

The NCDC Terminology Development Handbook



Facilitator's Guide 2024



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Facilitator's Guide



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Foreword

This NCDC's Facilitator's Guide to the Terminology Development Handbook has been developed by the Terminology Unit that is housed in the Department of Literature Bureau. The Guide provides sessions on knowledge frameworks, terminology tools, principles and methods of term coinage. It aims at equipping the facilitator with skills, guidance, and resources to ably conduct training sessions.

Terminologists in Uganda's indigenous languages have not been oriented to the Terminology Handbook, making it difficult to use in the field. Hence for purposes of making sure that facilitators interpret this Handbook appropriately, a well-planned and structured instrument to guide in the training has been developed by specialists from various fields.

In summary, the Guide presents training sessions on different areas pertaining to coinage of terms. In addition, assessment strategies are suggested to help enhance the competence of the trainees.

FOR GOD AND MY COUNTRY.

Prof. George Ladaah Openjuru

Chairperson, Governing Council National Curriculum Development Centre.



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In case of any shortcomings that might be identified in this publication, NCDC welcomes suggestions for effectively addressing such inadequacies. Kindly communicate such comments and suggestions to NCDC through P.O Box 7002, Kampala or email: admin@ncdc.go.ug or visit our website at www.ncdc.go.ug

Dr. Grace K. Baguma

Executive Director National Curriculum Development Centre.

SYMBOLS USED

SYMBOL	MEANING
F	Prefix
F+	Nominal prefix
F+	Prefix in plural
Η	Suffix
Local	Post suffix
Language	
R	Verb Root (simple or extended)
S	Nominal Stem
S'	Subordinating
	clause/embedded
	clause
S"	Sentence
W"	Phrase
Х	Word or word segment
	in English
Adl	Adverbial
С	Compliment
0	Object

SYMBO	MEANING
L	
<u>S</u>	Subject
V	predicator
•	Agglutinational
	boundary(in
	Luganda,syllable
	boundary in English)
÷	"fullfilled/realised/
	represented by)
1	Alternative
<	from
()	Ocassionalty/optionality
	brackets
[]	Block brackets
	A sentence in the local language
	A phrase in the local
	language
	In Local language
	In English
	In local language





Background to Terminology Programme

In 1987, the Education Policy Review Commission (EPRC) advocating for using indigenous languages as medium of instruction in early childhood and primary education, as well as including indigenous languages as subjects taught in upper primary and post-primary education in Uganda. UNESCO has long supported this perspective. (UNESCO, 2024). Consequently, the National Curriculum Development Centre (NCDC) introduced the Thematic Curriculum in 2007, which mandates local languages to be used as medium of instruction from P1 to P3. This curriculum has been hindered by inadequate terminology in local languages. Post-primary and tertiary education, as well as media, translation, and interpretation, all suffer from inadequate terminology. This highlights the urgent need for terminology development and harmonisation in education and general communication.

The challenge of inadequate terminology extends beyond policy and curriculum development—it directly impacts knowledge transmission and learning outcomes.. The NCDC terminology development programme aims at developing suitable terms to facilitate the teaching and learning of local languages.

The Need for Terminology Development

There is increasing knowledge production in the 21st century, especially in the fields of science and technology. For indigenous languages of Uganda to cope with such an increase, it calls for access to terminology development resources, such as the Handbook and its Guide. This will reduce dependency on borrowing terms to express new concepts in specialised fields in indigenous languages.

This Guide aims to empower indigenous language users by equipping them with skills to coin and use terms across various technical fields. Terminology development tools, methods, principles and trained personnel will be available for use once the Handbook becomes accessible and can be interpreted appropriately.



Language Situation in Uganda

The number of languages spoken in Uganda is varying leading to lack of consensus. Ladefoged (1967/71) mentions that Uganda has approximately 40 languages. Recent studies suggest 36 to 39 languages respectively (Lewis, 2009; Makerere, 2008). The Uganda Bureau of Statistics and the Uganda National Council for Culture and Heritage project their approximation of Ugandan languages to be 43. (Uganda National Census Report 2014). This could be partly because of lack of delineation between language and dialect and insufficient research on Ugandan languages. This problem is amplified in the Constitution of Uganda (1995, amended 2006). The Constitution puts the number of indigenous communities in Uganda at 65, however, this broad phrasing of the constitutional provisions leaves us guessing the actual number of indigenous languages in Uganda. Article 37 acknowledges the right to promote and use any language, which is in line with the Uganda language Policy (2016) which aims at promoting linguistic diversity.

The Ministry of Education and Sports (MOES) in conjunction with NCDC have however, implemented the use of area languages as the medium of instruction in the Thematic Curriculum. Some language boards have also been constituted and materials have been developed to that effect. In addition, ten local languages (Luganda, Lusoga, Runyoro/Rutooro, Leb Acoli, Lugbarati, Dhopadhola, Ateso, Lumasaaba, Runyankore/Rukiga and Leb Lango) are also being taught at secondary school level and at tertiary institution level. The Government of Uganda has however, through NCDC, supported the development of a handbook of Terminology. It covers knowledge frameworks, principles and methods of coining terms. This will aid in the development of terminology in specialised fields in local languages.

The Purpose of the Guide

This Guide is designed to support the facilitator to interpret the NCDC Terminology Handbook. It outlines the structure, methodology, and best practices for conducting effective training. This Guide helps facilitators equip term coiners with the knowledge and skills required for effective terminology development in Ugandan languages.

Structure of the Facilitator's Guide

This Guide is divided into three main sections: the preliminaries, content, and appendices." "Post-evaluation forms for participants to assess the training are enclosed.

The Content section forms the core of the Guide, presenting sessions on knowledge frameworks and tools used in term coinage.

A section on term formation principles outlines the fundamental guidelines for effective term coinage.

The methods of term coinage with examples in local languages are brought to the fore. References and readings are provided at the end of this section, along with a training programme for facilitators.

The **Appendices** section contains session extracts from the Handbook for easy customization with the Facilitator's Guide. Post-evaluation forms for participants to about the training are enclosed. Lastly a glossary is affixed to help the reader locate specific words and their meaning.

Objectives of the Training

- 1) To equip facilitators with a comprehensive understanding of the rationale for terminology development.
- 2) To enable facilitators, appreciate key concepts in the Terminology Handbook.
- 3) To equip facilitators with skills to conduct training sessions.
- 4) To empower facilitators with hands-on skills to coin terms in their local languages.
- 5) To enable facilitators to guide term coiners to create terms.



SECTION TWO: TRAINING SESSIONS

Topic 1: ORTHOGRAPHY

Session 1: Orthography/Rules

Session outcomes: By the end of this session, the participant should apply spelling rules to written texts in their language .

Resources needed:

Orthographies, Session Notes, Letter Charts, Stationery, Dictionaries, Internet Connectivity for web search,.

Duration: 270 minutes

Content	Activities	Techniques	Assessment
			strategies
a) The Local	Participants:	i) participants	i) Questionnaires
Language	1) compare and	engage in	are used to
alphabet	contrast the	group	elicit
b)Phoneme–	English and	discussions	responses.
grapheme	Local Language	on letters of	ii) Translation of
correspondences	alphabet.	English and	texts to
c) Vowel	2) share their	local	identify the
lengthening (if	findings in	language	use of
applicable)	plenary.	alphabet.	categories of
d)Consonant	3) study extracts	ii) take on	words.
gemination (if	on consonant	Gallery walk	iii) Punctuating
applicable)	gemination,	to interact	texts
e) The verb	verb complex,	with	
complex (where	conjunctive	different	
applicable)	and disjunctive	letters	
f) Conjunctive and	spellings,	posted.	
disjunctive	punctuation	iii) Presentatio	n
spelling	marks,	iv) interact	
		with	

Сс	ontent	Activities	Те	chniques	Assessment
					strategies
g)	Punctuation	apostrophisati		resource	
	marks	on, sound		persons in	
h)	Apostrophisation	change and		their	
i)	Orthographical	assimilation.		specific	
	consequences	(See appendix		local	
	of sound	III).		languages.	
	changes	4) discuss	v)	Illustration	
j)	Degree of	orthographic		of findings	
	orthographical	rules observed.			
	assimilation of	5) share their			
	foreign words	findings in			
	to Local	plenary			
	Language				

The session requires prior knowledge of the orthography of the language. You are encouraged to involve resource persons in helping you facilitate the session. In the context of NCDC a resource person is someone with broad knowledge on subject area who may be a speaker of the language or subject/topical specialists. Participants should have knowledge of their language-specific orthographies.

Topic 2: Knowledge Frameworks for Terminology Development *Session 1: Introduction to Theories of Terminology Development.*

Session outcome: By the end of this session, the participant should relate the theories to the practices of terminology development.



Resources needed:

Computers, projector(s), flip charts, masking tapes, markers, writing pads, pen pointers, and internet connectivity.

Duration: 240 Mins

Со	ntent	Ac	tivities	Те	chniques	Assessment strategies
a)	Wuster's General	Ра	rticipants:	i)	Brainstorm	i) Question
	Theory of Terminology	1)	In	ii)	Guided	and
b)	The Extended Theory of		groups,		discovery	answer
	Terminology (Myking,		study the	iii)	Group	ii) Exercise
	2002)		extract in		discussion	(s)
c)	Gaudin's Socio-		appendix	iv)	Presentations	
	terminology Approach		IV.			
	(2003)		Discuss			
d)	Cabre's (2003) Theory		the			
	of "The door of entry"/		tenets of			
	the theory of		the			
	communication/		theories.			
	communicative	3)	Present			
	terminology theory		their			
e)	The socio-cognitive		findings			
	Terminology Approach		in			
f)	The Cultural Approach		plenary.			
	to Terminology					
g)	The Textual Approach					

Note to the Facilitator

You will need to provide participants with an extract in Appendix IV on knowledge frameworks. **Also** Create a conducive environment for participants to freely interact, discuss and encourage them to ask questions on the theories. In this session, you should guide the participants to identify the basic tenets of each theory.

Topic 3: Terminology Work Tools

Session 1: Non-digital tools

Session Outcome: By the end of this session, Participants should be able to extract, analyze, and compare terms from at least three non-digital sources and justify their selection.

Resources needed:

General and specialised dictionaries, newspapers, Holy Books, The NCDC Terminology Handbook, Ugandan language grammar text books;

Duration: 120 minutes

Content		Activities		Techniques		As	Assessment	
						str	rategies	
a) b) c) d) e) f) g) h) i)	Dictionaries Glossaries Clossaries Chesauruses Documentary Data bank Chewspapers Journals Holy books Magazines	 Participants: Brainstorm on the non-digital tools. Terminology- work challenge. Analyse the content of the various non- digital 	i) ii) iii) iv)	Group discussion Presentation Graphic organizer peer reviews	a) b) c) d)	Question and answer Entry and exit tickets Exercises Hands-on activities		
		4) 5)	terminology tools. Extract terms from the tools provided using a corpus tool or editing using SDL Multi-Term. Share in plenary.					



This session introduces participants to non-digital terminology work tools necessary for terminology development. You should Encourage participants to interact with the tools and share their experiences on them.

