An intervention Programme for Promoting More Effective Learning among Foundation Phase Learners in South Africa

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Abstract

The author defends the claim, based on her experience as a teacher in the Foundation Phase as well as on her experience as the educator of student teachers in this Phase, that a specially constructed intervention programme will improve Grade 1's learning in several key areas. She firstly show that such a programme is required, given the current achievement levels of Foundation Phase learner's assessment results in South Africa, and then report on the results of an experiment based on her survey of literature. The results of the experiment show that the intervention programme indeed resulted in improvement of learning according to the results of a standardized test.

Keywords: *intervention programme; assessment; multicultural; constructivist; learning and teaching; foundation phase*

1. Introductory Remarks

Annually, approximately one million learners are admitted to Grade 1 in South Africa (SA). Previously only about fifty per cent of them had the privilege of attending a crèche, a nursery school or Grade R (i.e. the Reception year) before entering Grade 1 (Rademeyer, 2001). Statistics in 2011 showed that still only 57% of SA children between five and six years of age attend Grade R classes, preschools or crèches (Dept. of Education, 2013). Attending Grade R will become compulsory in 2019. Based on her expertise as a lecturer in ECD in the field of early childhood education, extended practical experience both as teacher in this field and as teacher educator, as well as on the results of a systemic assessment of the achievement levels of Grade 3 learners (the Foundation Phase covers Grades 1 to 3) done in 2001, 2007 and 2012 she surmised that a specially constructed intervention programme would help Foundation Phase learners learn more effectively than they had done up to the time of the experiment. She subsequently found her surmise to have been substantiated.

The purpose of this article is to defend the claim that more effective learning among Foundation Phase learners can be attained by making use of a specially constructed stimulation programme as intervention, consisting of certain pedagogically relevant insights, especially with respect to learners in this Phase. She defends the claim by making use of three strategies: she first explain why an intervention programme was and still is required for this Phase; she then explains how, by making use of insights gleaned from a literature survey, she put a special intervention programme together, and then give an outline of an experiment that she has done, and concludes by discussing the findings.

2. The Need for a Specially Constructed Intervention Programme

In an effort to overhaul the entire school programme in South Africa, the National Department of Education began introducing in 1997 a revised curriculum based on the principles of outcomes-based education. In 2001, the same Department launched a process of systemic assessment of Grade 3 learners (i.e. the last year of the Foundation Phase, after three years that the learners had been subjected to outcomes-based education). The sample for the 2000 systemic assessment consisted of 108 000 of the Grade 3 learners (approximately 5% of this population). The findings were disappointing: the national average for Literacy was only 39%; for Numeracy it was as low as 30% (Dept. of Education, 2002a). These averages show that about half of the approximately one million learners that completed the Foundation Phase in 2000 had not learned effectively. This did not predict anything good for their

future both as learners in the other three Phases of schooling and for later in their lives as adults. A next systemic assessment was done in 2007. The average score for Numeracy was 35% and 36% for Literacy (Dept. of Education, 2013). These scores stay unacceptably low and show that South Africa's educational system has a crisis which influences the whole country.

As a means to uplift the teaching standards and to assess teacher's performance the Annual National Assessment (ANA) were implemented. The Minister of Basic Education on 5 December 2013 announced the results of the Annual National Assessments (ANA) of Grade 1-6 and Grade 9 learners and 2013 was the third year during which the Annual National Assessments were conducted. The ANA 2013 results were published in the document *Report on the Annual National Assessment of 2013,* and were published on the Department of Basic Education (DBE) website on 5 December 2013 (Dept. of Education, 2013).

The total number of learners (Grade R-6) registered for ANA 2013 was 6997 602. There were 23 622 public schools and 793 independent schools which registered learners for ANA 2013. 20 111 learners in 2 045 special schools participated in ANA 2013. The following table gives the number of learners per province in Grade 1, 2 and 3 that were part of the ANA.

