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Opportunities provided in language textbooks to develop learners' multiple intelligences

A B S T R A C T This article is a report on a study that investigated the opportunities provided in language textbooks to develop learners' full potential. Howard Gardner's theory of multiple intelligences, which is used as a theoretical framework, claims that learners have different combinations of intelligences and that the various intelligences can be developed. Thus learners are developed in their totality as knowledgeable, skilful and balanced adults. By giving them a variety of activities which accommodate the different intelligences, learners have the opportunity to use their most strongly developed intelligences in the language classroom. At the same time, learners are given the opportunity to expand their less developed intelligences. In this study, eight selected Afrikaans and English language textbooks were analysed to determine how the different intelligences are covered. The study brings to light that only some intelligences receive attention in the analysed language textbooks, while other intelligences get little or no attention.

Keywords: multiple intelligence, language teaching, outcomes-based education, language textbooks, text analysis

1. Introduction and background

In contrast to content-driven education, which mainly focuses on learners' linguistic and logical-mathematical intelligences, outcomes-based education (OBE) – like in the theory of multiple intelligences – is concerned with the development of the whole learner. According to the Revised National Curriculum Statement (Department of Education 2002: 9), the curriculum is aimed at developing the total learner. Its objective is to develop each learner's full potential and it envisages "a lifelong learner who is confident and independent, literate, numerate and multi-skilled, compassionate, with a respect for the environment and the ability to participate in

society as a critical and active citizen". This close connection between the theory of multiple intelligences and OBE necessitates a closer look at the possibilities OBE offer for the development of learners' multiple intelligences and, consequently, also their uniqueness and full potential. This article focuses on the possibilities which language teaching – specifically language textbooks – hold for the development of learners' multiple intelligences.

The reasons for highlighting language teaching as a focus area are as follows: all learners receive language teaching at school. Language is intrinsically peculiar to human development and enables lifelong learning (Pawson, 1998: 18). Language enables learners of all ages to access and understand information; to express ideas, thoughts and emotions logically, critically and creatively; and to communicate with others socially, economically, culturally, politically and spiritually (Wessels & Van den Berg, 1998: 6). Because language forms the foundation of all the learning areas and spheres of life of learners, language teaching plays an important role in the teaching-learning situation. During language teaching learners are guided to master the different language skills of listening, talking, reading, looking, writing, thinking and reasoning. However, not all of them acquire these skills with the same ease. By using those intelligences that are better developed than others, learners can acquire different language skills much easier. If learners have to perform different activities that involve different intelligences, they get the opportunity to apply their own strong intelligences in the language classroom. In this way learners with a strong musical intelligence can benefit from listening activities that are based on song. Another example is that learners who are strong logical-mathematically can perform an oral activity that relies heavily on problem solving. Apart from the fact that these learners get the opportunity to use their strong intelligences for a specific activity, other learners with a weaker logical-mathematical intelligence are exposed to the activity and get the opportunity to develop this intelligence. Learners are therefore developed in totality as their different intelligences are developed.

The aim of this study was to establish the extent to which language textbooks involve and develop learners' different intelligences. The research was conducted by means of a literature study that served as the basis for an inductive qualitative text analysis of selected textbooks. Textbooks were used because, over the years, they have played an important role as a teaching aid in the classroom and are still used as a primary source in many classrooms. Franssen (1989: 31) rightly notes that textbooks – despite the existence of modern aids such as the computer – still remain an obvious phenomenon.

2. The theory of multiple intelligences

In his search for theoretical grounds for the view that a person's ability is much broader than his or her intelligence quotient (IQ), Howard Gardner – a psychologist from Harvard – formulated his theory of multiple intelligences (MI). The theory originated in the 1980s and has since been refined by Gardner himself and by a number of educationists such as Thomas Armstrong, Tom Hatch and Sue Teele. According to this theory, intelligence is viewed as a person's pluralistic ability that can be developed. This view of intelligence is a product of the research on human intelligence that has been conducted continuously since the early 1900s.

Initially Gardner presented his theory on multiple intelligences in his book *Frames of Mind* (1983). It is not the aim of the theory to allocate a specific intelligence to an individual; it merely

asserts that each person has different intelligences. Gardner initially identified seven intelligences, namely *linguistic (verbal), logical-mathematical, musical, bodily-kinaesthetic, spatial, interpersonal and intrapersonal.* During the 1990s he added naturalistic intelligence. Although Gardner has, to date, identified eight different intelligences, he maintains that an immutable, universally acceptable list of intelligences will probably never exist – simply because research is conducted continuously and because different people view intelligence from different perspectives (Gardner, 1983: 59, 60).

