<u>**SUBMISSION IDENTIFIERS:**</u>

Title	**UNIVERSITY OF KWAZULU-NATAL LANGUAGE BOARD REPORT FOR 2016/2017**
Author and position	Professor B Pillay (DVC: T&L (Acting); Chair: ULB) Dr Langa Khumalo(Director: ULPDO)

<u>**APPROVAL HISTORY**</u>

Structure consulted	Date	Outcome
University Language Board	28 June 2017	Supported
Senate		

<u>**SUBMISSION CONTENT**</u>

Proposal   To note the sixth annual University Language Board Report (ULB) (2016/2017) as required by policy.
Motivation   The 2016/2017 ULB Report is the sixth such report to Senate in conformity with the University Language Policy and Plan, which specifies that a bilingual annual report must be presented to the University Senate. The first, second, third, fourth and fifth Senate Reports were respectively tabled on 09 May 2012, 21 August 2013, 20 August 2014, 19 August 2015 and 31 August 2016. This current report documents further work and progress that the ULB has made towards the implementation of the University Language Plan.
Financial implications   Indicated in the report.
Attachments   University of KwaZulu-Natal Language Board Report for 2016/2017.

University of KwaZulu-Natal Language Board
Report for 2016/2017

Contents

1. Introduction

The University Language Board (ULB) continues to provide leadership in the implementation of the University Language Policy and Plan. Established by means of a University Charter, the ULB monitors and evaluates progress in the implementation of the University Language Plan. It provides strategic direction to the University Language Planning and Development Office (ULPDO), whose task is to operationalise the University Language Policy and Plan. Since 2014 the ULPDO has been developing isiZulu terminology in various specialized disciplines across the University's nineteen colleges in order to create bilingual English-IsiZulu specialized glossaries. To date ULPDO has developed terminology in the following disciplines: Anatomy; Architecture; Computer Science; Criminology; Environmental Studies; Law; Linguistics; Nursing; Physics; Psychology; and Research. ULPDO developed and launched two open-access technologies for the dissemination of the multidisciplinary bilingual terminology to students, lecturers and other end-users. A free mobile compatible application called the Zulu Lexicon (which is iPhone and Android compatible) and an isiZulu Term Bank https://ukzntermbank.ukzn.ac.za. These two technologies were part of the momentous occasion that saw the launch of an isiZulu National Corpus, an isiZulu short story anthology and the first bilingual (English-IsiZulu) Glossary of Architecture with Illustrations in November 2016. Through these milestones the University won the prestigious PanSALB National Award in Education for its progress in language planning and development.

Membership of the University Language Board 2016:

Professor R Vithal (Chair)	DVC: Teaching and Learning
Dr L Khumalo	Director: Language Planning & Development
Dr R Dhunpath	Director: Teaching & Learning
Mr. L Seshoka	Executive Director: Corporate Relations
Dr S Chalufu (Alternate)	Executive Director: Student Services
Mr. B Poo	Support Services Sector
Professor D North	Agriculture, Engineering and Science
Dr A Bengesai	Law and Management Studies
Mr. K Zondi (Alternate)	Law and Management Studies
Ms S Panday	Health Sciences
Ms C Engelbrecht (Alternate)	Health Sciences
Ms S Mathe	Humanities
Mr. M Mbatha	PanSALB
Dr Z Nkosi	Academic Expert
Dr N Sibiya	Academic Expert
Mr. K Mngadi	Language coordinator
Mr. S Mthethwa	CSRC Representative

The ULB had four meetings in 2016. These meetings were strategic platforms for the Board members to come up with programmes and strategies to steer the implementation of the Language Policy and Plan across all sectors of the University. This report highlights some of the milestones the ULB achieved towards the implementation of the Language Plan.

