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To cite this article: Nobuhle Ndimande-Hlongwa & Hloniphani Ndebele (2017) Defying ideological misconceptions through information and communication technology localisation in Higher Education, South African Journal of African Languages, 37:1, 1-9, DOI: [10.1080/02572117.2017.1316525](https://doi.org/10.1080/02572117.2017.1316525)

To link to this article: <http://dx.doi.org/10.1080/02572117.2017.1316525>



Published online: 26 Jun 2017.



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# Defying ideological misconceptions through information and communication technology localisation in Higher Education

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This article seeks to provide a critique on various ideological misconceptions regarding the integration of information and communication technology (ICT) and African languages in higher education. It further seeks to provide insight into various ICT localisation opportunities within the higher education domain. Many institutions of higher learning in South Africa have developed multilingual policies that are founded upon various national, regional and international provisions in order to promote the status of African languages. The low profile of African languages in these institutions, among other factors, could be attributed to negative ideological misconceptions that reinforce the hegemony and status of English in higher domains. These languages are often viewed as incapable of expressing technical terms, although they inherently possess the capacity to function in any given context, just as any other language can, and their multiplicity should be viewed not as problematic, but rather as resource and evidence of Africa's rich linguistic and cultural diversity. Given the high levels of utilisation, spread and accessibility of information and communication technologies (ICT) in higher education institutions, the integration of African languages with ICT could be of paramount significance in revitalising them.

## Introduction

The integration of information and communication technology (ICT) and African languages is a significant strategy in the revitalisation, promotion and intellectualisation of these languages in higher education and associated higher domains of life. Although nine of South Africa's eleven official languages are indigenous languages, English remains a dominant force within the educational domain and other official domains. This is despite a plethora of legislative frameworks that seek to promote linguistic equity and reinforce the official status of African languages. African languages have often been viewed as possessing limited terminology supposedly rendering them unsuitable for higher domains of life functions. They have also been considered inherently divisive along ethnic grounds and as unnecessary in the presence of the English language in higher status domains. It is against the background of such retrogressive ideologies that English is embraced as a viable solution to all the language problems associated with African languages. However, the multilingual nature of the information revolution and the spread of ICTs in Africa renders the integration of the various components of ICT and African languages inevitable in order to realise the maximum benefit of Africa's linguistic richness in education and other higher status domains (Osborn, 2010). This article therefore seeks to explore, firstly, the various negative ideologies that tend to perpetuate the low regard for indigenous languages. Secondly, the discussion provides a detailed account of various components of ICT that are important in the revitalisation, promotion and intellectualisation of these languages. Finally, the possible challenges of integrating African languages with ICT are reviewed.

## Background information

The need to promote African languages should be understood within the background of their continued marginalisation in higher domains of life such as education, science and technology, ICT, politics and the economy. The low esteem that is accorded to these languages threatens their continued existence for the benefit of future generations. The promotion of African languages is, however, theoretically enshrined in various international, regional and national legislative frameworks, thus the practical implementation of these frameworks must also be achieved.

In countries in Africa and abroad, endeavours undertaken to revitalise and promote the prominence of African languages have been witnessed through the activities of the United Nations and the Organisation of African Unity (OAU) with plans of action, charters and resolutions. Examples of such initiatives include the 'Language plan of Action for Africa' (OAU, 1986); the 'Charter for the promotion of African languages in education' (OAU, 1996); 'The Harare Declaration' (UNESCO, OAU & ACCT, 1997); 'The Asmara Declaration' (Asmara Declaration, 2000); the UN Declaration on the rights of indigenous people, Articles 13 & 14, 2007 (United Nations, 2007), among others. The need to promote indigenous languages has also seen the establishment of organisations such as the 'OAU Bureau of Languages' in Uganda, the 'Centre of Linguistic and Historical Studies through Oral Tradition' (CELHTO) in Niger, the 'Regional Centre of Documentation on Oral Traditions and African Languages' (CERDOTOLA) in Cameroon, the 'African Academy of Languages' (ACALAN), and the 'Open Society Initiative for Southern Africa' (OSISA). In the South

African context, the advancement of these languages has been witnessed mainly through the Constitution of the Republic of South Africa (1996), which accords official status to eleven languages of which nine (isiZulu, isiXhosa, isiNdebele, Siswati, Sepedi, Setswana, Tshivenda, Xitsonga and Sesotho) are indigenous African languages and two (English and Afrikaans) are former colonial languages. The Department of Arts and Culture and the Pan South African Language Board, among others, have also been involved in various initiatives to elevate the nine indigenous languages which have been afforded official status.

The elevation of these languages in the South African higher education sector in particular is derived from several national imperatives introduced since the instigation of the debate regarding the language issue in South Africa. The National Language Policy Framework (Department of Arts and Culture, 2003) is a major document that obligates different government departments to adopt a 'multilingual mode of operation' (Mesthrie, 2006: 153). Other national imperatives include the democratic Constitution of the country (Republic of South Africa, 1996), the 'Higher Education Act' (Republic of South Africa, 1997), the 'Language Policy for Higher Education' (Department of Education, 2002), the Ministerial Committee Report on 'The development of "indigenous African languages" as mediums of instruction in Higher Education' (Department of Education, 2003), the Ministerial Committee Report on 'Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions' (Department of Education, 2008), the 'Charter for the Humanities and Social Sciences: Catalytic project on Concept Formation in African Languages' (Department of Higher Education and Training, 2011), the 'White Paper on Post-Secondary School Education and Training' (Department of Higher Education and Training, 2012a), and the 'Ministerial Advisory panel on African languages in Higher Education' (Department of Higher Education and Training, 2012b). These initiatives advocate for, among other things, the promotion of Africa's indigenous linguistic heritage and its function as the language of teaching and learning in the higher education context as well as the establishment of language policies, guided by the Constitution and the Language Policy for Higher Education. Most universities in the democratic era have developed their own language policies, which reflect their commitment to the elevation and intellectualisation of the previously disadvantaged indigenous languages in this particular domain. The greatest challenge remains, however, in the practical implementation of these policies.

