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'It's easy to learn when you using your home language but with English you need to start learning language before you get to the concept': bilingual concept development in an English medium university in South Africa

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This article describes a multilingual glossary project in the economics department at the University of Cape Town which gave multilingual students learning economics through the medium of English, opportunities to discuss new economic concepts in their home languages in order to broaden and enrich understanding of these new concepts. The findings from this project illustrate how important it is that students use a range of languages and discourses to negotiate meaning of unfamiliar terms. The article responds to Mesthrie's (2008) caution regarding the development of multilingual glossaries, dictionaries and textbooks at higher education level in South Africa. It argues that translation of terminology happens inevitably both inside and outside our university classrooms as multilingual university students, in peer learning groups, codeswitch from English to their primary languages in order to better understand new concepts and this could be used as an important resource for building academic registers in African languages.

Keywords: codeswitching; multilingualism; African languages; concept development; African languages

Introduction

This paper uses illustrations from a research project at the University of Cape Town (UCT) to emphasise the importance of English as an Additional Language (EAL) speakers using both English and their primary languages to develop understanding of new economic concepts. It goes on to argue that, while the development of multilingual glossaries in African languages is undoubtedly a complex process, as Mesthrie (2008) has recently argued in this journal, translating discipline-specific terms is not something that the discipline experts or the linguists can put on hold. It happens inevitably both inside and outside our university classrooms as multilingual university students, in peer learning groups, codeswitch from English to their primary languages in order to better understand new concepts. Data from my research project will be used to argue that this translation forms an important part of the learning process and that the translation of discipline terms in a community of

practice – discipline experts and bilingual novices – could provide a very interesting starting point for the work of developing multilingual glossaries.

Following on the transition to democracy in 1994, South Africa positioned itself at the forefront of international language policy development by recognising 11 official languages which is the most multilingual state policy in the world. However, there is growing concern that although English is the language of the minority, it has become both the language of power and the language of educational and socio-economic advancement in South Africa. Although the student population in South African tertiary institutions have a vast range of home language backgrounds, until recently, the language of instruction in South Africa's universities has been either English or Afrikaans. Materials such as university textbooks are not available in any of the South African languages other than English and Afrikaans and the appropriate academic registers¹ have not yet been developed in African languages.

It is in this context that in 2002, the Language Policy for Higher Education issued by the Department of Education required institutions to include in their rolling plans, the strategies they had put in place 'to promote multilingualism' and ensure development of all the official languages as academic/scientific languages (Ministry of Education 2002). In 2003 a ministerial committee, set up in an advisory capacity, recommended that in addition to English and Afrikaans at least one official African language of the province concerned should be introduced as language of instruction, if only as the culmination of a long term strategy. Institutions should specify how introduction of such a language will be supported by terminology development, translation and development of study materials used in examinations and theses and assignments (Madiba 2004, 37).

In response to the Language Policy in Higher Education, the UCT, where this research project took place, developed the Multilingualism Plan (2004) (Toward a language plan for the University of Cape Town: 2005–2010 2003) and launched the Multilingualism Education Project to begin the process of promoting multilingualism in the institutional policies and practices at UCT and making the campus more of a home to all students. The plan underlined the fact that medium of instruction at UCT still privileged those who have had the benefit of developing a significant linguistic competence in English and made academic curricula inaccessible to speakers of EAL. For instance, it reported that 'In several programmes/degrees the discrepancy in throughput rate between English first language and second-language students is currently over 20 per cent' (Toward a language plan for the University of Cape Town: 2005–2010 2003). Statistics such as these are supported by research in mathematics and science education in schools in South Africa (Adler 1998; Rollnick and Rutherford 1996; Setati et al. 2002) which highlight many of the learning problems stemming from the use of English as the instructional language.

In South Africa, the majority of second-language speakers are 'black' and these discrepancies in completion rates have much to do with socio-economic and socio-political issues which have their roots in apartheid. Recent studies of undergraduate programmes have shown that, in almost all cases, the completion rate of 'black' students is less than half that of their fellow 'white' students (Scott, Yeld, and Hendry 2007). Nevertheless, the fact that students are learning through a second or additional language is also impacting on tertiary completion rates.