2. University Language Planning and Development Office (ULPDO)

The University Language Board implements and monitors the provisions of the University Language Policy as set out in the ULB Charter. The program to intellectualize isiZulu so that it (ultimately) functions as both an academic language, and a language of administration across the University alongside English is initiated by the ULPDO, and is reported quarterly at the ULB. The major thrust of the language program (*see* Fig 1.) as approved by the ULB is the creation of discipline specific terminology in isiZulu, the building of an isiZulu National Corpus, and the development of a contemporary body of literature in isiZulu. Other language activities include the provision of training workshops, translation and (simultaneous) interpreting services, Sign Language advocacy, the Sesotho *Bua Le Nna* Program, language research, and the development of computational tools.

Fig. 1. Language program
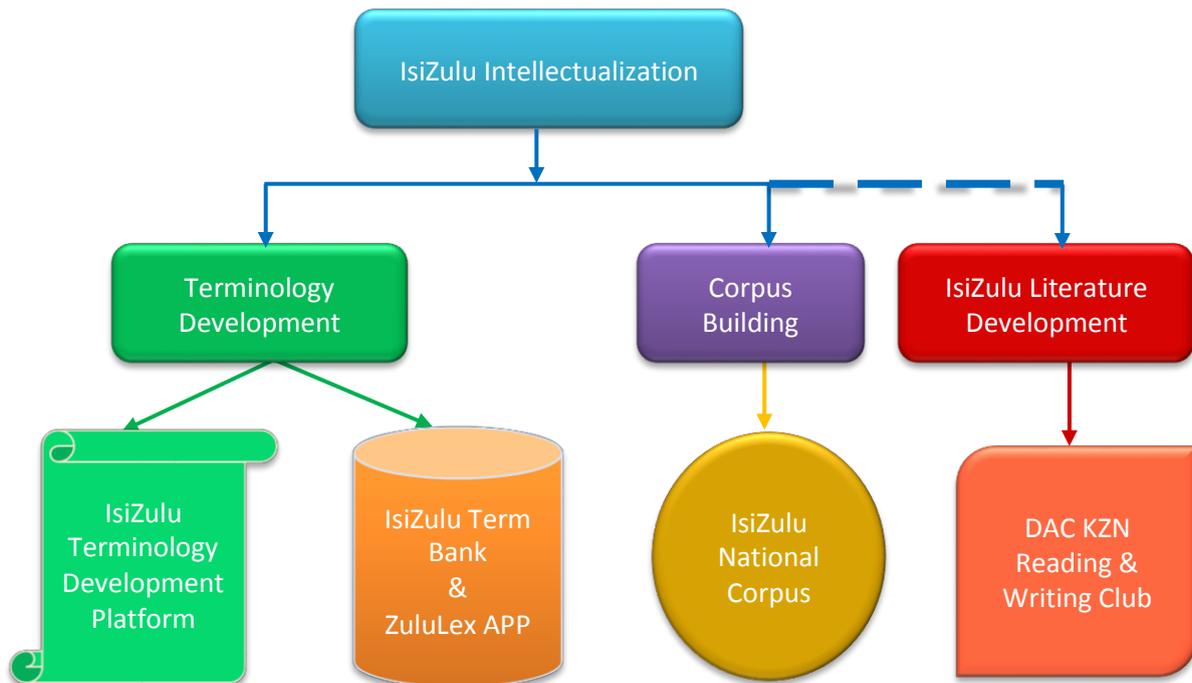
The period under review saw the authentication and standardization of terminology from five disciplines namely Law, Computer Science, Research, Criminology and Psychology. The terminology from each of these disciplines went through mandatory and legislated stages, which include consultation, verification and authentication. A total of 2123 terms were aunthenticated.

The ULPDO held its terminology development workshop on the 1-2 September 2016 at UNITE Building, Howard College Campus. The objective of this workshop was to train linguists, terminologists and language researchers on ISO standards and best practice in terminology development. The workshop was attended by linguists and lexicographers from UKZN and DUT, and language practitioners from Media houses (Newspapers, Ukhozi FM), KZN DAC, PanSALB and eThekwini Municipality. Discipline experts from the College of Health Sciences and Humanities also attended the workshop. The workshop was facilitated and led by Professor Bassey Antia of the University of the Western Cape. Professor Antia is a renowned Applied Linguist and an accomplished researcher in terminology and terminography. The workshop was a success and participants indicated at the end that they benefited a lot from it and they suggested that the office regularly hosts the workshops of this nature.