According to Golubtchik (2001), very few people possess eight strong intelligences; but most people have one or more intelligences that are developed strongly, a few intelligences that are developed to an average level and intelligences that are underdeveloped. However, with the necessary teaching, encouragement and enrichment, each person has the ability to develop all his or her intelligences to a relatively advanced level (Armstrong, 1994b: 11).

Haggerty (1995: 36) is of the opinion that Gardner's theory approaches learning and intelligence in a totally new way, which has forced educationists to reconsider established pedagogical methods. The educational implications of the theory of multiple intelligences should not be underestimated (compare Armstrong, 1994; Christison, 1998; Ridge, 1998; Teele, 2000; Golubtchik, 2001; and Van den Berg, 2002). It is these implications and the possibilities that accompany them that are considered in this article.

In the literature (Gardner, 1993; Armstrong, 1994; Christison, 1998; Ridge, 1998; Teele 2000; Golubtchik 2001; and Van den Berg, 2002) the following characteristics of the different intelligences are apparent. Although the intelligences are discussed separately, they are closely intertwined in practice. Gardner (1999: 39) says: "in ordinary life, intelligences comingle freely, almost with abandon".

2.1 Linguistic intelligence

According to Van den Berg (2002: 236), learners with a strong linguistic intelligence have the ability to perform well in the theoretical and practical usage of language. They can use language effectively, whether orally or written (for example, in debates, written pieces, storytelling and dramatisation). Armstrong (1994: 29) adds that learners with a strong linguistic intelligence mostly spell well. Linguistic intelligence is also evident when learners tell jokes, play with words and sounds, and apply language in different creative ways. Golubtchik (2001) points out that these learners are generally extremely sensitive to negative speech (for example, sarcasm, negative comment on their behaviour or work, and other forms of humiliation in front of others). These learners are sensitive to sounds and rhythm of words (Gardner, 1983: 79).

Such learners do not necessarily perform equally well in all linguistic activities. For example, some of them perform better in reading and spelling activities than in writing tasks (Van den Berg, 2002: 237). It is important that they are continually exposed to a linguistically rich environment in all learning areas in order to develop their linguistic intelligences.

2.2 Logical-mathematical intelligence

Gardner (1983: 155-167) explains that learners with a strong logical-mathematical intelligence have the ability to use numbers effectively. They have a refined sense for logical patterns and relationships. These learners perform well in experiments, reasoning, mathematics, investigating

patterns and relationships, and in tasks that require logic (Ridge, 1998: 35). The logical-mathematical intelligence is therefore linked to the development of critical thought. These learners have the ability to think abstractly and always to ask questions (Van den Berg, 2002: 236). When working on the computer, they prefer to work with databases and spreadsheets. They get easily bored with tasks that are given to them repeatedly in the same way and want to be challenged with different tasks that require problem solving. According to Christison's (1998) view of logical-mathematical intelligence, this intelligence can be divided into three related areas (mathematics, the sciences and logic).

2.3 Spatial intelligence

Researchers such as Campbell, Campbell and Dickinson (1999) and Golubtchik (2001) refer to this intelligence as the visual intelligence, mainly because of the focus on the visual arts. According to Ridge (1998: 35), learners with a strong spatial intelligence excel in visual discrimination and show sensitivity for colour, line, depth, texture, form and space. They like to draw, build, design and create. These learners like to look at pictures and films and to work with machines such as computers. They excel in visualisation, solving visual puzzles, sensing change, reading charts and diagrams, and understanding the typography of poetry. Walters (1992) holds that learners with a strong spatial intelligence like to play chess and build puzzles. Golubtchik (2001) says that these learners react positively to visual aids such as overhead projectors, charts, pictures, photos and videos in the teaching-learning situation. She asserts further that it is sometimes difficult for learners with a strong spatial intelligence to read long stories or texts that are not supported by illustrations. It is not always easy for these learners to express themselves verbally and they learn by looking and observing. According to Gardner (1983: 192-195) these learners can easily identify relationships.

2.4 Musical intelligence

According to Golubtchik (2001), learners with a strong musical intelligence are sensitive to rhythm and the sounds in their environment, and prefer to have background music when studying or reading. They like to sing and clap in time to music. When they are asked to do rhythmic movements, to click their fingers or to clap their hands, this rhythm can be used positively in their learning processes. Phonetics can, for example, be mastered by means of rhythm and songs. Gardner (1999: 103-104) says that these learners sometimes also have a strong logical-mathematical intelligence because both these intelligences go hand-in-hand with patterns, precision and the need for high standards.