Session 2: Digital Tools

Session outcome: By the end of this session, the participant should be able to use digital terminology work tools to coin terms in their indigenous language.

Resources needed:

The NCDC Terminology Handbook, Ugandan language grammar text books, soft-ware, Internet connectivity, computers, a projector, a printer, a photocopier, and stationery.

Content		Activities		Techniques		Ass	sessment
						str	ategies
a)	Terminology	Pai	rticipants:	i)	Group	a)	Observation
	research and	1)	Discuss		discussion	b)	Entry and
	analysis tools:		features of	ii)	Presentations		exit tickets
i)	Corpus Analysis		the various	iii)	demonstration	c)	term
	tools		digital tools	iv)	Graphic		extraction
ii)	terminology		in their		organizer		exercises
	extraction tools		different	v)	simulation		using
iii)	Concept		categories	vi)	Question and		selected
	mapping tools		as provided		answer		tools
b)	Terminology		in Appendix	vii)	Hands-on	d)	simulations
	management		V.		activities		on term
	systems:	2)	In groups				extraction
i)	Term star		demonstrat				giving
ii)	SDL Multi-Term		e the use of				reasons of
iii)	Across		some of the				

Duration: 240 minutes

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Content	Activities	Techniques	Assessment strategies
 c) Terminology Editing and Authoring Tools: i) XML Editor ii) Terminology databases 	 tools provided. 3) Use some of the tools in C to extract and edit terms 		the choice of tool.
 d) Machine Translation (MT) and Computer- assisted translation (CAT) tools: i) Google translator ii) Microsoft translator 			

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This session continues with exposition of different work tools. These tools will require use of specific devices such as computers, Smartphones and Tablets. Not all the digital tools may be readily available, user-friendly or compatible with available devices. You are therefore encouraged to test the tools before the sessions. You should Encourage the participants to have the most appropriate devices for the session.

Topic 4: Steps in Terminology Development and Stages in Term Use

Session 1: Steps in Terminology Development

Session Outcome: By the end of this session, the participant should be able to apply the different steps in terminology development to term coinage.

Resources needed:

The NCDC Handbook, On-line resources, Internet connectivity, a computer, a projector, a printer, a photocopier, and stationery.

Duration: 120 Minutes

Content	Activities	Techniques	Assessment
			strategies
a) Steps:	Participants:	i) Guided	a) Question
i) Needs analysis	1) Study the extract	discovery	and
ii) Gathering of	on steps in	ii) Group	answer
subjects/	terminology	discussion	b)Entry and
discipline specific	development	iii) Presentation	exit
terms/concepts	(Appendix VI)		tickets
iii) Term selection	2) Discuss the		
iv) Standardization	relevance of the		
v) Stakeholders'	steps in		
identification and	terminology		
consultation	development.		
vi) Testing	3) Present the		
vii) Publishing terms	findings in plenary.		

There is need for participants to know why the steps are necessary. Offer feedback and guidance to participants as they discuss the steps in terminology development.

Session 2: Stages in Term Use

Session Outcome: By the end of this session, the participant should be able to identify terms in their local languages and categorise them according to the different stages of term use.

Resources needed:

The Handbook, On-line resources (https://langeek.co/en/grammar/course/1297/coinage-and-eponyms, ebooks, journals, E-Terminology lexikos.journals.ac.za, articles, https://media.neliti.com/media/publications/335566-t), Internet connectivity, a computer, a projector, a printer, a photocopier, and stationery.

Duration: 120 Minutes

Со	ntent	Activities	Techniques	Assessment strategies
a) b) c) d)	Scientific stage Educational stage Application stage Consumer stage	 Participants: Study extracts in Appendix VII. Identify terms in their languages. Collect and categorise terms in their languages according to the stages of term use. 	 i) Guided discovery ii) Group discussion iii) Presentation iv) Demonstration 	a) Question and answer b) Exercises





Note to the Facilitator: This session introduces participants to the different stages in term use. You should encourage participants to compare digital vs non-digital tools based on efficiency, reliability and accessibility. Ask them to share their experiences. Offer feedback and guidance to participants as they complete hands-on exercises and projects.

Topic 5: Principles of Term Formation and Evaluation

Session 1: The PEGITOSCA Criterion

Session Outcome: By the end of this session, the participant should be able to analyse and evaluate at least Five terms in Local Language and English using PEGITOSCA criteria and justify their assessment.

Resources needed:

Specialised dictionaries, stationery, audio visual devices (padlet app, Kahoot app), pictures, charts, diagrams, chalk and board, glossary of Terms, copies of relevant guides on terms and standardization e.g., ISO

(https://en.wikipedia.org/wiki/International_Organization_for_Standardizati on), IUPAC

(https://en.wikipedia.org/wiki/International_Union_of_Pure_and_Applied_Ch emistry), IUPAP (https://iupap.org/), ICBN

(https://www.pw.live/exams/neet/icbn-full-form/), ICZN

(https://en.wikipedia.org/wiki/International_Code_of_Zoological_Nomenclat ure), session notes, The Terminology Handbook.

Duration: (240 minutes).

Cor	itent	Activities	Те	chniques	As: str	sessment ategies
a) b) c) d) e) f)	Precision Economy Generativity Internationality Transparency Objectivity	Participants: 1) Study extracts in appendices VIII and IX.	i) ii) iii)	Guided discovery Guided Discussion Plenary	a) b)	Question and answer Exercises

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Content	Activities	Techniques	Assessment strategies
g) Systematicity h) Consistency i) Acceptability	 2) discuss the PEGITOSCA sub- criteria. 3) Analyse given terms in English using the PEGITOSCA criterion (Appendix IX). 4) Formulate terms using the PEGITOSCA criterion. 5) Evaluate the existing corpus of terms in their languages using the PEGITOSCA criterion. 	iv) Gallery walks	 c) Letter Ordering game d) Reflection

Note to the Facilitator:

This session captures all the sub criteria into one acronym called **PEGITOSCA**. It should be hands-on to help participants master the principles of term formation. Provide terms that respond to this criterion as you facilitate, and prepare resources and assessment items in advance.



Session: 2: Conceptual Analysis

Session outcome: By the end of this session, the participant should be able to apply knowledge of conceptual analysis during coining of terms.

Resources needed: The Terminology Handbook, Specialised dictionaries, Online resources (Journals, articles, e-books, e-library, websites: e.g., <u>www.luganda.com</u>).

Duration: 120 minutes

Content	Activities	Techniques	Assessment strategies
 a) Conceptual entities: b) Quantity c) Quality d) form e) proposition set f) number g) degree h) length i) direction j) order k) matter l) conceptual predicate and others 	 Participants: 1) study the extract in appendix X and discuss the conceptual entities represented by terms. 2) study categories of entities and express them in Local Language (see appendix XI) 3) Analyse given words using the conceptual entities (see appendix XI) 3) Analyse given words Using the conceptual entities (see appendix XI) 4) Use the conceptual entities to coin terms in their languages 5) Share findings in plenary 	 a) Guided discovery b) Group Discussion c) Think-pair- share d) Gallery walks 	a) Question and answer b) Individual work/ exercises c) Reflections

This session will require a deeper understanding and breakdown of the meaning of a concept and how to analyse concepts before naming.

Allow participants to conduct a conceptual analysis leading to term coinage. This session should be hands-on to help participants acquire, and contextualise concepts during term formation.

Session 3: Expressional extrapolation in the Local language

Session outcome: By the end of this session, the participant should be able to use different lexeme formation processes to help them coin terms in their indigenous languages .

Resources needed: Specialized dictionaries, stationery, audio-visual aids (padlet app, Kahoot app), pictures, charts, Session notes, Assessment items.

Duration: 300 minutes

Co	ontent	Activities	Те	chniques	As: str	sessment ategies
a) b) ii) iii)	Systematic generation of new affixes. extrapolate d lexeme formation rules: Gradation Order) Direction	 Participants: i) Brainstorm on the meaning of extrapolation. ii) Explore existing affixes in their languages (see appendix XIII) iii) Explore rules involved in extrapolated lexeme formation (see appendix XIV) iv) Apply extrapolation rules to derive new terms in Local Language. v) Exhibit their coined terms in gallery. 	1) 2) 3) 4) 5) 6)	Brainstorm Guided discovery Think– pair- share Group discussion Presentat ions Gallery walks	a) b) c)	Question and answer Exercises Project



The session requires using stem or word roots with affixes to coin terms by using affixes in the indigenous languages. should be hands-on to help participants practice how to apply the rules of expressional extrapolation in forming lexemes. Refer to the NCDC Handbook and appendices for relevant examples.

Session 4: Prototypical Terminological Systems (x.illions)

Session outcome:

By the end of this session, the participant should be able to apply scientific number formulae to render large numeric expressions in Local Language.

Resources needed:

The NCDC Terminology Development Handbook, Charts, Session notes.

Duration: 90 minutes

Content	Activities	Techniques	Assessment
			strategies
Rendition of x.illion	 Participants: 1) Study extracts with x•illion rendition (see appendix XV) 2) Examine the origins and meanings of x.illion expressions. 3) Analyse rendition of x.illion following the examples in Luganda. 4) Identify the suffix 	 i) peer reviews ii) Guided discussion iii) Group work iv) Presentation v) Illustration vi) Gallery walks 	a) Question and answer b) Exercises c) Tests d) participants to create a mini dictionary of 10 words using the different methods.
	for x.illion equivalents in their		
	languages		

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Content	Activities	Techniques	Assessment strategies
	 5) Render the x.illion expressions in their languages using the suffix equivalent identified (in conjunction with the numeral combining forms e.g., bi, tri, quad, quint, etc). 6) Present in plenary 		

You should guide the participants to establish equivalents of x .illion rendition in their language. This session should be hands-on. You should give immediate and constructive feedback.

Session 5: Prototypical Terminological Systems (Systeme International – SI Prefixes).

Session Outcome: By the end of this session, the participant should be able to localise the SI prefixes in their indigenous languages correctly.

Resources needed:

The Terminology Handbook, charts bearing examples of *Systeme International (SI)* renditions in Luganda, session notes, https://en.wikipedia.org/wiki/International_System_of_Units



Duration: 90 minutes

Content	Activities	Techniques	Assessment strategies
SI prefixes	 Participants: i) Study the examples on the rendition of SI prefixes (see appendix XVI). ii) Examine the origins and meanings of SI expressions Discuss the examples of Local Language SI prefix renditions. iii) Coin the SI prefixes in their local languages. iv) Present in a plenary 	 i) Guided discovery: participants answer socratic questions, involve themselves in case studies, think-pair share,Role-play. ii) Guided discussion: led by the facilitator to discuss pertinent issues. iii) Presentation: participants share ideas and discoveries in plenary iv) Gallery walks: showcase their findings in stations around the study room. 	i) Question and answerii) Exercisesiii) Reflection

Note to the facilitator:

Standardization of terms is a very important step in the process of terminology development. Introducing participants to SI units should be done with emphasis on standardization. **You should engage** participants to generate equivalent names of concepts in their languages.

Session 6: Prototypical Terminological Systems (Chemical affixation)

Session Outcome: By the end of this session, the participant should be able to create chemical affixes into their indigenous languages.

