

# AJOTE



## African Journal of Teacher Education

**“To think so as to speak” The influence of the language of teaching and learning on thought processes: The case of a rural primary school in Zimbabwe**

**Sibonokuhle N. Ndlovu**

University of Cape Town, South Africa

### **Abstract**

*This article is based upon research that was carried in a rural school in Zimbabwe during the period 2010. The research problem in this study was the relationship in teaching, learning and cognitive development as elaborated by Vygotsky’s socio-cultural framework. Vygotsky argues that the socio-cultural context impacts significantly on the learner’s cognitive development. This study investigated specifically the aspect of the use of the Language of Teaching and Learning (LOTL) as an aspect that significantly influences teaching, learning and consequently cognitive development. This study was a response to Vygotsky’s (1978) cautioning against neglecting to consider the underlying causes that can be influential factors in the socio-cultural context and considering only surface and obvious ones. Thus, the study particularly examined the impact of the use of language in teaching and learning on learners’ cognitive development, using the Vygotskian theoretical conception of language and thought, in a cultural context of rural Zimbabwe schooling.*

*A case study of one rural primary school has been used and data collection involved observation of classroom teaching and learning to find out how language is used and how learners respond during the learning process. The findings of the study were that teachers simultaneously use two language codes of English and native language of Ndebele as the mixed language code. Use of language this way is so as to help learners who are not the first speakers of English to understand concepts being taught in different subjects. However this has been found to have limitations in the development of both languages consequently impacting negatively on concept development and failure by learners to participate fully in learning activities. The paper contributes towards an understanding of the effects of the use of language on learners learning and cognitive development specifically and suggests ways in which teachers could effectively use language to assist their learners’ learning, cognitive development and understanding of concepts during learning.*

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

### **Introduction**

As elaborated from the Vygotskian framework of understanding teaching, learning and development, the unique sociocultural context plays a significant role in influencing and shaping these experiences. From this lens therefore, this research was prompted by the desire to examine the impact of the use of Language of Teaching and Learning (LOTL) as the media through which the teacher and learner interact in the classroom. Vygotsky (1978, p. 62) cautioned against neglecting the underlying causes as factors that may positively or negatively impact on teaching, learning and consequently cognitive development in learners. I considered language to be one such important factor that underlies development.

This issue of LOTL is the subject of a long standing debate in many different socio-cultural contexts and remains an ongoing debate. In the context of rural South Africa, teachers were found to revert to the home language spoken by the majority learners in order to help learners in the conceptualisation process. Teachers also code switch from the learners' home language to English and vice-versa (Adler, 2001; Muthivhi, 2008a). In all cases however, it could be said that where the use of two language codes is not properly and effectively applied, problems result, including loss of time and, more importantly, conceptual confusion on the part of learners.

The specific case of a rural school in Zimbabwe presented a uniquely African situation in as far as the use of language in the class room was concerned. The single school as a case study was adequate because of its unique socio-cultural context and deeper understanding of issues at stake. The ruralness of this school in concerning language use was to the extent that even educated community members communicated with their children in their home (mother) language. English language was an additional language for both teachers and learners. Most learners, especially from impoverished families, experienced English for the first time when they came to school. Teachers' and learners' home languages were Ndebele, Sotho, or Venda, with Ndebele being the dominant language. Outside the classroom both learners and teachers communicated in their home languages. It was in the classroom that English was officially used for teaching and learning and in classroom reading and writing assignments.

The language policy stated that from grades One to Three, the home language of learners can be used as the language of teaching and learning (LOLT) and from grades Four to Seven English should be used as LOTL (Language policy, 2004). The language policy was however later amended and it stated that the language amongst the three main languages of Zimbabwe that is understood by the majority of learners at a school may be the language used as the medium of instruction or LOLT in schools (The Education Amendment Bill, 2006). This meant that Shona, Ndebele or English could be used as LOLT. The national examinations for grade Seven were administered in English for all subjects except for the home language as subject, which in this case was Ndebele. Textbooks were written in English for all subjects with the exception of Ndebele language textbooks.

The situation of language in this rural school presented a unique and contradictory situation from the start. First, the contradiction was policy versus the national examination. Learners at national levels were examined in English while policy stated that the language understood by learners could be used as LOLT. Another contradictory situation was in terms of textbooks that were written in English for all subjects except for the subject of Ndebele versus policy which stated that home languages of learners could be used as LOLT for all subjects. Thus the issue of LOLT from the start presented a complicated situation for classroom teaching, learning, and development in this school.

### **Theoretical Framework**

The Vygotskian language development theory generally relates to explaining the processes of human development, hence his general genetic law of development (Vygotsky, 1978). Intertwined with this development is the aspect of language which is also core within this framework for its relationship to cognitive development. This is because language and thought processes are found to develop together during the interaction processes. Muthivhi (2008a, p. 27) argued that language, "... is not viewed as only a container of ideas and thoughts but, essentially, as an integral part of the content of human thoughts and ideas." This highlights the language issue as an important aspect appropriated within the context of human development and thus important in informing issues that concern teaching and learning.

In this article the aspect of language and its relationship to cognitive development is important for understanding the developmental consequences resulting from the use of LOTL in a specific rural school. This is important because as Vygotsky (1981) explained, language is a tool that facilitates thinking and hence is very important in the learning processes and in schooling as it influences the development of learners and the way they learn.

