reported within the group of teachers with regard to the impact of ALS in the classroom[22]. The rapid increase in skills within these aspects may be as a result of the demonstration and immediate feedback received. Both of these are fundamental adult learning principles and should be built into all adult training programmes[23].

Skills in using ALS and facilitation of interaction developed in tandem. Therefore, teachers’ exposure to ALS facilitated the realisation that they could use ALS to assist them in monitoring and assessing children’s interactions. This may be one possible reason why these skills developed in tandem, as teachers used their newfound skills to manage the curriculum-based activities as well as the learners’ interactions. It would appear that by rating their own performance the teachers gained insight, not only into their own teaching strategies, but also into the interaction patterns of learners in their classroom. In addition, a movement away from a teaching strategy where questions and answers were used to measure understanding, towards augmenting this by using alternative responses such as pointing, signing and drawing, is evident. Classroom management strategies was the area in which the least gain was observed across the teachers’ performance. This finding is similar to and aligns with the results reported by Cegelka and Doorlag[26]. Facilitation and the use of ALS were maintained and eventually become habitual and, through repeated practice sessions, it is expected that the teachers’ classroom management skills will also become habitual.

Evaluation and implications

As so aptly expressed by Bruner (as cited in Brewer)[25], “It matters not what we learnt. What we can do with what we have learned… that is the issue” (p. 3)[15]. Narrowing the gap between practice and theory, ie, knowledge and skills[14], is therefore pivotal to the success of teacher training. It is
evident that the orientation session together with the follow-up sessions allowed the teachers to create the link between the theory, presented during the orientation session, and the skills training facilitated during the follow-up sessions. ALS as a strategy was successfully employed within this context and facilitated an increase in teachers’ performance in the three aspects measured. Adult learning principles work best when incorporating a variety of teaching methods and perceptual modalities and this is characteristic of ALS as a strategy in which visual, print, oral, interactive, tactile and kinaesthetic modalities are incorporated. This multi-modal approach to facilitating skill acquisition may have contributed towards the rapid gain in skill which the teachers experienced while using ALS principles in the classroom. In addition, the very nature of ALS as an adapted teaching strategy, due to its scripted routine, enabled teachers to become more observant regarding the children’s participation once the teachers became familiar with the script.

As the training programme was based on the guidelines stipulated by UNESCO, improved levels of knowledge and skills were observed. The fact that the training programme was developed using a core set of valid principles proven from literature to yield effective results, contributed largely to the successful outcomes achieved. The need for in-service training targeting inclusive teaching practices was identified by the Department of Education. Therefore, there was a willingness from the teachers to become engaged in a process of self-development. The training in Phase 1 created opportunities for teachers to consolidate support networks with colleagues in the same region. The fact that selected teachers had the chance to connect theory and practice together by participating in both phases of the training, created additional opportunities for learning through self-reflection. The repeated opportunities to engage in self-reflection mediated by experts, contributed to the sustainability of the teaching strategies taught.

It is difficult to develop a model of best practice for training in this context. Evidence-based practice refers to the extent to which strategies utilised in practice are based on fundamental principles supported by research. However, documenting and sharing findings are essential not only to facilitate critical reflection of the strengths and weaknesses of the process, but also to provide the guidelines onto which subsequent endeavours can be projected. It is therefore critical that researchers rise to the challenge to reflect continuously on the effectiveness, versatility and sustainability of projects.

Conclusion

Results from this study indicate that ALS is a means to increase teachers’ ability to facilitate interaction in the classroom, using curriculum-based activities. Teaching is a tension filled practice and challenges of inclusion should be addressed to ensure sustainable changes in attitudes, acquisition of knowledge and skills and engagement in the process of self-development. It is only by evaluating outcomes in relation to training effectiveness that training can become more sustainable and versatile, thus facilitating positive functioning of teachers in mainstream classrooms.

References


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