The Multilingualism Plan reported that at the UCT 65% of students claim English as a home language, while the remaining 35% have home languages which include all of the official indigenous languages and approximately 54 other languages

(Toward a language plan for the University of Cape Town: 2005–2010 2003). 'Black' students now constitute just over 50% of the university's student population, therefore, large numbers of 'black' students regard English as a first language, either because it is a home language (possibly one of many) or because they studied English as a first language at school. These figures reflect the fact that schooling backgrounds of 'black' students can no longer be homogenised. An increasing number of 'African' and 'coloured' students are now being educated at relatively well resourced, middle class, formerly white, now racially mixed ex-model C schools. Others, for whom an African language or Afrikaans is a home language, have been educated in the old Department of Education and Training (DET) schools and the Department of Education and Culture (DEC)² schools which are, by contrast, relatively ethnically homogeneous, working class and poorly resourced (Bangeni and Kapp 2007). Bangeni and Kapp's study points to the very different schooling experiences of these two groups.

The Language Development Group (LDG) at UCT has for more than 25 years focused on building academic literacy skills amongst this second group of students for whom English is a second or additional language. UCT's language policy commits the university to explicit teaching of the literacy and language skills of the disciplines to all students which is a complex task because UCT draws students from such diverse language and schooling backgrounds.

But the LDG sees the home language/s³ as an important resource for the development of the second language. Providing our students with opportunities to use their home languages can act as a tool for learning and scaffold access to the discourses of their disciplines (Baker 1993). It not only gives epistemological access, but students feel more welcome and affirmed if they hear and see their languages in the university halls and classrooms. Therefore, Language Development staff have introduced various innovations in this regard, such as encouraging and supporting students in the use of their home languages as a scaffolding tool to clarify ideas and concepts (Kapp 1998), providing orientation materials in the home language and training tutors to use multilingualism as a resource. More recently, the Multilingualism Education Project has promoted multilingualism in the university environment by means of translation of signage, official letterheads and the university logo and provided Xhosa Communication skills courses to staff and students. In addition, a multilingual concept glossaries project was launched in some faculties in order to promote discipline knowledge and development of academic literacies in some faculties (Report of the Language Policy Committee 2008).

My project, begun in 2006, is situated in the context of our work in the LDG and in collaboration with the Multilingual Education Project. It also builds on my PhD (2004) which explored the way first-year student texts are built from a range of past and present discourses, discourse strategies and genres and that in these 'interim literacies' students build on their prior discourses to learn new ways of writing and to appropriate new meanings. The PhD research focused on students writing in English and it showed that for speakers of EAL from rural and working-class backgrounds, acquisition of the new discourses is a very particular challenge. In my post-doctoral research, I became interested in what happens when bi- and multilingual students codeswitch and build on their primary languages to make sense of new concepts which they are learning through the medium of English. In order to develop a better understanding of how concepts transfer from one language to another, I ran a project with my students in the academic literacy adjunct module to first-year economics to

develop multilingual glossaries and to probe the ways in which students explained these concepts in their home languages. In this article I will focus particularly on the pedagogical implication of concept translation and codeswitching at university level.

South African schooling context

According to Cummins (1996), conversational communication is 'context embedded', that is, meaning in conversational communication is supported by contextual and interpersonal cues, such as gestures, the situation and negotiation of meaning between participants. Cummins speaks of Basic Interpersonal Communication Skills (BICS). On the other hand, academic language use is 'context reduced' in that students have to access or create cognitively advanced meaning purely through linguistic cues, which are not part of the immediate context of communication (e.g. having to follow complex instructions, such as 'analyse' or 'construct an argument' or having to interpret signal words like 'however' or 'although' in densely constructed texts). Cummins has called this kind of proficiency cognitive academic language proficiency (CALP).