2.5 Bodily-kinaesthetic intelligence

According to Christison (1998), learners with a strong bodily-kinaesthetic intelligence excel in physical activities like sport, drama, dance and mimicry. They learn through touch, want to move around, like to talk, and understand and use body language. They learn best when their learning activities are linked to physical activities, such as conducting scientific experiments and the dramatisation of events in the language classroom. Activities that are associated with the bodily-kinaesthetic intelligence are dances, role-play, physical exercises, sport and mimicry (Armstrong, 1994: 30). In a classroom situation these learners feel most at ease when they have the freedom to stand up and move around (Golubtchik, 2001).

2.6 Naturalistic intelligence

Learners with a strong naturalistic intelligence are attuned to the identification of patterns in nature and natural laws. They are sensitive to changes in weather patterns, and are extremely aware of their environment and the influence that the environment has on them. These learners easily identify plants, animals, rock formations, and other fauna and flora in nature (Christison, 1998; Gardner, 1999: 49).

2.7 Interpersonal intelligence

Van den Berg (2002: 236) holds that learners with a strong interpersonal intelligence have the skills to work in a group and to resolve conflict situations. They offer help easily, have a wide circle of friends and like to talk. They perform well in cooperative learning activities. They have empathy for their co-learners and understand others' perspectives. They have the ability to approach matters from different perspectives and the need to motivate others to, for example, achieve a common goal.

2.8 Intrapersonal intelligence

Intrapersonal intelligence has a direct bearing on the other intelligences – this is why it is of cardinal importance that this intelligence is always considered. It entails accessing one's own thoughts and emotions, and it motivates human behaviour (Golubtchik 2001). Here the educator can make an important contribution by supporting learners in the development of self-confidence, which in turn will lead to a positive self-image. A strong intrapersonal intelligence guides learners to self-knowledge and insight into their own intellectual ability, and also to an understanding of how to develop that ability. Ridge (1998: 36) asserts that these learners like to follow their own interests, prefer to work alone, and focus on their own emotions, dreams, instincts and goals. They are independent and like to keep diaries in which they record their experiences. Individual tasks should therefore be given in the classroom in order to accommodate these learners.

According to Gardner (1983: 252-254) and Teele (2000: 43), it is important that learners develop both the personal intelligences in order to, on the one hand, be able to function effectively in groups and to, on the other hand, also be able to work individually and to reflect critically on completed work. Teele's point of view is also applicable in the South African context because OBE especially emphasises group work and advocates cooperative learning, while individual tasks also receive attention. Furthermore, the need for developing a strong interpersonal intelligence in learners is of cardinal importance in South Africa's multicultural and multilingual society.

From this discussion on the different intelligences it becomes clear that similarities and differences exist between the intelligences, that they are linked to each other, and that they cooperate in the performance of tasks. Educators should therefore develop the different intelligences in learners and should regard them as of equal importance: "Teachers who acknowledge all of the intelligences as legitimate ways to learn can encourage students to engage and use their strengths as springboards for translating from one intelligence to another" (Teele 2000: 49).

3. Research method

The empirical study to establish the extent to which the above-mentioned intelligences are accommodated in language textbooks was conducted in the form of a text analysis. The research design entailed a qualitative, inductive text analysis of Afrikaans and English language textbooks.

The different selected textbooks were analysed separately. The ultimate goal with the text analysis was to establish the extent to which language textbooks provide learners with the opportunity to develop and use their different intelligences. The research area was demarcated by talking to people who are involved at different levels in the distribution of textbooks at schools in order to establish which textbooks are used in schools. This method – to approach relevant persons regarding the choice of school textbooks – was followed because currently there are no prescriptions for the use of textbooks and schools have the freedom to use school textbooks of their own choice.

Using existing texts, such as language textbooks, has a number of advantages. Firstly, these texts are relatively easy to obtain; secondly, the sources are available if the researcher requires further information; and, thirdly, the research is not very expensive. However, using selected textbooks also has its disadvantages. Firstly, using textbooks without conducting interviews with educators leads to the researcher not being able to verify to which extent and how the information in the textbooks are used. Because of the extent of this study, no interviews were conducted – and this can serve as a recommendation for further study. Another disadvantage is that not all the textbooks that are available for a particular grade or phase can be used to determine how the different intelligences appear in language textbooks. A selection had to be made. Because the research was mainly qualitative and the different textbooks had to be examined in depth, the number of textbooks was limited to eight. Although there are some minimal differences regarding the number of pages of the different textbooks, these differences were regarded as minimal enough to deal with each textbook on an equal basis. The following eight textbooks were used in the research:

