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The Linguistic-Cultural Impact of the Institutional Repository of North-West University, South Africa

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Abstract

This paper analyses the content of the North West University Institutional Repository (NWU-IR), also known as Boloka - a term that means "to save" in the Setswana language. The paper uses the documents hosted by Boloka to determine her representation of languages and culture. The research methods employed are informetrics and content analysis. It was found that Boloka has scant Setswana language and cultural representation as only 7 out of 21389 (0.033%) documents digitised are in this marginalised language. Its Afrikaans representation was found to be commendable as 4705 out of 21389 (22%) documents are in Afrikaans. The repository has excellent English language representation as more than 77% (16521 out of 21389) of documents digitized are in English. Three non-official languages in South Africa, Dutch (with 91 or 0.43% documents), German (with 14 or 0.07% documents), and French (with 10 or 0.047% documents) have more influence on Boloka than Setswana. Based on the scant Setswana representation, the paper argues that Boloka has minimal impact on this language and culture.

Keywords: *Institutional Repositories, Universities, Content, Language, Culture, Impact*

Introduction

Among the biggest challenges that confronted academic libraries at the beginning of the 21st century were the rising costs of journals, and the decreasing budgets. Running parallel to those challenges were unlimited opportunities associated with the introduction of new technologies. One way in which academic libraries responded to the challenges was through the establishment of institutional repositories (IRs). Initially, these digital collections of intellectual outputs and cultural heritage were used to digitise unpublished educational content in the form of theses and dissertations, but they later expanded to include other published and unpublished content such as journals, conference papers, magazines, artifacts, videos, and other university publications, some of which are written in indigenous languages. IRs trace their origins from William Gardner's 1990 article when the first proposal was made for the use of the World Wide Web and the Internet to publish academic research. In response to this proposal, arXiv.org was started at the Cornell University in 1991 (Jones, 2006). It was not until 2000 that the first university repository would be established in South Africa with the establishment of the University of Pretoria's repository (Van Wyk and Mostert, 2014).). Since then, the academic library landscape in South Africa saw a seismic shift, as almost all public universities in the country now host an IR (Bangani, 2018). Although Fredericks and Mvunelo (2002) and Ngulube (2012) decried the lack of interest to publish in languages and culture other than English and Afrikaans in South Africa by the traditional publishers,

with the introduction of IRs, libraries are now able to publish content in the language and culture of their choice free of any interference from the traditional publishers (Raju et al 2015). Language and culture were at the centre of several major events that shaped the future of South Africa, including the South African War (Anglo-Boer War) and the 1976 Soweto Uprisings. It also featured in two major negotiations that determined the future of the country: the negotiations for the Union of South Africa in 1908 and the Convention for a Democratic South Africa in 1991. In order to minimise conflicts that come as a result of the marginalisation of certain languages, the Constitution of the Republic of South Africa recognises eleven official languages. As a result, the development of African languages and culture is a constitutional obligation in the country (South Africa, 1996; Constitutional Court of South Africa, 2017). It is further encouraged by the National Development Plan of South Africa which calls for all citizens to learn an indigenous language (South Africa, 2012). Alexander (2011), Olaifa (2014), and Benson *et al* (2017) point out that African nations need to link their development agenda to the promotion of indigenous African languages. IRs have redefined the role of academic libraries from just collecting, preserving, and disseminating intellectual outputs and cultural heritage of universities to also publishing original content on the Internet, free of any access restrictions. In the African context, they provide libraries an opportunity to showcase the seriousness with which they treat the obligation to provide information for all in the language of their choice (South Africa, 1996). IRs further provide academic libraries an opportunity to take practical steps to promote African languages and cultural rights.

The aim of this paper, therefore, is to analyse the content and determine the linguistic-cultural impacts of public university IRs in South Africa, with the North-West University Institutional Repository (NWU-IR) used as a case study. In other words, this paper seeks to determine whether and to what extent do universities represent the languages and culture of the communities within which they operate. Specifically, this study has four objectives which are to:

- Analyse content held by the NWU institutional repository
- Determine age of documents on *Boloka*
- Establish the meaning of the oldest documents on *Boloka*
- Determine linguistic-cultural impact of the NWU-IR by identifying the languages it represents.