South African language researchers have found Cummins' distinction very useful because of the connections he makes between language and learning. The school teaching and learning context of students in the poorer township and rural schools in South Africa has been described as a foreign language learning environment because exposure to English is almost entirely limited to the schooling context (Setati et al. 2002). A number of studies (Kapp 2001; Macdonald and Burroughs 1991; Taylor and Vinjevd 1999) in impoverished township and rural schools have shown that students communicate in context-embedded⁴ and fairly cognitively undemanding English and bilingual learning environments. It could also be that a range of languages is used in these classrooms in the construction of CALP but that this use does not equate to any one language, which is then required for demonstrating their proficiency. As a consequence, these students find the context reduced and cognitively demanding university environment particularly taxing because of the variety of challenges it presents. Students from these schools indicate that they find the level of English at university very demanding (Bangeni and Kapp 2007; Paxton 2004, 2006) and in many cases the CALP has not been well developed.

Extensive research summarised by Cummins (1996) has shown cognitive and linguistic advantages resulting from additive forms of bilingualism. Codeswitching (see note 4) appears to be a useful way of achieving additive bilingualism in the classroom. International research has led to the development of a number of models of codeswitching, such as Gumperz's (1982) 'interactional model' and Myers-Scotton's (1993) 'markedness model' which have assisted in the analysis of the forms and functions of codeswitching. More recently, a number of local studies have been conducted to develop a better understanding of the role that codeswitching plays in Southern African primary and secondary school classrooms (Adendorff 1996; Cleghorn and Rollnick 2002; Setati 1998; Setati et al. 2002). Adendorff (1996, 400) described codeswitching as 'a form of sociolinguistic contextualizing behaviour' and he shows by means of data collected in an English medium school where the students were Zulu-English bilinguals, that codeswitching is an extremely valuable communicative resource which enables teachers to accomplish both social and educational objectives, often clarifying information or giving additional meaning to what is said and done in a conversation. He sums up by saying 'the mother tongue⁵ is the

solidarity code, the link language mediating between students' knowledge of the world (which is presented to them at home in the mother's tongue) and the preferred mode of representing that knowledge at school in English' (Adendorff 1996, 402).

In their extended study of language in mathematics classrooms in South Africa, Setati et al. (2002) conclude that codeswitching is important for enabling learners to explore ideas and concepts in a familiar environment. It would seem therefore that the acquisition of new discipline-specific concepts can be better scaffolded by codeswitching and multilingual usage and that teaching methods that make effective use of codeswitching may allow richer understandings of difficult concepts and thus begin to close the gaps described in *Towards a language plan for the University of Cape Town: 2005-2010* (2003). In fact, studies have indicated that knowledge of a second language can be an advantage in concept acquisition as it helps learners to see different representations of the same ideas (Swann and Cummings 1979, cited in Rutherford and Rollnick 1996).

However, these studies were undertaken in primary and secondary school classrooms, and very few South African studies have explored the extent of codeswitching in university classrooms to understand better what codeswitching means for concept development at the university level and whether students' primary languages have a role to play in meaning-making at university.

Developing conceptual understanding

Sociolinguists have assisted in understanding the ways in which concepts transfer from one language to another. Cummins refined the threshold hypothesis to develop his Developmental Interdependence Hypothesis (1979, 1996), which states that at deeper levels of conceptual and academic functioning there is considerable interdependence across L1 and L2 and the development of proficiency in L2 is partially a function of the level of proficiency attained in L1 by the time intensive exposure to L2 begins. Cummins argues that L1 and L2 differ in surface features of phonology, syntax and lexicon but that a common underlying proficiency determines an individual's performance on cognitive and academic tasks in both L1 and L2 (Cummins 1996) given that two languages operate through the same central processing system. Many of the academic concepts of economics have not yet been translated into African languages. Therefore, students have not yet had the opportunity to develop cognitive and academic proficiency in their first language in this specialist discipline and they may find developing the cognitive academic language for university economics quite a challenge in the second language (English).