- Afrikaans home language grade 6: *Afrikaans ons taal* (Van L Sadie, Louw, Mihai & Engelbrecht 2004)
- Afrikaans additional language grade 6: *Nuwe Afrikaans sonder grense* (Lätti & Gouws 2004)
- English home language grade 6: *English in context* (Beard, Hortop, Prinsloo & Sullivan 2002)
- English additional language grade 6: *On track with English* (Minkley, Gough & Rambau 2004)
- Afrikaans home language grade 9: *Afrikaans moedertaal* (Bataleur, 2002)
- Afrikaans additional language grade 9: *Bladsak* (Fourie, Malan, Meiring & Scheffler, 2002)
- English home language grade 9: *English for success* (Barris, Pilbeam & Ready, 2001)
- English additional language grade 9: *Let's use English* (Ellis & Mbhele, 2001)

According to McKee (2003: 1), text analysis is a process of data gathering to obtain certain information. This data can be words, phrases, sentences, paragraphs, pictures or symbols. He mentions the importance of the interpretation of patterns in text analysis, while Mayring (2000) adds the importance of the context and refers to Becker and Lissman (1973) who analysed content at different levels: "themes and main ideas of the text as primary content; context information as latent content". Stangor (2004: 133) mentions the importance of specifying coding categories and the use of more than one rater. In the current study all these aspects of text analysis were taken into consideration.

The inductive method was used in the text analysis and Mayring's (2000) model (which shows the steps according to which inductive, qualitative text analysis can be done) was used as a framework. These steps entail the following:

1. Establishing the research problem and the topic
2. Defining categories and establishing inductive categories
3. The step-by-step formulation of categories that are based on the literature and fit into the definition of the categories, and changing old categories to new or better ones
4. Revising categories after 10%-50% of the text has been analysed – the formative checking of reliability
5. The final analysis of the text – the summative checking of reliability
6. Interpreting the results and quantitative steps of the analysis (for example, quantities and frequency)

The initial categories that were specified were based on the characteristics of the different intelligences. After the initial categories were tested on a number of textbooks, the categories were revised and (where necessary) changed until the most important categories remained. These categories, which were used in the final text analysis, appear as an annexure to this article. The formative checking of reliability was done by means of intercoding. A second researcher, who is well acquainted with the theory of multiple intelligence and language teaching, analysed a number of pages from the different textbooks independently from the first researcher. The two sets of analyses were then compared. Differences and discrepancies that occurred were discussed separately and uniformity was reached before the final analysis was attempted.

4. Discussion of data

Although the appearance of the different intelligences was handled separately, it is important to bear in mind that the different intelligences are intertwined and can not be separated from each other in practice. This aspect is also apparent in the discussion. The distribution of the different intelligences is indicated in each instance by means of a graph, and a short discussion follows thereafter.

4.1 Afrikaans ons taal (home language grade 6)

The general distribution of the intelligences in this textbook can be presented as follows by means of a graph:

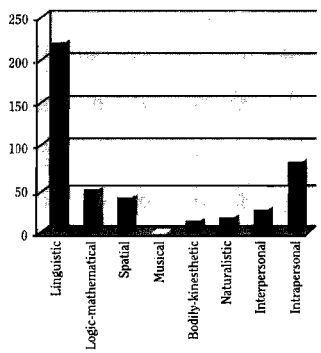

Figure 1: Distribution of intelligences in Afrikaans ons taal (home language grade 6)

From the text analysis and the graph, it is evident that learners are provided with the opportunity to use and develop all the different intelligences (with the exception of musical intelligence) in the textbook *Afrikaans ons taal*. The linguistic, intrapersonal and logical-mathematical intelligences receive the most attention; while the naturalistic and bodily-kinaesthetic intelligences receive the least attention, and learners' musical intelligence is not developed at all.

The fact that the musical intelligence does not receive any attention in this textbook and that the bodily-kinaesthetic intelligence receive very little attention can be viewed as a shortcoming. Learners with strong musical and bodily-kinaesthetic intelligences therefore have very little opportunity to apply these intelligences to their advantage, while learners with weaker developed musical and bodily-kinaesthetic intelligences have no opportunity to develop

these intelligences. Furthermore, language and music have so much in common that music can play an important role in the development of language skills. The omission of the musical intelligence can perhaps be ascribed to the fact that there is no theme on music in the textbook.

The advantage of the textbook is that it pays attention to six of the intelligences. In addition, different categories of the linguistic intelligence are developed – which makes it possible for the educator to present language teaching interestingly and with variety. An additional advantage is the strong emphasis on learners' intrapersonal intelligence, which provides them with the opportunity to consider their own work critically and to voice their own opinions.

4.2 Nuwe Afrikaans sonder grense (additional language grade 6)

The general distribution of the intelligences in the textbook can be presented as follows by means of a graph:

The textbook *Afrikaans sonder grense* succeeds in including all the intelligences, although not in equal measure. Several aspects of the linguistic intelligence are covered. As in the case of *Afrikaans ons taal*, it creates an opportunity to present language interestingly and with variety.