The concept linguistic-culture which depicts a symbiotic relationship between culture and language is often credited to Schiffman in literature. Schiffman (1996) defines linguistic-culture as "*a set of behaviours, assumptions, cultural forms, prejudices, folk belief systems, attitudes, stereotypes, ways of thinking about language, and religio-historical circumstances associated with a particular language.*" The subsection on the link between language and culture provides more in-depth explanation of this relationship. In the context of research, impact is often defined as the effect of research to any of the following aspects: culture, the society at large, academy, education, health, environment, public policy, professional services, and the economy (Jones and Liam, 2014).

Context of the Study

It is important that the context within which this study is conducted is fully expedited.

Universities and Libraries in South Africa

Before 1994, South African public universities were broadly reserved for certain groups along racial lines with separate universities for Blacks, Whites, Coloureds, and Indians (The New Encyclopaedia Britannica, 2003). Among the white universities were universities meant to promote the English language and culture, and those meant for the Afrikaans language and culture, while Black universities could also be divided along ethno-linguistic and cultural lines (Bunting, 2006). The biggest structural changes in universities did not come until 2002. In 2002, an attempt was made by the government to dismantle the racial and ethno-linguistic foundations of universities by merging several universities most of which came from different backgrounds (Bunting, 2006). This resulted to the reduction of the number of universities from 36 to 23 (Bunting, 2006). The then Potchefstroom University for Christian Higher Education (CHE) which historically catered for white

Afrikaans speakers and culture was merged with the Batswana dominated University of the North-West, with students and staff (not facilities) of the Sebokeng Campus of the then Vista University incorporated into the new institution to form the North-West University (South Africa, 2002a). Due to disparities in language, culture and missions, the university opted for a federalist system with the three campuses of Vaal, Potchefstroom and Mafikeng having parallel management structures. In the case of libraries, the Mafikeng and Potchefstroom Campus libraries had separate directors who reported to their respective vice-rectors while the Vaal Campus had a senior manager who reported to the Vaal Campus rector. The university moved towards a unified structure in 2017 with the library having a senior director to oversee all campuses (Bangani *et al* 2018).

Language in Higher Education in South Africa

African languages never achieved the status of mediums of instruction in higher education in South Africa. The New Encyclopaedia Britannica (2003) and Giliomee (2004) point out that when Transkei, Bophuthatswana, Venda and Ciskei, and other "homelands" acquired the status of independence they soon removed Afrikaans as a second language in the school curriculum and introduced an African language instead. When universities were established in these homelands, they then introduced departments of African languages where the local dominant African language was also taught but mainly as part of the education or arts faculty (The New Encyclopaedia Britannica, 2003). It was not until 1993, that nine indigenous African languages were recognised as official languages of the country, together with English and Afrikaans (South Africa, 1996). Those are: Sepedi, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga, isiNdebele, isiXhosa, and isiZulu. Ngulube (2012), however, asserts that the new found official status of these indigenous African languages did not lead to their recognition as mediums of instruction in higher education. At a policy level, attempts were made to promote the indigenous African languages. In the case of universities, the Gerwel Report (South Africa, 2002c) recommended that the then Potchefstroom University for Christian Higher Education and Stellenbosch be retained as Afrikaans universities. This recommendation was partially rejected as this would have resulted to perception of these universities being the exclusive reserves of Afrikaans speaking students and academics. In rejecting this recommendation, however, the government left room for Afrikaans to be developed in those universities and others in the context of multilingualism. In the case of indigenous African languages, a committee that was formed to investigate their usage as mediums of instruction in higher education recommended that certain universities should be tasked with the development of certain indigenous African languages.

According to the recommendations of the committee on use of indigenous languages in higher education, the present-day Mafikeng Campus of the NWU was tasked with the development of Setswana while the recommendations of the Gerwel Report suggested that the Potchefstroom Campus should be tasked with the development of Afrikaans in the context of multilingualism. The position of Setswana and Afrikaans at the NWU was affirmed by their recognition as official languages of the university with the third language, SeSotho, recognised as a working language (North-West University, 2012). Ngulube (2012), Lor (2012), and Thorpe and Galassi (2014) concur that as custodians of the nation's cultural heritage, libraries have some responsibility to develop the marginalised indigenous languages. The IRs, therefore, are best placed platforms to develop African languages from the librarian's perspective, as they do not always require the interference of publishers (Raju *et al* 2015).

