

## Augmentative and Alternative Communication: Requirements for Inclusive Educational Interventions

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**ABSTRACT** The objective of the present study was to explore the extent to which the Department of Basic Education catered for learners in need of Augmentative and Alternative Communication systems in an inclusive education context. The group includes learners with little or no functional speech, learners who are blind, learners with low vision, learners who are deaf blind; and (as relates written text) learners who are deaf. The study investigated adaptations to texts prepared for these learners. A qualitative research design was used to investigate ways in which the Department of Basic Education (DBE) provided for the communication needs of the different groups of learners in an effort to satisfy their implementation mandate as key stakeholders within the framework of inclusive education in South Africa. Findings revealed that there is need for comprehensive teacher training and the provision of adequate material resources to provide for the communication needs of different groups of learners.

### INTRODUCTION

Inclusive education is prominent on the South African agenda, as dictated by the national constitution and articulated through both the South African Schools Act and Education White Paper 6 of 2001 on inclusive education and training (Department of Education 2001). Despite the fact that a lot of consultation was done before and after the pronouncement of the policy on inclusive education, it has taken over thirteen years of inertia to see the flow of actions going beyond awareness raising workshops for teachers and up-stream decision makers. Some decisive action is beginning to emerge, which suggests increased government interest and volition to implement the policy. Groups of teachers are beginning to receive training in basic braille and sign language. The Department of Basic Education declared 2013 the year of inclusive education.

Literature on inclusive education in South Africa is weighted towards a postmortem of what has and has not been done well in its implementation (Pambazuka News 2012). The study is a pro-active reminder to key role players in the implementation of the inclusive education policy, to appreciate important aspects of inclusivity which have an impact on the successful inclusion of learners with various communication barriers to learning. It places proper planning on the apex of the provision of interventions. It is a

shift from reactive advocacy to proactive entrenchment of a democratic culture in educational planning (Van Niekerk 1999: 21). In various ways, learners with severe to profound communication needs which require Augmentative and Alternative Communication interventions constitute a small minority of the national population, so that their needs may not be adequately considered during planning. As an example, it is noticeable that the training of teachers of children with hearing impairment, visual impairment deaf-blindness and autism has almost ceased as is the trend elsewhere (Hartmann 2012: 728). Such considerations are especially important in South Africa where implementation will have to be large-scale to cater for a national population of fifty million people.

Traditional literature confines the application of augmentative and alternative communication to measures taken to aid the communication of learners and other people with conditions that inhibit speech; such as cerebral palsy, apraxia, autism, aphasia, traumatic brain injury and multiple disabilities (Bornman 2005: 171). The study approaches augmentative and alternative communication from a broader perspective which includes the needs of other groups of learners, on aspects where their traditional means of communication do not exhaust matters concerning adaptations of media to enhance communication. As an example, one would not regard providing for the Deaf and the blind as augmenting their communication.

Essentially, there are limitations in their means of communication (sign language and braille) which imply the need for augmentative provisioning. Technological improvements to communication for both the blind and the Deaf testify to the need to augment existing communication channels for the two groups (Lumadi and Maguvhe 2013: 246). The quest for meaning even among the blind and visually impaired is ever increasing as pictures and complicated diagrams do not ordinarily make tactile sense to the blind and other groups of people who experience visual perceptual problems (Braille Authority of North America 2012; Tiresias.org 2014).

Teachers should learn how to teach children to interpret pictures which have been converted to raised forms. As illustrated by Kitchel (2012) teachers perfect their skills in accommodating learners in all possible ways through practicing Augmentative and Alternative Communication methods. Teachers should be equipped with skills to accommodate learners who heavily rely on tactile feedback (University of Utah 2011). Learners should be helped to use models and to obtain details from texts quickly, to capture essential information for content mastery. Young learners should get as many skills as their teachers could impart for them to be avid readers and proficient learners.

Currently, there are many user interfaces on the market to allow for speedy mastery of content. Technical Graphics Design software is available for the teacher and the learner (Windows 2013). The present study suggests areas of attention to education planners, for them to concentrate on essentials for the education of various groups of learners who need augmentation in educational communication. To aid the learner to appreciate form in the physical world, it remains important to orient the learner to the graphic representation of three-dimensional figures and other types of diagrams (The Braille Authority of North America 2012). Insight into what makes meaning to learners with different impairments should enable hand-tailored educational planning to cover details on appropriate provisioning.