Table 1. Number of Learners per Province in Grade 1, 2 and 3

Province	Grade 1	Grade 2	Grade 3
Eastern Cape	196 693	175 141	158 983
Free State	67 042	62 981	55 980
Gauteng	190 515	177 064	162 872
Kwa-Zulu Natal	270 913	237 400	222 295
Limpopo	151 583	138 973	12 645
Mpumalanga	99 040	90 770	83 227
Northern Cape	29 378	27 264	25 291
North West	80 851	76 321	71 800
Western Cape	104 263	93 350	85 657
SA	1 190 280	1 079 264	993 750

2.1 Overall Results

Table 2. Results over the Past 3 Years Grade 1-3

Gr	Home Language			Mathematics		
	2011	2012	2013	2011	2012	2013
1	59	59	60	63	68	60
2	52	55	57	55	57	59
3	35	52	51	28	41	53

Table 2 Results over the past 3 years Grade 1-3. In the Foundation Phase more than 60% of learners achieved 50% or more in Mathematics, although the average dropped from 2012. The statistics show that there are still problems regarding the teaching and learning in SA schools starting in the Foundation Phase.

2.2 Learning

Several definitions of 'learning' was considered such as those of Hutchin (2007) and De Witt and Booysen (2007), but found Jordaan and Jordaan's (1998) to be useful in the context of our this research: 'Learning is the name that we give to the process or processes that we assume to lay the foundation for perceivable behavioural changes in situations pertaining to exercise, teaching-learning and life experience' (Translated from the original Afrikaans).

The researcher is convinced that a well-conceived intervention programme for stimulating and promoting more effective learning would be required to redress the shortcomings of the prevailing situation in SA.

2.3 Intervention Programmes

Intervention programmes for young learners are important because such programmes are considered to be the most effective way in which deficits in development can be addressed, and learning barriers can be overcome. The application and the usefulness of intervention programmes are particularly significant for deprived learners in cases where multiple factors contribute to developmental deficits (Desouza & Zeck, 2003). Researchers emphasise the

value of early intervention programmes for the possible prevention of learning problems as well as for economic reasons where future remedial work regarding treatment of barriers to learning can be limited (Reynolds, Temple & Ou, 2003). In their research (Reynolds et al., 2003) they established that vast numbers of Grade R learners are not ready to learn upon commencing with their formal teaching programme. According to Currie (2000) it is difficult to determine the long term effect of intervention programmes, but the short and intermediate term programmes yield good results. If learners with deficits could be better equipped to be learning or school ready when embarking on formal school programmes, the effect on the learner in totality would be positive. Quality intervention programmes and adequately trained, dedicated teachers would both be contributory factors towards the success of programmes to get learners ready for learning (Morris, Tyner & Perney, 2000; Excell & Linington, 2008).

3. The Construction of the Intervention Programme for Grade 1 Learners

3.1 Theoretical Background

Convinced of the fact that intervention programmes would only be effective if it is based on principles that can be pedagogically justified for young children that typically find themselves in the first Grade of the Foundation Phase, the researcher went in search of such principles. A search of the literature indicated that there are important principles that should form part of intervention programmes:

3.2 Nutrition and Health

In 2005, De Witt (2005) found that only about half of the learners in SA enjoyed only one meal per day. The National Food Consumer Forum found that only about the same percentage of learners received only about half the nutrients that they required for healthy living. This condition is responsible for a plethora of problems, including impairment of the ability to concentrate and listen (Talitz, 2000a), lower IQ, behavioural problems and lower academic achievement (Martorell, 2003, also see Dreyden & Vos, 2001) and weak neurological functioning (Fourie, 1998). It therefore did not come as a surprise when the *World Health Report 2000* adjudged SA's health system to be one of the most inadequate in the world (placed at 175 out of a total of 191) (Talitz, 2000b; HSRC, 2013).

3.3 Emotional Factors

Children need warm and consistent care in order to form secure attachments (Winkler, Modise & Dawber, 2004 Meyer et al., 2002). Learning also depends on the inter-connection between emotion and cognitive ability. Emotions play an important role in organising learning (Gravett & Geyser, 2004). Effective learning furthermore depends on a learner entertaining a healthy and strong self-image (Pauw & Kok, 2003) and the ability to socialize effectively (Vermeulen, 2002).

