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Scaffolded Code-switching: A resource for achieving academic literacy?

Abstract

The aim of this paper is to establish whether code-switching is still common practice in rural Limpopo as it was 16 years ago (McCabe, 1996) and if so, to suggest ways to use it as a resource to aid comprehension of English and to explicitly teach cognitive skills and academic literacy. Many rural South African schools have chosen English as a medium of instruction (Moi) from grade 4; and consequently, English second language learners need to simultaneously master English language skills, content and academic literacy.

Particularly in rural schools, English Moi has led to code-switching between the mother tongue (L1) and English. Through an English Language Teaching (ELT) lens, code-switching (CS) is generally

viewed as a reflection of a language deficiency of the speaker, language interference and an obstacle to learning. This view, however, ignores code-switching's functionality and its potential to assist the achievement of academic literacy. CS, clearly an inevitable component of our rural classrooms, could be used as a resource at school from the intermediate phase, through secondary school and to a limited extent at university. CS can be 'scaffolded' at school and gradually 'faded' as learners advance through secondary school and enter tertiary institutions.

Keywords: code-switching, trans-languaging, academic literacy, medium of instruction, English as second language

1. Introduction

It is acknowledged by educationists that South African schools perform below expectation (Department of Education, 2005; Reddy, 2005, Centre for Education Development (CEDD) 2010, Mtshali & Smillie, 2011, Jordaan, 2011) and this is supported by the National Education Evaluation and Development Unit (NEEDU, 2013a, 2013b) report. Two possible reasons are mooted for this: ill-discipline or inability to deliver the curriculum (NEEDU, 2013a:6). The issue of discipline is not within the ambit of this paper; instead it concentrates on the fact that the curriculum is delivered through the channel of language, and in rural schools frequently through English as a second language (ESL) or first additional language (FAL). In an English-impooverished environment, this is a challenge to teachers and learners who are required to teach and to learn through a language which has not been sufficiently mastered to deal with academic discourse.¹ For this reason the author prefers to use the term 'medium of instruction' (MoI) rather than 'language of teaching and learning' (LoLT) because in the rural context² of this study English may be the language of teaching but it is debatable whether it is also the language of learning.

True learning (higher order comprehension and problem solving processes as opposed to the memorisation of mere superficial facts) occurs and is articulated by means of language - and therefore the focus of this paper is the issue of teaching and learning through two languages, English as the MoI in an English impoverished environment, and the role of CS in the achievement of academic literacy.

The definition of academic literacy applicable in the context of this paper is Weideman's (2006: 84) which lists the following ten components that make up academic literacy:

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- 1 In discussion with postgraduates (2013) in Applied English Studies who are teachers themselves, the point was raised that the general maxim in their schools is "any teacher can teach English" and so teachers with no qualification in English may be asked to teach English and do so by using the L1 as a mediating tool.
 - 2 A 'rural student' in this paper is a student who attends a school outside an urban area with little or no access to English outside the classroom, has grown up in a reading material-impooverished background; far from shops, clinics and libraries and irregular or no access to electricity (and thus little or no access to computers or photocopiers) or running water; has been taught mainly by means of CS (between the L1 and English) and is academically underprepared for university (Maseya, 1995; McCabe, 2011: 47). The teaching in the rural environment may also be inadequate. This is confirmed by the NEEDU report (2013b) when it states that "[the] reality was that our schools were underperforming because educators did not know what they were teaching". This seems to occur more in rural schools than in urban schools.

- understand a range of academic vocabulary in context
- interpret and use metaphor and idiom, and perceive connotation, word play and ambiguity
- understand relations between different parts of a text, be aware of the logical development of (an academic) text, via introductions to conclusions, and know how to use language that serves to make the different parts of a text hang together
- interpret different kinds of text type (genre), and show sensitivity for the meaning that they convey and the audience that they are aimed at
- interpret, use and produce information presented in graphic or visual format
- make distinctions between essential and non-essential information, fact and opinion, propositions and arguments; distinguish between cause and effect,
- classify, categorise and handle data that make comparisons
- see sequence and order, do simple numerical estimations and computations that are relevant to academic information, that allow comparisons to be made, and can be applied for the purposes of an argument
- know what counts as evidence for an argument, extrapolate from information
- by making inferences, and apply the information or its implications to other
- cases than the one at hand
- understand the communicative function of various ways of expression in
- academic language (such as defining, providing examples, arguing)
- make meaning (e.g. of an academic text) beyond the level of the sentence.

Without the above skills students are unable to answer any questions with insight or solve problems that require more than mere information retrieval (cf. Weideman & Van Rensburg, 2002). The first-entering students at the University of Limpopo (UL) are frequently underprepared for the cognitive demands of tertiary studies and for the level of formal / academic English proficiency required to fully comprehend lectures, textbooks and assessments and to respond appropriately in writing. This leads to poor academic achievement. To address the poor results of first-entering university students, interventions need to be initiated in the intermediate school phase if not already in the foundation phase.

English is currently the medium of instruction for many primary and secondary school learners as well as tertiary students in the rural areas of Limpopo. They need to be academically literate in English if they want to achieve or perform better academically both at school and at university. However, to aid the achievement of academic literacy

the constructive role of the mother tongue (L1) needs to be considered³ (cf. Van der Walt & Kidd, 2012; Benson, 2004; Leibowitz, 2004). Scaffolded CS is indicated because although the L1 is used as MoI during the foundation phase, substantial CS is used at the intermediate primary school level when policy dictates that the L1 be replaced by English. Instead of English-only, CS is practised as the learner progresses from grade 4 through secondary school and enters tertiary education. It is part of the content subject classroom and many English classrooms and requires constructive implementation.

2. Problem Statement

The researcher increasingly finds that if students of English do not have cognitive or metacognitive skills as described under Weideman's (2006) definition of academic literacy, as well as a reasonable English proficiency, they have difficulty in coping with the English Studies' first year English language and writing assessments. They are unable to answer in-depth questions or write essays that require sequencing, argumentation, coherence and cohesion of text in English. This is found to be a problem across campus in most faculties at a number of tertiary institutions (Kasanga, 1998:107; Chimbanga, 2001: 147; Webb, 2002: 187; Balfour, 2002; Pityana, 2005; McCabe, 2008). The NEEDU (2013a, 2013b.) report highlights this problem in the school foundation phase: thus if the problem is to be solved at the tertiary level it needs to be addressed earlier on at the school level.

