

IsiZulu Terminology Development in Nursing and Midwifery

Charlotte Engelbrecht
Nondumiso C. Shangase
Sisana J. Majeke
Sindi Z. Mthembu
Zanele M. Zondi

Abstract

The Education White Paper of 1997 on transformation in higher education in South Africa (South Africa 1997) indicated that because of the multilingual nature of the diverse communities in the new democracy, higher education should play a role in the development of all the official languages including the indigenous languages, as well as the Khoi, Nama, San and Sign languages. The School of Nursing of the University of KwaZulu-Natal took this obligation to heart by participating in the SANTED multilingualism project. This emanated from the needs of the student nurses who are being educated and trained in English, but serve in communities where Zulu is the dominant language. To meet the identified student needs, the nursing and midwifery specialists, in collaboration with various language specialists in KwaZulu-Natal, engaged in a process to develop terminology which enhances isiZulu as a scientific language. This article discusses the language policies and multilingual trends, both locally and globally and describes the experiences of the nursing specialists who participated in the terminology development process. The main categories for deriving terms based on the linguistic decisions made by the team are also described, and examples provided. The challenges are outlined and the recommendations include the importance of institutional buy-in at all academic levels and strategies for the sustainability of the project.

Keywords: Terminology development, language development, transformation in higher education, multilingualism, isiZulu, nursing and midwifery, term extraction, indigenous language

Introduction

The White Paper on Higher Education of 1997 (South Africa 1997) indicated that the multilingual nature of South African education should be reflected in the role played by higher education in the development of all the official languages, which include the indigenous languages, as well as the Khoi, Nama, San and Sign languages. This would entail promoting and creating conditions for the development of all these languages by elevating their status and advancing the use of indigenous languages (South Africa 1996: 30). In line with this national imperative call, the former president of South Africa, Thabo Mbeki (South Africa 1996: 30), declared that: *'the building blocks of this nation are all our languages working together. The nurturing of (the dream of nationhood)¹ depends on our willingness to learn the languages of others, so that we, in practice, accord all our languages with the same respect'*.

It became clear that the government of South Africa expected previous inequalities to be rectified at the level of higher education and that the language policy should include the development of indigenous languages to a stage where they can be used as media of instruction alongside with English (Wildsmith-Cromarty 2008). Such a development would assist in strengthening the essence of democracy by giving each person in South Africa the right to speak, live and learn in his/her own language. The University of KwaZulu-Natal language policy of 2006 (UKZN 2006), subscribes to the nationwide Higher Education language policy (Ndimande-Hlongwa *et al.* 2010, in press) This policy acknowledged the multilingual nature of the university community and advocated for the enhancement of isiZulu terminology development in nursing and midwifery, alongside English, as a language for teaching and learning. isiZulu is spoken in KwaZulu-Natal as a communicational language, together with English and the other official languages, and it was hoped that this initiative would assist

¹ Brackets our own.

in the modernization of the isiZulu language by reflecting the needs and lifestyle of modern generations (Van der Walt & Brink 2005: 843).

This development of policy introduced the School of Nursing of the University of KwaZulu-Natal to a new level of progressive nursing education. Progressive and innovative nursing education is one of the niche areas that mark this school's specific and unique contribution to the body of nursing science. The school is well known for its work in problem-based education (Uys & Gwele 2005) and community-based education models. It is this community-based approach that led the School of Nursing to participate in the SANTED multilingualism project (Ndimande-Hlongwa *et al.* 2010). It was believed that this might provide an answer to the communication challenges that students are experiencing in their experiential learning in the community and hospitals (Engelbrecht *et al.* 2008), as well as in their class room activities. The Engelbrecht *et al.* study (2008) identified the need for students to develop multilingual skills to add to their résumé of communication skills. The research found that both English and Zulu-speaking students expressed a need to be proficient in both Zulu and English in their nursing practice settings. The nature of their education and training expects students to work closely with the members of the community as well as with patients in the hospitals, and in both these environments Zulu is the more dominant language (Ndabezitha 2005). Ndabezitha (2005:1) highlights the problem in more detail when she explains that the health professionals speak 'medical' language in English while the patients speak 'every day' language in Zulu and this leads to miscommunication.