3.4 The Teacher's Role

Because of the unfamiliarity of the new surroundings, learners who attend primary school for the first time have to enjoy an open and secure environment where they have opportunities for self-expression, and where self-confidence and personal development can be stimulated. Teachers therefore require knowledge and understanding of holistic development, both in terms of group and individual dynamics (Darvin & Van Staden, 2005). Teachers have to master the skill of sending positive non-verbal messages, of making learning a fun and challenging experience, of ensuring balance, of ensuring emotional involvement among learners, and of providing learning materials of the appropriate standard of difficulty (Gravett & Geyser, 2004). Teachers must be particularly aware of creating obstacles for learners, such as too difficult learning material, too complex language, disorganised classrooms, inappropriate learning methods and techniques, incorrect tempo of teaching-learning and assessment procedures (Louw & Louw, 2007).

3.5 Language

Teachers have to be masters of the medium of instruction (Cuvelier, du Plessis & Tech, 2003) because this is the medium through which new knowledge is acquired. Children have to be taught in the language that they know and understand best (Winkler et al., 2004). That particular language is also the one that best facilitates the forming of concepts (Darvin & Van Staden, 2005:89). Many children in SA are currently being taught in languages other than their home or mother tongues (Rademeyer, 2004; Darvin & Van Staden, 2005). This might be detrimental to their academic achievement in school in view of what has been said of the importance in the teaching-learning context of a language well understood and spoken (see Winkler et al., 2004).

3.6 Culture

Researchers have realized that the cultural context a person develops in can't be denied. Louw & Louw (2007) and

Nsamenang (2008) states that cultural development is not only influenced by ensuring that children receive the necessary cognitive, communicative, motivational and social-emotional or affective and spiritual characteristics, but also practical skills that helps them develop into able adults who can contribute to the survival and progression of others as well as the community. Human development is therefore a cultural process. In each culture children are exposed to cultural and universal influences. Therefore, it is understandable that some psychologist view child development primary as a cultural process. The different ways each culture develops and differs must be taken into consideration (Louw & Louw, 2007).

In a multicultural situation, cultural differences will be expressed both in terms of verbal and non-verbal communication (Van Zyl, 2001), and also in the form of a particular lifestyle. Although the different cultures that are represented in a classroom might differ in their priorities, they all parents seem to provide time for young children to play (Mwamwenda, 2004) and for interaction with others such as their peers (Louw & Edwards, 1998). Such interaction can stimulate the learning of new concepts and skills provided by games and other activities. It also promotes camaraderie, and consolation and compensation to learners whose personal circumstances are not optimal, among others because of bereavement through TB and HIV/AIDS (Meyer et al., 2002).

Modern sociocultural theorists have focused not only on the tools that culture provides, but also on how cultural norms and social practices influence the activities in which children engage, and the opportunities that children have for learning. For example, the society as a whole dictates whether or not formal schooling is available and if so, whether it is compulsory. Cultural norms influence many aspects of children's day-to-day activities, including infant care practices, child care arrangements, and expectations about work, study and play (Siegler & Alibali, 2005).

3.7 Approach to Learning

Constructivist insights have brought to light that teaching-learning will most likely not be as effective if the teacher attempted to 'transfer' knowledge to the learners. The learners should instead be assisted to develop for themselves unique, active and constructive ways of mastering the required knowledge/learning materials. Teaching should therefore, says Nieuwoudt (1998), not be aimed at creating and promoting learning, but rather at enabling the learners to learn. This, as Bloom (1992) and Askew (2014) convincingly argued, is a complex process.

3.8 Perceptual Abilities and Skills

We perceive the world through a number or sensory systems: vision, audition (hearing), gustation (taste), olfaction (smell) and a few others. Regardless of the particular sense being considered, however, the task of perception provides the information needed to accomplish three functions: attending, identifying and locating. *Attending* involves determining what in a situation is worthy of detailed processing. *Identifying* involves recognizing what we perceive. *Locating* involves specifying how far away the perceived object or event is and in what direction relative to the observer. All of these functions are performed with the goal of effectively guiding action (Siegler & Abibali, 2005).