Vygotsky (1962; 1986) placed great importance on language as a facilitator for development because it is the psychological tool that differentiates man from animals. It is the most important psychological tool that man uses to develop higher mental functions. It is not only a reproducer but also a shaper of ideas. Thus from the Vygotskian conception language and thought processes are inseparable. Language and thought develop along different paths at the beginning of a child's life; however the two different paths later come together and emerge as one (Vygotsky, 1962; 1986). This is further explained and elucidated by Muthivhi (2008a) to mean that the early stages of the development of the child's thought involve use of language as a tool for mastering the social world. According to Vygotsky, the internalisation of these tools leads to the development of higher thinking skills. Thus, the child then uses language for interacting with other people around him or her. Later this transforms into inner speech where the child uses language to self regulate his or her behaviour and thought processes. This is the process Bruner (1985) explains as:

Language is mastered at first in collaboration with an adult or more competent peer solely with the objective of communicating. Once mastered sufficiently in this way, it can then become internalised and serve under conscious control as a means of carrying out inner speech dialogues. (p. 25)

Luria in agreement with Vygotsky (1962) also understood thought processes to be mediated by language. He argued that words themselves become tools for formulating abstractions and generalisations that facilitate the transition from unmediated sensory reflection to mediated rational thinking (Luria, 1979, p. 49). This further confirms the theoretical understanding that the child first uses language to understand the world around him or her and later transforms from this and uses language in generalisations that mediate his or her thought processes. Vygotsky further explained that the relation of thought to word is not a simple instantaneous event but a process, a continued movement back and forth. In that process the relation of thought to word undergoes changes which itself may be regarded as development in the functional sense (Vygotsky, 1962, p. 125). This means that when there is no such process of relation of word and thought developmental changes are limited. It is therefore through the psychological tool of language that man transforms his thought processes from lower

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

mental functioning to higher psychological functioning. The conceptual background of the processes involved in the relation between language and thought was important for this study. It informed the researchers’ understanding of the implications for the language use in classroom teaching and learning. This thought and language process has a significant bearing on learners’ learning and their development.

Taking language and thought further, it is in formal schooling and specifically in classroom teaching and learning that the way language is used determines the promotion of cognitive development in learners and how they learn. This comes about through the process of mediation through the tool of language, a process that enables transformation from other regulation to self regulation. Wertsch’s (1979) language game best illustrates the process of using language to help learners to transform from one level of development to the other, that is, from other regulation to self-regulation. Where the learner is able to use language to monitor himself and use it to solve tasks; a level where language and thought are unified. Wertsch discusses how adults can mediate in the Zone of Proximal Development (ZPD) of children and assist them in using language to solve tasks. Vygotsky (1978) defines the Zone of Proximal Development:

The distance between the actual developmental level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (p. 86)

The actual level of development refers to those functions that have matured in a child, enabling him or her to solve problems on his or her own. Potential development refers to those functions that have not yet matured but are in the process of maturing. In other words there are two levels of development in a child, the first and second level of development. When functions at the first level have matured the child is able to solve problems on his or her own. On the second level of development, the functions have not yet matured. They are in the process of maturing. They enable the child to solve problems with assistance from an adult or others more knowledgeable on this level than the child. The zone of proximal development is the space between these developmental levels. It is where learning occurs.

Wertsch’s game involves mothers and their pre-school children of two years and above constructing a copy of a cargo truck through the use of a model. This problem solving task involved the mothers regulating their children’s thought processes to a point where the children reached a level where they did not need their mothers’ assistance anymore in solving the task. This means that language was used successfully as a tool to move the child to the independent level of thinking.

There were four successive levels that were identified from other-regulation to self-regulation in the processes of the puzzle building tasks. At the first level the children’s understanding of the task and the interpretation of their mothers’ utterances were very limited. To express lack of understanding at this level, Holzman and Newman (1993, p. 68) reported that in Wertsch (1985) one child of two and a half years old referred to the wheels of the truck as crackers. The mother agreed that they looked like crackers but were wheels that were supposed to make the truck. The child did not immediately take to that until the mother introduced the word circle. The child agreed that wheels were circles and mother and child continued their joint activity. This illustrates that the mother continued to mediate at the level above the child (ZPD) until the child developed the concept of wheels as circles.

At the second level the task situation is better understood by the child. Wertsch (1985) argued that at this stage the child begins to develop a definition of the situation. At the third level the child is capable of adequately functioning within the other-regulation stage. The child is capable of making all the inferences needed to interpret an adult's directives to formulate a definition of the situation. At this level inferences made by the child, although still carried out at inter-psychological level, indicate that self-regulation is beginning to account for much of the child's performance. Transition from other regulation to self-regulation is underway at this level. At the fourth level transition from other-regulation to self-regulation is completed. Wertsch observed that at this level the child enters into an "egocentric speech" that he uses to self-regulate himself in the task situation. This is the stage where language as part of communication and language as a self-monitoring tool emerge together, making language and thought processes one. The table below summarise the levels of the child during interaction.

**Table 1. Levels of achievement of the child during interaction within the ZPD**

Level	Achievement levels of the child
1	The child's understanding of the task and interpretation of the mother's utterances is very limited.
2	The child begins to develop a definition of the task.
3	The child adequately functions within the other-regulation and self-regulation begins to take place.
4	The child enters the egocentric speech and the transition is completed. The child uses speech to self-regulates himself in the task situation.

The four successive levels therefore indicate stages that the child goes through in the process of mediation through language to reach the independent level of operation. This is the level where thought and language are unified, so the child is able to solve cognitive problems on his own.