The motivation for this paper arose from the results of two written assessments of a first-year Business English group of students (191 wrote in March and April 2013) whose spoken English seemed adequate to good, many of the 47 students who failed the English assessments (obtained less than 50%) did so because they did not read, misunderstood, misinterpreted or could not interpret some of the questions (cf. Cummins, 2000; Coetzee-Van Rooy, 2011). In particular, questions that needed sequencing and an essay that needed argumentation, logical order and evaluation were poorly done. These are not English language skills per sé, but skills that would help them write better structured and argued academic essays or make better oral presentations in any language. This is confirmed by O'Neill's (2011) suggestion that literacy and literacy learning is more than a narrow skills and processes view of reading and writing. Instead, it promotes a wide range of literacy practices that are carried out for a variety of purposes, and occur in a range of social and cultural contexts (Barratt-Pugh, 2002, cited by O'Neill & Geoghegan, 2011: 98). Current classroom learning environments may not reflect this 'broader' ideal and may instead treat children from diverse backgrounds only as "*having inadequate English language skills 'to learn'*" (my emphasis) (O'Neill & Geoghegan, 2011: 99) when instead it is the crucial cognitive capacity that is lacking.

3 An affiliated topic that needs scrutiny is how well the learners know their own L1 and whether cognitive skills are cultivated in the L1 classroom and therefore transferable to English.

English language skills may not be a prerequisite to acquiring cognitive and meta-cognitive skills. Van der Walt and Kidd (2012: 30) and Leibowitz (2004: 49) contend that language proficiency is not necessarily a pre-condition for academic literacy. They refer to the concept of academic biliteracy as “the ability to actively use more than one language when reading and processing text” (Van der Walt & Kidd, 2012: 29). Developing academic biliteracy supports the case for code-switching.

Particularly in a rural context, academic biliteracy would allow, cognitive and academic skills to be taught initially in the language in which students ‘make sense’ of information (cf. Van der Walt, 2003, cited in Verwey & Du Plooy-Cilliers, 2003:53-54) and concepts, namely, the L1, after which it is anticipated that this knowledge is transferred to the additive language – English (cf. Van der Walt & Kidd, 2012). It is more likely that students initially decode information in their mother tongue (building on an existing body of knowledge – cf. Krashen’s input hypothesis 1998), rather than in English, especially with little to no exposure to English outside the school classroom. In such a context, English is more of a foreign language than a second language.

Although CS and academic biliteracy may seem to be a key to improving academic achievement, South African education faces a dilemma. On the one hand, there are those that advocate mother tongue / home language (L1) education. For example, Benson (2004) argues:

While there are many factors involved in delivering quality basic education, language is clearly the key to communication and understanding in the classroom. Many developing countries are characterized by individual as well as societal multilingualism, yet continue to allow a single foreign language to dominate the education sector. Compounded by chronic difficulties such as low levels of educator education, poorly designed, inappropriate curricula and lack of adequate school facilities, submersion⁴ makes both learning and teaching extremely difficult, particularly when the language of instruction is also foreign to the educator.

On the other hand, many rural South African parents feel differently as shown by the following comments (NEEDU summary 2013b: 9):

A principal of a primary school states that

because our children live in the rural area and are very disadvantaged, we decided to use English as LOLT, to expose them to the modern world, so they can understand what is happening on TV. It is difficult, but we are doing it at our own pace and parents are very happy about it.

4 Instruction through a language that learners do not speak has been called “submersion” (Skutnabb-Kangas, 2000) because it is equivalent to holding learners under water without teaching them how to swim.

The principal of another primary school in a village with isiXhosa learners justified the change to English as LOLT on the grounds that parents were demanding it, threatening to remove their children from the school if their demands were not met (NEEDU, 2013b: 9).

It is clear that major stakeholders in education still need to be persuaded to give L1 a role in the English Mol environment. CS, a maligned practice in the past, could make a positive contribution towards the development of cognitive and meta-cognitive skills incorporated by the definition of academic literacy as given below. The achievement of academic literacy in the L1 would form the basis on which to construct the acquisition of academic literacy in the medium of instruction. In rural schools and the University of Limpopo, this may entail using the L1 (by CS or translanguaging) to assist the development of academic literacy and a grasp of its conventions - alongside the expansion of English language skills which are required simultaneously because English is the Mol.

3. Defining Code-switching and translanguaging

CS is a worldwide phenomenon and common to multilingual communities. It is used in all walks of life where knowing and using more than one language every day is common practice. There are a number of different definitions of the phenomenon. This paper will limit itself to the definition of CS as alternating between two or more languages.

In simple terms, CS is conversation conducted in two languages. According to Myers-Scotton (1993: 1), code-switching is “not mainly a transitional stage in a language shift from dominance in one language to another”- although immigrants in the process of language shift do practise it – nor is it only “a feature of the language use of social groups on the socio-economic ‘margins’ of society.” CS is part of the daily conversations of ‘balanced’ or ‘stable⁵ bilinguals’, and it is practised by successful businessmen and professional people everywhere in the world, who have a different home language from the dominant language of the society he/she lives in. This view is supported by Kamwangamalu (1998) who points out that English second language speakers have a tendency to mix English with their home-languages and often alternate between or switch from one language to another in their speech. It is alleged that there are more people using more than one language than those using only one (Graddol, 1997; Fishman, 1998). This has a significant impact on the functions of communication, cognition and identity of the individual in the global community (Aronin, 2005).

5 Baker (1993: 8) defines a balanced bilingual as someone who is equally fluent in two languages across various contexts. He/she can also be an equilingual or ambilingual.

Cook (1991, 1993, 2001, 2002) speaks of *multicompetence* as opposed to *monocompetence* (also cf. Jessner, 2008). Multicompetence, defined by Cook, is “the compound state of mind with two grammars” (Cook, 1991: 112) in contrast with “the state of mind with only one grammar” of monocompetence. He argues that “the multicompetent individual approaches language differently in terms of metalinguistic awareness; multicompetence has an effect on other parts of cognition” (Cook, 1992: 565; Coetzee-Van Rooy, 2010: 4-7). The result of this is greater metalinguistic awareness and better cognitive processing (Kumaravadivelu, 2006: 20). This in turn supports the argument for advocating the use of CS as an aid to achieve academic literacy. It is therefore not a ‘deficiency’ but a social skill; and when used to ‘make sense’ of information may contribute to the achievement of academic literacy.