Clear perception is the ability to make meaningful interpretations form the basis of successful learning (Winkler et al., 2004). In the Foundation Phase, for instance, learners require certain perceptions for the development of laterality, body-view, balance and spatial orientation. A learner is not ready for formal learning structures if s/he cannot make use of a base line in graphic expression (De Witt, 1989:34). They should also have reached a certain level of maturity regarding perceptual motor abilities (Gallahue, 1982; Pieterse, 2002).

3.9 Motor Development

Although all children are born with certain motor abilities, (Pieterse, 2002) this potential should be developed by stimulating physical activity. Bodily movement and learning are interrelated (Oaklander, 1998; Pienaar & Spamer, 1999). Because of TV and computer games, (Kapp, 1990) children tend not to be physically active any more. Educators have to compensate for this by providing incentives for physical activity (Pienaar, 2006; Du Toit, 2002). Approximately 50% of all learners in Grade 1 require such stimulation (Joubert, 2000).

3.10 Learning through Movement

Movement in early childhood is important for developing skills such as forming spatial concepts, which in turn form building blocks for later formal learning (Casey, Tottenham, Liston & Durston, 2005). Better muscle tone improves a child's ability to concentrate (Hart, 2003). The brain tends to give priority to information experienced through movement – and especially kinaesthetic learners discover the world through movement (Calitz, 1999). Many children are today impeded from free movement in care centres, because of TV, computer games, or because of security reasons and parents are in some cases compelled to pay for extra movement stimulation for their children

(Wilkens, 2004). According to Calitz (1999), learning through movement is the window of opportunity that stays open from birth to the age of six years (Rademeyer, 2004; Roos, 2004).

Perceptual-motor skills form an important part of school readiness (De Witt, 2009). Learners from deprived socio-economic environments are, as a result of poverty, malnutrition, dysfunctional homes and lack of stimulation, more vulnerable and perceptual-motor deficits are more commonly found among them (Botha, 2010). Laszlo and Bairstow (1985) refer in this context to the influence that motor development has on intellectual, social and emotional development, and also to the fact that conceptualising realises better with children who are given the opportunity for motor experimenting and development (Blythe, 2006). Van Zyl, (2004) established connections between visual perception and learning readiness.

3.11 Concept Forming

Concept forming is the process of discriminating between the essential characteristics of something (such as a triangle) and which occurs only after repeated perceptions and internalising the concept (Winkler et al., 2004). The process begins with sensory input and the child makes sense out of sensation (Scott, 2004). Development coheres with concept forming and concepts form the building blocks of thinking (De Witt, 2006). Age zero to six years can be seen as a crisis period in concept forming, although the process will continue after this early age (Dept of Education, 2002b; De Witt, 1989). The cognitive system of the child is founded in concept forming (Calitz, 1990). A child with conceptual disorders is unable to organize materials and thoughts in a normal manner. A disturbance in this cognitive ability affects comprehension skills in reading and listening (Lerner, 2004).

The forming of concepts provides children with an opportunity to explore ideas by making connections and seeing relationships between items of information. This method can help them develop and refine their ability to recall and discriminate among key ideas, to see commonalities and identify relationships, to formulate concepts and generalizations, to explain how they have organized data, and to present evidence to support their organization of the data involved (Anon, 2014).

Concepts involve grouping together different entities on the basis of some similarity. The similarity can either be quite concrete (a concept of dogs) or quite abstract (a concept of justice). Concepts allow us to organize our experience into coherent patterns and to draw inferences in situations in which we lack direct experience. If told that malamutes are dogs, a child immediately also knows that they have four legs, a tail, and fur; that they are animals; that they probably are friendly to people; and so on. Concepts also save us mental effort by allowing us to apply previous knowledge to new situations. Once a child has the concept "kitten", he/she do not need to think about this particular scrawny, taffy coloured kitten to guess what the cat would like to eat (Stiegler & Abibali, 2005).

The tendency to form concepts is a basic characteristic of human beings. Infants form concepts even during their first months. Within a few years, children acquire a huge number of concepts. The following are considered as a few concepts that most 5-year olds in the United States possess: tables, gold, animals, trees, Nintendo, dirt bikes, running, birthdays, winter fairness, time, and number. Some of these concepts involve objects; others are specific to children throughout the world and have been throughout history. Others are specific to children living in advanced industrial societies of the late twentieth century. Some are broadly applicable and others are quite narrow (Stiegler & Abibali, 2005).