However, transfer of concepts is far more complex than Cummins' Developmental Interdependence Hypothesis indicates. Even when the concept is well developed in the first language, conceptual transfer may not be automatic for a range of different reasons. One of these is that meaning is relative to the linguistic system (Saussure in Mesthrie 2008, 531) and a second is because cognition is affected by one's sociocultural and historical formation (Vygotsky 1986; Wells 1999; Wertsch 1991). We know from Saussure that the sign is arbitrary and that the value of a sign derives from its use by a community of speakers. Thus, as Mesthrie points out, 'no concept can be meaningful in itself with an absolute value that will transcend translation or borrowing' (2008, 332). But Saussure's understanding of society was an abstract one; he had no particular interest in divisions and social arrangements within society and it was Voloshinov and Bakhtin who emphasised the ideological

nature of the sign and that the sign is open to different orientations and evaluations in the social world (Mesthrie et al. 2000).

Applied linguists draw on sociocultural theorists, such as Vygotsky (1978) to emphasise that cognition is social and cultural in nature. Thus, concepts are understood differently from the perspective of different cultures and different value systems. Vygotsky says that the discourse one engages with 'intermentally' with others becomes internalised as 'inner speech' for intramental functioning, such as problem-solving and reflection and it is this exchange of discourses that leads to intellectual growth. Wertsch (1991) connects Vygotsky's social view of cognitive development with Bakhtin's idea of appropriation of social languages and speech genres. Wertsch says that Bakhtin saw social languages and speech genres as the means by which communicative and mental actions are organised and describes them as a 'toolkit' of 'mediational means':

A toolkit approach allows group and contextual differences in mediated action to be understood in terms of the array of mediational means to which people have access and the patterns of choice they manifest in selecting a particular means for a particular occasion. (Wertsch 1991, 94)

The 'toolkit' notion provides us with an explanation for diversity and differential access to dominant discourses (in this case academic discourses in English).

In the context in which we work in post-apartheid South Africa, students' sociocultural histories, particularly their home and schooling histories, may have shaped the mediational means they have developed, as well as the experiences, beliefs and values they draw on in order to build understanding. Gee's (1996) notion of primary discourses can be compared with the 'toolkit' notion. According to Gee, the primary discourses are the home discourses, acquired early in life and they form the base from which later discourses are acquired, while secondary discourses are those acquired from social institutions outside the home, for example, the church and the school. Academic discourse is often referred to as a secondary discourse (Gee 1996). Wells (1999) emphasises that it is important that students construct their own understanding by using what they already know, in order to make sense of new information so that a learner's transformed understanding is a 'personal reconstruction' in that it is accommodated within the student's emerging identity. This personal reconstruction is crucial because it reflects a transformed understanding and an appropriation of meaning. But, as Gee (1996) points out, understanding of concepts is never fixed, it is constantly growing and changing because meanings are rooted in communities and differ across diverse groups. Gee draws on Bakhtin to emphasise that beliefs and values from different sociocultural groups 'can conflict in their content, in how they are used and in the values and perspectives they carry' (Gee 1996, 88).

This perspective problematises the notion of 'concept translation'. Understanding new concepts in a new language and a new discourse seems far more complex than simply translating concepts from one language to another. But rather, from the theoretical perspective I have outlined above, it would seem that students get to a common concept by creating the standardised dominant secondary discourse, using the non-standard and non-dominant primary discourse.

Using codeswitching for pedagogical purposes

It is this theoretical frame that formed the backdrop to the project we launched in our academic literacy module in first-year economics, which is offered to students in the Commerce Academic Development Programme, who are placed in an extended course in microeconomics. I believed that unless students explored concepts through various languages, they would not really develop their own personal construction and an enriched understanding of them.

In the first stage of the project students in the academic literacy class worked in home language groups (Xhosa, Zulu, Sotho, Tswana, Pedi, Afrikaans and English) on worksheets that required them to read a short passage which focused on a particular economic concept, explain the concept in English and then in the home language, and provide examples of how they would use the concept both in an English sentence and a sentence in their home language. Because students found this quite a complex process and the 45-minute period seemed not really long enough for working with the two concepts, I built in a further stage in the research and employed a Xhosa-speaking economics tutor to continue the discussion of economic concepts with eight Xhosa-speaking students in informal tutorials.