The stages of language development above relate to pre-school children, interacting with their mothers in a task situation as given by Wertsch. Extending on language development for children at school level is Muthivhi (2008a) who studied the use of Venda language as LOTL to grade One learners in South African. The teacher was using the Venda language to teach nouns as discrete "parts of speech." Muthivhi observed that the learners were not able to distinguish between the concept of noun and the spontaneous concept of name. This showed that the LOTL as used in learning was not able to make learners understand word meaning as part of the formal system of knowledge. This was because there was no difference in the use of LOTL as a system of knowledge in formal school learning from its everyday spontaneous use. The learners' learning was characterised by guessing, showing that even as Venda was the learners' home language, the teacher was not adequately using it to make them understand the concept of nouns that was taught.

Approaching the language issue from another angle is Piaget (1957). Popularly known for classifying development in stages, Piaget also locates language development within stages of chronological ages of learners. He states that during the sensory-motor stage, a period of the first two years of life, a child acquires the basic functions of language. At the pre-operational stage, a period from two years to seven years, a child learns the difference between the written and the spoken word. After seven years, the stage is the concrete and formal operational. The child begins to learn more complex terms and his language learning becomes complete. From understanding language development in stages and according to the

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

chronological ages of learners, the concrete and formal operational stage, which is the age levels of grade One to Seven learners, was the main concern of the study.

For this article, Wertsch’s language game, Muthivhi’s study on LOLT in Venda, and Piaget’s classification of language development according to stages and chronological ages of learners, were useful in understanding language use in this particular case. This theoretical framework helped to explain how teachers were mediating learning to the learners using the particular LOTL and at what levels were they mediating learning. This understanding, as informed by the above authors, was also important in terms of the observation of the interaction process using the LOTL and how learners responded. This enabled the analysis of whether or not the mediation and interaction processes using language were generative to maximum learner cognitive development and effective learners’ learning.

Language use in teaching and learning is a very complicated issue because language generally and LOLT in particular may also be influenced and interfered with by the socio-cultural context of schooling. For example, school specific concepts often differ in meaning from the way they are understood in the local context. This might have negative developmental consequences for learners as Muthivhi (2008b) explained:

The mode of language use that children encounter in their communities and in their homes, would subsequently, be integrated by the child into his or her own mode of using language for communicating with others and, more crucially, for communicating with herself her own actions-including the actions of thinking and problem-solving. (p. 26-27)

In essence, when differences exist between the way language is used at home and in the community at large and the way it is used in the classroom during teaching and learning of school specific concepts, this also has implications on the way the learner communicates with herself and the actions of thinking and problem-solving.

This language dilemma was also explained by Cole, et al. (1971) that it has adverse repercussion for learners’ learning and development as confusion in concept formation is experienced. Explicating this language dilemma, Cole explained that in the Kpelle language of Liberia for example, the word for medicine as used in the community has a wider range of meaning than the equivalent English term. This means that when teaching about medicine as a school specific scientific concept, it is important that the learners’ cultural concept of a term is taken into account. If this is not considered then the school specific concept of the term will be lost. This is because of the interference of language as part of culture and how it is used to refer to terms in the locality.

Furthermore, difference is experienced when language is used in its local context and when it is used in formal schooling in terms of purpose. When used in the local context, language is mainly for communication purposes whereas when used in the context of classroom teaching and learning, it is part of the knowledge system. In other words, it can be argued that when language is used in the local context of the learners, expressions are in the form of everyday, spontaneous forms of learning. This contrasts with formal learning, as in the classroom experience of teaching and learning, where the expression takes the higher systematised form of learning, as in the acquisition of scientific concepts. Explaining this variance of the use of language in the context of formal schooling and in the out of school context Vygotsky (1987) stated:

---

The child learns word meanings in certain forms of school instruction not as a means of communication but as a part of a system of knowledge. This learning occurs not through direct experience with things or phenomena but through words. (p. 27)

The above is what Muthivhi (2008b) explained that:

Language development in everyday life situation differs in fundamental ways from when it develops during the activities of formal school teaching and learning. Language in the latter situation is used more deliberately and is mainly a subject for its own reflection. Learners learn to look back, for example on the validity, accuracy, and adequacy or otherwise of their statements and answers to the questions and problems of the learning tasks, and as a result, probe their own thoughts expressed in and through language. (p. 27)

In essence, how language is used in the context of formal schooling, in classroom teaching and learning, should bridge the gap between the two contexts of learning it as does in the procedures involved between transitions from everyday-spontaneous functioning to abstract-scientific functioning. Thus, if the way language is used in classroom teaching is not different from the way it is used in everyday situation in the locality, it would not do much in promoting learners' ways of learning and cognitive development.

The case study of a rural school in Zimbabwe involved a socio-cultural context in which the learners' and teachers' different home languages were different from the official English language, which according to the previous language policy (Language policy, 2004), was to be used as LOLT. This implies that differences in meanings of terms between home languages and the English language were to be expected as there is no one to one correspondence in the meanings of terms in between different languages. The difference between home language and language that learners use at school already poses a problem in the way language might be used in the classroom. The problem posed by the situation of language in this school relates to language as used more deliberately and being a 'subject of its reflection' as Muthivhi argued. The chances of language being used in this way were slim at this rural school.

