

Exploring the Role of Conceptual Blending in Developing the Extension of Terminology in isiZulu Language

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Introduction

In apartheid South Africa, language issues were usually linked to politics, prejudice and privilege. For many years, Afrikaans and English were accorded the status of official languages whilst indigenous languages were marginalised. For decades, English was the Language of Learning and Teaching (LoLT) both in schools and in higher education institutions. However, in post-apartheid South Africa, with all the awareness about language rights, and the new Language in Education Policy (LiEP), national debates challenge the elevated status of English in education (Alexander 2002; Phaswana 1998) and call for mother-tongue teaching and language choice in schools (Webb 2002; Mnisi & Leibowitz 2000). In addition, new initiatives aim to develop and use the eleven official languages in schools. One such initiative is the introduction of a pioneering language programme that deals with language as a barrier to computer usage, which Microsoft South Africa (MSA), a global software leader, is implementing in schools. The programme, called the Language Interface Pack, which will initially be available in Afrikaans, isiZulu and Setswana, will be installed in computers for schools that are part of the programme (Mohlala 2007). However, putting together such a programme has met with challenges relating to terminology as Pansalb's manager of standardisation and terminology development, Alberts (in Mohlala 2007), points out:

It is no easy task to develop terminology for various concepts being used. The terminology and related concepts are known in English but not in the various official South African languages. Terms have to be coined for the various concepts to act as term equivalents for the English terminology.

Essentially, the current policy framework provides for an environment where languages work together. For instance, the South African Constitution of 1998 recognises eleven official languages, which have equal status. The Language in Education Policy (LiEP) of the Department of Education promotes multilingualism whereby eleven different languages are spoken in various communities—each of the specific African languages being used in the area where the majority are speakers of that particular language. For example, in KwaZulu-Natal the dominant indigenous language is isiZulu while in the Eastern Cape, it is isiXhosa. In academia, the Language Policy for Higher Education (Department of Education 2002) proposes that higher education institutions should promote multilingualism by using any of the indigenous languages as a Language of Learning and Teaching (LoLT), since this would promote access and success of students from indigenous groups.

Logically, in response to this changing environment and the current policy framework, higher education institutions have developed transformed language policies that include indigenous languages. For example, based on its multilingual and multicultural context, the North-West University has committed itself to a policy promoting multilingualism by using Setswana, English and Afrikaans (Coetzee-Van Roy 2006). The University of KwaZulu-Natal's language policy that was approved by its Senate in August 2006 promotes the use of isiZulu as LoLT and as a language of communication in addition to English, which is the primary language (Balfour 2007). This is because the majority of the population in KwaZulu-Natal province where the University of KwaZulu-Natal is situated, speak isiZulu as a first language. However, as indigenous languages such as isiZulu begin to be used in academic spheres, the major challenges to be met are that most languages have not developed enough concepts in existing scientific disciplines.

While isiZulu, like most indigenous languages, might have not so far developed enough concepts in various scientific disciplines, its flexibility in word formation and its class system allows for great possibility for conceptual development up to a level that the language is used in scientific disciplines. As yet, and as Nyembezi (2005: 52) shows, isiZulu has many concepts that it has adopted from other languages such as English and Afrikaans. Examples of these will be:

Figure 1: IsiZulu loan words from English and Afrikaans

isikole (school/skool)	Ifriji (fridge)
isitolo (store)	Ilivu (leave)
u-anti (aunt)	Ifomu (form)
iwindi (window)	Imfologo (fork)
ifasitela (venster)	Tafel (itafula)

In addition, I concur with Nkosi and Msomi (1992: 14) who claim that when isiZulu speakers came into contact with speakers of other indigenous languages, isiZulu language was developed by incorporating terms from languages such as isiSwati, isiNdebele, Sotho and isiXhosa, and isiZulu language has also developed many concepts through word-formation processes.