Language Policy of NWU

The majority of South Africa's universities profess multilingualism and multiculturalism in their language policies (South Africa, 2015). Thirteen of the 23 public universities (excluding the three newly established universities) recognise at least three official languages in their policies (South Africa, 2015). English is an official language of all 23 universities, while Afrikaans is part of official languages of fourteen public universities, followed by IsiXhosa in nine universities, IsiZulu in six, Sesotho in four, Sepedi in four, Setswana in three, Xitsonga in two, Tshivenda in two, IsiNdebele in two, and SiSwati in one (South Africa, 2015). North-West University is one of the

multilingual/multicultural universities, meaning that it recognises more than two languages as its official languages (North-West University, 2012).

The language policy of NWU took into account the provincial language dynamics of the North West Province where the two biggest campuses of NWU are situated, and the languages represented by the student population of the NWU. Figure 1 depicts the languages represented in the North-West province.

More than 63% of people in the North West Province speak Setswana, followed by Afrikaans at 8.96% (Statistics South Africa, 2011), hence the recognition of Setswana, English and Afrikaans as official languages. Sesotho is also given a prominent role as a working language in the Vaal Triangle Campus based in Sebokeng, a Sesotho dominated area of the Gauteng Province. According to Mwaniki (2014) and South Africa (2015), however, there is a disconnect between the overt language policy of public universities and what transpires on the ground.

Literature Review

The literature review is divided into five themes in order to better align it with the objectives of the research. The sections are:

- The link between language and culture
- Role of libraries in the promotion of language and culture
- Content analysis in institutional repositories
- Impacts of institutional repositories
- Language representation on institutional repositories.

The Link between Language and Culture

According to Ferraro (2004), culture can be defined as symbols (e.g. language), things (artifacts), ideas and knowledge, and patterns of behaviour in a community, hence the use of the concept Linguistic-culture, by Schiffman (1996). Leveridge (2008) argues that language and culture are intertwined, as language is used "to maintain and convey culture and cultural ties". Leveridge (2008) cites Emmitt and Pollock (1997) as indicating that language determines one's worldview. People from similar backgrounds who speak different languages have different worldview due to the differences in language and culture. Prodromou (1988) points out that teaching or learning a language is on its own a cultural action. This places a responsibility to those who teach a new language to understand the culture within which the language functions. Ferraro (2004) goes on to point out that the most important aspect of culture is language which allows a sense of identity within a cultural group. Cultures of people are classified as Setswana culture, isiXhosa culture, isiZulu culture, Sepedi culture, Afrikaaner culture, and other groups based on their language. African intellectuals, Ngugi Wa Thiong'o (1986; 2003) and Thorpe and Galassi (2014), point out that language is an expression of who we are as a group or community. Wa Thiong'o (1986) with support from Rajaram (2015) adds that written language is not only a means of communicating a culture but it is also a carrier of it. A document written in Setswana, for example, carries in itself a Setswana cultural expression and symbol even though the writing may have nothing to do with the Setswana language. In fact, Wa Thiong'o (1986) adds that language is part of one's identity. This prompted Rajaram (2015) to observe that "language without culture is unthinkable, but so is human culture without language." Just by dominance of a language in a university, that university can be described in terms of that language culture, meaning that the former Afrikaans universities in South Africa could be referred to as having had an Afrikaans culture. Kidd (2002) and Wa Thiong'o (1986; 2003) concurs that language and culture are interlinked as culture is a "way of life of people". Linguistic symbols (language), therefore, form a key ingredient within which a culture functions.

In agreement with other researchers, Moseley (2010) argues that "languages are vehicles of value systems and cultural expressions and are an essential component of the living heritage of humanity." Moseley adds that out of the +-6000 in the world, 43% are endangered. Though no official language in South Africa is part of the endangered list, Lor (2012) points out that 10 of the endangered and extinct languages are spoken or were spoken in South Africa, which raises the stakes even higher for the indigenous languages of the country as they may find themselves in a similar situation in future. Another prominent South African scholar, Ngulube (2012), links culture and language by arguing that publishers

who do not publish in indigenous languages are discriminating against both the culture and language of the people concerned. This study is not the first study in Africa to use the language on IRs to determine cultural impacts. Marungudzi and others' (2014) and Hikwa and Maisiri (2017) pointed a link between language and culture in their studies of IRs. Marungudzi and others (2014) take their contribution further by pointing out that not only there is a link between culture and language, but also language itself is culture. Olaifa (2014) and Hikwa and Maisiri (2016) argue that without language, culture is dead, as cultures are expressed through language- meaning that when a language becomes extinct but so is the culture within which that language operates. Thus by speaking a language, one is not merely speaking the language, but is also expressing the culture of a people. This is similar to the act of digitising a document; it leads to the preservation of the cultural heritage of people concerned (Ngulube, 2012; Marungudzi *et al* 2014; Hikwa and Maisiri, 2017).