The way language is used in teaching and learning also determines how learners acquire concepts and how they participate in their learning. The experience of dilemma of language use in terms of determining how learners acquire concepts and how they learn was described by Vygotsky (1962; 1986) when he presented an experiment that was conducted by Tolstoy. In this experiment as described by Vygotsky (1962):

Tolstoy was attempting to teach literacy language to peasant children by first translating their own vocabulary into the language of folktales, then translating the language of folktales into literary Russian. He found that one could not teach literary language by artificial explanations, compulsive memorisation, and repetition. (p. 83)

The use of LOLT as described above can be likened to code-switching from one language to the other, a form of language use most prevalent in the rural South African context. In the above excerpt, Tolstoy attempted to help learners understand language as used in the learners' socio-cultural context and as used in the official Russian context at school. The experiment also shows that the learning methods involved memorisation and repeating after the teacher. In the results of his experiment Tolstoy, as described by Vygotsky (1962), stated:

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

We have to admit that we attempted several times to do this and always met with an invisible distaste on the part of the children, which shows that we were on the wrong track. These experiments left me with the certainty that it is quite impossible to explain the meaning of the word using another word. When you explain any word, the word “impression” for instance, you put in its place another equally incomprehensible word, or a whole series of words, with the connection between them as incomprehensible as the word itself. (p. 83)

From the results of the experiment as given by the experimenter, Tolstoy’s use of language that involved translating terms from one language to the other or as used from one socio-cultural context to the other proved to not be beneficial to learners as might have been expected. Learners’ learning methods that involved memorisation and repeating after the teacher also proved not useful in helping in the development of learners as was envisioned. This experiment illustrates the difficulties of classroom language use and the negative implications this might have on learners’ learning and their cognitive development when it is not their home language. Vygotsky’s theoretical framework on language learning and learners’ development is useful in illuminating the analysis and discussion on whether the particular use of language in the classroom as LOLT in the Zimbabwe rural school case study promoted learners’ learning and development or not.

### **Methodology**

A case study of a rural school in Zimbabwe was used to examine the use of language in classroom teaching and learning. In this particular school the classes ran in double streams, A and B streams respectively. The classes had an average of 40 learners for each grade, One to Seven. Observation and interview methods were used to collect data. These were completed twice during the year, as the preliminary and main observations. The researcher sat in a number of classrooms and observed how teachers used language in their lessons and how learners of slow, average and above average levels responded. During the preliminary observation which was the whole month of February in 2010, I observed both grades One A and B, Three A and B, Four A and B, and Five A and B Classes. The main observation was three months long, from August to October. Thus, both during the preliminary and the main observation period, I sat and observed twelve classes. The grade One classes were observed during the preliminary and main observation periods. The teachers for these classes were school administrators. The grade Six classes were not observed because the teachers of these classes did not volunteer to be observed.

The same teachers who were observed during teaching were interviewed as follow up to what was observed during teaching and learning. This allowed individual teachers to explain why they used language the way they did. The observation and interview methods used enabled the gathering of data that was useful in understanding how language was used in classroom teaching and learning and the impact this had on learners’ learning, their cognitive development and concept formation. Data collected was analysed using theoretically informed interpretations and discussed using the Vygotskian theoretical framework on language and thought.

### **Findings**



In every classroom that was observed teachers used a code-mix of two languages, the Ndebele, which is the home language of the majority of learners in the school and most of the teachers, and English language which is the official language for teaching and learning according to the previous policy (Language policy, 2004). These two languages were not used in the sense of code-switching from one language to the other within other socio-cultural contexts in South Africa. It was a new language use experience where the two languages of Ndebele and English were mixed together in a single sentence, resulting in a sentence of mixed codes. The extract below is of a grade Seven Science lesson showing how all the teachers used the mixed language code of Ndebele and English and how learners were responding in their learning.

Date of observation: 12 October 2010

Lesson: Environmental science

Topic: The human heart.

(Science textbooks were given out and learners started opening them.....)

Teacher: (Close those books *ayaliphambanisa*) close those books they are confusing you. (We are talking about a pump. Is there anyone who knows ukuthi impompi kuyini?) Is there anyone who knows what a pump is? We use it every day. (You use it everyday *uma limpotshelwe zimota, liyayisebenzisa uma limpotshelwe ngamabhasikili.*) You use it every day when cars have punctures, when bicycles have punctures). (Who can tell me ukuthi impompi kuyini?). Who can tell me what a pump is? (Demonstrating pumping with his hands)

Learner: (hesitating) Yimpompi, it's a pump.

Teacher: *Ye, yimpompi.* What do you use *impompi* for? Yes, it's a pump, what do you use the pump for?

Learners: (No response)

Teacher: (repeats the question) *Isebenzani i-pump?* What is the work of the pump?

Learner: (unsure) *Iyampompa*, it pumps.

Teacher: Yes, what happens is that *impompi iya-puller umoya*; yes what happens is that the pump pulls the air. (Demonstrating). *Nxa umpompa uyabi-releaser umoya.* When you pump it releases the air. *Namhla sizakhuluma* about a different form of pump, a natural pump called a heart. Today we are going to talk about another form of a pump called a heart. According to you, *ucabanga ukuthi kuyini i-heart?* According to you what do you think a heart is?

Learner: *Inhliziyo* (a heart)

Teacher: Yes, *inhliziyo.* *Inhliziyo* is a very important pump in our bodies. *Yiyo eyenza uthole i-blood enyaweni lwakho, uthole i-blood ekhanda.* Yes, the heart is a very important pump in our bodies. It is the one that makes you get blood in

**“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

your feet, in your head and in every part of the body. It's the one *eyenza uthole igazi*. It's the one that makes you get blood in every part of your body. *Nxa i-heart itshaya laphana isithi tha, tha, that, sithi yikutshaya kwenhliziyo*. If the heart is beating, *tha, tha, tha*, we get what we call heart-beat .Say heart-beat.