Meyers-Scotton (1998) suggests CS to be strategic. The ultimate purpose of communication is to transmit a message and for communication to be termed effective there needs to be evidence that the receiver acted, changed the course of action or acted differently as a result of a communicated message. Educators want to see such evidence and if they do not, they resort to CS to achieve the desired action or reaction. In terms of cognitive skills and strategies, educators could use CS when alerting students to such skills and how to apply them in their studies.

CS is the general practice in many South African classrooms despite past ‘official’ opposition to it (Bot, 1993; Auerbach, 1994; Meyer, 1995a, 1995b; McCabe, 1996, 2001). In the nineties the approach to code-switching changed: “it is less viewed as an aberrant performance or unique to exotic cultures” (Myers-Scotton, 1993; Van der Walt, Mabule & De Beer, 2001; Lafon, 2009). It is also now a greater topic of research in the ESL or EFL classroom than in the past. It is now also referred to as translanguaging.

Using the term translanguaging is Garcia’s (2009) first step in removing the negative connotation that has been attached to the concept of CS (Vinson, 2013) and to Bilingual Education. Vinson (2013) declares that this means “taking back the linguistic database that comprises Bilingual Education and establishing definitions that match the reality of the Bilingual learner” and so in the place of CS is the notion of translanguaging, “a process in which two or more people who have comfort in the languages being spoken are able to interface and manoeuvre through a intermingling of languages without alienating any member of the group”. It is described as the process by which “a human brain is capable of accessing two or more linguistic data bases in order to formulate a tapestry of words in various languages (all bound by the rules of English grammar) in the formation of a thought”.

Vinson (2013) adds that “Translanguaging is to Linguistics what a key change in the middle of a symphony is to music. Both convey a mastery of critical thinking and by no means is there a deficiency exhibited”. (Nor should the importance of the notion of ‘comfort’ be underestimated in the learning environment as suggested by Krashen’s Affective Filter hypothesis.)

4. Code-switching which incorporates Scaffolding and Cognitive apprenticeship

Although English is the chosen MoI, the L1 has a role in acquiring essential cognitive skills, the constituents of academic literacy, and constructing and managing knowledge – serving a cognitive apprenticeship (Collins, Brown and Holum, 1991).

The term ‘scaffolding’ is related to Lev Vygotsky’s (1978) social learning model concept of the zone of proximal development (ZPD), that is, “the zone of activity in which a person can produce with assistance what they cannot produce alone (or can only produce with difficulty)” (Pea, 2004:430). Wood, Bruner and Ross (1976) were the first to use the term scaffolding - the support given to young learners which helps them achieve higher levels of performance in a task than they would achieve attempting it independently. Once the learners show understanding, the support is ‘faded’ – this refers to a scaffold-fade technique. Fading is the dismantling of the scaffolding (Pea, 2004: 431); once the learners have mastered a skill the support is gradually removed and the learner performs independently. Simply put, “scaffolding support enables learners to successfully practise complex skills and as they become independently competent, scaffolding is withdrawn” (Rose, Lui-Chvizhe, McKnight & Smith, 2003: 41) or in the words of a researcher involved in teacher training (Valcke, 2013), “I do, we do, you do”.

Educators need to be flexible and adapt and fade their help as the teaching situation warrants – whether students are working individually, in pairs, groups or the whole class. Scaffolding can also be provided by multiple agents: the educator, fellow students, print materials, posters, technology and many others (Davis & Miyake, 2004:267). CS can be one of these ‘agents’.

Collins, Brown and Holum (1991) incorporate scaffolding-fading into an umbrella term: cognitive apprenticeship. They believe that although schools have been relatively successful in consolidating and transferring large bodies of conceptual and factual knowledge, key aspects which students require to function successfully, still escape them. “The reasoning and strategies that experts employ when they acquire knowledge or put it to work to solve complex or real-life tasks” are not adequately addressed (Collins et al., 1991:2). In other words, cognitive apprenticeship is a model of instruction that works ‘to make thinking visible’. Many students fail to acquire conceptual and problem-solving knowledge at school. They rely solely on facts and textbook examples which are often only surface features of problems; hence they are unable to solve problems because they do not have a model of how to approach such ‘complex’ problems. For example, they have problems writing a well-structured, logical essay because they cannot analyse models of good writing – they do not know what the writer did to produce a good essay (Collins et al., 1991:2). Proponents of creativity may disapprove of formulaic writing or the provision of models; but not doing so may be counterproductive for formal academic writing or for students with inadequate English language skills.

Kuhn (2011:1) explains: “Thinking is made explicit by explanation, answering questions, and asking learners to explain/elaborate to ensure understanding.” She adds that

observing the performance of a task may be obvious but not so the cognitive component – it may be open to misinterpretation. Collins et al. (1991) term it ‘thinking made visible’. They distinguish four important stages of apprenticeship which can be applied and adapted to the language and content subject classroom: modelling, scaffolding, fading, and coaching. Kuhn (2011: 2-3) includes reflection, articulation and exploration⁶. Here the L1 could play an important role in teaching or modelling the ‘thinking process’.

5. Research Methodology

The purpose of the survey was to confirm whether CS still takes place in rural Limpopo schools and to ascertain the views of educators and learners about CS and English as the Mol.

5.1 *Sampling*

Convenience sampling was employed. The educators all attended a postgraduate colloquium on the UL campus. The students were an intact group of students attending a lecture.

5.2 *Data elicitation instruments*

Questionnaires (see Appendix A and B) were distributed among 19 educators, and 127 students who had completed secondary school the previous year. Both groups returned their questionnaires after the colloquium / lecture. The person who administered the student questionnaire spoke Sepedi and was able to explain the English questions in the vernacular when a respondent needed clarification.

Twelve learners who are in the last year of their primary school phase (Grade 7) and divided into 2 groups of 6 learners answered questions in a focus–group interview. In the primary school focus-groups similar questions were asked as appeared in the questionnaires; but they were simplified and translated into the vernaculars. The focus-group interviews were conducted by mother tongue speakers who were well-known to the participants, both the learners and educators.