As Zulu is one of the official languages in KwaZulu-Natal, patients in this province have the right to be served in their own language which often puts the nursing students in difficult situations. Many students are not proficient in Zulu as the local indigenous language. Some speak only English and others (coming from Francophone-African countries) are even more challenged because English is their third language. The Zulu-speaking students are often requested to assume the role of interpreter which places them in a difficult position as they have never had training in interpretation skills (Engelbrecht *et al.* 2008). Furthermore, they find themselves unable to interpret because of the lack of appropriate Zulu terms. For example 'white blood cells' translated into Zulu is *amasosha omzimba*, which literally means 'soldiers of the body'. However, the eosinophiles, neutrophils and

basophiles are all translated as *amasosha omzimba*, so referring to white blood cells by the same term does not specify white cell functions when students need to explain the immune system in HIV training. It also works the other way that some of the cultural practices in Zulu are not translatable into English as there are no relevant English terms to describe the practice (Engelbrecht *et al.* 2008). An example of this is *isihlambezo*, which refers to the practice of nurturing a pregnancy and unborn baby until birth. One of the recommendations from Engelbrecht *et al.* (2008) then, is for nurse educators, as subject specialists, to participate in terminology development activities.

Although some students might wish to practise internationally, the majority of the students are trained to serve the local community. According to the above-mentioned language policy of South Africa, it is imperative that within the health services, both the health professionals and the patients should have the right to communicate in their mother tongue. As the providers of health, nurses and midwives should be able to accommodate this right by helping patients in their own language. However, the Department of Health, which governs the health systems of South Africa, has no official language policy in place (Ndabezitha 2005: 2).

It is also important to remember that student nurses and midwives, while learning to communicate appropriately in the language of their clients, should also have the right to learn and participate in academic discourse in the classroom in their own mother tongue (Engelbrecht & Wildsmith 2009). Batibo (2009a) suggested that currently the African languages might not be the best medium for higher education because they have not been systematically developed as languages of science. Engelbrecht and Wildsmith (2009), however, are of the opinion that the indigenous languages or mother tongue of the students might be more effective as the medium of instruction because they are associated with the cognitive, affective and cultural experience of students. Engelbrecht and Wildsmith (2009), in their article, highlighted the difficulty the language of instruction plays in facilitating higher-order cognitive skills in second language speakers. Furthermore, it was suggested that the inequality in language power that is to the advantage of English students, but the disadvantage of the other students, can be equalised by using more Zulu as a second medium of instruction next to English, or on the same level as English. This means that the nurse educator should take an active role in facilitating both English and Zulu

conversations in the classroom setting. This obliges the nurse educator to be innovative in her teaching methodology by developing her own multilingual skills, as well as taking ownership of developing and maintaining multilingual language corpora in her speciality area (Engelbrecht & Wildsmith 2009).

Developing scientific nursing terminology in Zulu will not only enhance effective communication in the health care services of KwaZulu-Natal, but will prepare students to be bilingual professionals enabled to meet the patients' needs. In addition, the students will be enabled to learn in their own language, enhancing their conceptualization processes (Newsroom 2007). To reach this goal, the School of Nursing participated as a partner in the multi-departmental and multi-institutional SANTED multilingualism project. The SANTED project was triggered by the Africa report auditing reasons for student failure at the University of KwaZulu-Natal (Africa 2005). Africa (2005) reported that one of the challenges facing academic staff and students is that English is used as the medium of instruction and while it is the primary language of the majority of lecturers, it is the second or third language of the majority of students (Africa 2005: 26).

The awareness of the importance of multilingualism in the University then progressed to the point where the SANTED project was initiated. The objectives of this project included the acquisition of Zulu by staff and students; the development of teaching and learning materials in Zulu and English; and the development of core terminology for nursing and midwifery in the Zulu language.

Terminology development was one of the core activities that involved both the subject specialists and language departments. In this article the authors will focus on the language development and experiences of the nursing and midwifery subject specialists participating in this process. Although the terms language development, terminology development or concept development may have slightly different meanings, in this article the terms are used interchangeably to refer to the process experienced (Ndimande-Hlongwa *et al.* 2010).