Role of Libraries in the Development and Promotion of Language and Culture

Libraries cannot be spectators in the development and promotion of language and culture (International Federation of Library Associations and Institutions (IFLA) and United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2012). They play a critical role in developing and promoting the culture and language of the communities within which they operate (Feather and Sturges, 1997:255; Lor, 2012; Ngulube, 2012; IFLA and UNESCO; 2012; Marungudzi *et al.*, 2014; Nkondo *et al* 2014; Olaifa, 2014; Fauchelle, 2017; Hikwa and Maisiri, 2017). Olaifa (2014) points out that libraries are language banks through which written documents are kept. According to Feather and Sturges (1997), IFLA and UNESCO (2012), and Fauchelle (2017), libraries in a globalised world play a role to ensure the continuation of local identities and cultures by preserving material of concern to the local communities. Fauchelle (2017) argues that libraries should strive to reflect the demographics of their users (both in their physical and virtual environments) in order to ensure that they feel a sense of welcome, inclusion, acceptance, and belonging in the library. Users may feel alienated when their local libraries do not reflect their language/s and culture. Though the authors locate this role within the public library context, Lor (2012), Ngulube (2012), Marungudzi and others (2014) would later argue that it is not only public libraries that should play a role in preserving local culture, languages, and knowledge but academic libraries should also play their part. IFLA and UNESCO (2012) concurs that all types of libraries should play an active role in promoting and preserving marginalized indigenous languages and culture by "reflecting, supporting, and promoting cultural and linguistic diversity at international, national, and local levels…". This will result to multicultural and multilingual libraries that promote dialogue and active citizenship. While Hikwa and Maisiri (2017) advises libraries to collect, preserve and disseminate content in indigenous languages, Ngulube (2012), and Marungudzi (2014) and others see an expansive role for libraries as publishers of content in indigenous African languages. This will ensure that they bypass the normal traditional publishing obstacles placed by commercial publishers.

Fredericks and Mvunelo (2002) point out that library collections in South Africa are dominated by Afrikaans and English language books, with indigenous languages making less than one percent of most public libraries. Benson *et al.* (2017) also observed a similar phenomenon in the context of Nigeria where fewer documents are published in indigenous languages, and there is a strong preference for English language. It is clear that librarians have as much of a role to play to promote African indigenous languages as publishers and government. IRs have given librarians the best solution to the problem of lack of content on African languages.

Content Analysis of Institutional Repositories

Content analysis of IRs has been conducted in several countries (Abrizah *et al* 2010; Nyambi and Maynard, 2012; Namaganda, 2012; Chilimo, 2015; Raju *et al.,* 2015; Tsunoda *et al* 2016; Kakole, 2016). Abrizah and others (2010) studied content in Asian IRs and found that the dominant contents were journal articles, followed by ETDs, unpublished reports, conference papers, and book chapters. These findings were at odds with the findings of Namaganda (2012) who found that in the case of Uganda, ETDs were the most prevalent content, followed by journal

articles, conference papers, workshop reports, technical reports, working papers, braille, sound, and other documents. Another study by Nyambi and Maynard (2012) determined that in Zimbabwe the following materials are represented in IRs: ETDs, examination papers, journal articles, ebooks, book chapters, working papers, research reports, and seminar papers. Chilimo (2015) studied content in IRs in Kenya and determined that ETDs, journal articles, past exam papers, conference papers, archives, research papers or reports, books and book chapters, learning objects, and lectures and speeches were deposited. In the case of South Africa, Raju *et al.* (2015) determined that the most prevalent content in IRs was both ETDs and journal articles, followed by book chapters and conference papers, inaugural addresses, working papers, and data sets.