5.3 *Findings*

The responses to the questions have been rephrased are summed up below:

- *How many of the respondents’ schools are in rural areas?*

⁶ See Collins et al. (1991) and Kuhn (2011) for greater explication.

The two primary schools in the sample were in rural villages. Seventy-eight percent of the secondary school learners attended rural schools (of which 79% were in Limpopo Province). Ninety-five percent of the educators taught in rural schools.

- *How many learners have the opportunity to speak English outside the classroom?*

Twenty-nine percent of secondary school learners indicated that they spoke to English speakers outside the classroom; which means that 71% seldom or never encountered English outside the classroom. Most of the primary school learners felt uncomfortable speaking English.

- *How many of the sample schools have English as medium of instruction?*

The two primary schools both had English as medium of instruction. Seventy-eight percent of the secondary school learners attended English medium of instruction schools. Eighty-four percent of the educators who participated in the survey teach at English medium schools.

- *Do educators code-switch when teaching?* (This question was adapted to educators and students respectively to establish the amount of CS – which teachers admit to and learners confirm / deny.)

The educators in this survey estimated the amount of CS distributed over a number of subjects as an average 20 – 22% of teaching time. This is similar to the time reported by a primary school principal (Interview 2007, in Lafon, 2009: 15) in the Eastern Cape who estimated the amount of CS as being limited to 20% of teaching time.

- *Do learners code-switch in class?*

Primary school learners admitted to CS when engaged in activities especially to explain difficult words and to help weaker learners.

- *What were the reasons for teachers code-switching according to learners?*

- The primary school learners felt their educators code-switch to help them understand the work. Seventy-seven percent of the secondary school learners agreed with this and 35% of the educators admitted to CS to help learners understand the work.
- Forty-one percent of the secondary school learners said that the use of CS made them feel more comfortable in class. Thirty-eight percent of the secondary school learners believed that educators code-switched to get them to participate more in class.

- Only 19.5% of the secondary school students thought that their educators code-switched because their English was inadequate.
- Fifty-five percent of the educators admitted that the amount of CS done in class is determined by the grade the learners are in. Primary school learners confirmed this by pointing out that as the years progress code-switching grows less.

- *Did the educators / learners believe it was necessary?*

One primary school respondent stated 'It's good to mix Sepedi and English'.

While 77% of secondary school learners believed code-switching helped them better understand their schoolwork only 38% thought that it improved their English. According to 55% of the educators the primary school learners needed more code-switching than the secondary school learners.

- *Did the educators / secondary school learners and primary school learners feel it was appropriate to use English as a medium of instruction?*

Educators (89.5%) and learners (secondary school – 94%) approved of English as the medium of instruction. A minority of primary school participants indicated that they wanted to be taught in English.

- *How did these same groups feel about the code-switching between their mother tongue and English in the classroom?*

The primary school participants preferred the use of the mother tongue to explain their work because most of them generally found English difficult to understand. Only 32% of the secondary school learners approved of using the mother tongue in the classroom compared to 42% of the educators who approved of using the mother tongue in the classroom. The higher approval rate of educators may indicate either that educators felt the learners needed more assistance by means of the mother tongue or alternatively, the educators' English proficiency is inadequate. Most of the educator respondents teach in the intermediate phase and in the secondary school and all of them are second language English speakers. They are all L1 speakers of a vernacular, the majority (68%) of which speak Sepedi.

Summary of findings and interpretation

Code-switching is common practice in a number of Limpopo schools. Most school stakeholders believe English is essential, yet 71% of those asked hardly ever encounter English outside the classroom. Despite this, they have to listen, comprehend, read and write English in the classroom and for assessments. The educators and learners seem to agree with the use of the L1 especially to assist comprehension and to create a

familiar, comfortable environment. However, most still prefer English as the MoL. There appears to be a lack of awareness of the value of the L1 in education; the focus is on English. However, there may well be an awareness of the importance of the L1, but that the preference for English is mainly an economic choice.

6. Code-switching: A resource to teach academic literacy

As an educator of English as a second language (ESL), English as a foreign language (EFL), and English for Academic Purposes (EAP) for over 30 years, the researcher has taught English in different learning environments and has generally equated low academic achievement with poor English proficiency. Perhaps it is time to look at the problem through a different lens.

The rural classroom dilemma is that learners need two languages to cope with learning. Most participants believe that English proficiency is essential and therefore English should be used to teach, but in practice, from the literature and data reported from this survey there appears to be a vital role for the mother tongue (L1) in terms of subject and concept comprehension and 'feeling comfortable' in class (cf. Krashen's (1998) Input Hypothesis and Affective Filter hypothesis).

Relevant to this paper are the results indicated in the NEEDU report (2013a, 2013b) pertaining to literacy. Although the investigation was done in the Foundation Phase, the problems with lack of cognitive capacity ultimately filter through to the secondary school phase and higher education. Educators were tested by means of the South African Consortium for Monitoring Educational Quality (SACMEQ) language test which consists of comprehension tests. The educators were able to retrieve information (75,1%) but performed poorly when the higher cognitive functions of inference (55,2%), interpretation (36,6%) and evaluation (39,7%) were required (NEEDU, 2013a: 8). It can therefore be inferred that if educators cannot use higher order comprehension and problem-solving processes themselves or construct or select tasks which require these skills (inference, interpretation, evaluation, amongst others) they will not be able to teach them. This is likely even more true in many of the rural schools. The lack of knowledge of and application of cognitive skills are the very skills required for academic literacy and academic success (Weideman & Van Rensburg, 2002). The researcher submits that what educators and students are possibly lacking are the skills to 'manage knowledge' (Van der Walt, 2003). Having the 'information' about a subject, such as knowing about the English sentence structure, does not automatically progress to knowledge and application of this in an English essay.

Van der Walt (2003:53) distinguishes between the two terms. She argues that information stems from data but that knowledge does not in turn, result from information. "Instead, knowledge is the sense-making capability through which we create information from the available data" (Van der Walt, 2003: 53). It is only once we comprehend the data and its context that we (and therefore the ESL learner or student) can apply or

use it meaningfully (Snowdon, 2000). Students will only be able to achieve academic literacy, that is, make use of information, if they are able to successfully “take raw data through a process of abstraction” (Van der Walt, 2003:53). Once they have managed to summarise what the data is about and how it relates to a specific purpose and apply it to a task will the information become knowledge. Knowledge thus is what enables students to know what is relevant or irrelevant data for a specific task or situation. Knowledge contributes to intelligent decision-making, analysis, and evaluation, among a number of other cognitive skills (Tiwana, 2000: 57). Information is simply facts (grammar rules, definitions of analysis, categorising, evaluation, and other such terms) when it is mere raw data; whereas if the data is transformed to information by applying experience, learning and knowledge (how to use data to achieve a goal), the information becomes useful.