Literature Review

Multilingualism in education is an important global trend. Historically, in the United States of America (USA) the general trend was one of not valuing

languages other than English, but according to Grant (2009: 3), one of the political campaign items of President Barack Obama was the valuing of a multilingual future. She continues to explain that in the history of the United States there were English/French, English /German and English/Spanish bilingual schools available, but that English remained the primary language. English was used to control the African people that came in as slaves and none of these African groups were encouraged to keep or develop their own languages. They were separated from each other and lost all contact with the languages that carried their identity and their culture. The same happened to the Native American peoples who were taught the 'American way' of living and talking and were punished when they spoke their native languages.

Today, all students in the USA who speak a language other than English are entitled to language support. Although Grant (2009) did not spell out what this support entails, she ended the article by mentioning recent language policies which require teachers to understand and respect the rights of their students and to encourage the aspects that reinforce their cultural identities (Grant 2009). Cummins (1996, 2000, 2001a, 2001b in Lee & Norton 2009), moreover, advocated for an educational frame work in North America that would promote multilingualism, enhance equity and enable minority students to succeed in an increasingly globalized world (Lee & Norton 2009).

In contrast with the USA, the European Union (EU) values the maintenance of linguistic diversity. According to Tender and Vihalemm (2009), the protection of the multilingual environment in Europe should be a priority of the European Union's language policies. English as the *lingua franca* is increasing throughout Europe because of the effects of globalization and business developments. The EU authorities issued various documents which not only verified their values, but presented a framework of action where learners are trained in their own mother tongue and at least two foreign languages from an early age (Tender & Vihalemm 2009: 43). They expressed concern at the use of English as the medium of instruction in higher education. Furthermore, Tender and Vihalemm (2009) warned that if the use of 'less widely used languages' in Europe is diminished in higher education to the benefit of English, a direct impact on the sustainability and terminology processes of the respective languages will be observed.

Kosonen (2009) reported that although most Asian nations are multi-

lingual, their education systems use only one national language notwithstanding the fact that this is not the mother tongue of many learners. The outcome of this is that learners are excluded from learning opportunities and are generally disadvantaged in educational participation and achievement. Although Kosonen thoroughly discusses the challenges of learning in a multilingual context in Asia, she does not discuss it in terms of tertiary education. She agreed, though, with other international research findings that the first language should preferably be used throughout the educational system, including tertiary education as it will provide a solid foundation for further studies and the acquisition and successful transfer of literacy skills from the first to the second language. Kosonen (2009) concluded that first language-based multilingual education is a solution that can include learners who have been excluded from education due to language. It was not clear from this article what language planning and terminology development strategies were being implemented in Asia.

In Kenya, the development of Kiswahili as a nationally acknowledged language was mainly influenced by social history. During the colonial period Kiswahili was standardised and used in administration and in the lower levels of education (Onyango 2005: 220). After independence, however, the language policy changed stating that everyone in Kenya should speak Kiswahili and twenty-one years after independence, Kiswahili is a compulsory and examinable subject. This is interesting, as it was possible to trace a strong move in the development of the language to its rightful place as an official language (Onyango 2005). This has not been the case in South Africa with the declaration of the eleven (11) official languages.

Although the policy for language in education in South Africa is progressive, it is also complex. While the educational system has an obligation to promote multilingualism (Biseth 2006), this policy, however, is still an issue of debate in the primary and secondary phases (Heugh 2002) which has circled wider to the tertiary education systems in South Africa. According to Heugh (2002), a new policy of using non-discriminatory language in the educational system was put in place in 1997 to rectify the inequalities of language used during the apartheid era. This policy incorporated the internationally accepted principle of mother tongue education and provided a medium where pupils could gain proficiency in one language (English for most) while they are still able to use their mother

tongue alongside it. This worked in the primary schools, but as students progressed to high school as well as higher education institutions, English became the medium of instruction. Heugh (2002: 4) criticized this new language policy for its incomprehensiveness and the lack of integration into the national development plan. Thus, we find discriminatory processes still in place in all spheres of education. English-speaking students experience the benefit of being educated in their mother tongue and this is especially significant in the higher education system as most universities use English as their medium of instruction. Consequently, because of the racial distribution in KwaZulu-Natal, a minority group of students perform well as English is their mother tongue. The rest of the population, however, are handicapped by their lack of the language skills they need for the academic writing and highly complicated subject matter of their chosen professions. This leads to low academic performance and eventually non- completion of courses by the second language students (Africa 2005). This trend was confirmed by Kosonen (2009) who stated that learners who have insufficient comprehension and command of the languages used as the languages of literacy and languages of instruction are likely to learn differently from those who are fully proficient in the languages. She also mentioned that the ethno-linguistic minorities are generally disadvantaged in education participation and achievement as their mother tongue is not the dominant language with the benefits of a language with official status (Kosonen 2009).