Tsunoda and others (2016) sought to determine the quantity and the type of contents on IRs of the top 100 universities in the world. The researchers found that in terms of quantity, Harvard University was ranked first, followed by Peking University, Monash University, Uppsala Universitet, University College London, University of Queensland, Wageningen UR Corporate headquarters, Rijksuniversiteit Groningen, University of Cambridge, and University of Oxford. In terms of content types, journal articles formed the overwhelming majority of content at 43%, followed by electronic theses and dissertations (ETDs), conference proceedings, book chapters, datasets, multimedia and audio-visual materials, unpublished reports and working papers, learning objects, patents, software, and bibliographic references. Kakole (2016) studied the type of content held by *Boloka* and found that ETDs were the most prevalent content, followed by journal articles and journal volumes or issues, special collections, inaugural lectures, and other publications.

Linguistic-Cultural Impacts of Institutional Repositories

Abrizah *et al* (2010), Budzise-Weaver *et al* (2012), Wasa and Chakravarty (2013), Diekema (2013); Chilimo (2015), Dhanavandan and Mary (2015), Key and Tseng (2016), Das and Singh (2017), Ezema and Onyancha (2017), and Bangani (2018) studied the representation and usage of languages in institutional repositories in Asia, Kenya, Brazil, China, and Africa respectively.

Research conducted by Abrizah *et al.* (2010) determined that the majority of Asian languages and cultures are marginalised in IRs in Asia, with 84% of them dominated by English, followed by Japanese (37.7%), and Chinese (14%). Budzise-Weaver *et al.* (2012) made somewhat similar findings while studying key features of four multilingual digital libraries in the United States. Budzise-Weaver *et al.* (2012) found that the digital libraries contained 28,791 ebooks in English, 1685 in French, 718 in German, 544 in Finnish, and 501 in Dutch. This means that more than 89.3% (28, 791 out of 32, 239) of ebooks in these digital libraries are in English. Wasa and Chakravarty (2013) studied the representation of languages in IRs in India and found that all 25 IRs had content in English; of the 25 IRs, 4 also covered Hindi, Malayalam and Kannada were covered on two, while Sanskrit and Arabic were covered on one each. Dhanavandan and Mary (2015) determined that 74% of IRs in Brazil are monolingual. Spanish language and culture is marginalised, as only one IR uses the language with the majority opting for Portuguese. 15.48% of IRs in Brazil were bilingual, and 10.71% were trilingual. Diekema (2013) researched the advantages of multilingual and multicultural IRs, and determined that these IRs enhance the language and cultural impact of an IR, as they have a potential to reach wider audiences. Chilimo's 2015 study on content in IRs in Kenya found that the few Swahili documents on Kenyan IRs attract considerable attention. Key and Tseng (2016) report a project where the Taiwan National Central Library collaborated with international partners to digitise Chinese books and other books of cultural value in order to enhance their visibility. As a result of the project, 8, 988 titles and 2, 097, 163 images had been digitised by 2016. The authors point out that the digitisation of these books enhanced their cultural value. In the case of China, Das and Singh (2017) determined that the majority of IRs are in Chinese (9), followed by English (3). The rest were bilingual , either with Chinese dominating English (24) or English dominating Chinese (3). Ezema and Onyancha (2017) studied the most frequently used languages on open access publishing in Africa and found that 89.9% of open access resources in Africa were in English, followed by German, French, Dutch, Afrikaans, and Sepedi, with IsiXhosa appearing as number 15 on the languages represented, followed by Dutch Flemish. This means that only two African

languages are represented, which are Sepedi and IsiXhosa. These are both official languages in South Africa. Likewise, Bangani (2018) determined that English is represented in all 22 university IR's in South Africa, followed by Afrikaans (15), IsiZulu (7), IsiXhosa (5), Tshivenda (5), Xitsonga (3), Setswana (3), SiSwati (3), Sepedi (2), Sesotho (2), and IsiNdebele (1). Bangani predicted that English and Afrikaans are likely to also dominate on the number of documents on IR's in public universities in South Africa.

Methodology

This is a quantitative study that uses informetrics research methods to determine the content and linguistic-cultural impact of *Boloka*.. The content on *Boloka* as indicated under the "communities" section was used to determine the content covered on this IR. The age of documents was determined by creating an Excel spreadsheet divided into periods: 1844 to 1910, 1911 to 1950, 1951 to 1993, 1994 to 2002, and 2003 to 2017. The counting of the documents was done with the assistance of *Boloka* which provides an option to browse the documents by year of publication. Documents published from 1844 to 1899 were then downloaded and, for non-English language documents, searches were done on Google Translate to determine their language and meaning.