It is this abstract thinking, internalising of information and knowledge management that is more likely done in the learners’ L1 than in their L2 if their exposure to English is minimal. Both school learners and tertiary students need an adequate command of English for their studies and future careers but may first need to learn abstract thinking and how to use information gathered from data or facts before articulating it in the medium of instruction – preferably already in the primary school. They need to be made aware of what in-depth thinking is, what the cognitive strategies are and how to apply them to tasks. This should form part of teacher training (cf. Borg, 2003 on teacher cognition: “what teachers think, know, and believe and the relationships of these mental constructs to what teachers do in the language teaching classroom”) to ensure that they are able to teach cognitive skills at school level so that their learners commence tertiary studies with the essential cognitive skills. Currently this is not being done in the school classroom. The 2013 NEEDU Report (2013a: 30) points out that

If a teacher does not construct tasks to elicit higher order comprehension and problem solving processes in her learners in class (teacher competence), it must be because she does not understand how they function in developing cognitive capacity (Pedagogical content knowledge - PCK), which in turn is certain to arise if she does not herself undertake complex problem-solving activities or apply the perspectives of inference, interpretation and evaluation (disciplinary knowledge) to her own appreciation of her own subject.

This adds another dimension to the problem of low academic literacy: teacher training needs to be addressed alongside the application of CS as a resource.

Developing learners’ cognitive capacity is one argument for L1 as MoI beyond the foundation phase. For instance, Benson (2004) argues that mother tongue-based bilingual education not only increases access to skills but also raises the quality of basic education by facilitating classroom interaction and integration of prior knowledge and experiences with new learning. Since we do not have L1 education beyond grade four, CS could serve as a tool to access the required skills, knowledge and experiences cited above by Benson. It could assist students in becoming literate in a familiar language and then transferring those literacy skills to English. Students may

as a result feel more comfortable participating in class and demonstrating what they know (Benson, 2005: 17).

The Mol from Grade 4 is English; yet most of the learners do not have English as a first language. The widespread use of CS appears to be a palliative strategy. The question is whether it is the cause of low English proficiency and low academic literacy as declared in some of the literature on the topic (Cummins & Swain, 1986; Ferguson, 2003; Fennema-Bloom, 2009/2010).

Language purists are critical of the practice of CS, yet it is inexorably common practice in our rural South African schools, and worldwide, where learners have little to no exposure to English outside the classroom. CS has been and may still be viewed as a sloppy use of language, a corruption of the primary language, a language deficiency of the speaker and an obstacle to learning. It is not seen as being systematic or as being a possible resource for the English second language (ESL) educator and learner. Yet it may assist comprehension in the content subjects and, initially, in the primary school, comprehension in the ESL classroom as submitted by Moodley and Kamwangamalu (2004: 187). They state that every educator should provide learners with 'the opportunity and means' to use his / her L1 in the classroom as this would facilitate the learning of English as a second language. Furthermore, they declare that not doing so and by forbidding the use of the learners' L1 in the ESL teaching context, insight into literary works is inhibited and second language acquisition is hindered. Allowing opportunity for the use of learners' L1 is also suggested by Garcia (2009), Vinson (2013) and Cummins (2013), that is, 'translanguaging' in the classroom.

CS is used as a transitional aid to English because in the first three school years learners are taught through their mother tongue and suddenly in their fourth school year all their subjects are expected to be taught in English. (Heugh (2009) is but one researcher who sees this 'leap' as being too steep.) In this context, CS may serve as a resource to advance comprehension of content subject concepts and the acquisition of cognitive skills required for studying. Although it could be argued that CS is an obstacle to acquiring the reasonable English proficiency needed for the tertiary level or in the workplace, this challenge can be addressed at the secondary school level and especially in the English 'as subject' classroom (as opposed to English as medium of instruction (Mol)) where CS could be limited to explanation of concepts and cognitive skills.

An automatic response to the language difficulties experienced by South African learners may be to continue for at least seven years in the L1 to ensure that learners acquire adequate skills in their primary languages (De Witt et al., 1998: 119; Nkosi, 1997:2 cited in De Wet, 2002:119). However, it is clear once again that parents still prefer their children to receive their education through the medium of English (Webb, 1999; De Klerk, 2002; the NEEDU report, 2013a and b) (in this study, educators and learners also indicate this preference). This is often an economic or political decision instead of a pedagogical one: English is viewed as a status symbol, an international language, a lingua franca, and especially as a guarantee of employment and economic freedom. Unfortunately the politicisation of the language issue in South African education overpowers the debate

about the merits of mother tongue education in our schools. Until the value of the L1 for education (Cummins, 2000; Baker, 2001; Benson, 2004; Heugh, 2011; Bloch, 2012) is realised CS may have to be retained as a resource in the classroom. In Limpopo, rural schools, more so than in the urban schools, CS occurs in content subjects and to a lesser degree in the English classroom (McCabe, 1996; Molotja, 2008), making the classrooms linguistically diverse (Vinson, 2013). This is the reality and will not change in the near future. Thus resourceful ways should be found to use CS to support learning and increasing academic achievement.

In a study of CS in Botswana senior secondary schools, Chimbanga and Mokgwati (2012: 21) suggest that code-switching should be viewed from a functional perspective. They point out that the reality of two or more languages in the classroom “does not necessarily mean they are distinct and separate in their function.” Instead, the two languages are “intertwined ...[to] form a mutually supportive role by exploiting the students’ L1 in order to increase their understanding of the L2.” This supportive role could be underscored by using bilingual textbooks – bilingual parallel or bilingual supportive textbooks as described by McCallum (1995: 131-133) may be useful as a transition at the intermediate level. At least a bilingual glossary should be considered. The objections to the cost of such books may be outweighed by the cost caused by repeating grades or dropping out (Benson, 2004: 16).