These extra tutorials gave the tutor the opportunity and the time to explore the concepts in more depth and to try to address any difficulties that had arisen. The tutor, Ondile, had a number of training sessions with me where I explained national language policy and the multilingualism plan at UCT; I also provided insights into the rationale behind my project. We decided that I would not attend the tutorials but that the discussion would be captured on an audio cassette recorder and agreed that Ondile would use whichever language seemed most natural to discuss the concepts. We also agreed that, if time allowed, he would open up a discussion around the language of teaching and learning. To create an appropriately informal atmosphere, we decided to hold the tutorials in a tearoom over the lunch hour and a snack lunch was provided. Three tutorials were recorded; the first group consisted of three students who were all from rural ex-DET schools in the East Cape and the second group had five students from more diverse schooling backgrounds; the first group then asked for a follow-up tutorial where they discussed two more concepts.

After the tutorials, I interviewed all eight Xhosa-speaking students who had participated in the tutorials as well as Ondile to find out more about students' language and literacy backgrounds, their responses to the concept translation exercise and the extra tutorials as well as their responses to the language of teaching and learning at UCT. I have had all the material from the concept worksheets and the tutorials translated and tutorials and the interviews have been transcribed. After the mid-term break, I administered a detailed questionnaire to all 103 students in the Commerce Academic Development Programme to further probe issues related to multilingual learning. These data have allowed valuable insights into the very complex relationships between language, learning and identity and a more textured understanding of multilingual concept formation.

The glossary exercise

The discussions around the glossary worksheets were lively and sometimes quite heated. Some students were concerned that their African language was 'not good enough'; they said they did not know 'the deep Xhosa', which they needed to find the

best translation, whereas others were quite confident. One student said that it was not easy to find an explanation for the term because there was a great deal of disagreement in the group. The long debates and arguments about the meanings of the concepts underlined that meanings were contested. Although students shared the same mother tongue, some were urban and others were from rural backgrounds, some had attended the formerly white Model C schools while others had come from the ex-DET schools. In my interviews with the Xhosa speakers, students pointed to the many different Xhosa dialects and the notable differences in dialect between rural and urban Xhosa speakers. My analysis of the completed worksheets has led to the following observations.

Firstly, the translation of concepts illustrated borrowing from English. For instance, the classroom grouping that represented Setswana, Sesotho and Sepedi speakers provided an appropriate English explanation for 'deficit' (i.e. shortfall), then translated it as 'ke go shota'. In response to the worksheet request to note down any issues that came up in the discussion they wrote:

We don't know the actual word used for deficit in our language, as a result we used the word that we use in the streets, which is township lingo.

Gough (1999) observes that, in developing African languages, we need to note how words from other languages referring to specialist domains have become an established part of the language. The word *shota* here is a borrowing from the English word 'shortfall' and can be used as a synonym for deficit. As the students indicate, the word '*shota*' has become an established part of their language.

Secondly, when students could find no direct translation for the concept, they often used very lengthy explanations to get the meaning across. The group of Zulu speakers explained the meaning of the economic concept 'equity' as 'fairness' in English, but gave extended explanations of the concept in Zulu explaining that there was no direct translation for the concept, so they had used the Zulu word for 'balance' which could also mean fairness. Similarly, they commented that they could not find a direct translation for 'deficit' so they had explained it or used it in examples. A Xhosa speaker pointed out in his interview that translation of concepts is sometimes complex:

You sometimes translate things from English to Xhosa and find that it is more difficult in it than it is in English. It gives you a whole paragraph in Xhosa when it is only one term in English.

In the glossary exercise students often resorted to everyday language, what Cummins (1996) refers to as BICS (communication which is supported by interpersonal and contextual cues) to get the meaning across because they found that they did not have the academic term in their primary languages. But Gough (1999) notes that moving students from the everyday language to the specialised domain is a crucial stage in the teaching and learning process. Simply providing the African word for the same term may not give students access to the way the term is used in the specialised domain of economics. For instance, using the example of the word '*amandla*' which is the Xhosa word for 'force' would not give students access to the notion of 'force' in physics (Gough 1999). It is important that translating into the home language 'is more difficult than it is in English' because this means that students are really grappling with conceptual meanings. If the translation 'gives you a whole paragraph

in Xhosa when it is only one term in English' as the student explains, then it is more likely that students are providing a personal reconstruction of the concept and gaining a richer understanding of it.