Resources needed:

Charts, the Handbook, Pictures, list of chemical nomenclature, session notes.

Duration: 90 minutes

Content	Activities	Techniques	Assessment strategies
Chemical affixation	 Participants: i) Study extracts on chemical affixes (see appendix XVII). ii) Examine the origins and meanings of chemical affixes. iii) Localise chemical affixes in their language (appendix XVII). iv) Present in plenary 	 Guided discovery Brainstorm Case study Guided discussion Presentation 	 a) Question and answer b) Exercises c) Reflection

Note to the Facilitator:

In this session, participants should have knowledge on names of chemicals in English and their origins. You should encourage them to examine localised chemical names in their local languages in the appendices.



Session 7: Biological Taxonomies

Session Outcome: By the end of this session, the participant should be able to express biological taxonomies in their indigenous languages.

Resources needed:

Charts, The Handbook, pictures, and session notes.

Duration: 180 minutes

Co	ntent	Activities	Techniques	Assessment
				strategies
a)	Biological	Participants:		Question
	taxonomy:	1) Brainstorm on	1) Brainstorm	and answer
	i) Domain	what taxonomy is.	2) Guided	
	ii) Kingdom	2) Discuss the origins	discussion.	Exercises
	iii) Phylum	and meanings of	3) Presentation	Reflection
	iv) Class	taxonomies	4) Demonstration	
	v) Order	3) Study the		Tests
	vi) Family	examples of		
	vii) Genus	biological		
	viii) Species	taxonomies to		
b)	Examples:	find their		
	(i) Zoological	relationships (See		
	taxonomy	appendices XVIII,		
	(ii) Taxonomy	XIX and XX).		
	of the dog	4) create zoological		
	(iii) Taxonomy	and human		
	of the	taxonomies in		
	human	Local Language.		
		5) Present findings in		
		a plenary.		

In this session, you should know hierarchy of a category of a living organism. Therefore, knowledge of these levels will enable you to pass over the skill of naming living beings in the participants' languages. You should make it clear to the participants that systematic names given to plants and animals are in Neo-Latin. That means, coining Local Language terms is merely making them transparent i.e. expressing the Neo-Latin terms in everyday/familiar language.

Session 8: Classification of Numbers

Session Outcome: By the end of this session, the participant should be able to express categories of numbers in their indigenous language during term coinage.

Resources needed:

The NCDC Terminology Handbook, Pictures, Charts, List of numbers, Session notes.

Content	Activities	Techniques Assess strate	
Classification of numbers	 Participants: 1) Study classification of numbers in appendix XXI. 2) Coin terms in Local Languages for the numbers classified in appendix XXI. 3) Present the rendition of the classification of numbers in plenary. 	 i) Guided discovery ii) Guided discussion iii) Illustration iv) Group work v) Presentation 	i) Question and answer ii) Exercises. iii) Reflection

Duration: 90 minutes



In this session, ask the participants to reflect on the number systems in their languages and build on it in order to come up with classification of numbers based on the diagram. You should be familiar with number classification both in English and your local language. Encourage them to work in groups.

Session 9: Anatomical Structures and Directions

Session Outcome: By the end of this session, the participant should be able to express anatomical structures and directions in their indigenous languages.

Resources needed:

The Handbook, Pictures, Charts, Diagrams, session notes, a computer, a projector, flashcards.

Duration: 60 minutes

Content	Activities	Techniques	Assessment strategies
Hierarchy	Participants:	i) Brainstorm	1) Question
of	a) Brainstorm on the meaning	ii) Guided	and
anatomical	of anatomical structure and	discovery	answer
structure	anatomical direction.	iii) Guided	2) Exercises
and the	b) Coin Local Language terms	discussion	
anatomical	for anatomical structures	iv) Presentation	3) Reflection
direction	and directions (see	v) Gallery walks	
	appendices XXII and XXIII).	vi) Resource	
	c) Present in plenary.	Persons	

Note to the Facilitator:

In this sessionyou will have knowledge of the structure of the human body in both English and your indigenous language. You will need to have input of resource persons to support you in this session.

TOPIC 6: METHODS OF TERM FORMATION

Session 1: Introduction to Methods of Term Formation

Session outcome: By the end of this session, the participant should be able to use the NCDC terminology handbook and other resources in their indigenous language to understand the concept of a lexeme.

Resources needed:

The NCDC Terminology Handbook, Session Notes, Stationery, Textbooks, Internet Connectivity

Duration: 90 minutes

Co	ontent	Activities	Те	chniques	Assessment Techniques
a)	Introduction to lexeme formation.	 Participants: i) In groups, study the extract in appendix XXIV. ii) discuss the meaning of lexeme. iii) Drecent in glopent. 	1) 2) 3) 4)	Group discussions Presentations Guided discovery Think-pair- share	Question and answer
		iii) Present in plenary			

Note to the facilitator:

Since you are introducing a practical aspect of term formation called lexeme formation, guide the participants to understand the concept of lexeme. Differentiate between the standard and non-standard lexeme formation methods (see apendix XXIV).



Session 2: Standard Lexeme Formation

Session outcome: By the end of this session, the participant should be able to apply standard lexeme formation methods to coin terms in their indigenous language.

Resources needed:

The NCDC Terminology Handbook, Session Notes, Charts, Stationery, Local Language Orthographies, Dictionaries, Internet Connectivity.

Duration: 240 Minutes

Content	Activities Techniques		Assessment strategies
a) Complex lexeme formation (affixation: (pre) prefixation, infixation, suffixation, postsuffixation) b) Compound lexeme formation c) Zero Lexeme Formation	 Participants: i) In groups, study the extract on complex lexeme formation (see appendix XXIV). ii) illustrate the standard lexeme formation methods as observed in the appendix XXIV. iii) in groups generate terms in the Local Language using the standard lexeme formation methods acquired. iv) Display terms formed 	 Guided discovery Group discussion Gallery walk Use of resource persons. Presentation Illustration 	 a) Question and answer b) Exercises c) Portfolios d) Reflection e) Tests f) Projects

You shuld give participants enough hands-on practice focusing on each method of standard lexeme term formation. You should also focus on Local Language examples. Allow participants to critic presentations. Prepare assessment tools in advance.

Session 3: Non-Standard Lexeme Formations (I)

Session outcomes: By the end of this session, the participant should be able to apply non-standard lexeme formation methods to coin terms in their indigenous languages.

Resources needed:

The NCDC Terminology Handbook, Session Notes, Local Language Orthographies, Stationary, Dictionaries, Internet Connectivity, Resource Persons.

Duration: 180 minutes

Со	ntent	Ac	tivities	Те	chniques	As	sessment
						st	rategies
a)	Abbreviations (Blending, accronymisation,	Pa 1)	rticipants: in groups the study extract on non-standard	1) 2)	Guided discovery Group	a) b)	Question and answer Presentations
b) c)	initialisation, clipping, flipping) Eponymisation Backformation	2)	lexeme formation methods in appendix XXIV. illustrate non- standard lexeme formation methods	3) 4) 5) 6)	discussion Gallery walk Presentat ion Use of resource persons. Illustration	c) d) e)	and discussions Portfolios Reflection Creative Projects



Content	Activities	Techniques	Assessment strategies
	 identified in appendix XXIV. in groups generate terms in Local Language using non-standard lexeme formation methods . share in plenary display terms formed. 		

You should give participants enough hands-on practice focusing on each method of non-standard lexeme term formation. Also focus on specific examples in Local Language.
Session 4: Non-Standard Lexeme Formation (II)

Session outcome: By the end of this session, the participant should be able to apply non-standard lexeme formation methods to coin terms in their indigenous languages.

Resources needed:

The NCDC Terminology Handbook, Session Notes, Charts, Stationery, Orthographies, Dictionaries, Internet Connectivity, Resource Persons

Content Ac	tivities	Techniques	Assessment strategies
 a) Adoption b) Semantic expansion & expansion & narrowing c) Induction antonomasia i) Functional change: Etymologisation, Anagramming, b) loan translation, concantenation, mback formation, ii) Borrowing iv) Concatenation 	articipants: In groups, the study extract on non- standard lexeme formation methods in appendix XXIV. illustrate non- standard lexeme formation methods as observed in appendix XXIV in plenary. in groups generate terms in Local Language	 a) Guided discovery a) Group discussion b) Gallery walk c) Presentation d) Use of resource persons. e) Illustration 	 a) Question and answer b) Exercises c) Portfolios d) Reflection e) Tests f) Projects

Duration: 240 minutes

FACILITATORS GUIDE



Content	Activities	Techniques	Assessment strategies
	using appropriate non-standard lexeme formation methods . d) display terms formed.		

Note to the Facilitator:

You should relate this session of non-standard lexeme formation methods to session 3. You should also give the participants enough hands-on practice focusing on each method of non-standard lexeme term formation.



APPENDICES

Note to the Facilitator:

You will find some terminology tables with missing corresponding content in the various local languages. These empty tables have been intentionally designed to allow you engage participants in discussions and promote discovery and creative thinking, critical attributes necessary for terminology development.

Appendix I: Programme for Orientation Of National Terminology Facilitators

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES				
DAY ONE								
SESSION	SESSION ONE							
8:00 – 8:30am	Registration	To take record of attendance	Individually filling in record sheets	Well- documented records of attendance				
8:30 – 9:00am	 a) Prayer b) Anthems c) Self- introduction d) Climate setting 	 a) To seek divine guidance b) To honour the Nation c) To build rapport among participants d) Expectations, fears, helping hands, etc. 	Individual and participatory	Divine guidance, patriotism and teamwork among participants				



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
9:00 – 9:10am	Remarks from the Manager, NCDC Literature Bureau	To address participants on the mandates of the Literature Bureau and the Terminology Unit and objective of the training.	PowerPoint presentation, question and answer.	Participants are informed about the mandates of the Literature Bureau and the Terminology Unit
9:10 – 9:20am	Remarks from the Deputy Director (RCLS)	To enlighten participants on the position of the Literature Bureau in the structure of NCDC and the Directorate of Research, Library and Consultancy Services	Speech, question and answer.	Participants are aware about the place of the Literature Bureau in the structure of NCDC and the Directorate of Research, Library and Consultancy Services
9:20 – 9:30am	Remarks from the Director NCDC	To address participants on the broad	Speech, question and answer.	Participants get abreast with the broad

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
		mandates of		mandates of
		NCDC		NCDC
SESSION '	TWO			
9:30 –	Background to	To give	Group work,	Apply
9:50am	the	general	brainstorming	knowledge of
	Terminology	overview of	& discussions	the
	Development	terminology		orthography
	Project	development		in writing their
		programme		languages.
SESSION	THREE			
9:50-	The Need for	To enlighten	Brainstorming	Participants
10:30am	Terminology	participant	Group	are informed
	Development	on the need	discussion	of the need for
		for	Guided	terminology
		terminology	discovery	development
		development	Question and	
			answer	
10:30-	BREAK TEA			
11:00am				
SESSION	FOUR			
11:00-	Structure of	To acquaint	Question and	To be abreast
11:30am	the	participants	answer	with the
	Facilitator's	with the	Guided	knowledge of
	Guide	structure of	discussion	the structure
		the		of the guide
		facilitators'		
		guide		



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
SESSION	FIVE			OUTCOMES
11:30- 11:50am SESSION 9 11:50am - 1:00pm	The Training Programme SIX Being a Good Facilitator:	To give the overview of the training programme	Question and answer llustration Guided discussion Brainstorming Guided	Knowledge of the training programme Ability to facilitate
	 i) Rapport ii) Techniques iii) Materials preparations iv) Co- facilitation v) Information (Being Informed) 	participant with the attributes of a good facilitator	discovery Question and answer	effectively
1:00-	LUNCH			
SESSION S	SEVEN			
2:00 – 4:30pm	Orthography	To familiarise trainees with the orthographies of their languages and the rules for writing them.	Group work, brainstorming & discussions	Apply knowledge of the orthography in writing their languages.