## Methodology

The study employed a qualitative phenomenological approach to provide an understanding of the importance of ICT in the promotion of African languages in South African Higher Education. Two data collection methods were utilised, namely document review and semi-structured interviews. The document review method provided detailed information and descriptions on various opportunities that are available for the integration of ICT and African languages in Higher Education. The documents that were reviewed included journal articles, university websites,

project reports and descriptions of various projects that relate to the phenomenon under study. Interviews, on the other hand, were conducted with nine key informants identified from different institutions of higher learning in South Africa. These key informants consisted of experts that include lexicographers, terminologists, language teachers and language practitioners from different institutions of higher learning in South Africa. These interviews provided data on ideological misconceptions that seek to perpetuate the low status function of African languages and various initiatives of ICT localisation in different institutions.

## Theoretical framework

The language management theory (Jernudd & Neustupny, 1987) and the model of localisation ecology (Osborn, 2010) were applied in this study. The foundation of the theory of language management is associated with the development of language planning theory and has been developed by various scholars to include features that differentiate it from the language planning theory (cf. Neustupny, 2003; Nekvapil, 2006). The theory is based entirely on its ability to make a clear distinction between two separate and important processes that define language, namely the formation and the reaction towards speech and the metalinguistic behaviours based on Fishman's (1972) 'behaviour towards language', of which the second process is called language management (Nekvapil, 2006). The language management theory is based on a five-stage process model that seeks to explore 'behaviour towards language'. These stages include, firstly, deviations from communication norms in an interaction; secondly, the noting of a deviation; thirdly, the evaluation of a deviation; fourthly, the creation of an adjustment plan for the deviation; and finally the implementation of the plan (Nekvapil, 2006; 2009; Nekvapil & Sherman, 2015). It is also argued that the language management theory is a theory of language problems, hence any negatively evaluated deviation from the norm is viewed as an individual language problem (Giger & Sloboda, 2008).

Localisation ecology complements language management theory by accounting for the various interacting factors that affect the process of adapting the different aspects of ICT into the local modes of communication and beliefs. The linguistic conceptual framework of 'localisation ecology' was adopted from Haugen's (1972) concept of 'language ecology' and it has been associated with different scenarios, the earlier conceptions associating it with various approaches that are used to describe the relationship between human societies and the physical environment. The term was later adopted and used in more intangible conceptualisations to depict comprehensive processes in societies and in the lives of individuals (Osborn, 2010). According to Osborn (2010: 7), localisation can be defined as the 'adaptation of user interfaces and digital information to the local modes of communication, culture and standards'.

There are three fundamental factors of localisation ecology, namely language, technology, and society (Osborn, 2010: 21). Despite the acknowledgement of the fact that the language and technology factor are two important

factors of focus in implementing the translation feature in any localisation initiative, it is necessary to note that the sociocultural dimension is equally significant, considering the dimensions of the user and the power of localised technology in any given society (Osborn, 2010). It is also important to note that each of the three basic factors in localisation ecology are wide-ranging and comprise sections, which are important in underlining the significance of interrelationships between the factors (Osborn, 2010). There are other factors, outside the three basic factors of localisation ecology, which can affect the potential and results of localisation initiatives. These include politics, economics and education (Osborn, 2010: 22). The additional three classifications culminate in six headings that account for the factors that are key to localisation. The six different classifications and their relationships render the framework of localisation ecology an important tool for facilitating a full appreciation of the setting of any localisation initiative (Osborn, 2010).

### Literature review

South Africa's democratic constitutional framework prioritises the growth of previously disadvantaged indigenous local languages and further recommends positive and practical initiatives to be employed by the government to enable the promotion of these languages (Beukes, 2009). It has been argued that the multilingual nature of the South African community is buoyed by possibly the best liberal provisions of the Constitution when compared to other countries in Africa (Bamgbose, 2003: 5). In addition, this constitution has been widely acknowledged as exemplary and viewed as one of the most tolerant in contemporary society (Beukes, 2009). Furthermore, Kamwendo (2006), while acknowledging slow progress with regard to language policy within the African continent, argues that the South African language policy on paper is remarkably compliant to the 'Language plan of Action' crafted by the OAU.

The democratic South Africa also established a remarkable variety of language planning and implementation bodies. One of the most eminent is the Language Plan Task Group (LANGTAG), whose role was to urgently provide advice to the concerned ministry on a viable plan of action with regard to the official languages of the Republic (LANGTAG, 1996). Another important body is the 'Pan South African Language Board' (PanSALB) whose mandate was to function as an independent statutory body in the provision of advice to the provincial and national government on issues relating to language regulation and implementation. There is also the 'National Language Services' (NLS) under the Department of Arts and Culture, whose role is the provision of language services at local, provincial and national government levels (Alexander, 2003: 16; Ndimande-Hlongwa, 2009).