Balfour (2007) sees the primary language as the dominant language a person uses while conversing, writing or debating in her/his professional life. This, however, may not necessarily be their mother tongue. Batibo (2009a) further suggests that the primary or dominant language may also be the affective and expressive language that dominates a person's life. However, it is recommended that the use of bilingual education strategies will assist students to learn adequately in the dominant language (primary language), while learning materials and additional learning experiences, for example tutorial groups, should still be provided in the mother tongue. This would be to the advantage of students in all language groups as *'language is not only a tool for communication; it is more fundamentally a tool for thought'* (Biseth 2006: 8). It makes sense to promote the use of multiple languages in a learning environment where students' critical thinking in a problem-based education programme are developed, as illustrated by Engelbrecht and

Wildsmith (2009). To accomplish this, the indigenous languages must not only be promoted and developed, but materials for teaching and learning should also be developed.

There is a chronic lack of classroom materials that promote multilingualism. Because of their perceived low status in education and civil society, African languages have lagged far behind English and Afrikaans in terms of the number of titles published. Nevertheless, a small but growing number of publications and learning resources in African languages are becoming commercially available (LANGTAG 1996). In the higher education system, it would be the task of nurse educators to get involved, not only in the processes of language development, but in the development of new educational strategies and methodologies which include learning materials to provide the learner opportunities to learn in both English and an indigenous language such as Zulu.

The importance for multilingualism in nursing cannot be emphasized enough. In a study done in Australia it became clear that communication plays a major role in providing optimal transcultural nursing care as students practise in diverse health care services (Lim *et al.* 2004). Lim *et al.* (1999) continued to argue that an individual's social attitude towards health and illness, participation in early detection and screening programs, compliance with treatment and their coping strategies are greatly influenced by cultural values, beliefs and norms. Nurses who can neither understand nor communicate in the language of their patients face a challenge in providing and maintaining quality nursing care that is culturally congruent with the clients they serve. This is in line with the study of Ndabezitha (2005), in South Africa, who highlighted the communication challenges in a hospital in KwaZulu-Natal. Nurses must be able to translate transcultural concepts and skills into practical strategies that are linguistically and culturally appropriate for each patient (Lim *et al.* 2004). Collins (2005) added to this discourse by arguing that when neither the medical practitioner nor the nurse understands the language of the patient, it causes miscommunication which leads to the lack of quality health care. Furthermore, the nurses lose the advocacy role they play within the health team.

According to the ICN Code of Ethics (International Council of Nurses 2006), nurses are morally obliged to acknowledge and integrate the individual, family and community values of patients while performing their

duties. The ability to be sensitive to these values is based on self discovery and experience of these values by nurses which, in turn, is based on knowledge and understanding of the language spoken by the patients (Austgard 2007: 139). In addition, the quality of nursing care is based on professional judgement and decision making, both of which involve interpretational exercises where language plays an active role in the shaping of judgements and decisions made (Matinsen 2005; cf. Austgard 2007). As an example of implementing the above, the European educational context acknowledged the need for the mobility of nurses across country boundaries. Students now receive a multimedia language package as part of their nursing education and training which enhances their employment opportunities (Ludvigsen 1997). As the South African nurses are a resource for both the local and global health systems (Rispel *et al.* 2009), it would strengthen their profile if multilingual skills were included in their curriculum. The improvement of communication skills through multilingualism is one of the major objectives driving the terminology development process for nursing and midwifery, as discussed in this article.

Terminology development is an academic activity '*concerned with the creation, recording and institutionalizing of lexical items*' (Batibo 2009b:1). The terms used as the building blocks of a discipline are the scientific concepts within a discipline to describe the knowledge and the skills which constitute the infrastructure of specialized knowledge. In this article, the term terminology development will be used instead of lexicography, as this article is reflecting a subject specific approach and not a linguistic approach. Terminology development is the term used in most of the activities in the SANTED project (Ndimande-Hlongwa *et al.* 2010, in press) and is also acknowledged as a term in other studies (Buthelezi 2008).