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
DAY TWO				
8:00 – 8:30am	Registration & Prayer	To take record of attendance	Individually filling in record sheets	Well- documented records of attendance
SESSION	гwo			
8:30:	Knowledge			
10:30am	Frameworks			
SESSION	THREE			
10:30-	BREAK TEA			
11:00am				
11:00- 1:00pm	Terminology Work Tools	To expose trainees to the theories of terminology development	Group work, Guided discussion, & Writing minute paper	Application of knowledge of the theories in coining terms in their languages.
1:00- 2:00pm	LUNCH			
2:00- 5:00pm	Steps in Terminology Development & Stages in Term Use	To expose trainees to the theories of terminology development	Group work	Application of knowledge of the theories in coining terms in their languages.

FACILITATORS GUIDE



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
DAY THRE	E			
8:30am - 8:30am SESSION (8:30- 10:30am	Prayer and registration ONE PEGITOSCA	To seek divine guidance. To empower trainees with the knowledge of the PEGITOSCA criterion so as to enable them to use it to assess terms in Local Language & E when coining and creating	Individual and participatory. Guided discover & discussion, Plenary, Gallery walks	Divine guidance among participants Application of the knowledge of the PEGITOSCA criterion to assess terms in Local Language & E.
10.20		terms.		
10:30-	BREAK TEA			
TT:00am				
3E35IUN			Cuidad	Domonstratis
11:00am	Extrapolation	i o expose	Guiaea	Demonstratio
-1:00pm		trainees to	discovery,	n of the ability
		the different	Group	to describe
		steps that	discussion,	the different

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	
		are followed when coining/ developing terms.	Presentation	steps in term development
1:00- 2:00pm	LUNCH BREAK			
2:00pm – 5:00pm	Session 2: Conceptual Analysis	To expose trainees to knowledge of conceptual analysis in term coinage.	Guided discovery, Group discussion, Think-pair- share, Gallery walks	Application of the knowledge of conceptual analysis in coining terms.
SESSION 1	THREE			
DAY FOUR	!			
8:00am- 8:30am	Prayer and registration	To seek Divine guidance	Individual and participatory	Devine guidance among participants
SESSION	ONE			
8:30 – 10:30am	Standard lexeme formation	To enable participants coin terms in their languages using standard lexeme	Guided discovery Group discussion Gallery walks Use of resource persons. Presentation	Demonstratio n of ability to coin terms in Local Language using standard lexeme formation



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
		_		OUTCOMES
		formation methods.	Illustration	
10:30am - 11:00am	BREAK TEA			
11:00am –1:00pm	Standard lexeme formation	To enable participants coin terms in their languages using standard lexeme formation methods.	Guided discovery Group discussion Gallery walks Use of resource persons. Presentation Illustration	Demonstratio n of ability to coin terms in Local Language using standard lexeme formation
1:00- 2:00pm	LUNCH BREAK			
SESSION 1	THREE			
2:00- 4:30pm	Supplementary Materials: References, Evaluation Forms, Extracts and Language- Specific examples/ tables.	To provide support materials to the facilitators to conduct the training.	Guided discovery Group discussion Gallery walks Presentation Use of resource persons. Illustration	Demonstratio n of ability to coin terms in Local Language using non- standard lexeme formation methods (I).
4:30- 5:00pm	Closure and Dep	parture		

Appendix ii: Programme For Orientation Of Language-Specific Master Trainers

TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES
DAY ONE				
8:00 – 8:30am 8:30 – 9:00am	Registration a) Prayer b) Anthems c) Self-	To take record of attendance I) To seek divine guidance	Individually filling in record sheets Individual and participatory	Well- documented records of attendance Divine guidance, patriotism
	introduction d) Climate setting	 II) To honour the Nation III) To build rapport among participan ts IV) Expectati ons, fears, helping hands, etc. 		and teamwork among participants
	V) Orientationof theFacilitators	VI) Raise facilitators 'awareness	Lecture, demonstration, gallery walks	Readiness to facilitate
9:00 – 9:10am	Remarks from the Manager,	To address participants on the	PowerPoint presentation,	Participants are informed about the



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
	NCDC Literature Bureau	mandates of the Literature Bureau and the Terminology Unit	question and answer.	mandates of the Literature Bureau and the Terminology Unit
9:10 – 9:20am	Remarks from the Deputy Director (RCLS)	To enlighten participants on the position of the Literature Bureau in the structure of NCDC and the Directorate of Research, Library and Consultancy Services	Speech, question and answer.	Participants are aware about the place of the Literature Bureau in the structure of NCDC and the Directorate of Research, Library and Consultancy Services
9:20 – 9:30am	Remarks from the Director NCDC	To address participants on the broad mandates of NCDC	Speech, question and answer.	Participants get abreast with the broad mandates of NCDC

TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES
9:30– 10:30a m	Topic1 Session 1: Orthography	To familiarise trainees with the orthographies of their languages.	Group work, brainstorming & discussions	Apply knowledge of the orthography in writing their languages.
10:30- 11:00a m	BREAK TEA			
11:00a m- 1:00pm	Session 1 continues	To familiarise trainees with the orthographies of their languages	Group work, brainstorming & discussions Plenary	Demonstratio n of spelling rules in their local languages
1:00- 2:00pm		LUNCH BREAK		
2:00- 3:30pm	Session 1 Continues	To familiarise trainees with the orthographie s of their languages	Group work, brainstorming & discussions	Demonstratio n of spelling rules in their local languages
3:30- 4:30pm	Session 1: continues	To familiarise trainees with the orthographies	Group work, brainstorming & discussions	Demonstratio n of spelling rules in their



TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
		of their		local
		languages		languages
DAY TWO	D			
8:00am	Prayer	To seek	Individual and	Divine
-		divine	participatory.	guidance
8:10am		guidance.		among
				participants
8:10-	RECAP	RECAP	RECAP	RECAP
8:30am	- • • ~			
8:30-		Io expose	Group work,	Application of
10:30a	Session 1:	trainees to	Guided	knowledge of
m	Introduction to	the theories	discussion, &	the theories in
	theories of	of	Writing minute	coining terms
	terminology	terminology	paper	in their
	development	development		languages.
		•		
8:30-	Topic 2: Session	lo expose	Group work	Application of
10:30a	1 continues	trainees to		knowledge of
m		the theories		the theories in
		Of		coining terms
		terminology		in their
		development		languages.
11.	Tania 2	BREAK IEA	Creare	Development
11:	TOPIC 3	To enable	Group	Development
1.00 Dres	Session 1: Non-	trainees	aiscussion,	of ability to
1:00Pm	aigital tools	KNOW THE	guiaea	use non-
			uiscovery,	
		tools they	plenary	terminology
		can use to		work tools to

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
		coin terms and be able to evaluate the strengths & weaknesses of the tools.		coin terms in their languages
1:00- 2:00P m	LU	NCH BREAK		
2:00- 4:30pm	Session 2: Digital tools	To acquaint trainees with the digital tools for creating/coin ing terms.	Group work, Demonstration, Simulation, presentation	Acquisition of ability to use the digital tools to coin terms
DAY THR	EE			
8:00am - 8:10am	Prayer	To seek divine guidance.	Individual and participatory.	Divine guidance among participants
8;10- 8:30am	RECAP	RECAP	RECAP	RECAP
8:30- 10:00a m	Session 2 continues	To acquaint trainees with the digital tools for creating/coin ing terms.	Group work, Demonstration, Simulation, presentation	Acquisition of ability to use the digital tools to



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
10:00 - 10:30a m	Topic 4: Session 1: Steps in terminology development	To expose trainees to the different steps that are followed when coining/ developing terms.	Guided discovery, Group discussion, Presentation	Demonstratio n of the ability to describe the different steps in term development
10:30- 11:00a m		BREAK	BREAK	
11:00 -	Topic 4:	To expose	Guided	Demonstrati
11:30a m	Session 1: Steps in terminology development Continues	trainees to the different steps that are followed when coining/ developing terms.	discovery, Group discussion, Presentation	on of the ability to describe the different steps in term development
11:30pm -1:00pm	Session 2: Stages in term use	To furnish trainees with the ability to identify terms and categorise them according to the different	Guided discovery, Group discussion, Presentation, Demonstration	Display of the ability to identify terms in the local languages and categorising them according to

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
		stages of		the stages of
		term use.		term use.
1:00-		LUNCH		
2:00PM				
2:00-	Session 2:	To furnish	Guided	Display of the
2:30pm	Stages in term	trainees with	discovery,	ability to
	use continues	the ability to	Group	identify terms
		identify	discussion,	in the local
		terms and	Presentation,	languages
		categorise	Demonstration	and
		them		categorising
		according to		them
		the different		according to
		stages of		the stages of
		term use.		term
2:30-	Topic 5:	To empower	Guided	Application of
4:30pm	Session 1: The	trainees with	discovery &	the
	PEGITOSCA	the	group	knowledge of
	criterion.	knowledge	discussion,	the
		of the	Plenary,	PEGITOSCA
		PEGITOSCA	Gallery walks	criterion to
		criterion so		assess terms
		as to enable		in Local
		them use it		Language & E.
		to assess		
		terms in		
		Local		
		Language &		
		E when		
		coining and		



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES		
		evaluating terms.				
DAY FOU	DAY FOUR					
8:00am – 8:10am	Prayer	To seek divine guidance.	Individual and participatory.	Divine guidance among participants		
8:10- 8:30am		RECAP				
8:30- 9:30am	Session 1: The PEGITOSCA criterion continues	Continuation	Continuation	Continuation		
9:30- 10:00a m	Session 1: The PEGITOSCA criterion continues	Do	Do	do		
10:00:1 0:30am	Session 2: Conceptual Analysis	To expose trainees to knowledge of conceptual analysis in term coinage.	Guided discovery, Group discussion, Think-pair- share, Gallery walks	Application of the knowledge of conceptual analysis in coining terms.		
10:30- 11:00a m			BREAK			
11:00- 12:00n oon	Session 2: Conceptual analysis	To expose trainees to knowledge	Guided discovery, Group discussion,	Application of the knowledge of		