To further determine the representation of languages and culture on *Boloka*, five Excel spreadsheets were created each divided into the five periods covered by the study. Four columns were initially added for each spreadsheet covering the year, English language, Afrikaans, and Setswana language documents. These languages are the official languages of NWU (North-West University, 2012). The expectation was that all official languages of NWU will show significant representation on *Boloka*. Columns depicting other languages were added as documents in those languages were discovered. All four-thousand-eight-hundred and sixty-one documents written in languages either than English and Setswana were downloaded and their languages determined using Google Translate. This is because it proved a challenge for the researcher to confidently differentiate between Afrikaans and Dutch, and to a certain extent Frisian documents given the proximity of these languages. A statistical analysis of the data was thereafter carried out and the results are presented in the form of tables and pie chart.

Findings and Discussions

According to Table 1, journals dominate content on *Boloka,* followed by ETDs, conference papers, special collections, and inaugural lectures. This is somewhat at variance with the findings of Abrizah and others (2010) and Tsunoda and others (2016), but somewhat at odds with Namaganda (2012), Nyambi and Maynard (2012), and Kakole (2016). The dominance of journals could be a sign of the level of maturity of the NWU-IR, as most IRs start with ETDs during their infancy with other content types following at later stages. This is a reflection of the growth of the journals content since Kakole presented a paper at NWU during the Open Access Week in 2016. It is the view of the author that the dominance of journals is also a reflection of the impact of the National Research Foundation's Open Access Statement that calls for all research outputs published in universities using public funds to be deposited on IRs of universities (National Research Foundation, 2014).

Table1: Distribution of Type of Collection

Type of collection	Number of items
Journal articles	11703
ETDs	8661
Conference papers	359
Special collections	351
Inaugural lectures	292
Other publications	23

For purposes of determining the age of documents, the periods were divided into: the imperial era from 1844 to 1910, the Union of South Africa era from 1911 to 1950, the Apartheid era from 1951 to 1993, the democratic era from 1994 to 2002, and the period of change and institutional repositories from 2003 to 2017. This division is entirely the authors' creation for analysis purposes. This is not to suggest that the documents deposited on the NWU-IR represents the periods as indicated. Table 2 shows the age of documents on *Boloka*.

Table 2: Age of documents on *Boloka*

Period	Number of Items
1844-1910	80
1911-1950	777
1951-1993	1792
1994-2002	817
2003-2017	17923

Close to 83.8% (17923 of 21389) of documents were created between 2003 and 2017, with 13089 (61.2%) of those documents created between 2010 and 2017. The period before the Union of South Africa (1910) is represented by only 80 documents. Possible reasons for this include the fact that there was little research done at that time, or some relevant documents may have been lost along the way due to the long period of time, or the fact that South Africa was not a unified state at that time. It is the view of the current researcher that the late surge of documents from 2010 to 2017 can be attributed to the 2014 National Research Foundation Open Access Statement as the library started to add documents retrospectively after the NRF instruction.

Fifteen of 27 of documents on *Boloka* during this period are Afrikaans (55.56%), followed by its Dutch cousin language at 25.93% (7 out of 27). The rest are documents in Afrikaans and English at 7.4% (2 out of 27), English, German, and Dutch and English all at 3.7% (1 out of 27 each). Looking at the titles of the documents, this was the period of the build up to the Anglo-Boer War (Shillington, 1987) and the Afrikaans culture was perceived to be under threat, hence the expressions of pride, frustration and defiance through titles of documents, for example, "the history of our country in that language of our people", "Afrikaans our language: 71 theses, or statements, set and explained", and "History of the Afrikaans Language Movement for friend and enemy". Looking at documents during this period only would give a view of excellent linguistic-cultural impacts of *Boloka* on Afrikaans. However, Afrikaans was on the retreat after the Anglo-Boer War. Dutch has more representation on *Boloka* than Afrikaans during this period. Possible reason for this could be the results of the traumatic events of the Anglo-Boer War and the defeat suffered by the Afrikaners during the war. It is possible that Afrikaans and Afrikaner pride were on the retreat during the period immediately after the war.

To further determine the linguistic-cultural impacts, a representation of languages on *Boloka* was established.