Class: (Chorus) Heartbeat.

Teacher: (*Kuyini i- heartbeat?*) What is the heart-beat?

Learners: (no response)

Teacher: *I-heart-beat isitshela* the rate at which the heart is pumping. The heart beat tells the rate at which the blood is pumping blood (writing the statement on the board).

Teacher: There are places *emzimbeni lapho esikwanisa ukuyibona, siyizwe i-heart-beat*. There are places in our bodies where we can see and feel the heart-beat. Where are those places in the body *lapho esithola khona i-heartbeat?* Where do we find those places in the body? Edwin!

Learner: (Edwin) Here (pointing to beginning of the palm of his hand).

Teacher: Yes, *Lapha hantsho*. Here isn't it? (also points to the palm his hand) Where else?

Learners (no answer)

Teacher: There is the most important place *lapho etshaya khona kuzwakale kungaphi?* There is the most important place where the heart beat is felt, where is it?

Learners: (no response)

Teacher: *Esifubeni*, isn't it? In the chest, isn't it?

(Observation: 12 October 2010)

The code mixing, in the excerpt above, was common in all classes that were observed and it was in this same way that learners were responding, giving one word answers, short phrases and sometimes not responding totally when a question was posed. Learners were giving one word or short phrase answers to the teachers' questions both in English and Ndebele. The teachers accepted one word or short phrase answers; they did not encourage the learners to say the sentences in full both in Ndebele and in English. This kind of methodology has negative impact on language development. This is because learners will not learn to develop complete sentence structures for each language. This will lead to poor communication, lack of confidence in manipulating and expressing themselves and consequently a lag in cognitive development. Below is a

table summarising how language was used in selected classrooms from grades One to Seven in the school and how learners responded in each class.

**Table 2. Language of teaching and learning and of learners' responses**

Date	Grade	Area of learning and topic	Language of teaching and learning	One word/short responses in Ndebele	One word/short response in English	Sentence response in Ndebele or English
23 Feb 2010	5	Religious studies: Jesus' friends	Ndebele & English	4	3	Nil
26 Feb 2010	1	English: Sounds, words and sentences	Ndebele & English	7	7	7 sentences in English
12 Oct 2010	7B	Science: The human heart	Ndebele & English	8	7	Nil
21 Oct 2010	2A	Religious studies: Forgiveness	Ndebele & English	4	4	Nil

As already highlighted, the 'code-mix' language use due to English as the LOLT presented a new dimension of language use in classroom teaching and learning. This type of language use is different from other studies that examined the use of English South African socio-cultural contexts. In this case the official language code of English was mixed together in one sentence with the Ndebele language code. This is a new version of LOLT that was used in this specific rural context of schooling in Zimbabwe.

Mixing the two languages codes however can complicate or impede language development in learners. This is because neither of the two languages is properly promoted in the process of learning. This was evident in the lessons observed as learners responded with one-word answers and short phrases in both the Ndebele and English languages. This even occurred at grade Seven levels, where learners are expected, in developmental terms, to communicate in full sentences (Table 2). There were eight one-word and short phrase responses in English and seven in Ndebele respectively in the grade Seven lesson. In both the grade Five and Seven lessons, there were no responses from learners to teachers' questions in full sentences in either Ndebele or English. Teachers in both grade Five and Seven classes accepted one word and short phrases from learners and did not encourage full sentences either in Ndebele or English. The grade One learners, who responded in English sentences, were in fact repeating these sentences after their teacher in the matching exercises.

The general trend in all grade Five and Seven classes was that the average and above average learners responded in phrases. Slow learners gave a one-word answer to the questions. Responding in one-word and short phrases, especially at grade Five and Seven levels was an indication that learners had problems with explicitly expressing themselves in both of the two languages. This was because one-word or short phrase responses came from learners in both English, which was not the home language of learners, and in Ndebele, their home language. This demonstrated that the use mixed coding with these languages produced complications for learners' in their use of language in learning. Thus, this language use situation had negative developmental consequences for learners.

---

**“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

From follow-up interviews, it emerged that the reason teachers were using language in a mixed-code of the children home language and the official language of English was to help learners to understand concepts that were taught. The argument was that exclusive use of English language would result in lack of understanding of the concepts as English was not the learners' home language and learners were only exposed to English at school. The interview excerpt with a Grade Five teacher below attests:

Interviewer: You were using a mixture of English and Ndebele languages in your teaching. What explanation can you give about that?

Teacher: The mission of language, in reality for the Grade Five's, we are suppose to use English. Then the mother language should come where you find that learners do not understand what you are talking about. But then if you noted, I was doing a mix of languages because had I used English only throughout, at the end I would be talking to myself. So that problem I talked about that there was no learning for quite some time, it killed the children.

Interviewer: But there is a situation where the subject has terms for its concepts in which one cannot use another language for them. If you use another language, that concept is lost, what do you do to make up for that?

Teacher: Yaa, I understand because in English they say there is no one to one correspondence with other words. You may find that you can explain the concept in English and is understood by an English speaker, but when you bring it to our African tradition; you find we don't have that concept. But then in explaining it, unless you show them that here is what I am talking about. Like the tax-collector is something like the messenger of a local chief. We don't have them now. Even if you say it is someone who collects taxes, children do not know about taxes. So you just hope it would end up being understood as you continue teaching. (Teacher Interview, 2010)

In the interview the teacher explained that if he were to teach using only English he might find himself speaking alone as learners are lost in their attempts to understand him. He understands that English has no one-to-one correspondence with words in Ndebele. For example, the word “tax collector” in the story he presented in his lesson was difficult to explain to learners. Even if he had used a Ndebele term related or similar to it, such as “chief's messenger,” that would still pose problems because children did not know about chief's messengers and taxes.