Responses to questionnaires administered to learners and educators in this survey indicated that educators (who are also parents) and learners acknowledged the importance of English for academic and career success, but also the necessity of the mother tongue in aiding comprehension of content. Which language should therefore be used to teach the higher cognitive order and meta-cognitive skills essential to academic literacy? Research (Skutnab-Kangas, 2000; Benson, 2004, 2005; Heugh, 2009, 2011) would suggest the mother tongue; but at the moment many rural schools, the School governing bodies (SGBs), parents and even learners still choose English to be the medium of instruction (McCabe, 2008; NEEDU, 2013a: 31).

Particularly in rural schools this may inhibit effective learning (as opposed to rote learning or mere retrieval of information) and especially the mastering of above-mentioned academic literacy skills. Perhaps academic literacy should be taught in tandem in both the mother tongue and English, thereby making use of students’ multilingual capital (Bourdieu, 1986, 1991; Hill, 2009; Makalela & McCabe, 2013). The implication of this is the acceptance of code-switching in schools as a learning resource. This is not unheard of. Moodley and Kamwangamalu (2004) have already suggested that English literature be taught through alternation between English and the L1.

Canagarajah’s (1995:177) classroom observation of 24 educators from both rural and urban areas in the Jaffna Peninsula, Sri Lanka, showed that CS was used in the classroom for negotiating directions, requesting help, managing discipline, giving commands, defining, explaining, and negotiating cultural relevance. In the context of South Africa’s political history ‘negotiating political relevance’ is of particular importance because “classrooms are not culturally neutral terrains” (Boykin et al., 2005). CS has a

unifying function between the previous official languages, English and Afrikaans, and the African vernaculars, either to acknowledge each of the languages or to link concepts or topics in the medium of instruction with learners' L1 - hence the eleven-language policy.

CS has a valid role in conversation and in the classroom and the Centre for Education Policy Development (CEPD) recommends that "Code-switching be acknowledged as a normal feature of teaching and learning" (CEPD, 1994: 9, cited in Moodley & Kamwangamalu 2004: 199). Whether this approach is already recommended by Methodology of English in teacher training programmes needs to be investigated (cf. Van der Walt, 2010).

It is suggested that in the rural classroom if English only is demanded it may make learners mere 'performers' (Arthur, 1996). Arthur found that while educators have access to Setswana as the 'backstage' language because they are directors and co-actors, learners who were not allowed to switch but had to respond in English struggled to participate in class. In a recent visit to a primary school by the researcher the principal proudly demonstrated the learners' command of English. He would ask them a rehearsed question and they would respond with the rehearsed answer in a chorus. As proffered by Arthur (1996), CS would likely result in a little more in-depth discussion instead of the rehearsed 'script' that educators and learners frequently follow (Arthur, 1996). This emphasises the need for educators to be trained to 'make thinking visible'. If they can articulate their 'cognition' they should be able to teach the skill to their students.

Pimm (1991: 21) declares the following in the context of teaching mathematics:

One difficulty facing all educators, however, is to encourage movement in their learners from the predominantly informal spoken language with which they are pretty fluent, to the formal language that is frequently perceived to be the landmark of mathematical activity.

This probably applies to most of the subjects, including English itself (cf. Coetzee Van Rooy, 2011). The movement to learning and applying the more formal language is hampered by the steep 'leap' from learning in the mother tongue in the first years to having to use English from Grade 4 (Jordaan, 2011). Fleisch (2008) argues that the focus on lower-order cognitive tasks, as shown by the NEEDU Report (2013a, 2013b), is a way of compensating for not having mastered the medium of instruction. Students' struggle in trying to cope with the medium of instruction and their inability to express themselves clearly and appropriately, leads to problems of low self-esteem (Probyn, 2001). Learners may fail exams not because they do not have the intellect but because of a myriad of language problems – both in their L1 and L2. They first need to express abstract thinking in the L1 before attempting to do so in the L2 or MoI – at which point the general English language proficiency English academic discourse can be addressed.

When investigating code-switching in African schools, it becomes clear that code-switching provides an additional resource for coping with the demands of the ESL

classroom; and is, eventually, chiefly motivated by cognitive and classroom management factors: either (i) a need to focus or regain the students' attention, or (ii) a need to clarify, enhance, or reinforce lesson material.

Peires (1994: 19) submits that code-switching is used to negotiate social meanings and manipulate nuances. It is also used when a language lacks a certain word and provides an alternate learning route by means of paraphrasing and translation. Students feel that if allowed to code switch it improves their understanding of their work and reinforces their learning. She concludes that code-switching is firmly established in learning institutions. She views this as an advantage because then both languages are used for real communication and the second language is no longer just an "academic abstraction" (Peires, 1994: 21).

Afolayan (2006) submits that in the higher education process there are three entities – the educator, the learner and the instructional material. He states that a text book which uses English beyond the learners' ability invites translation and *conscious* code-switching. It is important that the textbook be written in a language which is on the level of the student's ability. This researcher would like to see bilingual textbooks in the intermediate phase as she believes that this would facilitate the learning and comprehension of the content as well as concepts thus enhancing the learning of English and the L1.

Explaining and learning concepts and strategies from their context is likely to be easier understood; a context which the bilingual textbook would provide. Recommending a bilingual dictionary which is sometimes offered as a solution is unsatisfactory because one word in English may have to be described in a sentence or more in another language. Nuances of meaning cannot always be translated by one word: the context is required to ascertain meaning.

Wheeler and Swords (2006) advocate code-switching as a successful literacy tool. Although it may be argued that this is not a case of two languages but of register awareness, the technique of comparative analysis may still be useful in a teaching context using two languages. Wheeler and Swords suggest teaching English by comparing formal English structures (in their context with African-American English) with the informal English structures of the Afro-American English. They propose that because code-switching requires 'cognitive flexibility', the skill to think about a task or situation in a number of ways means that learners can think about their language 'in both formal and informal forms'. They learn to intentionally choose the style of language appropriate to the setting. The method they use is to compare the informal spoken language with the required academic discourse.

Comparative analysis of the L1 and English may be a way to teach grammar and academic literacy. Although accused of being an outdated method direct translation activities can also raise awareness of differences in syntax and other grammatical structures between languages. The researcher believes that as cognitive skills need to be made explicit; so too some formal language structures also occasionally need to be taught explicitly.