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
12:00	continues	of conceptual analysis in term coinage.	Think-pair- share, Gallery walks	conceptual analysis in coining terms.
12:00- 1:00pm	Session 3: Expressional extrapolation in Uganda's indigenous languages	To equip participants with the requisite skills to extrapolate Local Language lexeme formation processes to render specialized (English) terms into Local Language.	Brainstorm, Guided discovery, Think–pair- share, Group discussion, Presentations, Gallery walks	Demonstration of capacity to extrapolate Local Language lexeme formation processes to render specialised terms in local languages
LUNCH E	BREAK			
2:00- 5:00Pm	Session 3 Expressional extrapolation continues	Continuation	Continuation	Continuation



TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
	DAY FIVE			
8:00am - 8:10am	Prayer	To seek divine guidance.	Individual and participatory.	Divine guidance among participants.
8:00- 8:30am		RECAP		
8:30- 9:30am	Session 3: Expressional extrapolation continues	To seek divine guidance	Individual and participatory.	Divine guidance among participants.
9:30- 10:30am	Session 4: Rendition of X.illion	To expose trainees to the scientific number formulae for rendering large numeric expressions in Local Language.	Guided discovery Guided discussion, Group work, Presentation Illustration, Gallery walks.	Demonstratio n of knowledge of scientific number formulae to render large numeric expressions in Local Language.
10:30-		BREAK	BREAK	
11:00am	c · ·	–		D
11;00.1	Session 4:	lo expose	Guided	Demonstratio
1:30am	Rendition of X.illion continues	trainees to the scientific	discovery Guided discussion,	n of knowledge of scientific

TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES
		number formulae for rendering large numeric expressions in Local Language.	Group work, Presentation Illustration, Gallery walks	number formulae to render large numeric expressions in Local Language
11:30- 1:00pm	Session 5: Systeme international (SI Prefixes)	To enable trainees assimilate SI prefixes into their languages.	Guided discovery Guided discussion Presentation Gallery works	Acquisition of ability to assimilate SI prefixes into Local Language.
1:00- 2:00pm	LUNCH BREAK			
2:00- 5:00pm	Session 6: Chemical affixation	To enable trainees assimilate chemical affixes into their languages appropriately.	Guided discovery Brainstorm Case study Guided discussion Presentation	Demonstration of ability to appropriately assimilate chemical affixes into Local Language.
	DAY SIX			
8:00- 8:10am	Prayer	To seek Divine guidance	Individual & participatory	Divine guidance among participants



TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES
8:10- 8:30am	RECAP	RECAP		
8:30- 10:30am	Session 7: Biological taxonomies	To train participants to be able to render biological taxonomies into Local Language	Brainstorm Guided discovery Guided discussion Presentation	Ability to appropriately render biological taxonomies
10:30- 11:00am	BREAK			
11:00- 1:00pm	Session 7: Biological taxonomies	To train participants to be able to render biological taxonomies into Local Language.	Brainstorm Guided discovery Guided discussion Presentation	Ability to appropriately render biological taxonomies
1:00- 2:00pm	LUNCH BREAK			
2:00- 4:30Pm	Session 8: Number classifications	To equip participants with the knowledge and skills to articulate number categories in	Guided discovery Guided discussion Illustration Group work Presentation	Demonstratio n of the ability to articulate number categories in Local Language.

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
		Local		
		Language.		
	DAY SEVEN			
8:00am	Prayer	To seek	Individual and	Divine
-		divine	participatory.	guidance
8:10am		guidance.		among
				participants
8:10-		RECAP		
8:30am				
8:30 -	Session 9:	To enable	Brainstorm	Demonstratio
10:30	Anatomical	participants	Guided	n of ability to
am	Structures &	to render	discovery	render
	Directions	anatomical	Guided	anatomical
		structures	discussion	structures
		and	Presentation	and
		directions	Gallery walks	directions
		into Local	Resource	into Local
		Language.	Persons	Language.
10:30-	BREAK			
11:00am				
11:00-	Topic 6	To acquaint	Group	Ability to
12:00n	Session 1:	participants	discussions	explain the
oon	Introduction to	with the	Presentations	concept of
	Methods of	concept of a	Guided	lexeme.
	Term Formation	lexeme.	discovery	
			Think-pair-share	
12:00-	Session 2:	To enable	Guided	Demonstratio
1:00pm	Standard	participants	discovery	n of ability to
	lexeme	to coin terms	Group	coin terms in
	formation	in their	discussion	Local



TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
1:00-	LUNCH BREAK	languages using standard lexeme formation methods.	Gallery walks Use of resource persons. Presentation Illustration	Language using standard lexeme formation.
2:00pm				
2:00- 4:00pm	Session 2: Standard lexeme formation continues	To enable participants coin terms in their languages using standard lexeme formation methods	Guided discovery Group discussion Gallery walks Use of resource persons. Presentation Illustration	Demonstratio n of ability to coin terms in Local Language using standard lexeme formation.
	DAY EIGHT			
8:00- 8:10am	Prayer	To seek Divine guidance	Individually & participatory	Divine guidance among the participants
8:10- 10:30a m	Session 3: Non- standard lexeme formation (I).	To equip participants with the knowledge of how to coin terms in their Local	Guided discovery Group discussion Gallery walks Presentation	Demonstratio n of ability to coin terms in Local Language using non- standard

TIME	ACTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED
				OUTCOMES
10:30- 11:00 am 11:00-	BR Session 4: Non-	Language using non- standard lexeme formation methods (I). EAK TEA	Use of resource persons. Illustration Guided	lexeme formation methods (I). Demonstration
1:00pm	standard lexeme formation (II)	participants with the knowledge of how to coin terms in their Local Language using non- standard lexeme formation methods (II).	discovery Group discussion Gallery walks Presentation Use of resource persons. Illustration	of ability to coin terms in Local Language using non- standard lexeme formation (II).
1:00- 2:00pm	Socion 4: Non	LUNCH BREAK	Guidad	Domonstration
4:00pm	standard lexeme formation (II). Continues	participants with the knowledge of how to coin terms in	discovery Group discussion Gallery walks Presentation	of ability to coin terms in Local Language using non-



TIME	ΑCTIVITY	OBJECTIVES	METHODOLOGY	EXPECTED OUTCOMES
		their Local	Use of resource	standard
		Language	persons.	lexeme
		using non-	Illustration	formation
		standard		
		lexeme		
		formation		
		methods (II).		
	Evaluation of the	training program	mme	
	Day 9: Closing pr	ogramme & dep	arture	



APPENDIX III: ORTHOGRAPHY

N/A = Not Applicable; RR1 = Runyankore-Rukiga

LEBLANGO		a) Gwokko b) Teddo c) Cammo d) kwallo	a-bin-o a-bi-bin-o
рнорарнога		NIA	a) wa-kiri-wa- wach-i ri go.
ATESO		NA	N/A
LUGBARATI		AIA	N/A
RR ₁		a) Kubbaruka b) Kubbashuka c) Kabba d) Akammanya e) Ommundeebere f) Akannaga g) Bonna h) Twenna	a) Ti-tu-ka-mu- reeb-a-ho-ga, b) Ti-tu-ra-gi-mu- handkiik-iir-e c) Tu-ku-nd-a-n-e
LUMASAABA		NA	a)Si-na-ku- muremel-a
LUGANDA		a) Emmamba b) Essomero c) Eddwaliro d) Ettama e) Ettigi f) Ejjembe g) Essonko h) Ejjoba	a) te-tu-a-gi- mu-wandiik- ir-a
Concept description	Sound-letter representatio ns	Systematic doubling of consonant sounds	A combination of a verb and its inflectional categories such as polarity, gender, case, person, number.
ASPECT	a) Phoneme- Grapheme correspondence	b) Gemination	c) Verb complex

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ASPECT	Concept description	LUGANDA	LUMASAABA	RR ₁	LUGBARATI	ATESO	рнорарнога	LEBLANGO
	tense, aspect, mood and voice.							
d) Conjunctive spelling	When words are written in combined forms	a)Gyendi (gye-ndi) b)Emmanga (e-mmanga)	a) Khuulya (khuu-lya) b) Silayi (si-layi)	 b) Ekyokuhanuur aho (ekya- okuhanuuraho) c) Ekinyandaaro 	a) Arojo (aro-jo) b) Okuak (oku-aka)	a)Papaodwe (papa- odwe) b)Totoatitipu	a) Minŋwen (min- ŋwen) b) Nyathidhy	a) Wangtic (wang-tic) b) Wonkom (won-kom)
		c) Engulu (e-ngulu)	c) Bibyowo (bi-byowo)	(ekinyandaaro) d) Ebyenda (ebya-enda) e) Ebyokurya (ebyaokurya)		(toto- atitipu) c) Agolto me (agol- tome)	aŋ (nyathi- dhyaŋ) c) Wonkom (won-kom) d) Waŋchieŋ (Waŋ- chieŋ)	c) Otyat d) (ot-yat)
e) Disjunctive spellings	When words are written as separate forms	a) Gye tuli, b) Wa kisa c) Ba kyejo	 a) khu meeza b) tima tima c) babili babili 	a) Turi gye b) Aha murimo c) Aha meeza	a) Aro jo b) oku aka	 (a) Ecolon g ebu, (b) Toto acelit (c) Ekori ojwiny 	 (a) Wod dhano (son of man) (b) Jafur ndelo (farmer/garden er) 	a) Won kom, b) Ot yat c) ot wele.
f) Apostrophisation	The use of apostrophe	a)N'olwekyo, ab'oluganda, ow'ekitiibwa, ab'ekiika.	a) N'umuundu b) ng'umilile c) ng'eewe.	a) N'ahabw'ekyo, b) Ab'ekitiinisa' c) Ab'owaitu	NA	a) k'ore b) k'icieda	a) amen'ameno b) apar g'achiel c) chal'achala.	a) Megʻa b) wot'Okelo, c) Megʻi d) megʻe.

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LEBLANGO	N/A
DHOPADHOLA	NIA
ATESO	N/A
LUGBARATI	NIA
RR ₁	a) Rya =ndya, b) Rwara = ndwara c) Gyenda= ngyenda
LUMASAABA	a)loma-noma b)rona-ndona c)khola-ngola d)Keenda- ngeenda e)Lya - ndya
LUGANDA	a) okugamba = ŋŋamba b) Okugumba = ŋŋumbye c) Olugendo = ŋŋendo
Concept description	Changes that occur to spellings when sounds change due to environment i.e. morpho- phonological changes
ASPECT	 Orthographical consequences of sound change

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APPENDIX IV: Knowledge Frameworks

Temmerman (2000) observes that apart from Wüster's General Theory of Terminology (GTT), other theories that followed are simply its offshoots. Wüster's GTT concerned itself more with assigning a new term to a new concept that appeared in a language (Cabré, 1999). The theory emphasises clarity and standardisation of terms, which makes it a relevant approach for Ugandan languages today. Nevertheless, Wüster was criticised for being simply prescriptive by only relying on his limited section of technical languages over agreed equivalents about a previously unified concept (Protopopescu, 2013, p. 3).