However, despite the formation of these official bodies, South Africa has experienced slow progress in implementing its language policy. Although the South African language planning initiatives could be considered among the best in the world, language policy implementation remains problematic as it involves many things, including practical initiatives, the distribution of funds, setting of time frames, and reviews and assessment (Ngcobo, 2007). Scholars in language planning,

such as Alexander (2000), Kamwangamalu (2000), and Moodley (2000), have argued that language practice in South Africa has been regressive despite the availability of a progressive legislative framework. There seems to be a lack of political commitment among leaders, and unauthenticated language misconceptions among the general public, probably as a result of the apartheid legacy and its policy orientation. In support of the above assertion, Ngcobo (2009) proposes two important approaches that can be employed as a motivation factor in the use of indigenous languages. The first approach relates to ensuring the accessibility of knowledge in the different official languages. Such an approach will create an environment that will influence the acceptance of the use of official indigenous languages as normality. The other approach involves the creation of opportunities associated with using indigenous languages by influential professionals within the public sector.

The implementation of language-in-education policies has experienced a lack of progress since the new constitutional dispensation in 1994. Heugh (2007) asserts that the government is blamed for slowing down and stalling progress in implementing potentially empowering language-in-education policies. She adds that this failure has disadvantageous consequences for the achievement of many African languages' first language (L1) learners within the education system and further propagates minimal literateness. Disappointingly, just like the apartheid educational policies, the employment of the abovementioned languages as mediums of facilitating education continues to be limited to disadvantaged schools in rural areas and townships (Lafon, 2008).

Research evidence derived from numerous local, regional and international educational studies reveals that mother-tongue education commands an enormous amount of potential, which is convincingly unquestionable. It has also been argued that knowledge on subject matter in a primary language and literacy can be promoted through the implementation of strategies that promote bilingualism and multilingualism (Cummins, 2000). It is further asserted that education in the L1 of the learner preserves the native languages and improves the quality of education as it is usually acquired in the early years of childhood and eventually becomes an instrument of thought and communication (Kamwangamalu, 2000).

A study on the language attitudes of isiXhosa-speaking university students at the University of Fort Hare revealed that while the dominance of English is acknowledged in the South African education system, isiXhosa can play a significant role as an additional language of instruction (Dalvit & De Klerk, 2005). On a similar note, a study conducted by MacKenzie (2009) in India revealed that while admission to school has improved and enrolment rates are on the increase, dropout and performance rates remain worryingly low because the knowledge is provided through a foreign language that learners are not able to comprehend, thereby exposing learners to unfamiliar cultural contexts. In Ghana, it is reported that the use of English in classrooms creates anxiety among students and hinders effective participation (Opuku-Amankwa, 2009). In addition, Ghuman (2002: 48) states that Asian students in America achieve lower marks when compared to their white counterparts.



He adds that some students are not able to realise their full potential because of poor expression, reading and listening skills. However, there are also a number of reasons that motivate students to opt for English in teaching and learning programmes as opposed to their indigenous L1. According to de Wet (2002: 119), in his study conducted in South Africa, there are many sociolinguistic issues that affect the choice of English over indigenous languages, and some of these include science, technology, politics, education, cultural activities, and trade and industry.

Given the purported instrumental role of ICT in the promotion of lifelong learning, curriculum transformation and innovation, breaking the digital divide, diverse participation and enhancing the quality of education (Kajee & Balfour, 2011), it is important to consider how ICT can be integrated with African languages. In South Africa, most institutions of higher learning have adopted ICTs and they have become a key feature of learning despite the fact that many students that gain access to university education still experience difficulties in literacy-related skills that may include reading, listening and writing (Balfour, 2002). In addition, it is also argued that the 'advantages and opportunities which ICT purportedly offer should not be exaggerated within the context of indigenous populations of Africa, most of which use ICT gadgets and applications that are built into languages alien to them' (Omojola, 2009: 33). Omojola (2009) further asserts that there is a need to integrate African languages with ICT and that the process should begin by considering local initiatives that are directly linked to developing indigenous languages through the publishing of media content on the internet. This would in turn play a significant role in developing responsiveness among ICT product designers and motivating them to create technological products that accommodate the African languages.

### **Ideologies that hinder the development of African languages in higher domains of life**

It is important that the foundation of initiatives aimed at elevating the status of indigenous languages be based upon an understanding and conceptualisation of the language problems in their context of occurrence. The conceptualisation of language problems is the initial point of any language management process approach, as it provides an understanding of the different types of language problems and, furthermore, introduces a framework that can facilitate the formulation of strategies to address such problems. According to Nekvapil (2009: 5), there are a number of language problems that occur in discourse, some of which include, firstly, problems and inadequacies that can be solved directly during an interaction or communicative act. Secondly, there are some problems that cannot be solved directly during an interaction but which the speaker can make an adjustment design to later, after possibly consulting a dictionary, friends or other people with similar problems. Thirdly, there are certain problems which speakers cannot solve by themselves, either during a communicative act or later, but which they may forward to professionals for assistance. In our analysis of language problems that hinder the use of African languages in high status domains, we will deal

with the third type of language problem, following the language management theory premise that language problems are experienced by language users themselves and thus cannot be defined universally (Jernudd, 2000; Giger & Sloboda, 2008). What is therefore important is to understand who experiences such problems and why such are viewed as problems.