Consistent with the goal of multilingualism as articulated in the University Language Policy, the ULPDO in collaboration with PanSALB, successfully hosted the sign language training workshop on the 14th of September 2016 at CR Swart Police Station in Durban. The purpose of the workshop was to create awareness on the importance of the Sign Language and how people can interact with the Deaf Community. The event was also a celebration of South African Sign Language as a basic human right for the Deaf Community as articulated in the South African Constitution. The workshop offered training to the officers of the police services department on the basics of the Sign Language so that they can be able to communicate with, and serve the deaf people easily, and to bring to the fore the issues that confront the Deaf Community. The workshop was a huge success and the police officers indicated that they profited a lot and expressed a wish that the workshop becomes an annual training workshop for their department. The KZN Manager of the Pan South African Languages Board officially opened the workshop.

One of the foremost aims of the University Language Policy (2006 revised in 2014) is to "[…] preserve and promote respect for, and proficiency in, the languages referred to in the Constitution, and other languages, including the heritage languages, that facilitate potentially valuable cultural, scientific and economic ties […]". As part of the implementation of multilingualism at the University in order to initiate and foster social cohesion within the University community, ULPDO continued to offer the *Bua le Nna* (Let'sTalk) program as a running project in the student residences. The purpose of the program is to teach conversational Sesotho to non-Sesotho speaking students at UKZN student residences. This project, initiated in 2014, is important in creating both linguistic and cultural awareness and tolerance within the university's diverse (multilingual and multicultural) student body. The project is also supported by the office of the director of student services. It is implemented through language champions and the ULPDO staff. During the period under review 16 *Bua le Nna* sessions were held at Ansell May and John Bews Residences.

3. Implementing the Language Policy and Plan

3.1. Corpus Building and Terminology Development

As stated in the introduction, corpus building is one of the main activities of the ULPDO. The development of the isiZulu National Corpus (INC) is vitally important as a basis for the intellectualization of the language.

Fig. 2. A screen shot of the 22.7 million word INC

Statistics List (unsaved)

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	Overall	0649 is(	0650 is(	0650 is(	0651 i	0652 i	0653 i	0654 i	0655 i	0656 i	0657 i	0658 i	0659 i	0660 i	0661 i	0662 i	06
text file	Overall	0649 is(	0650 is(	0650 is(	0651 i	0652 i	0653 i	0654 i	0655 i	0656 i	0657 i	0658 i	0659 i	0660 i	0661 i	0662 i	06
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tokens (running words) in text	22 734 068	13 109	13 542	8 734	11 355	16 155	22 43(	9 093	4 165	15 391	15 204	11 303	10 395	10 979	23 787	8 404	12
tokens used for word list	21 636 864	12 333	12 748	8 287	10 626	15 507	20 146	8 655	3 999	14 582	14 380	10 707	9 472	10 434	21 174	7 789	11
sum of entries																	
types (distinct words)	2 526 186	7 224	7 471	5 112	6 542	8 923	8 465	5 609	2 584	8 425	7 957	6 511	5 552	6 073	9 122	4 991	7
type/token ratio (TTR)	11,68	58,57	58,61	61,69	61,57	57,54	42,02	64,81	64,62	57,78	55,33	60,81	58,61	58,20	43,08	64,08	6(
standardised TTR	69,79	72,09	73,65	72,88	73,09	75,78	53,70	75,71	73,57	73,49	72,07	73,58	69,35	72,50	55,42	73,30	74
STTR std.dev.	30,73	24,91	24,56	24,27	25,25	22,94	37,90	21,96	20,72	25,29	26,20	23,99	28,63	24,54	38,90	23,76	24
STTR basis	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1
mean word length (in characters)	6,80	6,89	6,87	6,90	6,89	6,82	6,67	7,07	6,56	6,60	6,98	6,93	6,49	7,01	6,66	6,73	(
word length std.dev.	3,23	3,29	3,20	3,17	3,24	3,09	3,28	3,15	3,23	3,16	3,25	3,16	3,34	3,19	3,26	3,34	
sentences	1 786 039	845	840	578	711	1 038	1 489	609	260	890	1 002	743	621	753	1 833	522	
mean (in words)	12,37	14,60	15,18	14,34	14,95	14,94	13,53	14,21	15,38	16,38	14,35	14,41	15,25	13,86	11,55	14,92	1!
std.dev.	232,06	12,24	13,84	12,41	13,36	11,37	10,87	12,72	13,28	13,59	12,13	11,45	16,14	11,63	10,30	12,81	1
paragraphs	98 629	110	82	62	73	71	35	61	19	55	166	43	196	92	31	112	
mean (in words)	219,38	112,12	155,46	133,66	145,56	218,4	575,6(	141,89	210,47	265,1	86,63	249,0(	48,33	113,4	683,03	69,54	59
std.dev.	2 085,13	268,98	293,43	239,75	285,9(	482,6(	1 011,	277,6(	293,3(	665,75	226,4(	546,72	144,8	242,59	1 048,	183,03	83
headings																	
mean (in words)																	
std.dev.																	
sections	2 183	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
mean (in words)	9 911,53	12 333,(	12 748,(	8 287,0(	10 626	15 507	20 146	8 655,	3 999,	14 582	14 380	10 707,	9 472,	10 434	21 174	7 789,	11
std.dev.	16 962 40																

frequency alphabetical statistics filenames notes

77 entries   Row 3   0%   T   S   22 734 068

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The INC has grown tremendously since its inception on the 25th of November 2014. The INC was piloted at the then impressive 1.3 million running words. At the end of 2015 the INC had reached a new milestone of 10 million running words. By the end of 2016 the INC stood at 14.2 million running words. At a momentous occasion to officially launch the INC and other IsiZulu Human Language Technologies, the INC had reached a new milestone of 20 million tokens becoming the largest African language corpus in a relatively short space of time. At a strategic level, ULPDO has created crucial synergies with important stakeholders. These stakeholders include; Ilanga Newspaper, the KZN Legislature, Shutter and Shooter Publishers and the Killie Campbell Library. These institutions have provided electronic materials that have continued to fuel the tremendous growth of the INC. As shown in Figure 2 above, the INC currently stands at an impressive 22.7 million running. Figure 3 below illustrates the pattern of growth since piloting the INC in November 2014 to date.

Fig. 3. The pattern of the INC growth

Corpus Collection from 2014 -2017
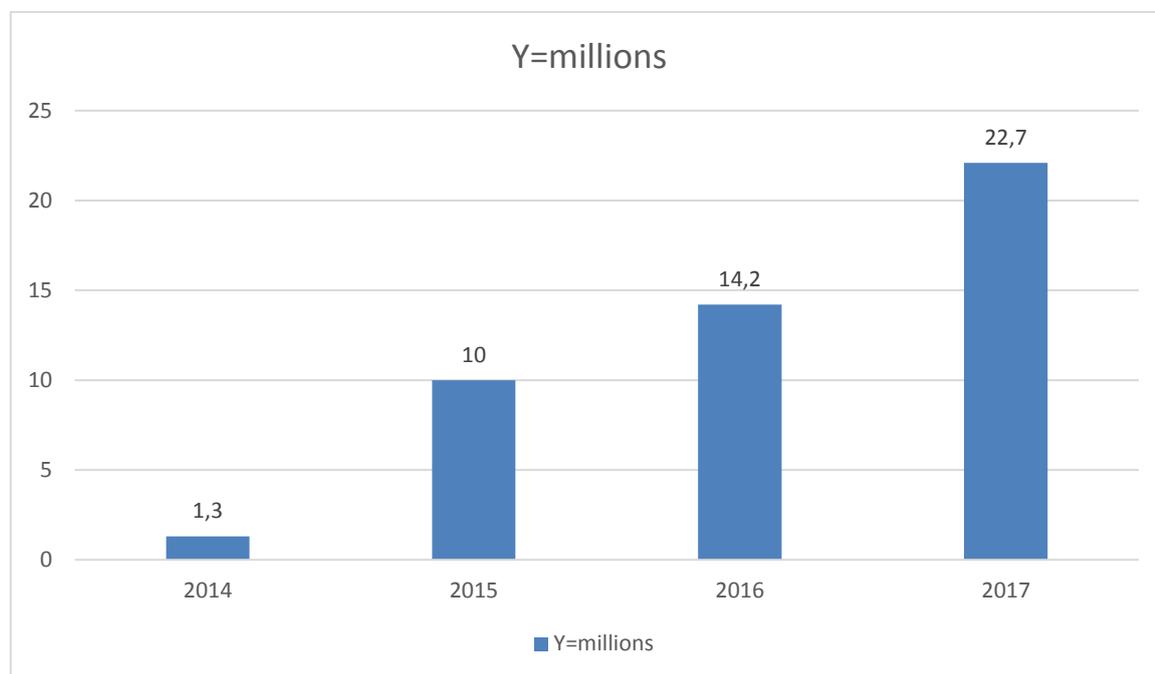
3.2 Terminology Development

As stated above, terminology development is also another major activity of the ULPDO. Figure 4 below shows the entire terminology development process from terminology harvesting through statutory processes, right up to dissemination and end-user access.

Fig. 4. Terminology development process
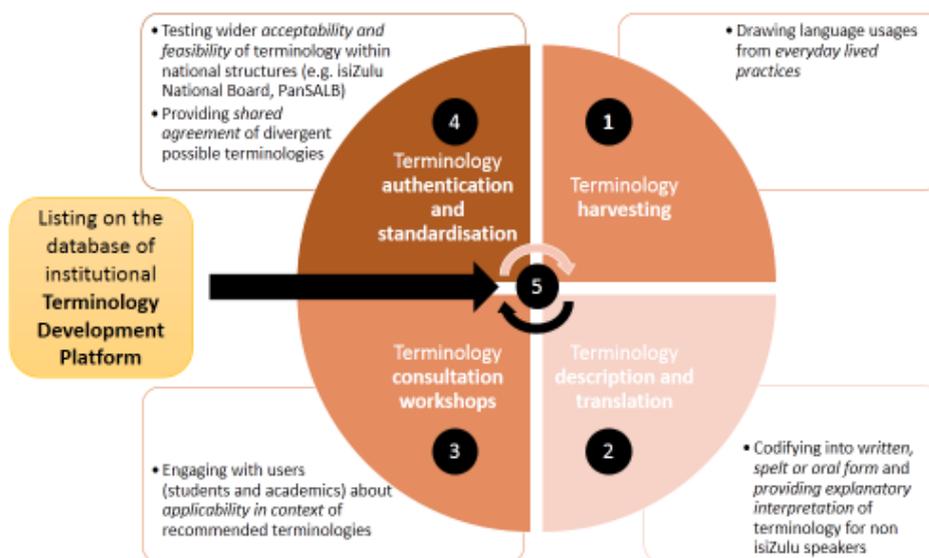
Consistent with the mandatory and legislated terminology development processes, the ULPDO working with the Pan South African Language Board (PanSALB) as required by law, successfully organized the consultation, verification and standardization workshops. A total of 10 workshops were successfully hosted, which produced 2123 terms that were authenticated and are currently being disseminated and used through our various media. The disciplines that were covered are Law, Computer Science, Research, Criminology and Psychology. The Table 1 below shows a detailed breakdown by discipline of the terms completed in the period under review.

Table 1 shows terms that have gone through various processes 2016/2017

No.	Discipline	Number of terms Developed	Number of verified terms	Number of standardized terms	Number of terms remaining	RAG
1.	Computer Science	146	146	147	0	
2.	Criminology Terminology	486	486	486	0	
3.	Law terminology	496	496	496	0	
4.	Psychology Terminology	500	500	500	0	
5.	Research	494	494	494	0	
	Total	2122	2122	2123	0	

4. The HLT Launch

4.1. The 10 November 2016 Launch

The University Language Planning and Development Office hosted a historical event, which saw the launch of isiZulu Human Language Technologies and two books, at the Hilton Hotel, in Durban. This historic event was officially opened by the Vice Chancellor and Principal, Dr. Albert van Jaarsveld. In his opening remarks, the Vice Chancellor underscored the importance of language, and the important task involved in the preservation of all human languages. The Vice-Chancellor further emphasized among other things the University's commitment in the development of isiZulu through a careful implementation of the Language Policy and Plan.

The occasion saw the official launch of the book *Inhlamvu Yelanga*, a culmination of a literature competition initiated by the University Language Board and organized and hosted by the ULPDO. This anthology of short stories is made up of winning entries to the literature competition. The winning 20 authors, who each contributed a chapter to the book *Inhlamvu Yelanga*, received prizes and a copy of the book at this momentous event.

The guest of honor and the University Chancellor Dr Zweli Mkhize, and Professor Ramesh Krishnamurthy, a leading expert in Corpus Linguistics from Ashton University in the United Kingdom, gave keynote addresses. Dr Mkhize delivered his keynote address on the intellectualization of African languages in higher education. He

underscored the need for use of African languages in the teaching and learning in both schools and in higher education. He commended UKZN for the progress it has made in the development of isiZulu.

International expert, Professor Ramesh Krishnamurthy from Ashton University in the United Kingdom emphasized the role of corpora in developing human languages, and explained the role of corpora in the development of necessary human language technologies. He spoke of language and discourse as a human activity that is best mirrored in corpora, and how the study of corpora permeates through all scientific disciplines. Thus, the development of an isiZulu National Corpus is an important milestone. The CEO of the Pan South African Language Board, Dr Mpho Monareng was one of the distinguished guests, who spoke on the importance of developing African languages in South Africa.

The isiZulu human language technologies that were launched on this occasion are all open-source and aim to help isiZulu students and lecturers, and other end-users. They are an expression of the University's commitment to develop isiZulu as an academic language. The technologies launched include the following:

4.1. IsiZulu National Corpus (The INC):

As mentioned above the INC is one of the biggest African language corpora in the world, with just over 22 million running words that are reflective of the creative genius of the language. With this resource, anyone around the world has access to study isiZulu as a language in all its complexities. The INC is an open source resource. The URL for the INC is: https://iznc.ukzn.ac.za/.

4.2. IsiZulu Term Bank;

The isiZulu Term Bank is a resource that was developed in order to provide access to isiZulu terminology, which has been developed for a variety of disciplines such as anatomy, architecture, law, nursing, physics etc. The resource is a work-in-progress with other disciplines set to be added. The isiZulu term bank is available as an open source resource on https://ukzntermbank.ukzn.ac.za. The tool has other functionalities useful in the study of isiZulu and the uptake of the new technology.

4.3. IsiZulu Spellchecker;

The spellchecker is a useful resource in language editing. Using the isiZulu national corpus as a basis for training the spellchecker, the isiZulu spellchecker as a tool will complement the university effort in teaching the isiZulu modules and assist book and newspaper editors in editing their texts written in isiZulu. The spellchecker boasts a 90% recognition rate, and is also an open source resource downloadable from the ULPDO website http://ulpdo.ukzn.ac.za.

4.4. Zulu Lexicon Application: Mobile-Compatible (Android iPhone).

This is a mobile application of the isiZulu Term Bank. It is freely available, and its development is to enhance end-user access to various multidisciplinary terminology. ULPDO has introduced the notion of ANYTIME ACCESS so that students and other general users can access the terms anytime they need to. ULPDO has thus exploited technology to develop improved end-user access through the development of this mobile compatible application. This application is called the Zulu Lexicon App, which is short for *isiZulu Lexicon*. It affords students and other users anytime access to all the authenticated (multidisciplinary) terminology, with search functions in both English and isiZulu. In addition, the following two-isiZulu publications (both published by the UKZN Press) were launched as part of the major effort to cultivate isiZulu as an academic language.

4.5. A short stories volume *Inhlamvu Yelanga* (UKZN Press)

The short stories anthology is a compilation of the literary genius of both the budding and experienced writers in isiZulu. It is a product of a literature competition initiated by the University Language Board and run by ULPDO, which seeks to promote the use of isiZulu writing through reflecting on both the historical and contemporary issues in the ever evolving culture of the Zulu people. The ULPDO received about 110 entries from isiZulu authors across the country. An adjudication team made up of academics, authors and prominent media personalities evaluated the entries in order to come up with the best short stories worthy of publishing. The twenty stories published in this anthology thus reflect on the creative experiences of the Zulu people.

4.6. An English-isiZulu Architecture Glossary with Illustrations.

The ULPDO is also developing bilingual glossaries in various specialized disciplines. These bilingual glossaries are going to be serialized. The first publication in a series is a bilingual (English-isiZulu) glossary of architecture with illustration. The illustrations are a vital component of the discipline. With this book now available as a teaching aid, the discipline of architecture can now be tutored or taught in both English and isiZulu. The University Language Planning and Development Office is working hard to capacitate isiZulu as a language of teaching and learning through the provision of such enablers.

5 ULPDO Services

As reported in the 5th Senate report the ULPDO continues to offer translation, interpreting and editing services to the entire University community on request. Translations that were done in the period under review include:

- Ethical Clearance Applications; School of Education – (English –isiZulu)
- College of Humanities – Graduation Announcements
- PhD Abstracts (Chemistry, Teaching and Learning, Microbiology)
- Research Consent forms – Linguistics
- Radio Releases (Corporate Relations)

- Indigenous Knowledge Systems – Parliamentary Committee Presentation
- Indigenous Knowledge Systems - Programme Handbook
- Biomedical Ethics Committee Documentation
- Memorandum of Understanding – Department of Nursing Studies
- Bio-kinetics Hand Out
- Flyers and Hand Outs – Department of Dermatology
- Conference Abstracts
- University Website Launch (Vice Chancellor's Profile)
- Radio Releases (Corporate Relations)
- J L Dube Memorial Lecture
- Indaba Online Articles
- ULPDO programme booklets
- ULPDO Correspondence and Newspaper Articles
- Indigenous Knowledge Systems: Cultural Tourism Phrase Book Preface
- ULPDO Term Bank User Interface

Interpreting services were also rendered at the following functions:

- ULPDO Launch of Books and Human Language Technologies
- J L Dube Memorial Lecture
- BRICS IKS Summit
- Shopstewards Grievance Procedure Training
- Academic Monitoring Symposium 2016

6 Funded Projects

The ULB continues to avail financial resources for academics and researchers who seek to contribute in the intellectualization of isiZulu through initiating language projects in various disciplines. In 2016 ULPDO provided funding for the university wide language survey to the tune of R200 000. The survey is led by Professor Delia North and is now towards finalization. The objective of the survey is to investigate the levels of familiarity with the university language policy and plan amongst the UKZN students, staff members (both academic and professional services) in order to establish the extent of the intervention required to efficiently implement the objectives of the language policy and plan. In 2017, ULB also funded the IsiZulu Computer Driver's License Project from the computer science discipline. The project is funded to the tune of R86 400.

The various projects funded by the ULB in 2013/2014 across four colleges, namely the College of Humanities, Law and Management, Health Sciences and Agriculture, Engineering and Science (AES) are still proceeding very well. An amount of R1, 021, 880 was provided to these projects. As reported in the last Senate report (2014/2015), ULDPO continues to receive progress reports from the project leaders.

7 ULPDO Funded Project

Table 2. 2013-2017 funded projects

Year	Surname	School/College	Title of the project	Amount Approved
2013	Buthelezi	Humanities	Development of discipline specific terminology for professional psychologists	R 90 000.00
2013	Christiansen	Humanities	Games for isiZulu Teaching	R 70 000.00
2013	Frescura	Humanities	Illustrated dictionary of Southern African Architectural Terms	R 50 000.00
2013	Modi	AES	Various projects involving isiZulu tutorials. Introducing Supplemental instruction in isiZulu AES.	R 730 000.00
2013	Keet	AES	COMMUTERM	R 56 880.00
2013	Mathews	Health Sciences	Mini video productions	R 25 000.00
2014	Modi	AES	Translation of College of AES handbook into isiZulu	R 80 000.00
2014	Bengesai	LMS	Translation of College of LMS handbook into isiZulu	R 80 000.00
2016	North	LMS	Commissioned Language Research Survey	R 200 000.00
2017	Vorster	AES	Computer driver's license in English and isiZulu	R 86400.00
Total				**R 1 468 280.00**

8 Looking ahead

The ULB will continue to monitor the Human Language Technologies, and their effectiveness in contributing to the University's goal of excelling in Teaching and Learning. The ULB will seek to expand the use of these technologies by students and lectures in order to improve epistemic access in various disciplines.

The ULB will in the short to medium term, seek to expand the Bua Le Nna (Let's Talk) project to other campuses. ULPDO is encouraged to work very closely with the Executive Director of Student Services in this regard.

The ULB will also receive the Language Survey Report reported above during the course of the year. The report will be instructive in shaping an improved implementation strategy of the language policy. This year the ULB will also receive a report on the organization and hosting of the 2nd Biennial Language Research Symposium, which was last hosted in October 2015.

9 Publications

The 2016-2017 staff publications are as follows:

1) Keet, C.M., **Khumalo, L.** 2017. Toward a knowledge-to-text controlled natural language of isiZulu. Language Resources and Evaluation, 51(1): 131-157.

2) **Khumalo, L.** 2017. Intellectualization through terminology development. Lexikos 27 (Accepted).

3) Keet, C.M., **Khumalo, L.** 2017. Evaluation of the effects of a spellchecker on the intellectualization of isiZulu. Alternations. (Accepted).

4) Keet, C.M., **Khumalo, L.** 2016. On the verbalization patterns of part-whole relations in isiZulu. 9th International Natural Language Generation conference (INLG'16), 5-8 September, 2016, Edinburgh, UK. Association for Computational Linguistics, 174-183.

5) Byamugisha, J., Keet, C.M. & **Khumalo, L.** 2016. Pluralising Nouns in isiZulu and Related Languages. Proceedings of the 17th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing 2016). Springer LNCS Series. Konya, Turkey.

6) Keet, C.M. & **Khumalo, L.** 2016. Grammar rules for the isiZulu complex verb. Journal of Southern African Linguistics & Applied Language Studies (Accepted).

7) **Khumalo, L.** 2016. Disrupting Language Hegemony: Intellectualizing African Languages. In Samuel, M., Dhunpath, R., and Amin, N. *A critical response to curriculum reform in higher education: Undoing cognitive damage*. Sense Publishers, 247-263.

8) Ndaba, B., Hussein, S., Keet, C.M. & **Khumalo, L.** 2016. The effects of a Corpus on isiZulu Spellcheckers based on N-grams. Proceedings of the IST-Africa 2016 Conference. Durban. South Africa.