When the researcher brought up the problem of teaching concepts translated directly from English to Ndebele, the teacher acknowledged the contradiction that some concepts in English may only be understood by mother tongue English speakers because they are not found in the African context. Here the teacher raises a pertinent issue related to the contradictory conditions of schooling in Zimbabwe, namely the difficulty of translating concepts which apply to everyday life conditions in essentially western socio-cultural settings into a rural African socio-cultural setting. Here the teacher argues that his learners may find it difficult to comprehend a concept such as tax collection or tax collector, which has little practical bearing on or relevance to their particular rural socio-cultural setting. He claims that

he might want to use a potentially similar concept, one pertinent to the socio-cultural context of the learners, that of chief's messenger. By doing this, he hopes that learners were able to understand the target concept through appropriate contextualisation. The teacher is however aware of the inherent contradiction as he notes that "We don't have messengers now." This suggests that even the traditional Ndebele lifestyle is fast disappearing, with examples such as "chief's messenger" also becoming unfamiliar to today's children as this role no longer exists.

### **Discussion**

In the classroom situation, language development occurs in the same manner as it does between the mother and child in the interaction game by Wertsch previously described. The role of the teacher is as that of the mother in probing and prompting the learners in a manner that facilitates independent functioning. Independent functioning of learners as probed and prompted by the teacher should enable learners to make meaningful construction in the learning process. This therefore becomes a reciprocal process whereby the teacher as the "more knowledgeable other" facilitates while learners in turn make meaningful constructions that develop their language acquisition, thought processes and problem solving skills.

When teachers in this school used the mixed language code in their lessons, it was determined that this method created limitations on the part of learners. In response to teachers' questions learners gave one word or short phrase answers both in Ndebele and English. The teacher did not encourage learners to respond in complete sentences, but accepted one word answers and short phrases given as correct answers by learners. This suggested that learners had limitations in the use of both languages to effectively communicate and express themselves in full sentences during their learning. This would have long term negative implications on learners' further learning. They would not be able to express themselves in interviews for work nor would they effectively engage in debates or discussions in their future lives.

After teaching about a human heart in a science lesson the grade Seven teacher asked a question in mixed code, "Who knows what a pump is?" A learner responded in a short statement that "it's a pump" in Ndebele. Since the learner responded in such a short statement in Ndebele, it is unclear whether the learner understood the whole question asked in the mixed language code or if he understood the question by identifying the Ndebele words that he understood. This leaves the issue of conceptual clarity in teaching and learning unclear. Also when a learner at grade Seven level gives a short statement for an answer, it is evident that language use, as implemented in this lesson, did not demonstrate the development of a system of knowledge in learners. Thus the learners could not explicitly use either language to express ideas as required and expected in formal schooling. Therefore mixed code language use in this context did not significantly contribute to learners' learning and cognitive development.

Explaining the relationship of learning in first and second language learning, Vygotsky argued that the home language of learners lays a foundation for the learning of the second language. This means teachers should initially use the learners' home language to teach concepts so that it lays foundation for the learning of the second language which is English. In the case, where the two languages were simultaneously used, it implies that there was no foundation laid for the learning of the second language for learners. At the same time the experiences of learners using solely their first language in response to teachers' mixed codes were also limited in their ability to learn the two languages at the same time. From the Vygotskian theory on how language and thought are both pre-requisites for the development

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

of each, this means that the learners were not only losing out in language development, but also in thought processes since thought and language are inseparable. Vygotsky argued extensively to explain how language and thought are inseparable. He explained that acquisition of abstract-scientific concepts, a highly systematised way of acquiring school knowledge, requires explicit linguistic use (Vygotsky, 1962). The way language was used for teaching and learning in this case study did not facilitate the development of abstract-scientific functioning as evidenced by the way learners used language in learning. This had negative developmental consequences for cognitive development and the way of learning for learners.

As the mixed language code was used during classroom teaching and learning, there was minimal learner-participation on the part of learners. This was manifested by total non-responses to teachers' questions by learners that were experienced in all classes observed except the grade one class. As illustrated in the Wertsch language game, using language to support a pre-schooler to move from inter-psychological functioning to intra-psychological involved interaction between the pre-school learner and mother. In this case there were several times when there was no interaction between teacher and learners as learners failed to respond to teachers' probing. This suggests that the movement from inter-psychological to intra-psychological functions that occurs through use of language was in stagnation in these learners. This results in delayed development consequences for learners cognitively. It also deprives the learners of active participation in their learning that serves to promote and facilitate cognitive development.

There were problems regarding literary translation of concepts from one language to the other during the use of mixed language code. During this time concepts were lost to learners instead of being understood better as it was envisioned. For example, the grade Five teacher failed to effectively bring the concept of tax-collector to learners because there was no one-to-one correspondence for the term “tax-collector” in English and in Ndebele. As experienced by Cole, et al. (1971), complications arise when the meaning of terms in formal school learning are different from meaning of the terms as used in local context of learners. In the context of the Kpele community of Liberia for example, the term “medicine” was difficult to explain to learners because in the local community the term had conceptual meaning that was different from its use in formal learning. This means that if a teacher uses the home language of learners to explain the term, it may present a different concept altogether when taught in English. With such terms and such experiences in communities, a mixed language code would cause even more confusion in conceptualisation. This confusion may be realized to a serious extent in the case where two language codes are consistently used as this further complicates the meanings of terms.