It is important to note that the underlying processes in conceptual development through word-formation lie in the general cognitive foundations as Fauconnier and Turner (2002: 310) say:

The construction of meaning is like the evolution of species. It has coherent principles that operate all the time in an extremely rich mental and cultural world. Many, many, many new integrations are attempted and explored in an individual's backstage cognition and in interchange by members of a culture, and most of them never go anywhere. But, enough survive to provide all the language rituals and innovations we see around us. We need to explore what makes for success versus failure in conceptual integration.

From the above explanation, it is clear that conceptual integration is one of the underlying cognitive processes that play a role in word-formation

processes. Notably, human beings have a developed cognitive ability to invent new concepts and assemble new and dynamic patterns (Grady 2005). Although invisible to consciousness, blending choreographs vast networks of conceptual meaning yielding cognitive products that appear simple at a conscious level. In fact, much of the current scholarship on Conceptual Blending (Bache 2005; Coulson & Oakely 2005; Grady 2005; Lakoff 1980; 1987; Klopfer 1999; Pereira & Cardoso 2002) within the framework developed by Fauconnier and Turner (2002) confirm that blending is fundamental in all mental activities including linguistic performance. For example, Bache (2005) also argues that 'blending is arguably an important governing principle at all levels of human linguistic performance'.

This argument is in line with Fauconnier and Turner's (2002: 187) view that:

Modern human performances, such as art, religion, science, and not least language, which all seem to have arisen as singularities in human evolution, are claimed to be the common consequence of the human mind's having reached a critical level of blending capacity.

In isiZulu, blending plays a major role in building terminology, particularly noun concepts. Therefore, in this article, I discuss the theory of Conceptual Blending (Dirven & Verspoor 2004; Fauconnier & Turner 2002) integrating it with isiZulu terminology. In my discussion, I highlight aspects of Conceptual Blending theory such as mental spaces, the two-domain model, composition, completion and elaboration. This is followed by a discussion of Conceptual Blending and formal blending and, here, I discuss the compounding and derivation processes. In my discussion, I briefly explore the derivation and compounding processes to determine the role of Conceptual Blending in developing new isiZulu terminology. This is followed by a discussion section where I argue that as indigenous languages such as isiZulu become used in academic spheres, they can be grounded in theory to further develop them into scientific languages. I further argue that Conceptual Blending is critical in developing particularly scientific concepts in indigenous languages such as isiZulu since in this process, the speaker or the understander is triggered to think at a conceptual level.

Conceptual Blending Theory

In recent years, when Fauconnier and Turner sought for a framework for explaining cognitive-linguistic phenomena such as analogy, metaphor, metonymy or counterfactual reasoning, they arrived at a theory of conceptual integration, named Conceptual Blending Theory (Fauconnier & Turner 1998). The development of the Theory of Conceptual Blending began in 1993 and the theory has been applied in several fields including cognitive neuroscience, cognitive linguistics, psychology, poetics, mathematics, art, music, discourse analysis, and so on ((Fauconnier & Turner 1998).

Conceptual Blending is a general theory of cognition, which postulates that elements and vital relations from diverse scenarios are blended in a subconscious process, the Conceptual Blending process (Turner & Fauconnier 1995). Fauconnier (1994) also defines it as a set of operations for combining cognitive models in a network of mental spaces. In his interpretation of the Theory of Conceptual Blending, Klopfer (1999) gives the following definition of Conceptual Blending:

Conceptual blending accounts for a person's capacity to interrelate and blend concepts extracted from his vast conceptual network of knowledge. It is a momentary process of symbolisation that selectively inter-relates concepts from two separate cognitive domains, a target space and a source space to conceptualise a new perceived relationship known as a blended space. Blending should not be equated to the fusing of information. During blending the various types of information belonging to the target, source and blended spaces are interrelated, but remain conceptually distinct in each space.