7. Conclusion

These findings show that despite the difficulty learners have with understanding and articulating their schoolwork in English, they, their parents, the SGB and educators still choose English as their medium of instruction. The choice is motivated by the fact that English is viewed as a status symbol, an international language, a lingua franca, and especially as a guarantee of employment and economic freedom. Parents and learners fail to connect poor educational achievement with the barrier that English as incomprehensible language erects, especially at the lower levels. By the time, typically in secondary school, when learners feel they have mastered the language, they are so far behind in content learning that they end up being relatively competent in English, but at the cost of falling behind academically. This indicates the requisite of a concerted effort to raise awareness of the benefits of L1 education, especially in an environment where English is more a foreign language than a second language (cf. Heugh, 2002).

There have been suggestions of extending the use of the mother tongue until grade 6 (Lafon, 2009) but whether this will be accepted is yet to be seen. The new South African First additional language policy statement, Curriculum Assessment Policy Statement (CAPS), introduces English from grade 1 (South Africa, 2011: 8). Whether this will ease the transition from mother tongue medium of instruction to English as medium of instruction is yet to be seen. The fact remains that the leap from L1 MoI to English MoI is too steep and seriously hampers learning in an English-impooverished environment. CS should be considered as a tool to bridge the gap between L1-only to English-only in an English-impooverished learning environment.

8. Recommendations

The first step to employing CS may mean a name-change – speaking of translanguaging instead of code-switching; making the practice acceptable by removing the negative connotation.

Code-switching should ideally be used predominantly in the primary school and gradually faded out in the secondary school but until inadequate teaching (overemphasis on rote learning and superficial facts without comprehension and reflection) is addressed it may still need to be used beyond the primary school. In the English classroom, specifically, code-switching should be faded once learners reach secondary school or else once they have become aware of and are able to apply cognitive processes to their studies: academic reading and writing. If the cognitive capacity of learners is developed at school, both in primary and secondary, tertiary students should be able to cope better with academic discourse.

As academic process writing is a large part of the first year English curriculum at UL, and if students enter university with little academic literacy, as they currently do, the L1 could be used as a scaffolding tool – as an ‘agent’ of ‘cognitive apprenticeship’ (Brown,

Collins, & Duguid, 1989; Collins, Brown & Holum, 1991; Davis & Miyake, 2004:266) as explained above.

Scaffolded code-switching employed for cognitive and classroom management, can play an important role in the content subject classroom; also to a controlled extent in the English classroom. Code-switching can also result in inclusive education which involves cultural sensitivity (NEEDU report, 2013a) when using and acknowledging the L1. There appears to be a definite role for code-switching in the ESL/EFL classroom, in particular in terms of aiding understanding of general concepts within a certain discipline; encouraging participation by eliciting responses; and improving educator-student rapport and in general being a bridge between using a little English and eventually mainly English with only a little vernacular until they are proficient enough to manage in English only.

Additional support should come from the L1 educators to play, as described by Chimbanga and Mokgwati (2012: 21), “a mutually supportive role by exploiting the students’ L1 in order to increase their understanding of the L2”. Academic literacy should be taught both English and in Sepedi (or one of the other African languages of the area) at the same time to develop the cognitive skills required. It is important that a standard, appropriate L1 be taught so that students acquire both academic Sepedi and academic English of a high standard. This could be enhanced by the introduction of bilingual textbooks. Comprehension and internalising (making sense of) a concept is easier if the concept is contextualised. Bilingual textbooks would be especially helpful for comprehension and contextualisation of subjects such as Mathematics and Natural Sciences. Mere translation is insufficient - a word in one language cannot automatically be explained by one word in another language. Hence bilingual textbooks are preferable to dictionaries or glossaries. It may be argued that that would be too costly, but as stated by Benson (2004:16) when promoting material and linguistic development of the L1, “[c]ost-benefit analyses demonstrate that this investment is balanced by savings in terms of per-pupil expenditure because of significantly reduced repetition and dropout rates”.

Teacher training which includes training in cognition is another consideration – “teachers are active, thinking decision-makers who make instructional choices by drawing on complex, practically-oriented, personalised, and context-sensitive networks of knowledge, thoughts, and beliefs” Borg (2003: 81). He further points out that research has shown that educator thoughts, understandings, perceptions, and practices are mutually informing, with contextual factors playing an important role in determining the extent to which educators are able to implement instruction congruent with their cognitions (Beach, 1994; Tabachnick & Zeichner, 1986).

The NEEDU report (2013a, 2013b) has highlighted the problem of educators themselves having problems with cognitive skills and thus cannot transfer these skills to their learners. When these learners enter tertiary institutions they cannot cope with the demands of their degree programmes and this is exacerbated by not being sufficiently academically literate in English. The question should first be whether educators are academically literate in their own L1. In a rural environment educators too have decreased access

to English. Most of their 'cognition' may be in their L1 and so the solution may be to approach the problem from the L1 instead of the L2. To enhance academic achievement and performance in our rural schools the development of the L1 should perhaps be priority by using bilingual models, such as transitional and developmental maintenance models, that maximise L1 development and subsequently improve L2 development and content learning (Benson, 2004:16).

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ABOUT THE AUTHOR

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Rose-marie McCabe holds a doctorate in the development of evaluation criteria for EAP language learning and teaching materials. She is senior lecturer in the Department of English Studies at the University of Limpopo and project leader of a multiple literacies project in collaboration with Flemish universities. The project does research and community work in rural primary schools. Her research interests are materials development and evaluation, SLA, academic literacy and language policy.

APPENDIX A

CODE-SWITCHING QUESTIONNAIRE

Dear Educators

I am writing a paper on code-switching in the classroom. Research from a number of countries I have consulted shows that it is often viewed as a resource and not an obstacle to learning. As educators, we use it to a greater or lesser degree in our classrooms often depending on the level of the learners or the subject we are teaching. May I request a little of your time to think about code-switching from English to the Mother Tongue. Ignore what people say 'should' be done and consider what is practical and possible when teaching - for you as an individual.

(This is completely confidential. I do not need your name or your school's name.)