The first theory that arose out of Wüster's ground-breaking theory is the Extended Theory of Terminology (ETT). Myking (2001, p. 61) cited in Protopopescu (2013) summarises ETT as a theoretical platform characterised by eclecticism. It is a set of epistemological tenets or independent concepts, hence terminology development in this theory depends on belief and truth. In the end, this leads to an idiosyncratic representation of terms in a specific language or field. Those who do not subscribe to some concepts may not be able to coin terms for a specific need. Another tenet depicting this principle is that it is an operational method based on onomasiology. This, in essence, means that the naming of concepts is determined by the needs of those using the language. Hence a term will be coined in a native language if there is a need for it. The theory further posits that there should exist a defined set of problems to be addressed by terminology. It goes without saying that most local languages spoken in Uganda by its natives are terminologically deficient in communicating meaning in modern fields like education, science and technology, and religion. While there is huge interest in indigenous education, especially through translation and transcreation, there is even a bigger need to bridge the gap between the target and source language text vocabularies. This should aim at disambiguation through common formulae.

In relation to the preceding viewpoint, Cabré in Protopopescu (2013, p. 3) observes that some principles of GTT were modified in response to the criticisms of the theory. For instance, in order to validate the objective of international standardisation, it was suggested that terminology development should be considered as part of language planning. This desire necessitated the realignment of terminology as an important aspect of how language is to be used and this observation on terminology development is in tandem with the general operations of local languages in Uganda. Cabré further observes that controlled synonymy is acceptable, that is, terms that represent the same concepts in different contexts should be used to a lesser extent. The use of synonyms in term coinage should be specific to some concepts and where the local language has exhausted the avenues for alternative terms. However, the proponents of the ETT, in their effort to salvage the GTT, did not attend to the blurriness of some of the principles of the theory: for instance, priority of the concept over the designation or naming needed modification, hence the local language terminologist may not be saved from the confusion between concept and its naming. The semiotic conception of designation and linguistic relationships needed to be simplified so as to guide the terminologist in meaningful naming of signs hence making terminology in local language to communicate meaning.

In reaction to the above shortcomings in ETT, another theory was propounded by Gaudin (2003), who considered the study of terms in the linguistic, pragmatic, social and historical contexts in which they appear. He called it the socio-terminology approach. As a reactionary theory, Campo (2012, p. 142 in Brenes, 2019) argued that concepts are not static because theories related to them also change and social and historical variables do affect the concepts during discourse. Besides, specialised fields cannot be defined because nearly each of them involves interdisciplinary knowledge; analysis of terms is done from a linguistic perspective in a social interaction (communication situation); and polysemy and synonymy belong to the nature of language, hence cannot miss in specialised discourse.



Further, terminology cannot overlook its diachronic nature because history, polysemy, synonymy and language are linguistically related. Socioterminologists thus contend that the GTT failed to recognise the cognitive and social functions of terminology. To this end, GTT looked at terms as isolated and independent units, which do not have any relationship with other units of language (Campo, 2012).

Cabré (2003) incisively proposed that terminology needed to be addressed through the communicative theory. This theory makes two key arguments; first that terminology is "a set of needs, and set of practices to resolve these needs in a unified field of knowledge" (Cabré-Castellvi, 2003, p. 182); and, secondly, that terminology operates with terminological units which are multidimensional and which are, simultaneously, units of knowledge, units of language and units of communication. Protopopescu (2013, p. 8) contends that:

The description of these "terminological units" should cover the concept, the term and the situation components. This is what differentiates them from other units of language with the same structural features, i.e. words, and from the units that also express specialised knowledge, i.e. specialised, morphological and phraseological units.

To combine all strands of terminology, Cabré (2003) introduces a model which she calls the 'theory of doors'. The model represents the plural, but not simultaneous, access to the object in a way that directly addresses the central object – the terminological unit, whether starting from the concept, term or situation. According to Brenes' (2019, p. 8) terminology, Cabré's (2003) theory of "the door of entry" aims to

... describe and explain terminological units [and] is conditioned by the adaptation of a theory suitable for its door of entry, i.e. a theory that does not deny the multi-dimensionality of the object. Such an approach allows the description of the real data in all their complexity.

The theory of communication takes into account the complexity and diversity of specialised units in a communication environment. The framework of specialised communication transfers specialised knowledge; it covers, for example, the communication among specialists, between specialists and semi-specialists, and between specialists and learners (Cabré-Castellvi, 2003, p. 152; Sageder, 2010).

Slightly different, but related to socio-terminology and communicative terminology theories, is the socio-cognitive terminology approach, by Rita Temmerman (Faber, 2009; Temmerman, 1998), which emphasises the conceptual organisation and category structure. It is premised on the GTT conceptual system, which focuses on terms as either type of or part of conceptual relations. The socio-terminology theory and the communicative theory converge at the point of the diachronicity of terms, i.e. that terms bear a historical inclination.

Arms and Faber (2009) advanced the cognitive approach to terminology development. This theory argues that the best way to study specialised knowledge units is by studying their behaviour in texts. In local languages this relationship exists between words as they are used, that the knowledge natives have about those words and where they use those words. Arms and Faber (Arms & Pamela, 2009; Faber, 2009) further contend that repetition of terms in the form of nouns, phrases, sentences and paragraphs happens at different parts of the text. This means, to determine the monosemy, polysemy or synonymy of the term, as well as its behaviour in relation to the other units of understanding, requires attention, both linguistically and situationally (Brenes, 2019; 2013). It is at this stage that the concept is brought to the fore of consideration during term development. In reference to the preceding argument, it should be added that this theory counters the principles of monosemy and univocity propounded by the first theory.



The cultural approach to terminology, as propounded by Diki-Kidiri (2008), postulates that it is culture that conditions the way man perceives and conceives the world, and that man is the only one with access to the real world through mentally and culturally conditioned representations (Campo, 2012, p. 160). This preceding tenet leads us to believe that terms in local languages can easily be formed and developed in view of the cultural aspects since language is an embodiment of culture. In this respect, Temmerman (2000, p. 8) agrees with Diki-Kidiri that the creation of neologisms or coining of new words or phrases should take into account domain knowledge (subject field), linguistic knowledge or understanding of aspects of language and cultural knowledge or understanding of different aspects of one's culture in relation to language. The theory, however, stops short of guiding the terminologist on how to navigate through the forest of linguistic units.

Despite the above shortcoming, the cultural theory positions native languages as the best vehicles to employ while developing terms in specialised fields since we perceive and conceive the world using our native tongues or first languages. A native user of a language will represent his understanding of a concept using a term coined in his local language and communicate or express it more easily. Therefore, a terminologist in a Ugandan language should strive to understand the interplay between specific field knowledge where the term under coinage is expected to be used, the aspects of his language and the cultural concordance in respect to many parts of his culture. A terminologist in the local language who is ignorant of the details of his/her culture is incapacitated in coining terms for use in specific fields in his native language.

A more recent attempt by Bourigault and Slodzian (1998/1999) in Brenes (2019) advances the textual approach to terminology. This theory is largely methodological in nature. The textualists argue that the terminologist should first create a corpus of terms from which the terminologist later selects the most suitable to the subject field (Brenes, 2013). The terminologist then studies the texts in the form of words or vocabulary (corpora) to find out how or whether to admit them in the family of terms (terminological acquisition).

After the selection, the terminologist explores the corpora to find relations between the different terminological units, i.e. knowledge, language and communication. Selected terms should also be validated pending acquisition, which process should follow and relations between the candidate terms with the help of subject-field experts and exploration of corpora to detect multilingual equivalents in target languages, and validation of these proposals by experts.

This approach, however, is considered as a shortcut, and may not allow a thorough description of the relationship between concepts and terms, and other linguistic units and their communicative role in a cultural context. The proponents of this approach do not provide guidance on the sequence of steps proposed. However, this approach allows languages which are still at basic development stages, such as indigenous languages in Uganda, to grow their term bases by first making a collection of existing vocabulary in their specific languages, then analysing them to find out how this vocabulary can be reoriented for specialised communication.

To this end, it can be argued and attested that the communicative theory is open enough to accommodate the concepts as well as terminological units in plurality and linguistic units. Its descriptive approach clearly provides for inclusivity in term development. It leads to specialised understanding (Cabré,1999, p.52). To terminologists who are well-intentioned about developing Ugandan languages, adopting a theory that integrates the triangular relations of a concept, a term and the situation in which the term occurs allows them to achieve the end goal of developing a body of terms in specialised fields in local languages in Uganda. Precisely, terminology development in local languages in Uganda should be anchored in the understanding of the different aspects of language.



APPENDIX V: Terminology Work Tools

A terminologist should be armed with a number of tools to use in the process of collecting, extracting, recording, storing and managing term data (Brenes, 2013, pp.1-9). In relation to the development of terminology in Ugandan languages, it is recommended to use the following resources: dictionaries, glossaries, libraries, computer-assisted tools, online search services, documentary data banks, newspapers, religious texts, dictionary software and corpus software.

A local language terminologist will require dictionaries as sources of reference and cross-reference during term search, extraction and collection. It is preferable to have both monolingual and bilingual dictionaries. Besides dictionaries, a terminologist will need to study glossaries and wordlists of terms in the language in question to support the choices made in building semantic relationships across terms. Today's technology is also available to the terminologist with dictionary software. This software may be accessed online or installed on personal devices such as mobile phones and computers to be accessed offline.

Libraries, physical or electronic, can provide term developers with opportunities to verify relationships between the terms (Pavel & Diane, 2001, p. 61). Documentary search tools such as library catalogues, periodicals and bibliographies for specialised fields can be used to obtain information about terms. Documentary data banks are also very useful since they cover several subject fields (ibid., p. 62).

The advent of computers and technology presents an opportunity for terminologists in local languages in Uganda to utilise the online search services through search engines such as Google to search for terms in specialised fields (Brenes, 2013, p.1). Today there are very many electronic databases which term developers can use to extract, build and validate corpora. These include 2lingual (https://2lingual.com/), AntConc (https://www.laurenceanthony.net/software/antconc/), Corpus Analysis (https://corpus-analysis.com/tag/word%20clouds), EuroTermBank
(https://www.eurotermbank.com/) and TshwaneLex (https://tshwanedje.com/terminology/. A more comprehensive list can be found at https://inmyownterms.com/wpcontent/uploads/2022/02/Terminology-Search-Tools-for-IMOT.pdf.

Spell-checkers such as Grammarly (https://grammarly.com) and QuillBot (https://quillbot.com) are word processing packages that help in proofreading of assembled terms. They rely mainly on dictionary records to locate the terms. The terminologist should establish the availability of such packages to assist in terminology work. Electronic publishing tools may also be useful in storing electronic glossaries and vocabularies. Closely related would be the use of terminology data storage software, which can help in the creation and updating of terminology databases in multiple languages (Pavel & Diane, 2001, pp. 79–90).

As local languages advance, terminologists will need to use the multilingual data management systems, for instance, Termbase (Pavel & Diane, 2001, p. 80), which allows the creation of records of terms, their extraction, exchange and updating the term data during the process of terminology development. A local language terminologist will find online user networks and discussion groups manageable across platforms such as WhatsApp, Academia and LinkedIn very handy in collecting and validating terms in a particular field in a local language. Medical terminology developers suggest the use of terminology browsers, terminology editors and terminology servers which provide a variety of options and searches to enable navigation through medical terms (Cimino, 2001, p. 298). In conclusion, each of the aforementioned tools may not independently yield super results, hence there is need to use a combination of tools.