From this definition, we learn that when two concepts combine to form a new concept (a blend), the blended concept emerges with a new meaning. While the new meaning of the blend interrelates with the various types of information belonging to the domains or input mental spaces of the two previous concepts that have blended, the blend remains conceptually distinct. In addition, the blended space has its own type of information, which interrelates with information drawn from the two input mental spaces. For example, Conceptual Blending has occurred in the following concepts:

umthetho (law) + isisekelo (base) = umthethosisekelo
(constitution)

From this example, we can see that two concepts, umthetho (law) and isisekelo (a base) are conceptually distinct. When blended in Conceptual Blending, no fusing of information takes place between the two concepts. However, during blending, various types of information belonging to the two input sources, umthetho (law) and isisekelo (base) interrelate with the information from the resultant blend, umthethosisekelo (constitution). The outcome is that the resultant blend, umthethosisekelo (constitution) is a completely new concept despite the fact that it carries some information from the two input sources. Similarly, when the concepts, iphepha (paper) and indaba (story) combine in Conceptual Blending, the resultant blend, iphephandaba (newspaper) is a completely new concept. More examples of blends are:

Uthisha (teacher) + inhloko (head) = uthishanhloko (principal)
Ibala (spot) + izwe (land) = ibalazwe (map)
Inhloko (head) + ihhovisi (office) = inhlokohhovisi (head office)
Isifunda (district) + izwe (land) = isifundazwe (province)
Iphepha (paper) + ibhuku (book) = iphephabhuku (magazine)

Mental Spaces

In their definition of Conceptual Blending, Turner and Fauconnier (1995) introduce the concept of mental space as follows:

In blending, structure from two or more input mental spaces is projected to a separate 'blended' space, which inherits partial structure from inputs, and has emergent structure of its own.

Thus, for us to understand the theory of Conceptual Blending, we need to understand the concept of a mental space. Fauconnier and Turner (1998) describe mental spaces as:

Partial structures that proliferate when we think and talk, allowing a fine-grained partitioning of our discourse and knowledge structures. As we talk and think, our reasoning focus flows from space to space, transporting and mapping concepts according to points of view, presuppositions, beliefs, changes of mood or tense, analogical counterfactuals, and so on, each giving birth to a different mental space.

In other words, a mental space is a small conceptual packet assembled for the purposes of thought and action, and is built up for local understanding and action (Turner & Fauconnier 1995). Turner and Fauconnier (1995) state that mental spaces normally recruit structure from more than one conceptual domains. They are constructed whenever we think and talk, and they are interconnected and can be modified as discourse unfolds. In this regard, Turner and Fauconnier (1995) use the term mental space in contrast to the term conceptual domain. For instance, to understand the concept khala (cry), we may build up the mental space that will include the sound, the emotion, the person (who cries), the tears, the mouth, the voice, and so on.

In this concept khala (cry), we can therefore say the mental space recruits partial structure from the two conceptual domains of sound and emotion. However, only a small amount of knowledge associated with the conceptual domains of sound and emotion is included. The additional structure in the khala (cry) mental space becomes available through default and pragmatic procedures. In another concept of imbazo (an axe), the mental space will recruit partial structure from the conceptual domain of equipments. The additional structure in the mental space will include the chopping, the chopper, the tree, the wood, the place, the physical movements, the shape (of an axe), and so on.

When the concepts khala (cry) and imbazo (an axe) combine in Conceptual Blending, the resultant blend is umkhalambazo (karate) that can be said to have a structure from the conceptual domain of sport, which is not the same as the conceptual domains of the two input sources, khala (cry) and imbazo (an axe). However, the blended mental space of umkhalambazo (karate) draws some partial structure such as sound and body movements from the two input mental spaces of khala (cry) and imbazo (an axe) respectively. In this way, a structure from two input mental spaces is

projected to a separate ‘blended’ space. This is in line with Turner and Fauconnier’s (1995) view that a blended mental space is an integrated space that receives input projections from other mental spaces that are connected in the network and develops a new emergent structure (a blend) that is not available from inputs. The blended space inherits partial structure from the inputs and has emergent structure of its own (Turner and Fauconnier 1995).