There are 9 languages represented in the North-West University institutional repository. Looking at the representation of languages, *Boloka* appears to be a multilingual and multicultural IR. It is also satisfying that all three official languages that are expected to be represented at NWU (North-West University, 2012) are represented on *Boloka*. The marginalisation of African languages (Ngulube, 2012) and the decreasing influence of Afrikaans (Giliomee, 2004) are not apparent at this stage.

Further analysis was done by counting the actual number of documents representing the languages. Table 3 shows the marginalisation of the Setswana language and culture on *Boloka*.

Table 3: The Marginalisation of Setswana Language and Culture on *Boloka*

Language	1844-1910	1911-1950	1951-1993	1994-2002	2003-2017	Total
English	2	16	366	478	15659	16521
Afrikaans	21	692	1420	337	2235	4705
Dutch	36	48	1	1	5	91
Afrikaans +English	4	12	1	0	4	21
German	3	3	1	0	7	14
French	0	0	0	0	10	10
Setswana	0	1	3	1	2	7
Frisian	3	2	0	0	0	5
Dutch + English	4	1	0	0	0	5
Portugese	2	1	0	0	1	4
Afrikaans+Dutch +English	3	0	0	0	0	3
Afrikaans+Dutch	2	0	0	0	0	2
Polish	0	1	0	0	0	1
Total	**80**	**777**	**1792**	**817**	**17923**	**21389**

In terms of Setswana culture and language, *Boloka*'s impact is almost non-existent. Three non-official languages in South Africa- Dutch, German, and French, have more representation on *Boloka* than Setswana. These results are somewhat similar to Ezema and Onyancha (2017) who determined that European languages were well represented on IR's in Africa. The 7 Setswana items digitised are nowhere near the 8, 988 Chinese language titles digitized at Taiwan National Central Library (Key and Tseng, 2016), probably because the later took a deliberate decision to collect and digitise items in the Chinese Language. More than 77.2% (16521 out of 21389) of documents on *Boloka* are in English.

With regards to the extent of English dominance, these results are better than those of Budzise-Weaver *et al* (2012) and Ezema and Onyancha (2017) who determined that more than 89% of items in the United States and Africa were in English. However, these results confirm Beukes (2008) and Ngulube (2012) who argue that African culture and languages are marginalised at universities in South Africa. Bangani's (2018) prediction that English and Afrikaans are likely to be dominant in terms of number of documents on IRs in South Africa is confirmed. Giliomee's 2004 prediction of a possible demise of Afrikaans is not immediately noticed in this study unless one compares Afrikaans and English. At face value, it can be argued that Afrikaans is over-represented on *Boloka,* given that only 9% of the population in North-West speak the language (Statistics South Africa, 2011). However, the position of Afrikaans looks precarious when considering that Potchefstroom, the dominant campus at NWU, is a former Afrikaans university.

Afrikaans' position on *Boloka* was not under threat until 1977, when English started to have documents in the double figures at 11, for the first time to Afrikaans' 15. Before then, from 1844 to 1976, English does not have more than 2 documents a year on *Boloka*. In fact, English has 26 documents on *Boloka* during that period to Afrikaans' 1348. *Boloka* at that stage looked like a monolingual and monocultural IR in favour of Afrikaans. The battle between these two languages would be neck and neck in favour of Afrikaans from 1987 to 1994. English took over the lead from Afrikaans each year from 1995 onwards. Giliomee's, and Mwaniki's 2004 and 2014 observations that 1976 and 1994 may have had a negative impact on Afrikaans is thus confirmed. However, due to the huge prior gap between the two languages, Afrikaans only ceded the lead to English

in 2008. This means that *Boloka* was an Afrikaans-English bilingual IR until that time. From 2008 onwards, the gap between Afrikaans and English widened, such that *Boloka* is currently an English-Afrikaans bilingual IR with some documents in seven other languages. If Giliomee's 2004 argument that Afrikaans was facing a possible demise in terms of academic influence was meant to compare English and Afrikaans then the observation is confirmed. Clearly, Afrikaans has lost its place as the leading language of science and scholarship at North-West University (Mandela, 1996), particularly its Potchefstroom Campus, to English. Afrikaans, however, shows improvement in the number of documents produced from 2003 to 2017.

Conclusion and Recommendations

The results show that despite the flattering Setswana pet name, *Boloka* has almost no Setswana linguistic-cultural impact, as only 7 (or 0.033%) out of 21389 documents are in this language while the impact on the Afrikaans culture and language are commendable. Afrikaans may be losing ground to English (Mwaniki, 2014) but, it still remains a formidable language and culture in terms of documents on *Boloka* sitting comfortable as the second biggest language.