Terminology development is essential when new language domains emerge or when the level of adequacy of terms in the given domain is found to be inadequate (Batibo 2009b). In nursing and midwifery, for example, these domains consist of practice, education and research. Batibo (2009b) presents the principles of terminology development within a framework which includes the operational principles, prioritization of sources used, criteria for the selection of alternatives, descriptive versus prescriptive nature of the process, phonemic rules to capture canonical word structure and the oral or orthographic source. Batibo continues to discuss various strategies in

terminology development namely: concept versus word-based; domain of use; term of representation; derivation/affixation; semantic expansion; compounding; blending; acronym; coinage; loan translation; and borrowing. Some of these will be discussed later in the article. Terminology development further includes the identification of terms, the preparation of workshop materials, the preparation of subject specialists who will attend the workshop for the first time, as well as the terminology development workshop itself where specialists in both Zulu and nursing meet to discuss, translate and develop scientific terms from English into Zulu.

The recording of guidelines as the criteria of how to choose and develop good terms and best practices is vital to enhance the productivity and the quality of terminology development. It can also increase the review and standardization process of new terms (Sluis 2001:1). Onyango (2005) presents a framework for the terminology process that describes a macro view to developing a language effectively. This framework includes the formation of a language institute, setting of goals, actual engineering of terms, mode of dissemination and evaluation. Within the micro activity of this project at the School of Nursing, it was important to follow the same framework.

The Process of Terminology Development

The process we have used will be described in steps, although none of the activities are totally separate from the others.

Step One: Terminology Extraction

The project manager extracted significant terms in the various subject areas of nursing and midwifery. This was a huge, labour-intensive activity as the terms selected were embedded in the materials that are mostly used in the students' learning materials. In order to involve students in the project, third and fourth year Bachelor of Nursing (B.N.) degree students were requested to assist with the identification and extraction of terms from their learning materials. This enriched their learning experiences, as they did not only learn the concepts and definitions themselves, but they were actively involved in creating glossaries which they knew would contribute to advancing the learning of future students.

There are various ways of extracting terms from texts such as manuals and software programmes.

The Wordsmith software can be used to identify terms that are most frequently used in a given text. For example, a text book might have different topics and the particular author focuses more on the communication skills of the nurse than her attitudes and values towards caring. The subject specialist then identifies and validates the essential terms in that particular subject. Another method of extraction of terms or concepts from resource texts is to do it manually. This involves reading the text, identifying items and deriving definitions from the text or other resources such as dictionaries. These terms with definitions are then typed into terminology lists and cited accordingly. If the resource text used is a hard copy and not a digital copy, this might take a considerable amount of time which is compounded by the risk of typing errors and mistakes. As we did not receive the Wordsmith training before the end of the SANTED project, the extraction of terms for this project was done manually. The following principles for term extraction evolved from this learning experience:

- Identify a specific chapter or textbook.
- Explain how terms should be identified. Experience showed that participants (students in this case) might identify the more difficult terms (e.g. Neuro- hypophysis) while passing over the more important, more commonly used descriptive terms that give nursing and midwifery its own context or characteristics (e.g. pain, foetus).
- Explain to the participant the importance of the definition and description of the term. Sometimes more than one explanation of the term is included, as different definitions had different meanings or uses in different subject contexts. For example, ‘partner’ in the context of community health nursing might refer to a community member being in partnership with the professional nurse in a community development project, but in the context of the HIV/Aids pandemy, the term ‘partner’ would refer to the person in a sexual relationship with the patient.
- After the terms and definitions lists are compiled, the subject specialist should edit these lists to ensure the terms are representative of the subject and that the definitions and explanations are adequate for the

specific context of the subject domain. To add more meaning to the definitions already listed from the subject context, textbooks and dictionaries, these descriptions of terms might be extended and elaborated on in the working process when the specialists explain the term from their own experience and integrated knowledge,

- Terms and definitions are arranged alphabetically in a table with an extra column for the Zulu equivalents.
- All materials are referenced to acknowledge the copyright of previous authors.