Firstly, it was established that African languages are sometimes considered incapable of functioning in higher domains of life. Architects of this view believe that indigenous African languages are only suitable for inferior status realms that may include the family, cultural and social activities, and informal conversations. They argue that these languages lack the capacity to express technical terms that are associated with higher domains of life such as ICT. According to Bamgbose (2011), despite the general expectation of African language users to take pride in their linguistic heritage, negative attitudes are encountered in most cases mainly by the privileged in society who usually opt for education for their descendants through the ex-colonial languages. He adds that parents from lower social groups, motivated by the elites, also want similar education for their children. African language speakers frequently place less value on their native languages, which are embodied with their rich cultural heritage. As such, they favour ex-colonial languages, which they equate with civilisation and modernity.

Secondly, respondents felt that the multiplicity of indigenous African languages is often associated with various problems ranging from tribal conflicts, divisions in society and under-development of these languages. It is upon such a basis that politicians lack the will to adequately address the language issue as they believe that the promotion of one language over the other would fuel tribal discontent and thus create disunity among different multilingual communities. However, scholars argue that historical evidence testifies to the fact that economic, political and religious factors are causative of all the abovementioned ills in a society and not the multiplicity of languages (Baker, 2003). This then clarifies the misconception that the so called 'language and linguistic wars' are caused by language diversity, whereas they are rather the result of social, economic, and political power inequalities between linguistic communities (Calvert, 1998, as cited in Chumbow, 2009).

The third ideology is associated with the hegemony of English in most, if not all, high status domains, with ICT included. English has established itself as the language of the economy, politics, science and technology, education and even social life. Respondents argued that success in these spheres of life is conceived to be largely dependent on knowledge of the English language. They felt that English has thus come to be viewed as a global language. It is upon such a basis that the elevation of indigenous languages is deemed unnecessary and a waste of time and resources, given the important role of English in the different domains of life. Scholars have, however, issued counter-arguments with regard to the abovementioned views. Skutnabb-Kangas (2000) reveals that classifying English as a 'global language' is a myth designed to further the domination of English in the world, while native languages continue to be marginalised. In addition, Mavesera (2011) argues that globalisation ideology entrenches the domination of former colonial languages in

former colonial states and further facilitates the continued disregard for and underdevelopment of African languages. She adds that globalisation and the information era have placed the disadvantaged languages in danger of ostracism since information is transmitted through what has been conceived to be the global language, English.

It is therefore important to formulate strategies that would be of significance in countering these prevailing ideologies. Given the spread of ICT, its status, adoption and utilisation in higher education, ICT localisation would be of pronounced significance in elevating the status of African languages.

### **Opportunities available for the integration of ICT and African languages**

There are various opportunities that are available for ICT localisation in higher education. The starting point in such an initiative is the development of a national corpus, while paying particular attention to Sinclair's (2004) and Bennett's (2010) basic factors of corpus design that include representativeness, size, and typology, among others. While acknowledging a number of efforts regarding the development of corpora for the African languages by different institutions of higher learning in South Africa (e.g. University of South Africa, University of Pretoria, Rhodes University, among others), it is important for higher institutions of learning to combine their efforts and develop a national corpus that would be of vital significance in the development of sustainable and reliable human language technology accessible to the entire South African population. Human language technologies that could result from the development of a national corpus include corpus tools for the African languages, spell checkers and correctors, grammatical analysers, machine translation tools, speech technologies, terminology data bases, term glossaries, and online dictionaries.

The University of KwaZulu-Natal is currently collaborating with various government institutions and other institutions of higher learning to develop a national corpus of isiZulu, which will then pave the way for the development of national corpora for the other official African languages. Human Language Technologies have also been developed in various institutions such as the Centre of Text Technology at North-West University (North-West University, 2014), the 'Computational Morphological Analysis Project' at the University of South Africa (UNISA, 2014) and the Online Environment for multilingual glossaries developed by the Centre for Education on 'Vula', an online learning environment at the University of Cape Town (University of Cape Town, 2014a).

The availability and utilisation of electronic learning (e-learning) tools in most institutions of higher learning also presents a grand platform for the integration of indigenous African languages and ICT. There are two major broad categories of e-learning tools, namely 'Learning Management Systems' (LMS) and 'Computer-assisted language learning' systems (CALL), which can be used in this regard. LMS tools are either 'proprietary software' applications or 'open-source software'. Examples of 'proprietary software' LMS tools include eCollege, Learning Space, Blackboard and Web CT. On the other hand, examples of open-source software LMS

tools include MOODLE and GNU general, uPortal and 'Open Source Portfolio Initiative', among others. Computer-assisted language learning, on the other hand, can be defined as a technique of employing technology in the teaching and learning of a language (Januszewski & Molenda, 2008, as cited in Olibie, 2010). It encompasses the application of computer-assisted learning principles to the context of language learning and the use of computer software packages to reinforce the language learning process (Olibie, 2010). Examples of CALL tools include software packages such as 'hot potatoes', online courses, games and mobile and multimedia technology.

An example of an institution that has taken advantage of the opportunities offered through ICT is the Department of African Languages at the University of South Africa (UNISA), which has been involved in a pilot project for the use of open educational resources through its free, online language courses. Furthermore, it has participated in the 'signature course', which is a pilot project involving the development of courses for full online teaching and learning. The 'signature modules' are envisaged to promote communication, interaction, mentorship, media fluency and critical thinking, while also reflecting 'an appreciation for societal values and the establishment of social cohesion' (Mischke & Le Roux, 2012, cited in Kosch & Bosch, 2014). Based on its commitment to the promotion of African languages in higher education, UNISA has made the 'signature course' in African languages a compulsory module for all students that enrol in the College of Human Sciences from 2013. These resources can be accessed through the [myUnisa](#) online learning system (Kosch & Bosch, 2014). Other universities in South Africa also have online learning systems such as [learn@ukzn](#) for the University of KwaZulu-Natal (University of KwaZulu-Natal, 2014), and [RUConnected](#) for Rhodes University (Rhodes University, 2014).