Fundamentally, teaching is hinged on effectual educational communication. Core pedagogical and andragogical considerations should circumscribe modalities for effective communication with various groups of learners such that that all groups of learners mentioned earlier ben-

efit from classroom pursuits. In the case of the deaf, it has become fashionable for example, to twin text with sign language on DVDs, serving the same purpose as subtitling or captioning (Wikipedia 2013).

The rationale behind inclusivity in the classroom is the creation of a democratic society. Democracy in education is inclusive. As an example minimum standards have already been set for certain types of digital provisioning for the deaf, to enhance their comprehension of visual information. In terms of captioning, a standard example is compliance to specifications set by CEA-708 (Information Healthcare 2013). The application of Real-Time Text technology gives even better access to conversation-like production of (and response to) text-based communication. True inclusion of learners who are deaf requires curriculum planners to improve the way in which content could be presented for it to be more understandable to deaf learners, through augmenting traditional means of communication for learners hitherto considered as not belonging to the community of augmentative and alternative communication users. In essence, on a micro level inclusive education is about teacher and learner social preparedness and therefore psychological disposition. On incrementally higher levels, it is about provisioning for the creation of classroom environments for all learners.

In general inclusivity in education is about sharing good practice as an enlightened society. Sardonic critics of inclusive education are of the opinion that there is no empirical evidence to the benefits of inclusion especially as it relates to 'academic gains and graduation rates' of included learners (Learning Rx 2014) but the evolution of human societies through attitudinal change testifies clearly to the practical viability of seeing sameness among all humans, and seeking for the longevity of the enabled lives for all human beings. Actual practice has also shown that sound education is a powerful roadway to successful transition in social status (Lumadi et al. 2012).

Learning environments should cater for all learners if democracy should pervade the culture of the classroom. Education planning could specify consideration for the inclusion of some technologies which were hitherto unthinkable for the classroom as teachers could consider conversing with their learners actively using Real-Time Text (Real-Time Text 2014).

The broad concept of Augmentative and Alternative Communication in this study makes it imperative that the teacher makes the curriculum available to the learner in such a manner that the learner accesses the curriculum fully. Provision of materials to articulate the curriculum should by any practical means ensure that all essential elements of the curriculum are presented in accessible format. Democracy in education should engender a culture of informed, provision of relevant materials to all learners in the education system.

### Study Objectives

The following are the study objectives:

- ♦ To explore and describe the extent to which AAC is provided to different learners with different learning needs
- ♦ To identify and describe factors that could influence and/or impede AAC in its quest for educational intervention
- ♦ To discuss the research outcomes and draw recommendations to advise all stakeholders involved in AAC.

### Rationale

The rationale for writing this paper is to review existing AAC practices in South Africa. The main factors which influence/impede the provision and effective utilization of AAC in South Africa will be explored in depth. The paper also endeavours to reveal the perceptions of participants comprising teachers, workers in Disabled Students' Units (DSUs), parents and a former principal of a special school.

The paper gives readers a further vehicle through which insights could be gained about the experiences, feelings, problems and practical realities of participants. The paper tries to suggest some tips to those problems in the hope for evidence based redress in South Africa.

### METHODS

This study employed qualitative research methods to establish South African education practitioners and parents' perspectives on the extent to which AAC facilitates inclusive educational interventions and good practice.

The study was primarily guided by the following main research question: What constitutes requirements for inclusive educational interventions? Additionally, there were four sub-research questions on various aspects of the relationship between inclusivity and augmentative and alternative communication:

- Q 1.* Is the AAC concept and practice embraced in inclusive schools? If yes, to what extent?
- Q 2.* To what extent do educators who have learners with diverse needs possess requisite skills and training to address those needs?
- Q 3.* What could be done to enhance AAC at inclusive schools?
- Q 4.* Mention any policy that addresses the provision of AAC at inclusive schools?