APPENDIX VI: Steps in Terminology Development.

1.1. Steps in terminology formation

Borrowing from the EPA manual (2014, pp. 13–24), the following steps can be followed closely or reviewed to fit in the terminology development work depending on the requirements of the specialised field at hand in the context of a terminology development project.

i) Needs analysis

At this level, terminology developers endeavour to determine why terms are needed. Muwanga (2016) suggests that to analyse the needs, one may as well use the four Ws: what, why, who, and when. This step helps determine the terms needed to satisfy the differing needs like business, scientific, legal, linguistic needs and so on. What is to be communicated needs to be identified to inform the process of terminology development.

ii) Gathering of subject /discipline specific terms/concepts

The terminologist engages in collecting terms that reflect the concepts of interest, scope, purpose and audience identified in needs analysis. The terms can be obtained from: terminology services, published materials such as journals, white papers, technical reports, curriculum materials, textbooks, web pages, strategic plans, research reports etc., and other terminology resources. Manual methods or specialised software may be applied to text parsing and extracting terms when dealing with large corpora. These include TshwaneLex (https://tshwanedje.com/tshwanelex/), AntConc (https://www.laurenceanthony.net/software/antconc/) and other corpus analysis tools (https://corpus-analysis.com/tag/word%20clouds) and ISO

recommended applications found at https://termcoord.eu/terminology-isostandards/.

iii) Term selection

Once terms have been collected, appropriate terms should be selected to represent target concepts. The terminologist includes terms that are important to the audience that occur in the content and those that are unique by avoiding polysemous ones. The above steps (i–ii) together represent development stages of the terms. In many African countries, researchers and the general public operate as users of secondary terms. This means that terms are already existing. At this stage, the terminology team compiles the terms and assigns them to existing concepts.

iv) Standardisation

After identifying the terms and assigning them the concepts they represent, terms are then grouped into their conceptual systems. It is then possible to map out the expressional elements that are peculiar to the discipline, for example, target language affixes needed in creating the terms. The choice of the right tool is critical here. According to EPA (2014) and Cabré (1999, p.10), standardisation is the application of conventions about the style of such a term in the language of use.

v) Stakeholders' identification and consultation

This step guides the terminologist not to place the process of terminology development in a vacuum. Strategic groups which may include native linguists, language teachers, boards of governors, cultural institutions and targeted individual language enthusiasts are important to the process of developing a term. Broadly, the audience and purpose of the term to be developed will impact the subject, geographic or activity of terms collected and further developed to standardisation. Consultation with stakeholders determines the degree of synonymity as well as other relationships to be considered and leads to acceptance of the terms so developed. For large-scale projects, funders or sponsors and other interested partners may impact the resources available and dictate on the needs or governance structures to be considered. This forms the consumer stage of the term development process.



vi) Testing

The process of developing a term is not complete until that term is tested. Terms are validated for PEGITOSCA compliance, i.e. precision, economy, generativity, internationality, transparency, objectivity, systemicity and consistency and acceptability. (Kiingi, 2021; ISO 704, 1987; ISO, 2009) (*also see Section 11 of this handbook on principles of term formation*). Term testing is done to evaluate their effectiveness, acceptability and usability. The target audience serves as the sounding board. The intention is to establish if the target user understands the term and can use it in different contexts. Testing the terms for usability during term development assures and gives direction for the completion of the whole process. Reviewing and testing from early stages help to confirm that the terms selected are in common usage by the user group. It also helps establish the relationships of broader and narrow terms. A terminologist can use index cards or sticky notes containing the terms. In this case, users are asked to sort the cards in the order that makes sense. The user is then allowed to give his/her reason for the order.

vii) Publishing terms

This step may include, but is not limited to, modifying, printing and distributing documents containing the terms developed for both general and specialised use.

APPENDIX VII: Stages in Term Use

Terminology development is a process around the concept, object and intra- and inter-linguistic aspects, which navigates through a number of stages to create the final product called a term. Helge Niska (2002, p. 39) fronts four stages which she sometimes calls levels. She anchors her argument in the assertion that terminology is done by different groups of people at both theoretical and practical levels of language. The coinage of many words into terms happens unconsciously or even informally but intentionally among the indigenous people in Uganda to complete communication in different specific contexts.

When a new phenomenon, idea or discovery is made, within a scientific discipline such as technology, it is classified as being in the *scientific stage*. The understanding here is that science is punctuated by discovery and invention. At this point, various concepts are named for the benefit of the scientific community. Once the subject experts agree to it, it is then communicated or disseminated to non-subject experts. The mode of communication or naming of any discovery or invention is often done in language. So, linguists have a key role to play in bringing out the sense of the new term and find the best way possible, in collaboration with native speakers, to disseminate it. In day-to-day life, a new phenomenon is often given a name in the local language even without making it known to scientists, in the case of a scientific discovery or invention. However, local language terminologists should be aware that at the initial stage the term is still evolving and may attract varying meanings with time. Terms take time to stabilise in their meanings and use. The growing use of terms, especially in specialised fields like health, should be put under serious scrutiny in naming cases like COVID-19. Local language terminology developers should coin new terms in their native languages to get new meanings that mirror new discoveries and theoretical changes taking place in terminology development.

The second stage is called the *educational stage*. This stage is characterised by the use of new terms in universities and other learning institutions and disseminated to the public through mass media. Terminology becomes fixed or stable in specific subject fields of science, art, technology, medicine, religion and so on. It is at this stage that standardisation of the term is done.



For instance, if in English the term 'syllabic consonant' is created in the *scientific/discovery stage* (first stage), at the educational stage it will be included in various texts, manuals, journals and reports and presented to institutions of higher learning to be validated. It will be fixed in the field of language as a candidate term. Once the meaning of the concept it represents is plurally conceived, then it will gain acceptance. The term will be tested for monosemy, univocity or polysemy in the specific field of expertise.

Once the term has passed the educational level, it finds its place in real-life situations. This is referred to as the *application stage* of the terminology discovered in stage one. The terms are applied in the industry or institutions of production and services. At this stage, standardisation may be inconsequential to users since they prefer locally generated or coined terminology because of its nearfamiliarity and contextual closeness. For instance, the term 'syllabic consonant' from the previous stage will now find its niche in the application stage within the writing and publishing industry, where educational materials dealing with the alphabet will be produced using it.

According to Niska (2002), the fourth stage is characterised by either effectiveness or ineffectiveness of the term. It is called the *consumer stage*, where the potency of the term in instruction, medical prescription, institutional or day-to-day discourse may affect the terminologist's ability to communicate. Terminology is highly needed at this stage because different professionals, for instance, translators, interpreters and technical writers, operate at this stage. Therefore, at this stage the terminology developer has to be patient with consumers and admit the disaffection from them to help in further research and standardisation of the terms advanced.

Niska (2002) points out that terminology work is done by people active in related professions, mainly as part-time work. Some are never conscious of terminology activities; for example, journalists may translate terms without being conscious that they are dealing with terminology. In an ideal situation, therefore, terminology should be developed by subject experts, terminologists, native speakers and linguists. The immediate users in a specific field are the key determinants of how far the term will be usefully applied to a specific field.

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Stages	Concept	LUGANDA	LUMASAABA	RR	LUGBARATI	ATESO	DHOPADHOLA	LEBLANGO
)	description							
a) Scientific	When a	a) tekinologia	a)Kamaya	a) Akakookoro	a) Simu/	a) Ekorapsion	a) Silim, two	a)Atipa (Malaria)
stage	new,	(technology)	(technology)	(mask)	Yakani	(Ecamusan	twilo (AIDS)	b)Two
	'unknown'	b) Essimu	b) Bulyaanga	b) Siriimu	(phone)	a)	b) ndijo (skills,	Jonyo/Cilim
	phenomen	(telephone)	(corruption)	(AIDS)	b) Korona	b) Ekorona	expertise)	(HIV/AIDS),
	on	c) telegulafu	c) Sinama	c)Kavunuuzi	c) Initaneti/	(Corona)	c) Lakpapila/	c) Pagikop
	acquires a	(telegraph)	(pistol)	(Dictionary)	serebi/	c) Efirigi	kinde (page)	(Grammar),
	new term	(p) (p	d) Liburo	d)Omwoga	emba	(Fridge)	d) Menyo	d)Apor apong
	in a	bayologia/ka	(dictionary)	(Skill)	simuniri	d) Esanitaisa	e) dikichonare/	(Similie),
	language	nnabiramu	e) Fukhuula	e)Ekimaasho	d) Ondrindria	(sanitizer)	Derowach	e)Lok apong
		(biology)	(research)	(Theme)	/silimu	e) Emocare.	(dictionary)	(Idiom),
			f) Moota		e) Bakitiria		f) omingili/	f) witlok
			(painting)		f) O'bundrel		pesa/dome	(Sentence),
			g) Shibalo		ekuri		(money)	g)Dero di wi kop
			(maths)				g) okondo/	(Dictionary),
			h)Naba/				simo	h)Lok dog
			umuleekeli				h) bolwach	(Statement
			(lecturer/				/sentesi	
			i) teacher)					
b) Educational	The term	a) genetikisi	j) Kamaya	a) Akakookoro	a)Simu	(a) Akomputa	a) Two twilo	a) Atipa
stage	created for	(genetics)	(techology)	(mask)	b)alitrasawu	(computer)	(AIDS)	(Malaria)
	the new,	b) okisijeni	k) bulyaanga	b)Siriimu	ndi	(b) Ebank		
	'unknown'	(oxygen)	l) Liburo	(AIDS)	c) ekisire	(c) Arikoda		

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Stages	Concept description	LUGANDA	LUMASAABA	RR ₁	LUGBARATI	ATESO	DHOPADHOLA	LEBLANGO
	phenomen	c) matimatika/	(dictionary)	c) Kavunuuzi	d) kilo/	(d) Awufa	b) Menyo,	b) Two
	on is now	kannakubala	m) Fukhuula	d)(Dictionary)	mateniti		dwarowach,	Jonyo/Cilim
	used in	(mathematics	(research)	Omwoga	e) komupio		kisoma	(HIV/AIDS)
	academic	<u> </u>	n) Moota	(Skill)	ta		c) ndijo (skills,	c) Pagikop
	space such	(p) (p	(painting)	e)Ekimaasho			expertise)	(Grammar),
	as in	logiki/kanna	o) Shibalo	(Theme)			d) kinde (page)	d) Apor apong
	universities	nsonga	(maths)				e) Derowach	(Similie),
	and other	(logic)	p) Naba/				(dictionary)	e) Lok apong
	institutions		umuleekeli				f) pesa/dome	(Idiom)
	of learning		q) (lecturer/				(money)	f) witlok
			teacher)				g) simo	(Sentence),
							(phone)	g) Dero di wi
							h) bolwach	kop
			<u></u>				i) /sentesi	(Dictionary)
							(sentens)	h) Lok dog
								(Statement)
c) Application	The new	a) yintaneti/mu	r) Kamaya	a) Akakookoro	a) Simu	a) Esimu	a) two twilo	a) Atipa (Malaria)
stage	term	timbagano	(technology)	(Mask)	b) komupiota	b) Ebisiop	(AIDS),	b) Two
	moves	(internet)	s) Bulyaanga	b) Siriimu (AIDS)	c) alitrasawu	c) Airumunet	b) ndijo (skills,	Jonyo/Cilim
	from	b) mobayilo	(corruption)	c) Kavunuuzi	ndi/aci	(will)	expertise)	(HIV/AIDS)
	academic	mane	t) Liburo	(Dictionary)	d) Ekisire/aci	d) Apirianuto	c) Kinde (page)	c) Pagikop
	space to	(mobile	(dictionary)	d) Omwoga	e) Bakitiria	(skills)	d) Derowach	(Grammar)
	real-life,	money)	u) Fukhuula	(Skill)	f) O'bundrel		(dictionary)	d) Apor apong
	everyday		(research)	e) Ekimaasho	ekuri			(Similie)