With regard to CALL tools, the University of Cape Town has developed a 'mobile Xhosa' application designed for health science professionals. Students use this application to develop their communication skills in isiXhosa, and medical professionals can also use it to assist them in communicating with isiXhosa-speaking patients (University of Cape Town, 2014b). The University of South Africa has also developed an online basic course for different official indigenous languages of South Africa (University of South Africa, 2014). On a similar note, the University of Stellenbosch has developed *Masazane* and the *Masincokole ngempilo ngesiXhosa*, accessible to students and staff in various fields (University of Stellenbosch, 2014). An effective use of CDs and DVDs can be noted in the UNISA 'basket module' approach in which multilingual content on selected modules is made available on both the myUnisa platform as well as on a CD-ROM. Kosch and Bosch (2014) argue that the multilingual CD-ROM was the only logical approach to accommodate all the languages under one module code in the Department of African Languages. As a result, students could choose their language, while the teaching approach on the CD-ROM supported creative learning environments through the provision of hyperlinks to pronunciations and interactive sound tracks. The use of CDs represents a pedagogical innovation and technological solution to the

promotion and intellectualisation of African languages in higher education.

Despite the growing availability of content in African languages on the web, there are only a few web-based applications which have been localised to accommodate users and speakers of African languages. The localisation of such applications, more importantly, should involve the translation of user interfaces, among other things, to enable users to easily navigate through the applications using their own native languages. The available opportunities for localisation, in this regard, include computer operating systems, web pages, browsers and mailing systems. There are a few efforts that have been made by companies and different organisations in the localisation of both open-source and proprietary software, though it is argued that such efforts have limited potential to impact significantly on speakers of African languages (Dalvit, Tsietsie, Mapi, Sam, Maseko, Terzoli, 2008). However, it is an important opportunity that institutions of higher learning should embrace and explore through vigorous marketing of the use of these applications among students and the university community at large. Windows XP is an example of a computer system that has been localised into isiZulu, Afrikaans and Setswana. 'Ubuntu Linux' and the 'Open Office. Org 2 Office Suite' have also been localised into the official indigenous languages by Translate.org.za (Dalvit et al., 2008). Web-mail has also been localised and is accessible to both students and staff at Rhodes University, and its user interface is in isiXhosa. Students have the privilege of communicating among themselves and with their lecturers through the medium of isiXhosa. The South African version of the Google browser has also been localised into Afrikaans, Sesotho, isiXhosa, isiZulu, Setswana and Northern Sotho (Dalvit et al., 2008).

Social software and multi-media products present another important platform for the integration of African languages with ICT. While some of these products are incorporated in Learning Management Systems (LMS) and CALL software, they can also be used individually to support the processes of the teaching and learning of African languages. The adoption of social software in higher education institutions is on the increase as it is envisaged to promote social and intellectual motivation between educators and learners. Social software can also be critical in the promotion of African language content on the internet and for facilitating community engagement through discussion, debate and the publication of research and educational information in African languages. According to McLaughlin and Lee (2007), the developments in ICT have facilitated the emergence of new trends in the distribution and consumption of information. They add that the emergence of 'Web 2.0' applications that include blogs, podcasts, wikis and social bookmarking, as well as social networks such as Facebook, MySpace and Friendster, have made it possible for individuals to produce and combine small units of content leading to the production of new interpretations, patterns and images. The idea behind 'Web 2.0' applications is to benefit the community through collaboration, interaction and the sharing of ideas (Guth, 2007).

### **Possible challenges in integrating the two phenomena**

The challenges that affect the integration of ICT and the indigenous South African languages should be understood within the context of the various interacting factors of localisation ecology (Osborn, 2010). These factors are not independent of each other, but are inter-related and overlap to provide a comprehensive conceptualisation of the challenges associated with integrating ICT and African languages.

The first challenge relates to the lack of technical expertise and collaboration for the success of localisation initiatives. Localisation focuses mainly on concerns related to the technical processes, localisation for language and cultural factors, and end-users (Osborn, 2010). The localisation process thus requires expertise from various fields. These include technological experts such as software designers and software engineers, and language experts such as terminologists, applied linguists and language custodians, among others. It is important to highlight that there has been a lack of collaboration between technological experts and language experts. There seems to be a lack of interest or awareness of the significance of ICT localisation among most technological experts. At the same level, most language experts lack the necessary technological skills to design and modify software.

The second challenge is related to a lack of financial resources to support localisation projects. Localisation is an expensive process involving computer software, expertise and translation, among other things, and it is a prolonged process. The situation on the ground is that investors and stakeholders are reluctant to invest in localisation projects as they view African languages as unmarketable. There is still an unwavering commitment to the refining of tools for the English language despite efforts to promote local indigenous languages.