### Design

The author used the qualitative research method. Eight participants were involved in the study: one member of the Department of Augmentative and Alternative Communication at the University of Pretoria, two participants from the disabled student unit (DSU) at the University of Johannesburg, an ex-principal of a school for the blind, an English language specialist from the DBE and three parents of learners with moderate communication disabilities.

Face to face interviews and follow-up telephonic interviews were conducted with the eight participants. Individual interviews were conducted with each participant for 40 to 50 minutes. Semi-structured interview schedules were employed to gather the views of interviewees. Interviewees were part of the task team which adapted books for learners without speech, learners with visual impairments, and deaf learners. Their inputs centred on the most effective means of communication for learners mentioned above. A significant amount of information on adaptation of text for learners with visual impairments was contributed by the former principal of a school for the blind, who is also a materials developer and an author. The author of the present article provided fill-in information on the education of people with visual impairments. Learners' grievances on the provision of text in accessible formats were reported by research participants as indirectly implying the low capacity of

braille printing houses in meeting the needs of some learners (at least learners using braille).

### Data Analysis

Data was analysed in the context of the four sub-research questions presented under methodology, above. Themes used were directly emerging from the sub-research questions used.

### Ethical Considerations

Informed consent was sought from individuals involved as participants through verbal consent. This was in accordance with the principles of social research ethics and human rights. The researcher followed and maintained ethical procedures to protect participants involved in the study against any form of violation of human rights, free wills, integrity, confidentiality and beneficence. The option to refuse to participate was well-explained. In addition, a separate room was secured and used for interviews at the venue in order to grant personal privacy and comfort during the interview process. Participants felt comfortable with the designated place of interview and did not choose alternative venues or rooms for interview purposes. Local customs, institutional cultures and values were respected during the conduct of the study. An arrangement was made beforehand to ensure that the outcome of this study would be made known to all parties involved in Augmentative and Alternative Communication in South Africa.

## RESULTS AND DISCUSSION

Results of this study largely reveal gaps that should be filled on ways of improving access to educational content for learners with disabilities through considering their limitations in accessing information when it is presented in ways which are typical for learners without disabilities. The results and discussion are headed by the questions which the researcher sought to answer through interviewees' responses.

### *Q 1. Is the AAC Concept and Practice Embraced in Inclusive Schools? If Yes, to What Extent?*

The AAC concept is effectively applicable when school-level practitioners have mastered

communication systems which apply to their group of learners. Data gathered and analysed reveals that of late, the South African Department of Basic Education has been actively involved in preparing teachers (at least in special schools) to understand special media for learning, such as the South African Sign Language (SASL) and braille. The mastery of those communication systems enables teachers to offer an appropriate curriculum for all, which is the aim of inclusive education (Farrell 2001: 8).

Participants opined that true educational inclusion was about ensuring that learners in traditionally marginalized and isolated groups got all physical and social environmental information which assisted any other learners to manage their environment for personal and community survival. Inclusive education was not merely about physical contiguity of learners with different barriers to learning through placement in the same school. Teachers therefore had to have extensive skills to enable all learners to communicate effectively with members of their communities, teachers and other learners. Thus, learners who have problems expressing themselves verbally had to be equipped with alternative means of expressing themselves both in the formal learning context and outside. Participants who were familiar with the activities of the Department of Basic Education (DBE) were of the opinion that it was time to re-capitalize all special schools so that they would serve as resource centres for full service schools which surround them. They expressed that if special schools remained poor, they would not have much to give to poorer full service schools. The following verbal quotes illustrate these findings:

*Inclusive education should include all sheds of learners in the classroom, even those with barriers to speech-based communication. It should also permit learners with the need for other communication media to use such media ordinarily to articulate their thoughts freely and effectively* (Participant 6).

*The DBE has now started training teachers in sign language and braille to ensure proper communication between teacher and learner, as outlined in Education White Paper 6. What remains is for them to equip special schools so that they could strengthen full-service schools which would in turn influence other schools to create a wholly inclusive school culture* (Participant 7).