Composition, Completion and Elaboration

In trying to provide an in-depth explanation of what happens in blending, Fauconnier and Turner (2002: 42) define three different operations that are involved in the blending process: composition, completion and elaboration. According to Fauconnier and Turner (2002: 42), composition is the (partial) selection of elements, structures or frames from input spaces and their projection to the blended space to create new relations, concepts and scenarios. For instance, in the previous example, partial structures from the two input mental spaces of khala (cry) and imbazo (an axe) were projected to the blended space to create a new concept, umkhalambazo (karate). According to Fauconnier and Turner (2002: 42), completion brings additional material from the speaker’s background knowledge into the blend to enrich the relations and scenarios of the blend and; elaboration is the actual running of the blend—the unfolding of the scenarios or development of the relations involved. The speaker’s or decoder’s background knowledge of the movements and sounds made during karate sport will enrich and develop him or her to understand the conceptual meaning of umkhalambazo (karate). These three mental sub-processes collaborate to create the emergent meaning of the blend.

The Two-domain Model

Fauconnier and Turner (1994), argue that Conceptual Blending can happen at a two-domain model. However, Fauconnier and Turner (1995) further argue that ‘the two-domain model is actually part of a larger and more general model’ of conceptual intergration, which they call the many-space model. According to Fauconnier and Turner (1995), a conceptual domain is ‘a vast organisation of knowledge...which has a basic structure of entities

and relations at a high level of generality'. For example, we have our knowledge vastly organised into conceptual domains such as imfundo (education), inkolo (religion), umndeni (family), ikhaya (home), and so on. As Fauconnier and Turner (1994) argue, each of these domains of meaning has a basic structure of entities and relations at a high level of generality. For instance, the domain of imfundo comprises uthisha (teacher), incwadi (book), isikole (school), umfundi (learner), ikilasi (classroom), and so on. At the same time, these various domains in themselves comprise various other domains. For example, while ikilasi is within the domain of imfundo, in itself it also comprises other domains such as ushoki (chalk), ideski (desk), ibhodi (chalkboard), ukuhlala (sitting) and so on.

When new conceptual blends are created in a two-domain model, a structure from one conceptual domain (a source) combines with another structure from another input source (a target) to form a blend. The resultant blends constitute the products of creative thinking although Conceptual Blending is not a theory of creativity (Turner & Fauconnier 1995). To illustrate, in this process, elements from two concepts are blended into a new more complex concept. For example:

Akha (build) + umuzi (home) = isakhamuzi (citizen)
Umbulali (killer) + izwe (land) = umbulalazwe (epidemic)
Funda (learn) + ize (nothing) = umfundaze (bursary)
Uhlu (list) + khangisa (advertise) = uhlu khangisa (catalogue)
Umqumbe (swelling bud) + imbewu (seed) = umqumbembewu
(capsule)

In order to understand the blended concept, one has to be familiar with the concepts that are combined to form the new blend. Our cultural knowledge, that is our knowledge of frames and domains, determine the way in which we interpret the new concepts. According to Dirven and Verspoor (2004: 55) the notion of frame or domain refers to all the elements that constitute a given concept. For example, Dirven and Verspoor (2004: 55) give an example that the kitchen frame comprises 'utilities for cooking, washing up, eating, sitting down, and so on'. The chair is part of the kitchen frame. Moreover, in itself, the chair frame comprises ways of sitting that are defined by various domains such as eating, working, and so on. Therefore,

the compound, kitchen chair is a blend of the chair frame and the working domain (since the chair is used in the kitchen).

Similarly, the word umphathisikole (principal or school manager) results from a combination of the words umphathi (manager) and isikole (school). The word isikole (school) provides a school frame, which comprises teachers, learners, learning and teaching material, learning and teaching activities, and so on. Then, umphathi, is part of the school frame. But, also in itself the word umphathi comprises other various domains such as holding together, leading, carrying, and caring, and so on. Therefore, umphathisikole (principal or school manager) is a blend of the school frame and mainly the leading domain.