Thirdly, the glossary worksheets often brought to the surface alternate conceptions of words, which would otherwise not have been detected. For instance, 'equity', according to the textbook glossary, means:

a distribution of income that is considered to be fair or just. Note that an equitable distribution is not the same as an equal distribution and people have different views on what is equitable. (Sloman 2006, G:5)

The grouping that represented Tswana, Sotho and Pedi speakers had explained equity incorrectly in English. They wrote: 'It means equal or having things on the same level' but they gave an appropriate English example, that is, 'Women want gender equity'. However, the example they gave in the primary language 'Maemo a Pirates le Chiefs me kgweleng ya dinao a lekana' means the soccer teams, Pirates and Chiefs, are equal and indicates a rather different meaning than 'fairness'. Students may well be confused about the meaning of 'equity' because it has a completely different meaning in accounting, that is, equity refers to what remains after liabilities are deducted from the assets of a business.

Concept development tutorials

The transcripts of the tutorial discussions which followed the worksheet exercise showed that there was a fair amount of codeswitching between Xhosa and English in these discussions. The transcripts provide further evidence that sometimes students were confused about the meanings of the concepts and emphasise the importance of exploratory informal discussion in any language as it allows for the discovery of possible misconceptions. The discussions with the tutor helped to iron out these misconceptions as the excerpts from one of these discussions show. The translated excerpt below comes from the first tutorial with three Xhosa speakers who were all from rural schools in the Eastern Cape:

Tutor: Xolelwa, what is your understanding of deficit?

Xolelwa: Deficit is a loss, in that . . . I don't want to say it is a loss . . . but its kind of . . .

Zandi: I say deficit means loss. Say for instance you are in business; in your business you know that you'll have the profit and the loss, the deficit occurs when your loss is more than your profit. So you can start saying you have made a loss when your loss is more than your profit. When we describe that in English we refer to this as a deficit and in Xhosa we refer to it as a loss.

Tutor: You have lost me now because when we speak of profit in English we speak about income . . .

Here the tutor points out that Zandi is very confused, she should be talking about expenditure and income rather than 'loss' and 'profit'. She should have said 'you have made a loss when your expenditure is more than your income' in the underlined section of the excerpt. The word for 'loss' in Xhosa is 'ilahleko' but none of the students are aware of a direct translation for 'deficit' and they are having difficulty in explaining the difference between 'loss' and 'deficit'. There is a long discussion as the

tutor guides them to the correct understanding of the concept using many different examples including the example of a trade deficit (which was similar to the example I had provided on the worksheet), that is, when imports exceed exports in the balance of payments, one has a trade deficit. When Zandi asks if the notion of 'deficit' only occurs in the context of balance of payments, the tutor says it can also be used in the context of one's current account:

Tutor: It refers to current account. Take for instance when we do budget, you look at the income you have like R800,000 so you count that I want to buy this . . . sometimes you find that these things you want to buy from your income are more than it (your income). In that way what do you have?

Students: a deficit!!!!

Tutor: . . . so the deficit in terms of how I see it is the amount one requires to meet your needs Á the shortfall to meet your needs.

Zandi: you can't put it together with loss?

Tutor: loss is something else. It is (related to) expenditure in business. So for instance you are running a business . . . you bought this glass for R20 and then you sell it for R10, now your income is less than your cost. Then you have a loss.

The tutor clarifies the meaning by giving the students an example of how deficit would be used in the context of a current account and provides the English synonym for deficit, that is, shortfall. He goes on to explain the meaning of the concept of 'loss' by illustrating with an example from business.