The third challenge is that there is a wide gap between language policies and ICT policies. According to Osborn (2010), the seeming disjuncture between the major objectives, processes and considerations involved in the formulation of language policies and ICT policies presents localisers with limited room for flexibility and support in their activities. While language policies embrace the promotion of multilingualism, there are no provisions that seek to promote linguistic pluralism in the ICT domain. This gap explains the lack of collaboration between ICT experts and language experts. The English language continues to dominate this particular domain despite an acknowledgement that the national population consists of a high percentage of African language speakers. For example, the Millennium Development Goals call for an increase in ICT facilities, the advancement of technology, infrastructural development and affordable prices to provide an opportunity for as many people around the world as possible to be able to participate in the information society (United Nations, 2008). Eight years later, little has been achieved as no mention is made of the language factor, which is a critical aspect in the effective use of ICT. However, the Ministerial Advisory Panel on African Languages in South African Higher Education (Department of Higher Education and Training, 2012b) highlighted the



importance of integrating ICT and African languages in the higher education domain. This is a significant step.

The final challenge relates to the large volume of content that requires translation as an important process in any localisation initiative. There are two major focal points of localisation that require translation, namely the localisation of user interfaces, and the localisation of web content. It has been argued that African language content constitutes too low a percentage of the entire web content to necessitate its translation. Given the need to increase the amount of localised software and web content, the African language translation process could become prohibitively labour intensive and furthermore consume a lot of time and financial resources. Although machine translation could be considered as a possible option in addressing such a challenge, the situation on the ground is such that most translation tools that have been developed do not cater for African languages and therefore need further modification and development.

### Conclusion and recommendations

This article sought to explore ideological misconceptions associated with the marginalisation of African languages in higher status domains. The article further explored the concept of ICT localisation in promoting the status of these languages in high status domains, and the challenges of such an initiative. In terms of misconceptions about indigenous languages, it was established that indigenous African languages are often viewed as lacking the capacity to function in higher status domains and their multiplicity is sometimes viewed as a catalyst of tribal conflicts and societal divisions, and hence should be discarded. Furthermore, the hegemonic status of English has been entrenched in most communities so much so that it has become the 'only' language associated with modernity, technological advancement and prosperity. However, these ideological views do not hold water as evidence does reveal that African languages can function in higher domains of life such as ICT. ICT localisation, which is the focus of this study, presents various opportunities such as corpus development, the development of human language technologies, the localisation of learning management systems, e-learning tools, and social software and web applications. However, the implementation of such an initiative is plagued by a number of obstacles including lack of technical expertise and collaboration among experts, the lack of financial support, the wide gap between ICT policies and language policies, a lack of commitment to the promotion of these languages, and finally the large volume of content that needs to be translated or localised. Despite these obstacles, however, the integration of ICT and African languages appears to be a logical way forward in revitalising these languages within higher domains of life. There is therefore a need for different stakeholders to channel resources in localisation projects to facilitate the development and intellectualisation of African languages. Such projects should include, among other things, the development of national corpora for these languages, which would in turn facilitate the development of human language technologies such as spell checkers, machine translation, morphological analysers, among other tools.

Language practitioners should move from their comfort zones and acquire programming skills in order to contribute in the development of ICT localised tools. There is also a need to create awareness around the significance of African languages in education and other spheres of life. The democratic government, in particular, has an obligation to create platforms and systems that will add economic value to African languages. It is also important to formulate strategies that would accommodate all the languages and furthermore take radical decisions based on policy for the promotion of indigenous languages in higher domains of life.

### References

- Alexander N. 2000. English unassailable but unattainable. The dilemma of Language Policy in Education in South Africa. *PRAESA Occasional Papers, No.3*. Cape Town: Praesa/University of Cape Town.
- Alexander N. 2003. *Language education policy, national and sub-national identities in South Africa*. Language Policy Division, Council of Europe, Strasbourg. Available at: <http://www.coe.int/t/dg4/linguistic/source/alexander/en.pdf> [Accessed 6 June 2012].
- Asmara Declaration. 2000. Asmara declaration on African languages and literatures. *Against All Odds: African languages and literatures into the 21st century conference*, 17–19 January 2000. Asmara, Eritrea. Available at: <http://www.queensu.ca/snid/asmara.htm>. [Accessed 10 June 2013].
- Baker MC. 2003. Linguistic differences and language design. *Trends in cognitive sciences* 7(8): 349–353. [https://doi.org/10.1016/S1364-6613\(03\)00157-8](https://doi.org/10.1016/S1364-6613(03)00157-8).
- Balfour RJ. 2002. Language curriculum development at tertiary level in South Africa. *Alternation* (Special Issue on Intercultural Communication) 9(1): 143–153.
- Bamgbose A. 2003. Language and the African renaissance: Lessons from the South African experience. In: Wolff E (ed.), *Tied tongues: The African Renaissance as a challenge for language planning*. Münster: LIT Verlag. pp. 39–56.
- Bamgbose A. 2011. African languages today: The challenge of and prospects for empowerment under globalisation. *Selected proceedings of the 40th Annual conference of African Linguistics*. Somerville: Cascadilla proceedings project.
- Bennett GR. 2010. *Using corpora in the language learning classroom: Corpus linguistics for teachers*. Ann Arbor: University of Michigan Press. <https://doi.org/10.3998/mpub.371534>.
- Beukes AM. 2009. Language policy incongruity and African languages in post-apartheid South Africa. *Studies in the Languages of Africa* 40(1): 35–55. <https://doi.org/10.1080/10228190903055550>.
- Chumbow BS. 2009. Linguistic diversity, pluralism and national development in Africa. *Africa Development* XXXIV(2): 21–45.
- Cummins J. 2000. *Language, power, and pedagogy. Bilingual children in the crossfire*. Clevedon: Multilingual Matters.
- Dalvit L, De Klerk V. 2005. Attitudes of isiXhosa-speaking students at the University of Fort Hare towards the use of isiXhosa as a language of learning and teaching (LoLT). *Southern African Journal of Linguistics and Applied Language Studies* 23(1): 1–18. <https://doi.org/10.2989/16073610509486371>.
- Dalvit L, Tsietsie M, Mapi T, Sam M, Maseko P, Terzoli A. 2008. 'The localisation into isiXhosa of iLanga, a VoIP PBX'. Paper presented at the 4th Annual International Conference on Computing and ICT Research, (SREC-2008), Makerere University, and Kampala, Uganda: 3–6 August 2008. Available at: <http://ijcir.org/specialissue2008/article5.pdf> [Accessed 18 July 2012].
- De Wet C. 2002. Factors influencing the choice of language of learning and teaching (LoLT): A South African perspective. *South African Journal of Education* 22: 119–124.