The evidence of this grave implication of the use of two languages simultaneously in terms of concept formation is experienced differences found in the use of terms in the local context compared to their use in formal schooling. The grade Five teacher, for example, had problems in explaining the term “tax collector” explicitly to learners because of this. There was a gap between the use of the term in the locality and the experience of learners with the term. At the end of the day, learners would not be able to probe their own thoughts as expressed in and through the language (Muthivhi, 2008b). Lack of probing of own thoughts as expressed in and through language because of lack of term-correspondence and variance of language as used in the locality compared in formal schooling results in negative developmental consequences. Negative development consequences might include, among others, poor expression in both local and official language resulting from literal translations,

---

or lack of problem-solving skills both in the locality and at school due to the inability to probing one's thoughts. This inhibits reflection on the part of learners. Thus the learners' thought processes of these particular learners lag behind due their inability to understand terms used during classroom teaching and learning.

The concept of Zone of Proximal Development (ZPD) as a factor for the promotion of development and facilitation of an effective learners' way of learning, from Muthivhi's (2008b) perspective dictates that language acquisition and its use follows the same procedure as that involved in the acquisition of everyday spontaneous concepts and scientific functions. As applied to the Zimbabwe case study, the simultaneous use of two languages in this school did not enable learning to be pegged at the ZPD of learners to promote their development. This is because the home language of Ndebele was already acquired by learners, meaning that the aspect of language in which the home language of Ndebele was used to explain terms, had already matured in learners and did not help learners in development. Their learning English as a foreign language is the language that had not matured in learners. This in turn played a role in the development of learners and their way of learning. However this was not adequate as the other aspect of language was expressed in Ndebele language which had already matured in learners, thus ZPD of learners was not fully utilised. As explained in the Wertsch's language, development in the child was only promoted and facilitated when the mother mediated at the level above the child's level of development, that is, at the child's ZPD. In the case of the specific school, lack of mediation at the ZPD of learners was due to the use of the two languages, one that was already acquired and matured in learners as their home language and English as an additional language simultaneously. That is tantamount to using languages at a spontaneous level, which is only for communication and not as a system of knowledge. Using LOTL in that way does not contribute significantly to the learners' learning and development.

### **Recommendations for Improvement**

For learners to develop language competence and effectively use it to learn and express themselves clearly in classroom activities, teachers could initially use the children's home language to lay the foundation for learning English. Vygotsky's emphasis on the role of a home language in the acquisition of a second language was mentioned as the role played by the home language in providing the foundation for the learning of a second language (Vygotsky, 1986). The reason for this is that word meanings are already developed in the home language. To help learners develop language competence for school learning, teachers could reorganise their LOLT in such a way as to start with using the learners' home language without mixing it with English. When learners have mastered the basics of the second language, English, then English language can be gradually introduced and ultimately used as the LOLT.

For the above to be effectively implemented in the school where the study was carried out and the Zimbabwean rural schools generally, teachers should abide by the previous policy (Language policy, 2004) which stated that learners should be taught in their home language from Grades one to three and English should be introduced at Grade Four levels. This policy of language is most appropriate if language use is to improve in this case school and in Zimbabwean schools generally. This policy is consistent with the Vygotskian theory that home language provides the foundation for the foreign language. When learners at grade Four are then taught in English, they will learn it effectively as the home language in the previous grades has laid the foundation for its learning. When learners get to grade Seven levels they

## **“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

could then successfully complete the National examination presented in English with the exception of Shona and Ndebele subjects.

Again rather than code mixing the languages, teachers should code switch from one language to the other for slow learners. English should be used exclusively for those learners who are above average learners so that they develop English language skills beginning the early grades. They might have problems at first but would later adjust to learning in English. This would allow them to develop English language competencies that are necessary to write the National examinations. From the studies carried out in South Africa on language use (Adler, 2001; Muthivhi, 2008b) code switching, if done appropriately and skilfully has a positive potential to improve classroom teaching and learning, although further research on its viability and effectiveness is still necessary. Thus, if code switching rather than code-mixing can be tried out in this Zimbabwe school, it might go a long way to improving the quality of classroom learning activities in the school.

Again when teachers use the first language of learners, this aligns with the amended language policy that allows them to use the home language of learners as LOTL (Education Amendment Bill, 2006). Using the home languages of learners would build a strong foundation for the learning of English. As Vygotsky explained that the home language lays the foundation for the acquisition of a foreign language. Support with regards to using home language of learners in classroom teaching and learning, is already in place as the minister of education stated that the Ministry of Education for the first time is planning to have textbooks printed for the ‘marginalised’ indigenous languages, such as Kalanga, Tonga, Nambia and Sesotho. This means that for the first time textbooks for those languages are produced for school use (Hansard, 2010). The statement by the minister suggests a positive prospect for language learning as textbooks would be provided in the different home language of learners. The provision of textbooks in home language would thus support the use of home language of learners which presently is difficult, especially for learners which Ndebele is not their home language, but rather Sesotho or Venda. This change holds promise for improved language learning in other schools besides the Zimbabwe case study. These are schools where the home languages of learners include a range of minor languages like Tonga, Khalanga or Bemba.