3.12 Brain Dominance

Modern schooling seems to be mostly left brain dominated, which makes it difficult for children with other brain domination to achieve good results. Approximately 70% of learners requiring remediation are right brain dominant (Fourie, 1998; Copeland, 2002). Many of them also experience neural stress (Fourie, 1998). The use of music in teaching-learning situations promotes experience and integration of the two brain hemispheres (Campbell, 2000).

3.13 Learning Styles and Multiple Intelligences

Children do not all learn in the same way, and this calls for the use of a diversity of teaching methods (Winkler et al., 2004; Van Zyl, 2001; Copeland, 2002). This is also necessary in view of the fact that learners possess multiple intelligences – they tend to be stronger in a particular type of intelligence and therefore a particular mode of learning (Jordaan & Jordaan, 1998; Spodek & Saracho, 1999; Gardner, 2006). Learning processes therefore have to be adaptive and pliable, and this has to be observable in assessment processes (Dept. of Education, 2001; Gardner, 2006).

The theory of multiple intelligences developed by the psychologist Howard Gardner in the late 1970's and early 1080's, posits that individuals possess eight or more relatively autonomous intelligences. Individuals draw on these

intelligences, individually and corporately, to create products and solve problems that are relevant to the societies in which they live (Gardner, 2006).

Lemmer, Meier and Van Wyk (2006) state that "caution should be taken when people relate learning styles to cultural background." The characteristics associated with a learning style should not be over-simplified when applied to certain groups, such as ethnic groups or male or female learners. There is no particular learning style adhered to by a particular cultural group. An awareness of the diversity of teaching strategies should be considered.

3.14 Music

Research in brain development has shown a strong relationship between listening to and participating in music on the one hand, and numeracy/Mathematics, and reading and writing skills on the other hand. The most important aspect of music is rhythmic movement. Music and balance also promote better speaking, writing and movement. Music stimulates auditory, visual and spatial capabilities in the brain (Calitz, 2002; Calitz & Grobler, 2002; Janse van Rensburg, 2011; Nevill, 2003; also see Campbell, 2000, Guyton & Hall, 2000 on brain stimulation). Warner (1999) regards musical activities as an excellent method to improve self-image in children; it provides them with opportunities to give enjoyable expression to their emotions and to develop small motor skills.

3.15 Memory

Information presented in both auditory and visual form is better retained than information presented in only one of these forms (Louw & Edwards, 1998). Kinaesthetic activities also improve retention (Calitz, 2003).

3.16 Television

This aspect is different from all the aforementioned aspects in the sense that its influence should ideally be combated if it cannot be employed in justifiable pedagogical terms. There are strong indications that the lack of muscle tone, attention deficit, behavioural problems, inadequate auditory, language, spelling, numeracy and problem solving abilities as well as weaker school achievement can be ascribed to extended periods of watching television (Healy, 1998). The visual stimulation provided by watching television for long periods seems to inhibit left-brain structures (Copeland, 2002); because the sound and language of television productions are difficult to master, small children tend to concentrate on the visual images. Extended periods of television watching discourage constructive learning while also promoting immediate gratification and entertainment. Children's brains become lazy and react unfavourably to activities demanding more strenuous exertion (Calitz, 2002). Parents should be informed of this negative effect of television.

4. The Experiment

4.1 Nature of the Experiment

The researcher constructed an intervention programme based on these pedagogical aspects relevant to early childhood education and thereafter conducted a true experiment, i.e. formed an experimental group that we exposed to the intervention programme, and a comparable control group that were not expose to the programme but allowed to indulge in other activities such as listening to the teacher reading stories in another classroom while the researcher actively and purposely involved the experimental group in the intervention programme.