- Department of Arts and Culture. 2003. *National language policy framework*. Pretoria: Government Printers.
- Department of Education. 2002. *Language policy for Higher Education*. Pretoria: Government printers.
- Department of Education. 2003. *The development of 'indigenous African languages' as mediums of instruction in Higher Education*. Ministerial committee's report to the minister of education. Pretoria: Government Printers.
- Department of Education. 2008. *Ministerial committee report on transformation and social cohesion and the elimination of discrimination in public Higher Education institutions*. Pretoria: Government Printers.
- Department of Higher Education and Training. 2011. *Report commissioned by Minister of Higher Education and Training for the Charter for Humanities and Social Sciences*. Pretoria: Government Printers.
- Department of Higher Education and Training. 2012a. *Green paper for post-secondary school education and training*. Pretoria: Government Printers.
- Department of Higher Education and Training. 2012b. *Report of the Ministerial Advisory Panel on African Languages in Higher Education (MAPAHLE)*. Pretoria: Government Printers.
- Fishman JA. 1972. *The sociology of language: An interdisciplinary social science approach to language in society*. New York: Newbury House Publishers.
- Ghuman PAS. 2002. South-Asian adolescents in British schools: A review. *Educational Studies* 28(1): 47–59. <https://doi.org/10.1080/03055690120090370>.
- Giger M, Sloboda M. 2008. Language management and language problems in Belarus: Education and Beyond. *International Journal of Bilingual Education and Bilingualism*, 11(3-4): 315–339. <https://doi.org/10.1080/13670050802148715>.
- Guth S. 2007. Wikis in education: Is public better? *Proceedings of the 2007 International Symposium on Wikis*. Montreal: Association for Computing Machinery. pp. 61–68. <https://doi.org/10.1145/1296951.1296958>.
- Haugen E. 1972. *The ecology of language*. Stanford: Stanford University Press.
- Heugh K. 2007. Language and literacy issues in South Africa. In: Rassool N (ed.), *Global issues in language, education and development: Perspectives from postcolonial countries*. (Linguistic diversity and language rights 4). Clevedon: Multilingual Matters. pp. 187–218.
- Jernudd B. 2000. Cognition and language management. Paper presented at the International Conference on Language and Cognition, Kuala Lumpur, 14 July 2000, Mimeo.
- Jernudd BH, Neustupny JV. 1987. Language planning: for whom? *Proceedings of the International Colloquium on Language Planning*. Québec: Les Presses de l'Université Laval. pp. 69–84.
- Kajee L, Balfour R. 2011. Students' access to digital literacy in a South African university: Privilege and marginalisation. *South African Linguistics and Applied Language Studies* 29(2): 185–194. <https://doi.org/10.2989/16073614.2011.633365>.
- Kamwangamalu NM. 2000. A new policy, old language practices: Status planning for African languages in a multilingual South Africa. *South African Journal of African Languages* 20(1): 50–60.
- Kamwendo GE. 2006. No easy walk to linguistic freedom: A critique of language planning during South Africa's first decade of democracy. *Nordic Journal of African Studies* 15(1): 53–70.
- Kosch IM, Bosch SE. 2014. African languages as languages of teaching and learning: The case of the Department of African Languages, University of South Africa. In: Hibbert L, van der Walt C (eds), *Multilingual universities in South Africa: Reflecting society in higher education*. Bristol: Multilingual Matters. pp. 49–67.
- Lafon M. 2008. Asikhulumel! African language for all. A powerful strategy for spearheading transformation and improvement of the South African education system. In: Lafon M, Webb V (eds), *The standardisation of African languages in South Africa: Language political realities*. Johannesburg: Institut Francais d'Afrique du Sud. pp. 35–59.
- LANGTAG. 1996. *Towards a national language plan for South Africa*. Pretoria: Government Printer.
- MacKenzie P. 2009. Mother tongue first multilingual education among the tribal communities in India. *International Journal of Bilingual Education & Bilingualism* 12(4): 369–385. <https://doi.org/10.1080/13670050902935797>.
- Mavesera M. 2011. Situating African languages in the global village for sustainable development: Attractions and challenges for Zimbabwe. *Journal of Language and Culture* 2(5): 72–81.
- McLaughlin C, Lee MJW. 2007. Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era. *Proceedings ascilite Singapore*. pp. 664–675. Available at: [www.ascilite.org-au/conferences/singapore07/procs/mcloughlin.pdf](http://www.ascilite.org-au/conferences/singapore07/procs/mcloughlin.pdf) [Accessed 10 November 2013].
- Mesthrie R. 2006. Language, transformation and development: A sociolinguistic appraisal of post-apartheid South African language policy and practice. *Southern African Linguistics and Applied Language Studies* 24(2): 151–163. <https://doi.org/10.2989/16073610609486414>.
- Moodley K. 2000. African renaissance and language policies in comparative perspective. *Politikon* 27(1): 103–115. <https://doi.org/10.1080/02589340050004127>.
- Ndimande-Hlongwa N. 2009. *Ukuhlelwa Kolimi*. Pietermaritzburg: Shuter & Shooter.
- Nekvapil J. 2006. From language planning to language management. *Sociolinguistica* 20: 92–104.
- Nekvapil J. 2009. The integrative potential of language management theory. In: Nekvapil J, Sherman T (eds), *Language management in contact situations: Perspectives from the continents*. Frankfurt am Main: Peter Lang. pp. 1–11.
- Nekvapil J, Sherman T. 2015. An introduction: Language management theory in language policy and planning. *International Journal of the Sociology of Language* 232: 1–12. <https://doi.org/10.1515/ijsl-2014-0039>.
- Neustupny J. 2003. Japanese students in Prague: Problems of communication and interaction. *International Journal of Sociolinguistics and Language* 162: 125–143.
- Ngcobo M. 2007. Language planning, policy and implementation in South Africa. *Gloss: An Ambilingual Interdisciplinary Journal* 2(1&2): 156–169.
- Ngcobo MN. 2009. The politics of compromise and language planning: The case of South Africa. *Studies in the Languages of Africa* 40(2): 205–214. <https://doi.org/10.1080/10228190903188575>.
- North-West University. 2014. *Centre of Text Technology*. Available at: <http://www.nwu.ac.za/> [Accessed 14 February 2014].
- Olibie EI. 2010. Using computer-assisted learning to improve students' English language achievement in universal basic education. *International Journal of Educational Research and Technology* 1(1): 66–71.
- Omojola O. 2009. English-oriented ICTs and ethnic language survival strategies in Africa. *Global Media Journal, African Edition* 3(1): 33–45.
- Opuku-Amankwa K. 2009. English-only language-in-education policy in multilingual classrooms in Ghana. *Language, Culture and Curriculum* 22(2): 121–135. <https://doi.org/10.1080/07908310903075159>.
- Organisation of African Unity (OAU). 1986. *Language Plan of Action for Africa. Adopted by the Council of Ministers of the OAU*, 20–25 July. Addis Ababa, Ethiopia.