Step Two: Preparing Subject Specialists

The next step that is essential to a successful terminology development workshop is the preparation of the subject specialists. Because it was essential for the specialists to come prepared in order to present and explain the terms to the linguists, the terminology list for the specific discipline was given to the subject specialist prior to the workshop.

Step Three: Selecting the Terminology Team

To ensure that triangulation took place, thereby enriching the term descriptions, at least three subject specialists in the field participated in order to give in-depth explanations of the terms. It is during this phase that the definitions of the identified terms are crafted and adapted to make them more meaningful and descriptive. In this project the subject specialists were nursing and midwifery specialists. According to South African Nursing Council (SANC) regulation R212 (SANC 1993 as amended), a Nursing and Midwifery Specialist is defined as a person with an additional qualification which includes a specialized post-graduate degree in a specific nursing field such as community health, medical-surgical, mental health and midwifery, and/or more than five years clinical experience in the specific discipline.

Both linguists and terminologists were included in the team to ensure representation of their differing skills in developing new Zulu equivalents for the identified terms. A linguist is a specialist who is skilled in the science of a particular language (Collins English Dictionary 2006) while a terminologist

is a specialist who is skilled in the science of specialized words and expressions relating to a particular subject (*Collins English Dictionary* 2006). In the case of this project, the language specialization refers to Zulu and the terminologist was a specialist trained in linguistics, specializing in the development of terminology.

A good balance between traditionalist *versus* modernist language specialists is also helpful. A traditionalist ensures the pure use of the language, that is, *deep Zulu*, while the modernist language specialist is concerned with the functionality and dynamic use of the language. Over representation of traditionalists makes it difficult to capture the dynamic characteristics of the language and to adapt to more modern ways of speaking. People from the Southern, Northern and Midlands areas in KwaZulu-Natal speak different dialects and it was, therefore, also important to have representation from all these geographical areas.

Although such representation is necessary, the group size should remain conducive to the work at hand. The ideal working group, from our experience, is a group of ten members, including the subject specialists. In this way all members of the group have an opportunity to participate.

Step Four: The Workshops

In this step, the aim was to generate equivalent terms in Zulu for identified nursing and midwifery terms. Four, three-day workshops were held at a venue neutral for all participants. These workshops were conducted according to specific disciplines in nursing and were attended by teams of subject specialists according to their specializations. These included two medical-surgical nurses, two community health nurses and three midwives. At the workshop, each participant received a prepared terminology booklet. The meaning and context of the terms was discussed in English, where the terminology was presented by the nursing and midwifery specialist, who also suggested an appropriate Zulu term that could be used within the communities. The linguists and terminologists contributed to the development process in accordance with the grammatical structure of the terms in Zulu, as explained by Batibo (2009b). Terms, meanings and structures were discussed and agreed upon in a negotiation process until the Zulu equivalent was finally recorded.

Step Five: Post-workshop Management of the Terminology

The workshop negotiations resulted in appropriate Zulu equivalents for 1400 English nursing and midwifery terms. After the workshops the definitions and explanations were given to the subject specialists to be translated from English to Zulu who, in turn, sent them to be edited by the linguists.

Currently, the identified terms in English, the Zulu equivalents as well as the definitions in both languages have been put on a Moodle (Rice 2006) online learning website in the form of a glossary, and a workshop will be conducted to introduce nursing and midwifery lecturers to the use of the website. Thereafter, students, at the various levels of their study programmes, will be introduced to the website during the orientation period at the beginning of each year. This will not only provide both teacher and learner with an important resource, but it will encourage the School of Nursing to buy into the continuation of the development of Zulu, alongside English, as a teaching, learning and expressive scientific language.