What do you think of code-switching

1. In the English classroom?

2. In a content subject classroom such as Geography , Mathematics, or other subject?

3. When do you code-switch (use the mother tongue alternately with English) and how regularly?

(Please give your answers a rating - **1. Always 2. Often. 3. Sometimes 4. Seldom. 5. Never** - to indicate how frequently you use it in a specific situation. E.g. If you never do it without thinking you will not mark it with a X nor give it a rating.

Possible situation when you would code-switch	Mark with a X if used	Rating
1. When learners do not understand.		
2. When I cannot find another way of explaining a concept in English.		
3. When I use the vocabulary of a subject or topic which the learners do not always know or understand (e.g. in the Maths or Science class or in the English poetry class).		
4. When I want to create an effect or atmosphere of security in the classroom.		
5. Having to teach English despite not having the qualification or confidence to teach English.		
6. I do it without thinking about it.		
7. Any other situation not mentioned here? Explain here.		

4. Do you teach in a secondary school or primary school (Mark with X or √):

4.1 Secondary		1.2 Primary	
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5. Which subject/s do you teach?

Thank you very much for your time and effort.

Dr Rose-marie McCabe: UL Dept of Languages

APPENDIX B

QUESTIONNAIRE ABOUT THE USE OF ENGLISH AND SEPEDI / XITSONGA / SETSWANA IN THE CLASSROOM: LEARNER OPINION

MEDIUM OF INSTRUCTION USED AT SCHOOL

The purpose of this questionnaire is to help with research into the language or medium of instruction used in secondary schools during the GRADE 12 year.

Thank you for being prepared to help with the research. You will remain COMPLETELY ANONYMOUS; therefore your name is not required.

ENCIRCLE THE NUMBER BELOW OR ALONGSIDE THE BLOCK WITH THE CORRECT ANSWER (WHICHEVER IS APPROPRIATE).

Section 1

1. Was the school where you completed grade 12 in a rural or urban area?

1. Rural	
2. Urban (city/ town)	

2. In which province?.....

3. What was the OFFICIAL medium of instruction (language of learning and teaching - LoLT) at your school?

1. Mother tongue (MT) / home language (HL)	
2. English	

4. How often do you speak English outside school?

Almost Always <i>(91-100% of the time)</i>	Often <i>(70-90% of the time)</i>	Regularly <i>(50-69% of the time)</i>	Seldom <i>(21-49% of the time)</i>	Almost never <i>(0- 19%)</i>

5. How often was the HOME LANGUAGE used by the TEACHER in the classroom for your various subjects?

Subject	Almost always <i>(91-100% of the time)</i>	Often <i>(70-90% of the time)</i>	Regularly <i>(50-69% of the time)</i>	Seldom <i>(21-49% of the time)</i>	Almost never <i>(0- 19%)</i>
Accounting	1	2	3	4	5
Agriculture	1	2	3	4	5
Business Economics	1	2	3	4	5
Biblical Studies	1	2	3	4	5
Biology	1	2	3	4	5
Economics	1	2	3	4	5
Home Economics	1	2	3	4	5
Geography	1	2	3	4	5
History	1	2	3	4	5
Mathematics	1	2	3	4	5
Needlework	1	2	3	4	5
Science	1	2	3	4	5
Typing	1	2	3	4	5
English	1	2	3	4	5
Any other subjects:					
	1	2	3	4	5
	1	2	3	4	5

6. *If your Home Language was used, did it help you understand your school work better?*

*(If the Home Language was **not** used in your classroom your answer would be 3)*

Yes	No	Not applicable

7. *Do you think that because your teacher used your Home Language you performed better in your English school work?*

1. Yes	2. No

8. *What do you think about the use of your **HOME LANGUAGE** in the classroom? Indicate with an X as many of the reasons below as you wish.*

1. It helped me better understand the subject	
2. I did not learn the English vocabulary that I needed for a subject.	
3. It made me feel more comfortable in class	
4. It made me lazy because I waited for the teacher to explain in my language and did not try and understand the English explanation	
5. My teacher used it to help us understand	
6. My teacher used it because his/her English was not good enough	
7. My teacher used it because we did not participate in class if we could not speak our home language	
8. It helped me perform better at school	
9. It prevented me from learning good English.	

9. How *OFTEN* was the Home Language used by the *LEARNERS* in your class in *EACH* subject when speaking to your teacher?

Subject	Almost Always (91-100% of the time)	Often (70-90% of the time)	Regularly (50-69% of the time)	Seldom (21-49% of the time)	Almost never (0- 19%)
Accounting	1	2	3	4	5
Agriculture	1	2	3	4	5
Business Economics	1	2	3	4	5
Biblical Studies	1	2	3	4	5
Biology	1	2	3	4	5
Economics	1	2	3	4	5
Home Economics	1	2	3	4	5
Geography	1	2	3	4	5
History	1	2	3	4	5
Mathematics	1	2	3	4	5
Needlework	1	2	3	4	5
Science	1	2	3	4	5
Typing	1	2	3	4	5
English	1	2	3	4	5
Any other subjects:					
	1	2	3	4	5
	1	2	3	4	5

10. Do you approve of the use of the Home Language / Mother Tongue in the classroom?

1. Yes	2. No

11. Give a reason/reasons for your answer to Question 10.

12. Do you approve of English as the language/medium of instruction?

1. Yes	2. No

13. Give a reason or reasons for your answer to question 12.

Thank you very much for your time and effort to complete this questionnaire for me.

You are welcome to ask me for the results of my survey. They should be processed by the beginning of next year.

Dr Rose-marie McCabe

University of Limpopo

Department of Languages

Tydskrif vir Taalonderrig - Journal for Language Teaching
- Ijenali yokuFundisa iLimi - Ijenali yokuFundisa iiLwimi -
Ibhuku Lokufundisa Ulimi - Tšenale ya tša Go ruta Polelo
- Buka ya Thuto ya Puo - Jenale ya Thuto ya Dipuo - Ijenali
Yekufundzisa Lulwimi - Jena?a ya u Gudisa Nyambo
- Jenala yo Dyondzisa Ririmi - Tydskrif vir Taalonderrig -
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- Tšenale ya tša
Go ruta Polelo -
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ya Puo - Jenale
ya Thuto ya Dipuo
- Ijenali Yekufundzisa
Lulwimi - Jena?a ya u
Gudisa Nyambo - Jenala yo
Dyondzisa Ririmi - Tydskrif vir Taalonderrig
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