It seems apparent that neither Phindi nor Zandi understood the distinction between 'deficit' and 'loss' and it took a fairly lengthy discussion and a number of examples before this distinction was clear for them. The difficulty seems to have arisen from the fact that they were using the Xhosa word 'ilahleko' to cover both English words and they were not aware that there was a word for 'deficit' in Xhosa.

Towards the end, the tutor admits that he also gets confused and he suggests that it may be because there is no term for 'deficit' in Xhosa:

Tutor: I don't want to lie, there is time when I think about the deficit I get a bit lost with 'loss'. In your thinking why do we always confuse deficit with loss, is it because we are not using this term or what? Like do you ever hear of the word deficit in Xhosa?

Students: Deficit!!!! No we hear of loss.

Both the students and the tutor conclude that the reason they have struggled with distinguishing between 'loss' and 'deficit' is that there is no word for 'deficit' in Xhosa. I found it interesting then that one of the translators I used consulted with her retired Xhosa language professor and found that he was able to give her a Xhosa word for deficit, 'intsilelo'. As she pointed out to me, this word will soon be lost from the language unless the concept is used and recorded in Xhosa-English economics texts and glossaries.

The data illustrate quite effectively the role that tutors play in moving students from the BICS to the CALP stage, assisting them by means of numerous and meaningful examples until they are able to work with more abstract concepts and

models. In some cases, this may involve understanding the concept in terms of one's primary language or one's primary discourse.

Discussion of language and learning

My interviews and the transcripts of the tutorials confirm that academic curricula are often inaccessible to speakers of EAL. For instance, the quotation taken from my data and used in the title of this article emphasises how difficult it is to learn through the medium of a second language:

Its easy to learn when you using your home language but with English you need to start learning language before you get to the concept.

Students acknowledged that sometimes when they did not understand the English words, the only solution was to rote learn. Badisa said:

when you are studying you find some words that are too much for us to understand and you go to dictionary even the dictionary cant really help so you tend to memorise when you are writing. So we memorized. . .

Some of the contradictions they experienced were illustrated when the tutor steered the small tutorial groups to a reflection on learning and language of instruction in secondary school where classrooms are often bilingual but tests and examinations are in English:

Tutor: When they taught you economics, how much Xhosa was used?

Phindi: We got more explanations in Xhosa and that was more helping us to understand. We understood more . . .

Xolelwa: But that becomes a problem when you have to write (exams in English). When you have to write you need to do so in English because the terms that you have to use are in English. You would understand the terms in Xhosa, then you would have to do the translation . . .

Tutor: So I hear you guys saying you understand more when explained in Xhosa even though you cannot write in Xhosa.

Zandi: Yes it is easier to understand because you can't miss any word when taught in Xhosa. You'll understand more when explained in Xhosa even though I cannot write in Xhosa.

The other difficulty the students identified in this discussion was that they felt that when they learn in English they do not retain the information as well as when they learn in Xhosa:

All: When taught in English you forget easily because you need to sit down and try to understand the terms taught in English in your language . . . try to think what does this mean in Xhosa?

Tutor: If taught in Xhosa?

All: It will be easier in Xhosa because its my language; I can keep whatever I'm told.

Xolelwa: You see you would be a master of a subject if taught in Xhosa because in English you read a book or something two or three times before

understanding or not understanding at all or forget about what you read. You read and still do not get the meaning but in Xhosa you would understand fully. You would understand the meaning and you would not spend much time reading something you don't understand.

The notion of 'keeping' what they have been told is an interesting one and raises questions about how these students construe knowledge. Do they understand knowledge as socially constructed or as being something one simply absorbs? Again this may be a discourse they have brought with them from their schooling experiences where they may have been taught to memorise and not to question the textbook 'facts'.