Language Development

Although most of the team involved in this project speak Zulu as a first language, it became apparent to us during the process of language and terminology development that there was still much to learn. We identified five categories of Zulu terms that were developed during our engagement with the team:

1. Using lay terms: It was found that some terms were already available in Zulu such as *umbungu* (foetus), but some of the words did not convey the appropriate meaning in the context of nursing and midwifery. In some instances these terms were retained which fulfilled the criterion of clinical cognition as referred to by Sluis (2002 in Bakhshi-Raiez *et al.* 2008). *Clinical cognition* ensures that the term chosen will be consistent with existing clinical terms that are easily understood by the targeted user or that are familiar to the user. For example, the word *ukuxukuza*, literally translated into English as ‘shaking of the stomach’, is a generalised term used by the community to refer to the abdominal examination of a pregnant woman. Although it does not describe the exact process in biomedical terms, it is an

accepted term in the community. Thus it was retained by the team. Other cases in which the team decided to use terms already used by lay people, were the term for miscarriage, *ukuphuphuma kwesisu*, literally ‘the natural coming out from the stomach’ and the term for abortion, *ukuhushulwa kwesisu*, meaning ‘to remove or pull out from the stomach’ which is perceived by the community as meaning intentionally induced termination of pregnancy.

2. *Using synonyms for intimacy terms: Ukuhlonipha* or ‘the act of respecting’ is fundamental to the functioning of Zulu society, and is most appreciated when practised by people outside the society who are engaging with a Zulu context (UKZNdaba 2007; Ndabezitha 2005). Using certain intimate terms in public is not socially acceptable, and synonyms, which are called *ukuhlonipha* terms, should be used instead. The students/learners need to know these terms so as not to offend members of the community with whom they are speaking and working, and should rather use more accepted terms when they are doing health education in Zulu. An example of this practice can be seen in the use of the term *isisu* (stomach) rather than *isizalo* (womb). Although stomach is not medically correct, community members are using it to indicate *ukuhlonipha*. It is important, however, that students understand the ‘unspeakable’ terms when they hear them, even though they may not use the terms themselves.

A huge debate developed when working on the terminology, especially for midwifery. The dilemma was whether the ‘true’ term should be used on the web glossary, or whether the ‘*ukuhlonipha*’ synonym of the term should be used to ensure that the students would not use disrespectful terms. One of the issues under debate was whether to retain the respectful term for ‘vulva’ in midwifery which is *inkomo* (cow) referring to the final cow that should be paid in lobola for the mother of the child or to use ‘vulva’, a common term used in the midwifery setting. It was finally agreed that the respectful term *inkomo* should be retained. The team decided to use a two-pronged approach with respect to the ‘*ukuhlonipha*’ words, namely: 1) they would retain the terminology that is acceptable in the community; and 2) use terms that the students will be expected to use when attending to their patients. The students would be referred to the Zulu dictionaries and other resources for the ‘true’ version of the *ukuhlonipha* words.

3. *Using borrowed terms:* Transference refers to the process of borrowing a term from English and transferring it to Zulu without changing it (Ramani *et al.* 2007: 213). For example the term for ‘AntiD injections’ is *umjovo we-AntiD*. Transliteration on the other hand, means that the equivalent was morphologically and phonologically adapted to the target language (Ramani *et al.* 2007). This was used quite often by the team. The following examples will explain how transference and transliteration were used.

White blood cells are commonly known as *amasosha omzimba* in Zulu. The literal translation in English is ‘body soldiers’. This term is used when talking about immunity and antibodies, but when nurses explain the processes of compromised immune systems, they need more refined terms for these explanations. In this case, transliteration was used so that nurses could differentiate between the different types of cells by referring to ‘neutrophils’ as *ama-neutrophils* (transference) or *amanyutrofilisi* (transliteration) and ‘basophils’ as *ama-basophils* (transference) or *amabhasofilisi* (transliteration). These words were clearly not available in Zulu and were borrowed from English. The outcome of a debate whether to retain the original English spelling or to change the spelling according to Zulu rules was that both versions were included in the glossary of terms. The traditionalists were in favour of keeping to the Zulu rules, whereas the modernists did not have a problem using the English spelling of the term.

4. *Adapting terms geographically:* *Izigodi* (geographical areas) sometimes use different words for the same term and this increased the difficulty in specifying a particular term for nursing. For example ‘buttocks’ are referred to as either *izinqe* (Southern KZN) or *izibunu* (Northern KZN). The team’s decision was to include all equivalent terms used according to different geographic areas.