It was also revealed that beyond the role of a well trained teacher, the quality of ‘communication’ conveyed in examination question papers was an element of inclusivity which was often absent in national examinations. In that view, the inappropriate adaptation (or non-adaptation) of question papers was a matter of functional exclusion, as noted by Ajuwon and Oyindale (2008: 327). The following verbal quote illustrates the findings:

*It is common to ... see un-adapted examination scripts or other Annual National Assessment instruments, yet examination bodies at the two levels [Basic and Higher Education] are aware of the nature of their students and learners. Students now declare their disabilities on application to institutions of learning, and their declarations should be considered seriously, not only for the selection of residential accommodation, but also for their media requirements for appropriate learning and assessment (Participant 8).*

The comments made by the participants cited above seem to point towards the critical role that teachers should play as facilitators of educational communication as suggested by Spungin and Ferrell (2007). In that regard, the education system has to be equipped with learning devices and print adaptation which both teachers and learners should find understandable and useful.

***Q 2. To What Extent Do Educators Who Have Learners with Diverse Needs Possess Requisite Skills and Training to Address Those Needs?***

There is enough evidence to suggest that South African teachers are not well-trained to cater for the learning needs of all their learners who experience various barriers to learning. There are various examples of such deficits, which are evidenced by the department of basic education’s country wide move to train teachers in special schools in both braille and South African Sign Language. Besides, teachers point out such deficits at various meetings and workshops - from pre-school to Grade 12. There could also still be feelings of inadequacy expressed by higher level academics, as inferred from interviewees from the University of Johannesburg Disabled Students Unit.

In accommodating the communication needs of students in higher education, lecturing staff mostly churned out information to all students as if they were one, leaving the necessary innovation for student access to information in the hands of the DSU staff. In that respect, even in higher education some lecturers taught ‘courses’ such as Mathematics 201 rather than individual students. Inclusive communication was therefore at the periphery of educational communication, but “pronouncing the content, to which it could concern”. In actual fact, the content would be of concern to all but it would be inaccessible to those whose sense modalities needed augmented means of communication. These findings concur with the role of the teacher as a change-maker (Landsberg 2005). Effective teachers should be life-long learners on the means of communication that bring meaning to the teaching and learning processes.

It also emerged from the study that teachers did not have important specialized skills in addressing children’s varied needs. The following verbal quote illustrates these findings:

*I bet that the majority of us do not possess requisite skills and adequate training to address learners’ diverse needs. Isn’t it that the fish start to rot from the head? I am saying this because even some officials do not know and fully understand learners’ needs. So, what do you expect from us who are very junior? Our training workshops do not cover disabled learners and they are characteristically very short and unfruitful. Subject advisors do not know what adaptations are all about, so the Biblical Bartimea leads us where sight is needed. If that is the case, how could we improve our skills or acquire new ones? (Participant 3).*

It also emerged from the study that the number of teachers with requisite skills for effective communication in inclusive classrooms was still believed to be small. The following verbal quote illustrates these findings:

*There is a serious shortage of skilled teachers to address learners’ diverse needs. In the past, all who worked with these learners were obliged to receive a suitable qualification for genuine practice. Today there is need for in-service training workshops on various aspects of inclusive education from time to time. What makes matters worse is the policy of redeployment and rationalization. Good teachers are transferred to schools where their expertise is*

least applicable, and therefore wasted (Participant 5).

**Q 3. What Could Be Done to Enhance AAC at Inclusive Schools?**

The study further revealed that there was need for the Department of Basic Education to address the staff and material shortages which were apparent to educators. There should be more concerted efforts to meet the needs of learners with more communication needs than those of typical learners for whom hand-tailored learning materials abound. The following verbal quote supports these findings:

*I believe the answer to the shortage of specialist teachers is training. The DBE should spell out its expectations for a teacher and institutions responsible for teacher training will produce those teachers. The department itself will have to provide schools with materials which are in short supply (Participant 1).*