### **Conclusion**

This article discussed the language use in the case of a rural school in Zimbabwe, and how this had negative developmental consequences for learners. The teachers used a mixed code of the learners’ home language of Ndebele and the foreign language of English. English was identified as new language in its use as the LOLT as it was not previously used or experienced in other’ socio-cultural contexts in Zimbabwe. Language mixed code use in the classroom developed because teachers thought it was a way to help learners understand concepts, since English was not their first language.

It was found however that the use of mixed language code for teaching and learning had unintended negative developmental consequences for learners. Using language this way did not help the development of both the Ndebele language, the home language of learners and English, the foreign language. This was evidenced when learners gave one word answer or short phrase answers in both Ndebele and English when they responded to teachers’ answers. This occurred because home language was not used as a foundation on which to teach English as a foreign language as explained by Vygotsky (1962; 1986). The use of the two languages on a horizontal basis made it impossible for one language to be the foundation



of the other. This resulted in learners failing to explicitly use either language to express themselves in their learning. This had adverse negative consequences for the communication skills in learners as it resulted in limitations in areas where self expression is required, such as in interviews and debate circles.

Again this kind of language use hindered learners' active participation in their learning. Lack of active participation in learning had negative developmental consequences in that learners had to rely solely on teachers for information. Lack of active participation again on the part of learners negatively affected their development as they did not experience learning at the ZPD because such interaction with teachers was necessarily limited due to mixed code teaching. This inhibited the students' development of thought processes that occur through mediation using the psychological tool of language.

Again through the process of imitating their teachers, learners may develop a communication system where they also code-mix the two languages together in spoken or written language. This would have adverse effects as code-mixing of two languages may contradict linguistic principles and laws. This further confuses students' attempts to learn either language to the point of mastery. On a positive note, when code mixing is used for teaching and learning, the issue of time factor, whereby there is loss of teaching time as concepts are first taught in one language and then the other, is not experienced. This is because the teacher does not need to continuously repeat himself in either of the two languages.

From the findings therefore it can be concluded that code mixing as in the simultaneous use of the home language of learner and English for classroom instruction has developmental limitations on learners' learning and their cognitive development. This may be compared with other multi-language use experiences in different socio-cultural contexts within South African. It may be argued that the implementation of mixed code language use developed as a result of the contradictions experienced in schooling LOLT regulations and consequently demonstrated a negative impact on English language use as a medium of instruction. While the new amended policy (Education Policy Amendment, 2006) stated that the home language of learners can be used, examinations at grade seven are exclusively in English except in the subject of Shona and Ndebele. This ambiguity led to mixed code language use as teachers understood that if they exclusively taught in learners' home language, it would hurt students at grade Seven level when they take the National exam. Therefore this awkward language use may be viewed as an outcome of the contradictions in school policy and implementation in Zimbabwe.

The Vygotskian theory on language development is applicable to the Zimbabwean context. It could be used to inform the design of the Curriculum and Language Policy. For example, as guidance in understanding the relationship between learning a foreign language and home language could result in the expansion of language lessons that better prepare students for the grade Seven National exam. Thus the Vygotskian theory is useful to the Zimbabwean context through these recommended curriculum adjustments that would make it useful to the learners in question. This language use change would also consider Zimbabwe's unique context including its various ethno-linguistic based traditions and constructs.

#### REFERENCES

- Adler, J. (2001). *Teaching Mathematics in multilingual classroom*. London: Kluwer Academic Publishers.

**“To think so as to speak” The Influence of the Language of Teaching and Learning on Thought Processes: The Case of a Rural Primary School in Zimbabwe**

---

- Bruner, J. (1985), Vygotsky; A historical and conceptual perspective. In J.V. Wertsch (Ed.), *Culture, communication and cognition: Vygotskian perspectives*, (pp. 21-34), Cambridge, Cambridge University Press.
- Cole, M. & Gay, J. (1971). *The cultural context of learning and thinking: Exploration experimental ant.* New York, Basic Books.
- Government of Zimbabwe, (1984). *Language Policy*. Harare, Zimbabwe: Government Printers.
- Government of Zimbabwe, (2006). *Education Amendment Bill*. Harare, Zimbabwe: Government Printers.
- Holzman, L. & Newman, F. (1993). *Lev Vygotsky: Revolutionary scientist*. London: Routledge.
- Luria, A.R. (1979). *The making of mind*, Cambridge, Mass: Harvard University Press.
- Ministry of Education, (3 March, 2010). *Hansard*, Parliamentary Debate [David Coltart’s official website post], Retrieved from: <http://davidcoltart.com/?p=2151>.
- Muthivhi, A. E. (2008a), *Socio-cultural Case Study of the Schooling System in Venda, South Africa*. (Unpublished thesis). University of the Witwatersrand, Johannesburg, South Africa.
- Muthivhi, A. E. (2008b). Language policy, classroom practice and concept learning in a Grade One Tshivenda classroom, *Southern African Review of Education*. 14(3), 23-35.
- Piaget, J. (1954). *The construction of reality in the child*. New York, Basic Books.
- Vygotsky, L. S. (1962). *Thought and language*. Massachusetts: MITI Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Mass, Harvard University Press.
- Vygotsky, L. S. (1981). The genesis of higher mental functions. In J.V. Wertsch (Ed.). *The concept of activity in Soviet Psychology*. New York: Sharpe.
- Vygotsky, L. S. (1986). *Thought and language*. (Rev. ed.). Cambridge, MA: Harvard University Press.
- Wertsch, J. V. (1979). From social interaction to higher psychological processes, In *Human Development*, 22(1), 1-22.
- Wertsch, J. V. (1985). *Vygotsky and the social formation of mind*. Cambridge MA: Harvard University Press.