The colourful presentation of the textbook and its strong reliance on the spatial intelligence can contribute to learners, in whom this intelligence has been developed strongly, enjoying the book and acquiring an additional language easier. The textbook also has clear headings that are presented creatively and colourful to make learners aware of the focus of certain sections.

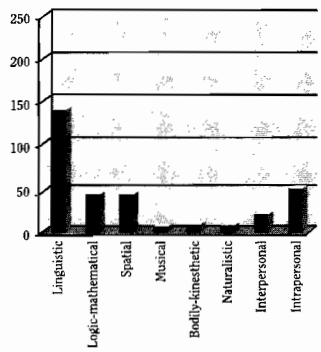

Figure 2: Distribution of intelligences in Nuwe Afrikaans sonder grense (additional language grade 6)

intelligence, the linguistic, logical-mathematical and spatial intelligences are developed the strongest in this textbook. The three intelligences that receive the least attention in *Nuwe Afrikaans sonder grense* are the musical, bodily-kinaesthetic and naturalistic intelligences.

4.3 English in context (home language grade 6)

The general distribution of the intelligences in this textbook can be presented as follows by means of a graph:

Although one can deduce from the graph of the distribution of the different intelligences that the intelligences are more or less distributed the same as in the previous two textbooks, there are a few important differences. Firstly, it appears from the text analysis that language aspects are covered to a lesser extent than in the previous two textbooks. Secondly, the textbook pays a lot of attention to the spatial intelligence (especially to the aspects that cover art activities: categories 3.1 and 3.3 in the annexure) and to the interpretation of visual texts (category 3.7).

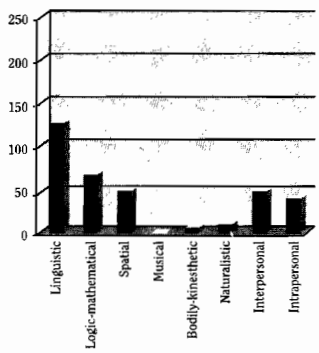

Figure 3: Distribution of intelligences in English in context (home language grade 6)

The aforementioned sections are especially advantageous for artistic learners and learners with well-developed spatial intelligences, but can be experienced as negative by learners whose spatial intelligence has not been developed so well. The danger exists that the latter group of learners will experience language teaching negatively as a result of the huge amount of art activities in the language classroom; especially because it is not always clear how these activities support language teaching. In contrast to this, musical intelligence is not considered at all in the textbook and bodily-kinaesthetic intelligence receives very little attention.

The three intelligences that receive the most attention in *English in context* are the linguistic, logical-mathematical and spatial intelligences; while the bodily-kinaesthetic, naturalistic and musical intelligences receive the least attention. As in the previous textbooks, the personal intelligences also figure prominently in *English in context*.

4.4 On track with English (additional language grade 6)

The general distribution of the intelligences in this textbook can be presented as follows by means of a graph:

From the text analysis, it is clear that all the intelligences are accommodated. Although all the categories of the linguistic intelligence receive special attention, it can be seen as a disadvantage that the textbook pays so little attention to the development of listening skills (category 1.6 in the annexure).

graph that the bodily-kinaesthetic, musical and naturalistic intelligences receive considerably less attention than the other five. The linguistic intelligence is noticeably employed more than all the other intelligences – something that is expected of a language textbook. In addition, the logical-mathematical, interpersonal and intrapersonal intelligences receive almost the same attention.

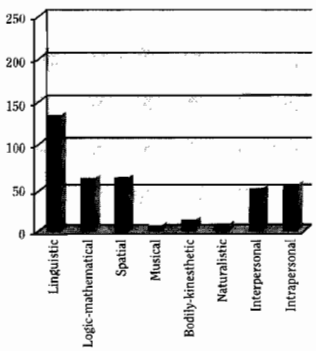

Figure 4: Distribution of intelligences in On track with English (additional language grade 6)

4.5 Afrikaans moedertaal (home language grade 9)

The general distribution of the intelligences in this textbook can be represented as follows by means of a graph:

The textbook has clear advantages, but also shortcomings, regarding the different intelligences. The fact that the textbook relies heavily on the linguistic intelligence can be seen as an advantage, especially if one takes into account that the textbook was written for grade 9 learners whose home language is Afrikaans. Different language aspects are explained and examples

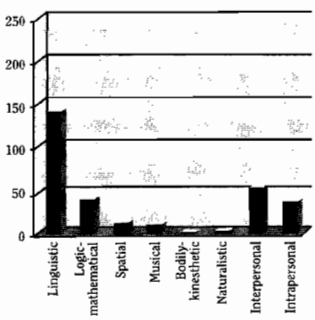

Figure 5: Distribution of intelligences in Afrikaans moedertaal (home language grade 9)

are provided. Thereafter the learners are given the opportunity to complete assignments that are related to the information that is provided. The textbook focuses on the development of all the language skills. A further advantage is that it pays particular attention to the development of the musical intelligence.