The mitigation of learning encounters for learners in need of augmentative and alternative communication is fraught with problems. There is an uneven availability of such resources across countries. In South Africa learners in schools for the blind (particularly), usually express dissatisfaction with a general shortage of important prescribed textbooks, or a delay in the delivery of such textbooks in accessible formats, or a lack of capacity on the part of printing and publishing houses. In some districts there could be a supply of workbooks embossed on unbound sheets, which learners find difficult to keep intact for long. Inadequacies in the provision of textbooks and workbooks for braille users are prominent, and teachers in this sector complain about the late receipt of learning teaching support material (LTSM). Experiences shared by interviewees used in this research touched on the relatively long time that it takes to produce a quality textbook in braille, taking into consideration the usual waiting period of one year that many who place orders to printing houses bear. The Department of Basic Education had to examine either the production or the distribution of requisite learning materials to identify the source of inadequacy. The following verbal quote supports these findings:

*At least in Gauteng province, the DBE struggles to supply textbooks selected by schools and they cite printing backlogs, but find it eas-*

*ier to produce unbound copies of workbooks. In that form, the workbooks do not last. Believe you me school administrators and learners are blamed for carelessness at the end of it all (Participant 6).*

*The DBE should speed up the dispatch of essential materials by establishing its own National Braille Printing Press to augment the efforts of overwhelmed traditional printers (Participant 2).*

**Q 4. Do You Know Any Policy That Addresses the Provision of AAC At Inclusive Education Schools?**

The perceptions of different participants to this question show a wide awareness of policies that could empower and improve disabled learners' access to educational and tutorial information. Since policies guide practice, participants' views were revealing. The study revealed that although the inclusive education policy embraced all learners with disabilities as covered by the requirement for redress, practice since 2001 has been slow in effecting important changes since the DBE has taken its time to effect and transform the actions provided for in the South African Constitution and spelt out in the SASA (1996) and the EWP 6 of 2001 substantially. Some contributions indicated that South African inclusive education was like a statue made of a diamond head (the policy planning machinery) and a trunk and limbs made of semi-dry clay (the implementation machinery). The expensive statue started sinking into itself the moment it was mounted for display!

The following verbal quote supports these findings:

*White Paper 6 is the policy advocating for inclusion at South African Schools. The reason why Inclusive education seems not to be working according to me is that this is a 20 year project. Addressing weaknesses and deficiencies of the current education system will be a mammoth and expensive task. Full access will have to be expanded for instance to: special schools/resource centres, designated full-service and other schools, public adult learning centres and further and higher education and training institutions. Twenty years is too short a period for a project of this magnitude (Participant 3).*

*Though we have a policy in place, a policy does not implement itself. I suggest that all policies, legislation, structures, etc. that are instrumental for facilitating the inclusive education transformation process be revised. That way, Inclusive education will take place as anticipated (Participant 4).*

### CONCLUSION

A careful analysis of the above results led to the following conclusions:

Existing printing houses have little capacity to meet the demand for braille books and other learning materials for different groups of learners who experience barriers to learning when they have to use typical print-based media for learning. There is therefore need to consider a wider range of options for the production of essential materials that support teaching and learning.

In-service courses for teachers do not adequately cover content related to the adaptation of communication media for learners in need of such adaptations.

There are few teachers and ministerial staff who are well conversant with the necessary accommodations for students experiencing barriers to learning, including the knowledge of Augmentative and Alternative Communication systems that apply mainly to learners with little or no speech.

There is little knowledge among many teachers to cater for the needs of learners who do not benefit fully from conventional tutorial media, such as the deaf and the blind.

There is need for massive qualitative teacher training for teachers to meet the wide-ranging educational needs of all their learners.

### RECOMMENDATIONS

On the basis of the above conclusions, this study recommends the following to inform practice:

Printing and publishing of textbooks and learning teaching support material

If the Department of Basic Education could establish a National Braille Printing Press, it would augment the current braille printing capacity through planned departmental output. That would also lower the unmet output of existing printing houses.

### Teacher Education

If the DBE could clearly spell out its requirements for teacher training to Institutions of Higher Learning, they would plan hand-tailored training to meet the quality of the envisaged teaching practitioner. In-service training would then be mostly on radical policy changes and other matters than teaching media and techniques.

### Role of Government: Staffing

If government policy on staffing could retain teachers in areas of knowledge where they had the best knowledge and promote or transfer them within those systems, there would be continuity in the growth of knowledge systems within school education. Such policies would promote a sound culture of teaching and learning.

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