- Organisation of African Unity (OAU). 1996. *Charter for the promotion and use of African languages in Education*. Adopted at the Pan African Seminar on 'The problems and prospects of the use of African National languages in Education'. Accra-Ghana. Available at: <http://www.bisharat.net/Documents/Accra96Charter.htm> [Accessed 10 May 2013].
- Osborn DZ. 2010. *African languages in a digital age: Challenges and opportunities for indigenous language computing*. Cape Town: HSRC Press.
- Republic of South Africa. 1996. *Constitution of the Republic of South Africa*. Pretoria: Government Printers.
- Republic of South Africa. 1997. *Higher Education Act, 1997 (Act 101 of 1997)*. Pretoria: Government Printers.
- Rhodes University. 2014. *RUconnected*. Available at: <http://www.ru.ac.za/> [Accessed 14 February 2014].
- Sinclair J. 2004. *Trust the text: Language, corpus and discourse*. London: Routledge.
- Skutnabb-Kangas T. 2000. *Linguistic genocide in education*. Mahwah: Lawrence Erlbaum.
- UNESCO, OAU & ACCT (Francophone Agency). 1997. *Harare Declaration*. Intergovernmental conference of ministers on language policy in Africa, 20–21 March 1997. Harare: Zimbabwe. Available at: <https://www0.sun.ac.za/taalsentrum/assets/files/Harare%20Declaration.pdf>. [Accessed 11 November 2013].
- United Nations (UN). 2007. *United Nations Declaration on the rights of indigenous peoples*. Resolution adopted by the General Assembly 61/295 on 13 September 2007. [Online]. Available at: [http://www.indigenousbar.ca/pdf/undrip\\_handbook.pdf](http://www.indigenousbar.ca/pdf/undrip_handbook.pdf) [Accessed 11 November 2013].
- United Nations. 2008. *The Millennium Development Goals Report*. New York: United Nations. Available at: [http://www.un.org/millenniumgoals/2008highlevel/pdf/newsroom/mdg%20reports/MDG\\_Report\\_2008\\_ENGLISH.pdf](http://www.un.org/millenniumgoals/2008highlevel/pdf/newsroom/mdg%20reports/MDG_Report_2008_ENGLISH.pdf) [Accessed 10 February 2013].
- University of Cape Town. 2014a. *Vula*. Available at: <http://www.uct.ac.za/> [Accessed 14 February 2014].
- University of Cape Town. 2014b. *Mobile Xhosa*. Available at: <https://vula.uct.ac.za/access/content/group/9c29ba04-b1ee-49b9-8c85-9a468b556ce2/Mobile%20Xhosa/index.html> [Accessed 14 February 2014].
- University of KwaZulu-Natal. 2014. *learn@ukzn*. Available at: <http://www.ukzn.ac.za/> [Accessed 14 February 2014].
- University of South Africa (UNISA). 2014. Free online course: Learn to speak an African language. Available at: [http://www.unisa.ac.za/Free\\_online\\_course/](http://www.unisa.ac.za/Free_online_course/) [Accessed 14 February 2014].
- University of Stellenbosch. 2014. *Masincokole ngempilo*. Available at: <http://www.sun.ac.za/languagecentre> [Accessed 14 February 2014].