Students were very positive about the opportunity they had been given to discuss the concepts in their primary language and this provides a powerful argument for encouraging support and mentoring in home language groupings:

When he spoke about concepts, they were so clear after he explained. He explained concepts so clearly and I could understand more clearly. (Kagelo)

Some things we may not know about in depth were quite explained. It gives one more light about the concept itself so I think its wonderful. We are trying to come up with the meaning of the words in Xhosa Á it helps because we didn't have enough vocabulary in Xhosa Á it was very difficult. (Landiwe)

Its easy for me to translate in English when I know it in Xhosa. (Badisa)

Ondile, the tutor, also believed that when he was able to codeswitch and explain in Xhosa to the Xhosa speakers in his regular economics tutorials, they definitely benefited.

Conclusions

This article has illustrated that learning of economic concepts is restricted by the use of the second language only. The data from my project revealed that students did not have clear understandings of the new concepts and that their learning needed to be scaffolded to broaden understanding. Without the discussion of concepts in the primary language, some students' alternative conceptions might remain undetected. Teachers may not be aware that English written work and multiple choice questions conceal misconceptions as students resort to rote learning because they do not fully understand the English texts and memorising is seen as the only way to acquire the information. If we are to give our second-language students access to the new concepts they need to be offered opportunities to explore ideas and concepts in both English and their primary languages. Indeed, using a range of languages and discourses to negotiate the meaning of unfamiliar terms is an important pedagogy which we need to find time and space for in our curricula.

Furthermore, I would argue that the development of African language translations for academic registers is, indeed, an urgent matter. Linguists, such as Mesthrie (2008) and Gough (1999) point to the complexities of this task, that is, the need for contextualisation and the theoretical and practical difficulties of translation and term creation when the experts in the discipline do not speak the language. The problem of contextualisation has been resolved in the Multilingual Education Project at UCT where corpus linguistic tools are being used very successfully to develop online

glossaries so that meaning is negotiated in real contexts (Madiba 2008). As for the second complexity, that of finding disciplinary experts who speak the language, it seems that we are ignoring the fact that English Second Language students in South Africa who are acquiring the academic registers are constantly shifting between two or more languages in order to understand the new concepts and they could form an important resource for assisting the experts in developing appropriate academic registers for African languages. Mesthrie (2008) notes that the value of a sign derives from functional context by a process of linguistic negotiation and used by a community of speakers. The data from my project have shown that this kind of linguistic negotiation is taking place in informal peer group and tutorial sessions all around us but it is not recorded and the opportunity to use it as data for building a register of Xhosa economics or science is lost. Our bilingual students working with more senior mentors could provide a very interesting community of practice for developing multilingual glossaries.

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Notes

1. In translating academic registers into African languages, translators use a variety of strategies and including word coinage, borrowing and paraphrasing (Wildsmith-Cromarty 2008).
2. In South Africa under apartheid there were 19 different education departments. Schools located in townships designated for 'African' people were administered by the Department of Education and Training (DET), and those designated for 'coloured' people were administered by the Department of Education and Culture (DEC). These departments were very poorly resourced. In 1991, the State allowed formerly 'whites only' schools to choose among three models, 'model C' used to refer to those former 'white' schools which opted for a model which allowed for a 49% 'black' enrolment and semi-private status. However, since 1994, 'model C' has become a generic term for all schools which were designated for 'whites'.
The notion of home language or 'mother tongue' is complex because many African students may have more than one home language and their home language practices may be different from those of the dominant language. Some students may regard their 'mother tongue' as different from their primary language (see note 9) and in some homes codeswitching could be considered a language variety itself.
By codeswitching, we mean the alternate use of two or more languages in a single piece of discourse. It is usually part of the performance of fluent bilinguals (Myers-Scotton 1993, 177).
3. The threshold concept (Toukomaa and Skutnabb-Kangas 1977) argues that the basis for the possible attainment of the threshold level of second-language competence seems to be the level of attainment in the primary language.
4. L1 is an abbreviation for first language and L2 for second language.
Four of the students in this group were from township schools in and around Cape Town and they spoke what might be regarded as an urban Xhosa with more use of codeswitching. The fifth was from Beaufort West, a small more rural town in the Western Cape. He had attended an Afrikaans medium school and could be regarded as fluent in three languages. He said he regarded Xhosa as his 'mother tongue' but felt more comfortable communicating in English (see note 4).
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- 6.
- 7.

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