4.2 The Sample

She made use of availability sampling based on the following criteria: the sample should consist of one class of Grade 1 learners, all of them had to use the same medium of instruction, and they had to represent the four major racial groups in SA. She found such a multi-racial/multi-cultural Grade 1 class in an English medium school in a medium sized city in SA, and acquired permission from the authorities as well as of the parents to conduct the experiment. The class consisted of 39 learners aged 6-7 years, of which n=19 were placed in the experimental group and n=20 in the control group. It was ensured that the groups also had the same composition with respect to gender and cultural background and she made use of the class teacher's knowledge and understanding of her learners to ensure that the two groups were comparable. The class could not be divided into two equal groups because of n = 39. Therefore the experimental group was slightly smaller. The experimental group was subjected to the intervention programme, while the control group had to listen to stories read to them by the class teacher. Although measures to ensure that the two groups would be comparable were taken, other external factors such as socio-economic background and other factors could not be controlled.

4.3 The Intervention Programme

The researcher constructed an intervention programme based on the principles and strategies discussed in the literature review. The participants in the experimental group were involved in a variety of activities specially planned to stimulate them with respect to each of these factors as discussed in 3.2-3.16 of this article. The programme was presented over a period of ten (10) weeks at a rate of three (3) one hour sessions per week. The school principal gave permission for the lessons to take place from 9:00-10:00 in the morning. Activities during the lessons included the development of skills, knowledge and values. The activities were devised to involve learners both in individual and group capacity. The rest of the school programme went on as usual, and was the same for both groups.

4.4 The Presenter

The intervention programme was presented by a university lecturer with 9 years of teaching in a school and 27 years of experience as a university lecturer in educating student teachers for the Foundation Phase. Because of having constructed the intervention programme, she was well equipped for integrating the various activities in the context of classroom presentations.

4.5 The Measuring Instrument and Statistical Processing

The initial placement of the participants in the experiment was done on the basis of the Aptitude Test for School Beginners, a standardized culture-free school readiness test of the former Human Sciences Research Council, consisting of a battery of 8 sub-sections (Perception, Spatial, Reasoning, Numerical, Gestalt, Coordination, Memory and Verbal Expression) (HSRC, 1987). Graph 1 below shows that both groups departed from a baseline of 28.5 on the Aptitude Test scale. After the 10 consecutive weeks that the experiment ran, the participants were subjected to exactly the same school readiness test. Both tests were marked by the reseacher in accordance with prescribed procedures, and the results were statistically processed and interpreted according to the prescribed norms. The actual processing of results was done by the Statistics Department of a SA university. Cohen's (1988) effect sizes (d = 0.2 - small effect; d = 0.5 – medium effect; d equal to or exceeding 0.8 – large effect) were used to determine possible practical significance between the results of the two groups after the completion of the experiment (Newcombe, 2006).

4.6 Findings

A comparison of the pre- and post-tests of both groups showed that the experimental group had markedly improved (see Tables 1 and 2 for effect sizes) (total: d = 1.30 for the control group as opposed to d = 1.89 for the experimental group). A medium effect was acquired for all the sub-tests of the experimental group, except coordination and verbal comprehension, for which a large effect was registered.

Table 3. Effect sizes: Improvement in the Control Group

Sub-tests	N	Average difference $\overline{x}$	Standard deviation of difference = s	d-value
1. Perception	20	0.2	0.76	0.26
2. Spatial	20	0.3	0.86	0.34
3. Reasoning	20	0.1	0.78	0.13
4. Numerical	20	-0.3	0.97	0.30
5. Gestalt	20	0.3	0.73	0.40
6. Coordination	20	0.6	0.8	0.67
7. Memory	20	1	1.2	0.79
8. Verbal Expression	20	0.7	0.92	0.75
Total	20	2.9	2.22	1.30