To further illustrate how Conceptual Blending occurs, I use the word inswelaboya, which refers to a criminal. This word results from the words swela (be deprived of) and uboya (hair growing from the animal skin), which exist in two domains of meaning. In other words, these concepts exist in two different mental spaces. The word swela, which is a verb, has a noun form ukuswela. This word ukuswela provides a deprivation or a poverty frame, which comprises need, sadness, misery, pity, and so on. On the other hand, the word uboya provides a frame, which comprises animals, a scare, inhumanity, thoughtlessness, and so on. Therefore, by selecting information from these two domains, through the operation of composition, the blend inswelaboya emerges with a new meaning—which refers to a criminal. In fact, the conceptual meaning of the word inswelaboya is: an animal-like, pitiful ‘thing’, which has poverty of animal hair. To elaborate, this means that a criminal can be classified as neither human nor animal. While it has all the physical features of a human being, the behaviour indicates that it lacks the value of humanity that makes a human being to be human. But, while its behaviour is animal-like, it cannot be classified as an animal because it does not have uboya, animal hair. The use of the word ukuswela emphasises the poverty of hair—the ‘animal-hair poverty state’.

This conceptual meaning fits in with Klopper’s (1999) definition of conceptual blending. As I mentioned earlier, Klopper (1999) highlights that in conceptual blending no fusing of information occurs. While the blend interrelates with the two previous concepts that have combined, the blend remains conceptually distinct. Specifically, while the word inswelaboya bears some aspects of the two concepts that have combined, swela and

uboya, it is conceptually distinct. In addition, in this example, to understand fully the conceptual meaning of inswelaboya, a person should have background knowledge about how the Zulus view and relate to animals, their beliefs about animals versus the meaning they have about humanity, which is captured in the value of ubuntu. This is in line with Fauconnier and Turner's (2002: 42) description of completion that it occurs when additional information or material is brought from the speaker's background knowledge.

Moreover, O'Grady (1997) also introduces the concept of conversational implicature, which refers to another type of information that enters into the interpretation of utterances. The information has to do with the rules for conversation and our understanding of how the language is used in particular situations to convey message. As speakers of the language, we are able to draw inferences about the meaning of the concept inswelaboya, which is not the literal meaning of the word. Such information that is conveyed in this way is what O'Grady (1997) refers to as conversational implicature. He further says that 'the ease with which we recognise and interpret implications stems from our knowledge of how people in our linguistic community use language to communicate with each other'.

However, it is important to note that Fauconnier and Turner (2002: 351) recognise that not all cognitive operations result in blending, we may combine different objects that we see, imagine or think of without blending them. Bache (2005) concurs with this view and says that:

Many operations involving categorisation and temporal or spatial sequencing serve to combine and organise experiences without conceptually integrating them.

Conceptual Blending and Formal Blending

As I have mentioned in the introduction of this article, the creation of new concepts is also a cognitive process. However, not all cognitive processes of word-formation result in blending. In language, the new concepts formed result from a creative process and they serve the purpose of enhancing not only communication, but also the development of the language. The most important processes of word-formation are compounding and derivation. In

the process of derivation, the free morphemes combine with bound morphemes to build derivations; whereas in compounding, two free morphemes combine to form a compound. Not all compounds can be claimed to be conceptual blends.

Derived from the Greek word morphe, which means ‘form’, the word morpheme means the smallest meaningful unit in the language (O’Grady & Guzman 1997). These morphemes allow us to build composite words and composite grammatical units (Dirven & Verspoor 2004: 50). Dirven and Verspoor (2004: 50) as well as Nyembezi (2005: 38) distinguish between free morphemes (simple words) and bound morphemes (affixes). In derivation, particularly in English, a free morpheme combines with a bound morpheme to form a derivation. For example, a free morpheme use can combine with a bound morpheme -less to form a derivation useless, see figure 2.