A shortcoming of the book is that it only focuses on some categories of the logical-mathematical intelligence. In addition, the bodily-kinaesthetic and naturalistic intelligences are not covered significantly.

4.6 Bladsak (additional language grade 9)

The general distribution of the intelligences in this book can be presented as follows by means of a graph:

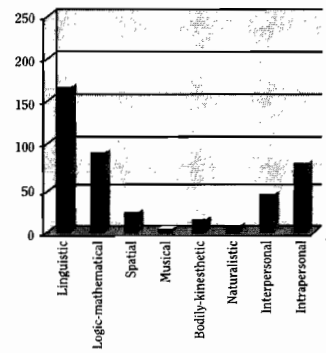

Figure 6: Distribution of intelligences in Bladsak (additional language grade 9)

The graph shows clearly that the textbook pays particular attention to the development of the linguistic intelligence. The fact that no attention is given to the development of listening skills can be viewed as a shortcoming of the textbook. The textbook also does not pay any noteworthy attention to the development of learners' bodily-kinaesthetic, musical and naturalistic intelligences. Learners, in whom this intelligence is developed strongly, do not get the opportunity to use it.

The prominence given to the development of learners' logical-mathematical and intrapersonal intelligences (according to the graph, these are the two intelligences that receive the most attention after the linguistic intelligence) is considered an advantage of the textbook, because it encourages the learners to think logically and independently and to make their own choices.

4.7 English for success (home language grade 9)

The general distribution of the intelligences in this textbook can be represented as follows by means of a graph:

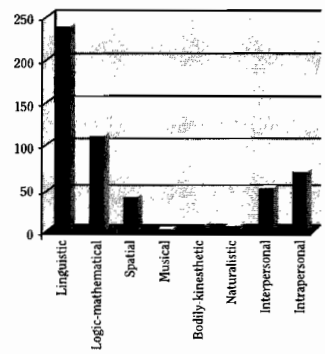

Figure 7: Distribution of intelligences in English for success (home language grade 9)

The graph in figure 7 shows that the linguistic, logical-mathematical and personal intelligences receive the most attention in the textbook. Although the development of these intelligences is extremely important for grade 9 learners, it is a shortcoming of the textbook that not more attention is given to the development of the musical, bodily-kinaesthetic and naturalistic intelligences.

From the text analysis, it is evident that language is presented with particular variety and that the different intelligences are integrated into language activities. This can be seen as an advantage of the textbook.

4.8 Let's use English (additional language grade 9)

The general distribution of the intelligences in this textbook can be presented as follows by means of a graph:

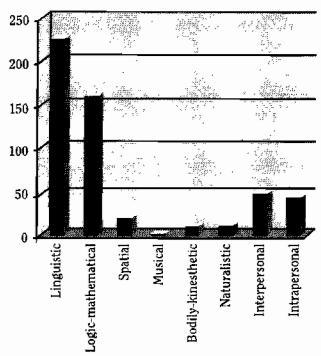

Figure 8: Distribution of intelligences in Let's use English (additional language grade 9)

Although the textbook has a section entitled "Write about other learning areas", the different intelligences do not seem to receive more attention as a result of it. The graph does not appear noticeably different than those for the other grade 9 textbooks.

The structuredness and variety with which language is presented in this textbook can be considered an advantage. However, the excessive use of tables, lists and columns is a shortcoming of the textbook because it mainly accommodates learners with a strong logical-mathematical intelligence. The three intelligences that receive the most attention in the textbook are the linguistic, logical-mathematical and interpersonal intelligences. The musical, bodily-kinaesthetic and naturalistic intelligences receive the least attention.

5. Findings and recommendations

The text analyses produced certain findings on the basis of clear patterns in the occurrence of the different intelligences in the textbooks that were examined. In all the textbooks that were analysed the linguistic intelligence received considerably more attention than the other intelligences. However, this should be expected because language textbooks were analysed. The text analysis indicated further that different facets of the linguistic intelligence received particular attention in the textbooks and, as a result, learners who are strong in different categories (category 1.1-1.10 in the annexure) of this intelligence were accommodated. This is advantageous if one considers that people can manifest a specific intelligence in respect of a particular intelligence category in different ways.