5. *Re-introducing lost terms:* Some terms in Zulu are available, and listed, but not commonly used and consequently not well known. For example, *isigqa*, meaning ‘hormones’, is an old word, but it has fallen into disuse as it is not commonly used by the younger generations. There are various factors that affect the transmission of a particular community’s language to the next generation, including age, gender, birthplace, period of residence in a specific area, educational level, qualification as well as migration

(Schüpbach 2009). Whatever the reason for the terms being lost, we realised that when terms are not used, they die or disappear, and are replaced by more informal terms. For example, 'HIV' is now commonly referred to as *Iqhoks*, literally translated into English as 'pencil heel shoe' describing the marks made on a body when a person is hit or assaulted with a high heel shoe. Thus the original term has been changed to contain a new meaning used by modern or younger generations. It is vital that the original terms should be used in teaching, learning and research contexts if we want them to survive. On the other hand, new meanings should be clarified and understood by students to be able to understand the fine nuance of the terms used in the community. If we use the correct terminology in teaching, we help to preserve the indigenous language and develop cognitive proficiency (Koch & Burkett 2005).

6. *Creating new terms (Coining)*: Where no existing terms could be found, the team discussed the English terms extensively in the workshop situation. The subject specialists presented these terms as mentioned above. After developing a clear image of the use of the term in the nursing and midwifery context, the linguists and terminologists assisted with developing an appropriate term, guided by language rules, and created new Zulu terms from English and other languages (Batibo 2009b: 1; Batibo 2009c). For example, the new Zulu term *Isigcinabisi ebeleni*, which means 'reservoir of milk in the breast', was created for the English term 'Lactiferous sinus'. The importance of combining the knowledge and skill of subject specialists and language specialists was especially evident in this kind of terminology development where the different specialists complemented the skills of each other.

Challenges in Terminology Development

Although the team consisted of highly specialized people, the process was very slow and labour-intensive. A list of only 350 terms was developed during one three-day workshop. After four workshops, 1400 terms had been developed and made available to nursing and midwifery. In spite of allocating 120 working days to the workshop activities, these terms have not yet been submitted to a standardization process or a language board as recommended by Batibo (2009c).

The availability of specialists can sometimes be a challenge. When there were not enough academics available to participate in the procedures of a specific workshop, clinical specialists, who were actively involved in the particular clinical field, were recruited. For future workshops, we recommend the inclusion of students and clinical practitioners in nursing and midwifery in this process.

Another challenge we now face is to maintain the momentum of such a demanding project. It can easily happen that the product of this project gets shelved as glossary lists and will not be made available to students, academics and clinical practitioners for nursing education, practice and research. There is a need to disseminate these terms in the public domain through publishing and validation from the stakeholders (Batibo 2009c). This means that it is vital to continue this project and, thus, future funding is of extreme importance for its continuation and sustainability.

Recommendations

1. The University should have a language policy in place which will ensure institutional support over the longer term.
2. The language board of the university should take ownership of terminology development in the different subjects or discipline areas by providing capacity building and funding for future initiatives.
3. Funding is important for the continuation of the process already initiated by the SANTED project.
4. Projects of this nature are dependent on long term commitment. Coordination and management of the process is essential to sustain it.
5. Capacity building skills and resource development to engage in terminology development is important for both the linguistic and the subject specialists.
6. The engagement of students and clinical practitioners in future projects should be encouraged.

7. The use of electronic methods for the extraction and development of terminology, translation of documents and dissemination of glossaries should be cost effective, as explained in Fernandez (2008).

Conclusion

In this article we shared the process of developing terminology from the perspectives of the subject specialists. We discussed the lessons learnt as we collaborated with the language specialists in the process. The techniques, as well as the categories of terms developed, were explained. The challenges were discussed and relevant recommendations, based on our experiences, were suggested. Participating in this project gave us, as nursing and midwifery specialists, a glimpse of ‘*the dream of nationhood*’ as reflected in the constitution of South Africa. With appropriate means, this process of terminology development, which has been initiated by The School of Nursing of the University of KwaZulu-Natal, can be continued and sustained to enhance Zulu as a language for the benefit of our learners and communities at large.

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C. Engelbrecht, N.C. Shangase,
S.J. Majeke, S.Z. Mthembu and
Z. M. Zondi

School of Nursing
Faculty of Health Science
University of KwaZulu-Natal

Corresponding author: Charlotte Engelbrecht
engelbrechtc@ukzn.ac.za