Figure 2: Derivations in English

(free m)	+	(bound m)	=	(derivation)
use	+	-less (affix)	=	useless
shop	+	-s (affix)	=	shops
child	+	-ish (affix)	=	childish

In compounding two free morphemes combine to form a compound. For example, the words hair and brush are two free morphemes. The two words can combine to form a compound hair brush, see figure 3.

Figure 3: Compounds in English

(free m)	+	(free m)	=	(compound)
hair	+	brush	=	hair brush
tooth	+	brush	=	tooth brush
water	+	pipe	=	water pipe

In isiZulu, most words are derivations formed by a combination of bound morphemes, which are called izakhi. Mainly, these are isiqalo (prefix), umsuka (word-stem) and isijobelelo (suffix). For example, the word umfundisi (teacher) is a derivation formed by um- (prefix), -fund- (word-stem) and -isi (suffix), see figure 4.

Figure 4: Derivations in isiZulu

(bound m) prefix	+	(bound m) stem		(bound m) suffix	=	(word)
um-	+	-fund-	+	-isi	=	umfundisi (teacher)
isi-	+	-hlal-	+	-o	=	isihlalo (chair)
isi-	+	-khulum-	+	-i	=	isikhulumi (speaker)

In this word formation process, the word-stem does not change. In this way, many words can be formed from the same word-stem by using different affixes (prefixes and suffixes). For example, many words can be derived from the word-stem -fund- by using different prefixes and suffixes. For the list of examples of such words see figure 5.

Figure 5: Derivations from the words-stem -fund-

(bound m) prefix	+	(bound m) word-stem	+	(bound m) suffix	=	(derivation)
aba-	+	-fund-	+	-isi	=	abafundisi (teachers)
abe-	+	-fund-	+	-isi	=	abefundisi (pastors)
ubu-	+	-fund-	+	-isi	=	ubufundisi (calling to the ministry)
um-	+	-fund-	+	-isikazi	=	umfundisik azi (female teacher/past or)
isi-	+	-fund-	+	-iswa	=	isifundiswa (an educated person)

u-	+	-fund-	+	-o	=	ufundo (back of Zulu hut, opposite the door)
im-	+	-fund-	+	-o	=	imfundo (education)
im-	+	-fund-	+	-a	=	imfunda (meadow land)
im-	+	-fund-	+	-iso	=	imfundiso (doctrine)
isi-	+	-fund-	+	-o	=	isifundo (lesson)
isi-	+	-fund-	+	-a	=	isifunda (district)
i-	+	-fund-	+	-ululu/ululo	=	ifundululu /ifundululo (malice)
		fund-	+	-a	=	funda (read)
		fund-	+	-ani	=	fundani (plural-you all read)
		fund-	+	-isa	=	fundisa (teach)
		fund-	+	-ela	=	fundela (read for or practise songs to sing in a wedding)
		fund-	+	-ekela	=	fundekela (pester/ bother)
		fund-	+	-isisa	=	fundisisa (carefully read)

		fund-	+	-wa	=	fundwa (be read)
		fund-	+	-iwe	=	fundiwe (been read)
		fund-	+	-isiwe	=	fundisiwe (been educated)
		fund-	+	-iswa	=	fundiswa (being taught)

IsiZulu has a limited number of free morphemes (Nyembezi 2005: 38). Mostly, the free morphemes are ideophones. Examples of ideophones are: Swayi! (*to keep quiet*); Ntinini! (*to run fast*); Lungu! (*to appear*), and many others. For this reason, most isiZulu words are formed by a combination of bound morphemes. This explanation means that most words result from the derivation process where bound morphemes combine in a particular sequence to form a word. Therefore, in compounding, the words that were formed through this derivation process further combine to form compounds. For example, some of the derivations listed in figure 4 such as funda, isifunda, imfundo, isifundiswa and imfundiso, can combine with other words to form compounds, see figure 6.