The intelligence that, according to Gardner (1999: 41-43), enjoys the most attention at school apart from the linguistic intelligence – namely, the logical-mathematical intelligence – receives the most attention in the textbooks apart from the linguistic intelligence. The only exceptions are *Afrikaans moedertaal, Afrikaans ons taal* and *Nuwe Afrikaans sonder grense,* in which one of the personal intelligences receives somewhat more attention than the logical-mathematical intelligence. It was also quite clear that the logical-mathematical intelligence received considerably more attention in the grade 9 textbooks – with the exception of *Afrikaans moedertaal* (home language grade 9) – than in the grade 6 textbooks. Since it is expected of grade 9 learners to already make important choices and decisions regarding further training and career choices, this difference is explicable. The deduction can be made that the development of the logical-mathematical intelligence, which exhibits clear links with thinking skills, is therefore extremely important to these learners.

Apart from the above-mentioned two intelligences, it appears that the textbooks focus strongly on the personal intelligences. Although minor differences occur, the interpersonal and the

intrapersonal intelligences are covered to almost the same extent in relation to each other in the different textbooks. Where the interpersonal intelligence is concerned, the categories group tasks (category 7.1 in the annexure) and group and peer assessment (category 7.2 in the annexure) receive the most attention. This intelligence is important because it helps learners to communicate meaningfully with their co-learners and also develop their oral and listening skills. By means of group work, learners whose interpersonal intelligence has not been developed strongly get the opportunity to use and develop this intelligence.

The intrapersonal intelligence has a direct influence on the other intelligences – this is why it is of cardinal importance that this intelligence be considered continually. It appears from the text analyses that the development of this intelligence receives a lot of attention in the textbooks. It would therefore seem as if the categories that are emphasised the most are the description and discussion of one's own emotions and likes and dislikes, and voicing one's own opinion (categories 8.5 and 8.8 in the annexure).

The spatial intelligence (which focuses strongly on the visual and therefore on visual texts) is covered to a reasonable extent in all the textbooks. This means that learners with a strong spatial intelligence can use this intelligence to develop their language skills. On the other hand, learners whose spatial intelligence is not developed so strongly get the opportunity to let this intelligence grow. The aspects of the spatial intelligence that receive the most attention in the textbooks are the interpretation and reading of visual texts and also the depiction of concepts and explanations in visual texts. The spatial intelligence also enjoys more attention in all the grade 6 textbooks than in the grade 9 textbooks. The only exception is *English for success* (home language grade 9), where the spatial intelligence is covered to the same extent as in some of the grade 6 textbooks. It therefore seems that the use and interpretation of visual texts are not considered so important for grade 9 learners. Although the assumption is made that older learners can think more abstractly than younger ones, one would expect that learners who are learning a language (especially an additional language) would benefit from the use of visual texts that support the written texts. In addition, visual texts and colour play an important role in everyday life, and it is important that learners should acquire the skill to read and interpret such visual messages/symbols at school. Colour is used in the grade 6 textbooks that were analysed, while the grade 9 textbooks were printed in black and white. In this regard, *Afrikaans sonder grense* (additional language grade 6) and *English in context* (home language grade 6) are prominent because they are presented with such exceptional colour and creativity.

When the text analyses of the different textbooks are compared, it appears that the same pattern occurs with the musical, the bodily kinaesthetic and the naturalistic intelligences. These three intelligences receive the least attention in all the selected textbooks. Furthermore, it appears that of the three intelligences the musical intelligence is considered the least in all the textbooks. This intelligence is only considered to a reasonable extent in two of the selected textbooks, namely in *On Track with English* and in *Nuwe Afrikaans sonder grense*. Although music can be an ideal instrument with which to teach language – "songs tell thousands of human stories" (Lê, 1999) – it does not seem to be recognised or used.

It seems that the choices of themes do in general have a major influence on the different intelligences that are considered in the textbooks. Examples of these are themes such as "Art

and artist" and "Body decoration" in *On track with English* (which are aimed at learners' spatial intelligence) or "Die heel kleintjie" and "Leef en laat leef" in *Afrikaans ons taal* (which give learners the opportunity to develop their naturalistic intelligence).

Those involved in writing textbooks – authors, publishers and the Department of Education – need to ensure that all the intelligences are accommodated in the textbooks. The criteria for the various intelligences, which appear in the annexure, could be used as a checklist. When writing textbooks, themes should be meticulously planned, as research indicates that themes are closely related to the intelligences which are included. Themes in textbooks should therefore be selected so as to connect with all eight intelligences. Where textbooks do not cover all the intelligences, teachers should incorporate additional material in which the missing intelligences are covered.