Table 4. Effect size: Improvement in the Experimental Group

Sub-tests	N	Average difference $\overline{x}$	Standard deviation of difference = s	d-value
1. Perception	19	0.53	1.17	0.5
2. Spatial	19	0.47	0.90	0.52
3. Reasoning	19	0.57	1.07	0.54
4. Numerical	19	0.52	0.84	0.62
5. Gestalt	19	0.31	0.47	0.66
6. Coordination	19	0.78	0.71	1.10
7. Memory	19	0.84	1.42	0.59
8. Verbal Expression	19	0.89	0.80	1.10
Total		4.94	2.61	1.89
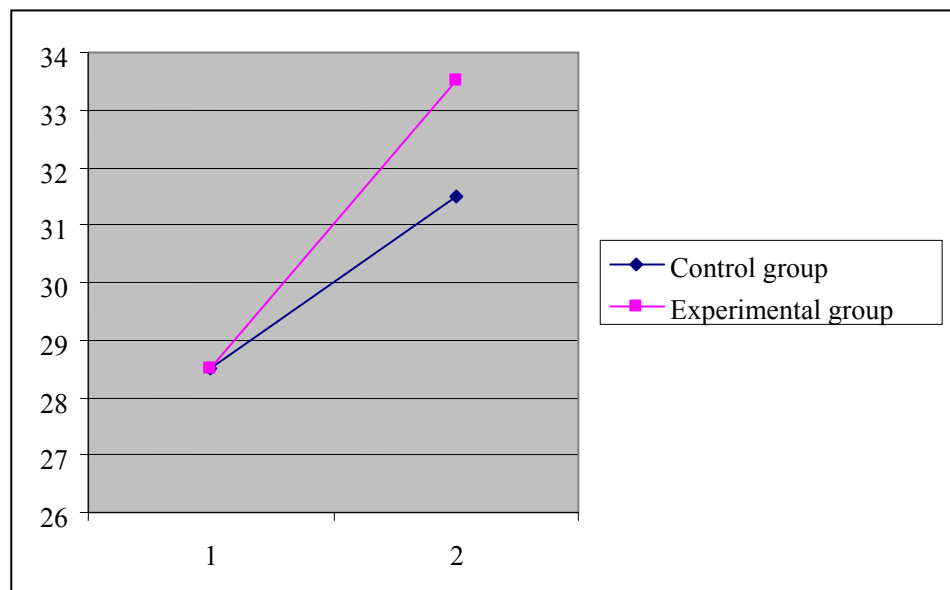
Graph 1. Graphic Representation of Progress of Both Groups in All Eight Sub-sections

This graph shows that both groups departed from the same baseline but that during the 10 weeks that the experiment lasted, the experimental group made better progress because of the intervention that took place.

5. Discussion, Conclusion and Recommendations

These findings imply that Foundation Phase education in SA could be improved by including interventions such as or similar to those incorporated in this intervention programme. Such a programme should especially provide for the development of the essential perceptual abilities required for success in this phase. The National Feeding Scheme should be extended to all learners not receiving adequate nutrition (including fresh running water) at school and home; their motor abilities should be improved by providing the appropriate apparatus in schools; specific measures should be taken to stimulate their emotional status and self-images; children whose home language is not the same as the school's medium of instruction should receive special attention for mastering the latter as a basis for conceptual development. The introduction of classical music will help integrate the functioning of both brain hemispheres. Achievement in numeracy, reading and writing will also be stimulated by music. Foundation Phase programmes should furthermore reflect understanding of the theories of multiple intelligences and of learning styles. And finally, not only should such programmes combat the disadvantages of too long hours of watching television at home, but should also make parents aware of the detrimental effects of this practice.

The three strategies that the researcher employed substantiated the claim that more effective learning among Foundation Phase learners can be attained by making use of a specially constructed intervention programme consisting of certain pedagogically relevant insights, especially for learners in this Phase. Experts firstly agree that

some form of intervention of learners in the Foundation Phase is required. The literature survey subsequently showed that learners in this Phase are in need of specific interventions in different areas of their development. Finally, an experiment in which insights from such interventions were used to stimulate the learning and development of the learners also showed that the Grade 1 learners subjected to the intervention programme indeed benefited from the intervention programme.

In 2014 (after the results of the 2013 ANA's were made public) focused intervention programmes to strengthen reading mathematics and English First Additional Language were recommended. Interventions should be aimed at poorly-performing schools, and not all schools should be forced to participate in the intervention strategies of the Department if these are unnecessary. Many schools already are examples of best practice and should be encouraged to support poorly-performing schools and districts. The development of educators' subject knowledge and teaching methodologies is also targeted for focused intervention (Le Roux, 2014).

From the research, the researcher of this article is convinced that effective teaching and learning implies more than what is currently taking place in most Foundation Phase classes in SA. Her innovation is to promote this intervention programme to poorly-performing schools in districts thorough district officials to enhance more effective learning among Foundation Phase learners in SA.

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