Figure 6: Compounding from derivations

(derivation)	+	(word)	=	(compound)
funda (read)	+	ize (nothing)	=	umfundaze (bursary)
funda (read)	+	amakhwelo (whistle using mouth)	=	imfundamakhwela (apprentice/ beginner learner / amateur)
imfundo (education)	+	-khulu (big)	=	imfundonkulu (tertiary education)

imfundiso (doctrine)	+	ize (nothing)	=	imfundisoze (false ideology)
isifunda (district)	+	izwe (land)	=	isifundazwe (province)
isifunda (district)	+	inkantolo (court)	=	isifundankantolo (magisterial district)
isifundiswa (learned person)	+	mbumbulu (not real)	=	isifundiswambumbulu (a learned person who does not behave as such / unlearned person who pretends to be learned)

From the above compounds, which are blends, we find formally integrated linguistic structures such as umfundaze (bursary), imfundisoze (false ideology), imfundamakhwela (apprentice), and so on. In these linguistic structures, we can recognise the two original concepts that combined to form a compound. For example, in the compound isifundazwe (province), we can recognise the linguistic structures, isifunda (district) and izwe (land) that formed the compound. However, as Turner and Fauconnier (1995) argue, formal integration ‘gives only a small combination of elements from the two input spaces that are to be integrated’. In other words, formal integration provides minimal indication of a starting point from which the speaker or the person formulating a concept can depart in constructing integration.

However, although the conceptual integration is worked out from the formal blend, this does not mean that the formal blend parallels the conceptual blend very closely (Turner & Fauconnier 1995). As seen in most examples that I gave in this paper, most cases of formal blending have no corresponding blend at a conceptual level. However, in very rare cases, formal blending and conceptual blending are in closer parallel. Some examples in this category are:

Andisa (increase) + umsindo (sound) + isandisamsindo (amplifier)

Akha (build) + umzimba (body) = isakhamzimba (vitamin)

Izinga (rate) + ukukhula (growth) = izingakukhula (growth rate)

Discussion

As alluded to earlier on in this article, Conceptual Blending is not the only process in which new concepts are developed. Other processes such as derivation, back derivation, clipping, conversion, and so on, are also used to form new concepts. However, Conceptual Blending is critical in developing isiZulu terminology, particularly scientific concepts, as in this process, the 'understander' or speaker is triggered to think at a conceptual level. From the examples that were presented in this article, it is clear that some of the blended concepts such as umfundaze (bursary), umthethosisekelo (constitution), umtholampilo (clinic), umabonakude (television), umakhalekhukhwini (cell phone) and isifundazwe (province), have developed as a result of the advancement in science and technology as well as the changing socio-political and educational environment.

However, as discussed in this paper, in Conceptual Blending the speaker also draws from his or her own background knowledge. For this reason, the success of conceptual blending depends largely on the language competences of the person forming the new concept. Therefore, the linguists who are first language speakers of isiZulu and / or second language speakers who have developed a level of competence in the language should commit themselves to developing new concepts in various fields or discipline areas.

A way of facilitating the process of developing new concepts in various areas would be that isiZulu language be used as Language of Learning and Teaching (LoLT) in the education sector (schools and higher education institutions). This would not only facilitate the development of new concepts in various disciplines, but would also make the new concepts available to a wider community. In South Africa, Afrikaans (which evolved out of Dutch and slave experience in Africa in the 18th century) is an example of a language that further developed through its use in government and in the education sector. Afrikaans was not recognised as an official language until 1925 when it replaced Dutch (Mesthrie, 2002). In the 1950s the Department of Bantu Education ruled that English and Afrikaans be

introduced in the first year of schooling for all children who were non-native speakers of the two languages. This regulation was passed partly because the government feared that should only English be used as an official language, Afrikaans would die as a language. This wide use of Afrikaans in the government and education sectors had sustained its existence and led to its development as a language.

Conclusion

This paper explored Conceptual Blending in developing isiZulu terminology. The Conceptual Blending theory has been discussed and integrated with existing isiZulu terminology. It therefore attempts to pave the way for the developing of indigenous languages into scientific languages.

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