These results also show that unlike Afrikaans in the mid-1920's, indigenous languages have not benefitted from their status as official languages. Instead they have reverted, as some African language departments in the former homelands closed due to loss of subsidy from the homeland governments and the internationalisation of universities (Mwaniki, 2014). English has been a major beneficiary of these events. Given the link between language and culture (Feather and Sturges; 1997:255; Lor, 2012; Ngulube, 2012; Marungudzi *etal,* 2014; Nkondo *et al* 2014; Fauchelle, 2017; Hikwa and Maisiri, 2017), *Boloka*'s impact on Batswana culture is almost non-existent. What this means is that the university is making virtually no impact on the language and culture of 63% of the citizens of North-West Province (Statistics South Africa, 2011) where the university is mainly based. Though English is the dominant language (Mwaniki, 2014) on *Boloka*, Afrikaans culture and language is well-represented on this IR compared to Setswana. Fredericks and Mvunelo (2002) also found that English and Afrikaans are well represented in public libraries in South Africa with indigenous languages represented by less than 1% of collections.

In terms of content, *Boloka* show signs of maturity as journal publications have recently overtaken ETDs by the number of items. The majority of documents in this IR were born in the past five years. It is also interesting that the documents on *Boloka* show some relations with historical events such as Anglo-Boer War, Soweto Uprisings, and the 1994 democratic breakthrough. There are signs that the Soweto Uprisings slowed down the upward trend of Afrikaans as the dominant language in higher education in South Africa. However, these events did not prove a fatal blow to the language (Mwaniki, 2014), as the Afrikaans language remains the second largest language in higher education in South Africa. It is also the second most represented language on university IRs in the whole country (Bangani, 2018).

The findings of this study have implications for universities and the country at large. They point to the possible failure of the South African National Development Plan to "*foster common values across language, culture, religion, race, class and space", and to* ensure that every South African has some knowledge of at least one African language by 2030 (South Africa, 2012). These findings may also be interpreted as the failure of the Republic of South Africa's Constitution and the various language policy documents (South Africa, 1995; South Africa, 1997; South Africa, 2002c, South Africa, 2002d) to inspire public universities to develop and promote African languages. This shows that merely declaring a language official does not automatically result to more recognition of that language unless practical steps are taken to develop, publish and promote material written in the language. There are no signs that the situation of Setswana and other African languages improved due to their official language status, as *Boloka* only has three documents in this language from 1994 to 2017. Dutch and Afrikaans on the other hand showed tremendous benefit from their status as one of two official languages from 1844 to 1925 and 1925 to 1994 respectively. This point to a need for investment and enforcement of the constitutional obligation to develop African languages, as done by the Afrikaaners to Afrikaans between 1925 and 1994.

The results of this study show clearly that declaring a language an official language does not mean the language automatically becomes the language of publication unless it is accompanied by investment and enforcement of the policy. Further, the findings of this study show that despite the professed multilingual and multicultural policies (North-West University, 2012), South African universities continue to marginalise African languages, meaning that there's a gap between the intentions of the policies and what actually transpires (Beukes, 2008; Mwaniki, 2014). The findings point to a general lack of enforcement of language policies not only in the country but also at the universities. Further, this study shows that the majority of people in the North-West Province may not identify with the university (Fauchelle, 2017), as it does not preserve and promote their most important cultural symbol, the language. Many people at the North-West Province, therefore, may feel justified in considering the university an ivory tower, as many of them neither speak nor understand English and Afrikaans.

It is recommended that librarians at the Mafikeng Campus of NWU, a Batswana dominated and historical campus, should consider visiting the communities to request content written in the Setswana language. The librarians should work closely with the Setswana language department at the campus to publish open access publications in this language on *Boloka*. Raju and others (2015) argue that IRs can be used for redress and social justice. Given that Setswana is a historically marginalised language, the NWU Library has a moral obligation to develop the language in order to address the cultural and language imbalances of the past. Providing a publishing platform for this language, therefore, will go a long way towards redress. At national level, university libraries should work with the South African National Library and start a national repository of African languages content similar to the one reported by Key and Tseng (2016) and Hikwa and Maisiri (2017) in Taiwan and Zimbabwe respectively.

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