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LEBLANGO	 e) Lok apong (Idiom) f) witlok (Sentence) g) Dero di wi kop (Dictionary) n) Lok dog (Statement) 	a) Atipa (Malaria) Jonyo/Cilim (HIV/AIDS) c) Pagikop (Grammar), d) Apor apong (Similie) e) Lok apong (Idiom)
рнорарнога	e) pesa/dome/ omingili/ nyir (money) f) simo (phone) g) bolwach h) kisoma	a) Two twilo (AIDS) b) ndijo (skills, expertise) c) Kinde (page) d) kisoma e) Derowach (dictionary) f) pesa (money)
ATESO		a) Esaati b) Isirigin c) Ekooti d) Eirwom (biography) e) Edistrikita
LUGBARATI	g) Initaneti/ h) serebi/ i) emba simuniri	 a) Simu b)komupiota b)alitrasawu ndi d)Ekisire e) Bakitiria f) O'bundrel ekuri g)Initaneti/ serebi/ emba
RR ₁	(Theme)	a) Akakookoro (mask) b) Siriimu (AIDS) c) Kavunuuzi (Dictionary) d) Omwoga (Skill) e) Ekimaasho (Theme)
LUMASAABA	 v) -Moota (painting) w) Shibalo (maths) x) Naba/ umuleekeli (lecturer/ teacher) y) [w]Sirara she liwumule khusimu(Mm oney) 	a) kamaya (technology) b) bulyaanga c) Liburo (dictionary) d) Fukhuula (research) e) Moota (painting) f) Shibalo (maths)
LUGANDA	c) apu/kkozeso (app/applica tion) d) (d)	a) essimu sseereza (smart phone) bili (labtop) c) telefayina (television) d) monita/ olutimbeb baziso
Concept description	situations i.e. mass use.	The new term is applied in different professions but also receives feedback. Its strengths and limitations
Stages		f) Consumer stage

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4GO	ĸ	ntence)	o di wi					
EBLAN	witlo	(Ser) Der	kop				
OLA L	f		б	(
DHOPADH	g) simo	(phone)	h) bolwach	(sentence				
ATESO								
LUGBARATI								
RR								
LUMASAABA	g) Naba/	umuleekeli	(lecturer/	teacher)	[w]Sirara shew	h) w]liwumule	khusimu(M	money)
LUGANDA	(computer	monitor)						
Concept description	are	exposed.						
Stages								



APPENDIX VIII: Principles of Term Formation and Evaluation

Principles of Term Formation

This section presents a general discussion of the principles of term formation. It also provides a more formulaic definition of the term 'term', relating it to PEGITOSCA criteria in term development and testing.

Definition of the term "term"

An expression $W^{"}_{Local Language}$ (a phrase $W^{"}$ in any language Local Language) is a term T_{L} if and only if it represents a concept Θ and fulfils an acceptability function A(P, E, G, I, T, O, S, C)

where A = acceptability, P = precision E = economy G = generativity (or productivity) I = internationality T = transparency O = objectivity S = systematicity C = consistency of the term T_L

In the symbolic paraphrase of the definition [1]

[1] $T_L = [\Theta + W"_{Local Language} + A(P, E, G, I, T, O, S, C)]$ A(P, E, G, I, T, O, S, C) is the PEGITOSCA Criterion².



APPENDIX IX: Exemplification of PEGITOSCA

1) **PRECISION** denotes the exact idea or concept being referred to e.g fire in some of the indigenous languages can be; mac(Leb Acholi), aci (Lugbarati), akim (Ateso). Precision can further be illustrated as in [a] below:

In Luganda:

- [a] i) {force = ekikasi}, { work = omulimu }, {energy= amaanyi}.
 - ii) {mass = obutole}, {weight = obuzito}.

In Dhopadhola:

[a] i) {force = derino}, {work = tich}, {energy = meni}.

ii) {mass = muma}, {weight = peko}.

In Lumasaaba:

[a] i) {force= kumusiindikho}, {work=kumulimo}, {energy =kamaani}.ii){mass=bukali}, {weight = busiro}.

In Runyoro-Rutooro

[a] i) {force=akasindikaine}, {work=omulimo}, {energy =amaani}.ii){mass= amalemerro}, {weight = obulemeezi}.

It should be noted that to attain precision in, for instance, Luganda, the coinages '**ekikasi**' and '**obutole**' are contrived such that '**ekikasi**' is derived from '**okukaka**' (to force) and '**obutole**' from '**ekitole**' (lump).

- 2) ECONOMY is when a term uses fewer characters(word stems, letters, punctuation marks, spaces, numbers, signs, symbols) to denote a concept which would otherwise have many characters e.g "INTERPOL" = which stands for international police passes the criterion of economy.
- 3) GENERATIVITY: refers to the ability of a linguistic item to generate more terms. For instance, there are more than 900 electro-X and about 250 micro-X words, according to Dorian (1978). Therefore, we can say that electro- and micro- are productive combining forms. E.g electronics, electromagnet, microscope, microwaves etc.

- 4) **INTERNATIONALITY** is when a term is relevant and applicable (used) across different cultures. Logical, mathematical, physics and chemical symbols are internationally stipulated. The International Union for Pure and Applied Physics (IUPAP), the International Union for Pure and Applied Chemistry (IUPAC), the International Commission for Botanical Nomenclature (ICBN) and the International Commission for Zoological Nomenclature (ICZN) regulate terminology and standards at the international level.⁴
- 5) **TRANSPARENCY** is when a term is used and is understood by all without ambiguity. Language, nationalism and/or level of education of the prospective terminology users may lead to transparency or opacity of a term as in [4].
 - [4] i) German **Sternkunde** = **Astronomie** "astronomy"
 - ii) Kiswahili elimunyota = astronomia "astronomy"
 - iii) Lumasaaba = **bye tsinyenyeesi**

However, it should be conceded that opacity will only prevail if the German or Kiswahili speaker does not know Classical Greek intimately.⁵ That is, etymologically treated, 'astronomy' originated from the Greek word '*astronomos*', meaning arrangement of stars.

[6] **OBJECTIVITY** is when a term is neutral and unbiased avoiding emotional and a personal connotation. E.g, to marry can be reffered to as yila/beyisa (Lumasaaba), nyom(Leb acholi)

[7] **SYSTEMATICITY** is when terms are organized and structured in a logical and consistent manner.

[8] **CONSISTENCY** is where a particular pattern is followed in different contexts and documents.

[9] **ACCEPTABILITY** is when terms are approved by stakeholders to have met the above enlisted criteria. As a result, the term is widely used in all spheres in the local language.



APPENDIX X: Conceptual Analysis

Matthew (2007), defines a concept as *a mental construct seen as mediating between a word and whatever it denotes*...⁹.

Hence, what the English 'dog' and Kiswahili 'mbwa' have in common is the concept *dog.* According to Kiingi (2021, 2022), conceptual entities may be arranged in ascending order of complexity as follows: quantity, quality, form, proposition, set, number, degree, length, neighbour, direction, ordered object, matter, change, non-change, time, energy, material object, living being, plant, animal, human, perceiver, mental being, non-material object, emotional being, institution, supernatural being. He has also arranged conceptual predicates in ascending order of complexity: change bearer, non-change bearer, reference, dynamic contactor, static contactor, contactee, dynamic causer, static causer, and causee.

The conceptual entities may alternately be arranged vertically from I – XXVII and the conceptual predicates be arranged horizontally from 1 – 9. Furthermore, if y = conceptual entity and F = conceptual predicate, then yF is a conceptual element. What emerges is a table of conceptual elements with 27 periods a, q, ... i, b; and 9 conceptual groups B, Z, R, ..., C, K, E¹⁰.

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APPENDIX XI: CATEGORIES OF ENTITIES

The Periodic Table of Conceptual Elements/predicates

	Quantity	Quality	Form	Proposition	Set	Number	Degree=	psycology		44000	Leligui		
9predi cates E	aE	qE	фΕ	pE	SE	nE	γE			L			
∞×	aK	qK	фK	рК	sK	Яu	γK			1	2		
7 C	aC	qC	фС	bС	sC	nC	۲C			<u> </u>	١		
9 Q	aA	qA	φA	pA	sA	hA	γA			<	£		
<u> -</u> - 2	aT	qT	φT	рТ	sT	nT	γT			Ŀ	5		
4 Z	aN	qN	φN	Nd	sN	Nn	٨N				2		
ю Ч	aR	qR	фR	pR	sR	nR	γR			<u>_</u>	Ľ		
2 Z	aZ	dZ	φZ	pZ	sZ	nZ	γZ			1	2		
B 1	aB	qB	фB	pB	SB	nB	γB			9	Ō		
	ŋ	σ	Ð	d	S	L	>	>	 0	U	ŋ	_	
	loll	=	≡	≥	>	N							

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	Neighbour	Direction	Ordered object	Matter-phy	Change	Non-change	Time	Energy
9predi cates E	jE	dE	оE	шE	сE	КE	tE	еE
∞ ¥	Ϋ́	dK	Уo	шK	cK	kК	tK	eK
7 C	jĊ	dC	oC	mC	CC	kC	tC	eC
9 A	jA	dA	оA	mA	cA	kA	tA	eA
<u>т</u> 5	jŤ	dT	oT	шТ	cT	kΤ	tT	еT
4 Z	Z	dN	No	шN	CN	N	ťN	eN
τ. τ.	 2	dR	SR	mR	R	Ϋ́	Ĥ	eR
2 2	į	dZ	οZ	mZ	cZ	kZ	tZ	eZ
B 1	jB	dB	oB	mВ	cB	kВ	tB	eB
	.—	q	0	Е	υ	-	+	Ð
	×	×	×	XII	XIII	XIX	X	IVX

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	Material object-phy	Living being	Plant	Animal	Human	Perceiver	Mental being	Non- material object	Emotional being	Institution
9predi cates E	Ľ	vE	fE	zE	hE	wE	иE	хЕ	gг	Ë
∞ ⊻	rK	٨٧	fK	zK	hК	wК	uK	ХX	дĸ	Ж
7 C	rC	٧C	fC	zC	hC	wC	nC	×C	പറ	ic
9 8	rA	VA	fA	ZA	hA	WA	NA	XA	gA	Ą
- 2 -	Ŀ	Ļ	Ļ	ZT	hT	wT	uT	Τ×	Ē	E
4 Z	Ž	Ź	P	NZ	Nr	۸N	N	- