Corpus design for
Setswana lexicography

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Co-Promoter: Dr. Adam Kilgarriff
Summary

This PhD thesis is about the design of a Setswana corpus for lexicography. While various corpora have been compiled and a variety of corpora-based researches attempted in African languages, no effort has been made towards corpus design. Additionally, although extensive analysis of the Setswana language has been done by missionaries, grammarians and linguists since the 1800s, none of such research is in corpus design. Most research has been largely on the grammatical study of the language.

The recent corpora research in African languages in general has been on the use of corpora for the compilation of dictionaries and little of it is in corpus design. Pioneers of this kind of corpora research in African languages are Prinsloo and De Schryver (1999), De Schryver and Prisloo (2000 and 2001) and Gouws and Prisloo (2005).

Because of a lack of research in corpora design particularly in African languages, this thesis is an attempt at filling that gap, especially for Setswana. It is hoped that the finding of this study will inspire similar designs in other languages comparable to Setswana.

We explore corpus design by focusing on measuring a variety of text types for lexical richness at comparable token points.

The study explores the question of whether a corpus compiled for lexicography must comprise a variety of texts drawn from different text types or whether the quality of retrieved information for lexicographic purposes from a corpus comprising diverse text varieties could be equally extracted from a corpus with a single text type. This study therefore determines whether linguistic variability is crucial in corpus design for lexicography.
Declaration

I declare that Corpus design for Setswana lexicography is to the best of my knowledge and belief, my original work. All the sources that I have used or quoted have been indicated and acknowledged by means of complete references. The material has not been submitted, either in whole or part, for a degree at this or any other university.

Thapelo Joseph Otlogetswe
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- Botswana Parliament.
- Mokgosi newspaper.
- Many secondary schools whose identity we are not disclosing in the interest of anonymity.
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- Different Botswana government departments.
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.... Finally, my unwavering faith in God, through Jesus Christ, has remained a rock and encouragement throughout this study.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>BNC</td>
<td>British National Corpus</td>
</tr>
<tr>
<td>CDIF</td>
<td>Corpus Development Interchange Format</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>CLAWS</td>
<td>Constituent Likelihood Automatic Word-tagging System</td>
</tr>
<tr>
<td>COBUILD</td>
<td>Collins Birmingham University International Language Database</td>
</tr>
<tr>
<td>CQS</td>
<td>corpus querying software</td>
</tr>
<tr>
<td>DDP</td>
<td>Dictionary Development Process</td>
</tr>
<tr>
<td>HLT</td>
<td>Human Language Technology</td>
</tr>
<tr>
<td>HTML</td>
<td>Hyper-text mark-up language</td>
</tr>
<tr>
<td>JFIT</td>
<td>Joint Framework for Information Technology</td>
</tr>
<tr>
<td>KWIC</td>
<td>Key Word in Context</td>
</tr>
<tr>
<td>LDOCE</td>
<td>Longman Dictionary of Contemporary English</td>
</tr>
<tr>
<td>LMS</td>
<td>London Missionary Society</td>
</tr>
<tr>
<td>LOB</td>
<td>Lancaster/Oslo-Bergen Corpus</td>
</tr>
<tr>
<td>MD</td>
<td>Multi-Dimensional</td>
</tr>
<tr>
<td>MWE</td>
<td>multi-word expression</td>
</tr>
<tr>
<td>NLP</td>
<td>Natural Language Processing</td>
</tr>
<tr>
<td>OED</td>
<td>Oxford English Dictionary</td>
</tr>
<tr>
<td>POS</td>
<td>Part of speech</td>
</tr>
<tr>
<td>RNPE</td>
<td>Revised National Policy on Education</td>
</tr>
<tr>
<td>RRC</td>
<td>Russian Reference Corpus</td>
</tr>
<tr>
<td>SCA</td>
<td>Simple Consistency Analysis</td>
</tr>
<tr>
<td>SDA</td>
<td>Seventh Day Adventist</td>
</tr>
<tr>
<td>SGML</td>
<td>Standard Generalized Mark-up Language</td>
</tr>
<tr>
<td>SIL</td>
<td>Summer Institute of Linguistics</td>
</tr>
<tr>
<td>STTR</td>
<td>Standardized type/token ratio</td>
</tr>
<tr>
<td>TEI</td>
<td>Text Encoding Initiative</td>
</tr>
<tr>
<td>TSB</td>
<td>Traditional Setswana Beliefs</td>
</tr>
<tr>
<td>TTR</td>
<td>Type/token ratio</td>
</tr>
<tr>
<td>WWW</td>
<td>World Wide Web</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Mark-up Language</td>
</tr>
</tbody>
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