6. Conclusion

The research showed that language teaching, in accordance with the OBE approach, provides the opportunity to involve and develop learners' different intelligences. The text analyses showed that only certain intelligences receive particular attention in the language textbooks, namely the linguistic, logical-mathematical, interpersonal, intrapersonal and spatial intelligences. Learners in whom these intelligences are developed strongly therefore get the opportunity to use these intelligences in the language classroom, while learners in whom these intelligences are not developed so strongly get the opportunity to develop it. In contrast to this, other intelligences (namely bodily-kinaesthetic, naturalistic and musical) are rarely considered or not considered at all in all the textbooks that were analysed. Despite the important role music plays in language teaching, it seems further that of all the intelligences the musical intelligence receives the least attention in seven of the eight textbooks that were analysed. The result of this is that learners who have a well-developed bodily-kinaesthetic, naturalistic or musical intelligence get little or no opportunity to use these intelligences. In contrast to this, learners whose bodily-kinaesthetic, naturalistic or musical intelligences are underdeveloped do not get sufficient opportunity to develop these intelligences in the language classroom. Learners' uniqueness in this regard is therefore not respected sufficiently, which means that their overall development into capable, skilled and balanced adults can be hindered.

This research does not claim that Gardner's theory of multiple intelligences is the perfect theory in education. Yet one can deduct from the research that it can make a special contribution to the optimal development of each learner in the language classroom and in the teaching-learning situation. It is hoped that this study will contribute to our learners' development into balanced, capable and skilled people who will be trained to enter adult life – with the challenges of the 21st century that accompany it.

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ANNEXURE

The following categories were used in the text analysis:

1. Linguistic intelligence

These learners
1.1 play word games
1.2 participate in oral tasks such as debates, speeches, talks, jokes and stories, telephone conversations and descriptions
1.3 perform well in comprehension questions
1.4 explain how tasks should be done and/or give hints
1.5 complete crossword puzzles and compile it
1.6 do listening exercises
1.7 collect information from newspapers, books, magazines and other sources
1.8 perform well in creative reading and writing tasks (eg poems, plays, limericks, jokes, advertisements and stories)
1.9 ask questions about different language aspects
1.10 name stories, animals, concepts, people, pictures, etc

2. Logical-mathematical intelligence

These learners
2.1 excel in logical reasoning to solve problems
2.2 work with the sequence of patterns and relationships
2.3 describe main features
2.4 do mathematical calculations
2.5 categorise information
2.6 work out budgets
2.7 plan journeys and outings
2.8 develop games
2.9 estimate quantities

2.10 do time planning and compile schedules
2.11 compile lists and tables, and draw up graphs

3. Spatial intelligence

These learners
3.1 excel in art activities
3.2 draw and read charts and diagrams
3.3 depict concepts and explanations in pictures and colours
3.4 make and build jigsaw puzzles and collages, and do page layout
3.5 draw up mind maps
3.6 make posters, pamphlets and books
3.7 look at and analyse visual texts
3.8 give travelling directions
3.9 use or draw up plans for houses and other designs
3.10 work with machines such as computers and cameras, or explain how they work

4. Musical intelligence

These learners
4.1 use limericks to convey concepts, messages, etc
4.2 use music and rhythmic movement to convey concepts, messages, etc
4.3 play suitable background music during activities such as reading
4.4 make music with instruments of their choice
4.5 write/sing/play songs
4.6 listen to specific rhythmic patterns, music and songs
4.7 clap or perform other movements in time with music
4.8 look for suitable sounds to express the meaning of words

5. Bodily-kinaesthetic intelligence

These learners
5.1 use games and simulations
5.2 conduct scientific experiments
5.3 dramatise events, stories and poems
5.4 build decor and participate in similar activities
5.5 use body language or mimicry to explain concepts or phrases
5.6 collect information on sport
5.7 use recipes to prepare dishes; follow instructions to produce products
5.8 perform plays

6. Naturalistic intelligence

These learners
6.1 introduce other learners to the environment (nature) outside the classroom
6.2 recognise, categorise and classify fauna and flora
6.3 go on outings in the veld
6.4 collect information on animals and plants
6.5 complete oral and written tasks on their pets and other topics from the plant and/or animal kingdom

6.6 gather information in the veld to (eg write reports or complete questionnaires)
6.7 record videos and take photos in the veld to use in the classroom

7. Interpersonal intelligence

These learners
7.1 excel in group tasks and cooperative learning, and participate in discussions
7.2 perform well during peer and group assessment
7.3 share experiences with each another
7.4 participate in debates and discussions
7.5 help others to solve problems
7.6 take care of younger children and friends who need help

8. Intrapersonal intelligence

These learners
8.1 perform well in individual tasks
8.2 reflect on their own work and opinions
8.3 make diary entries and write down their own experiences
8.4 plan their time
8.5 discuss/describe their own emotions and likes and dislikes
8.6 determine the extent to which they agree with others or differ from them
8.7 do self-assessment
8.8 express their own opinions
8.9 compile portfolios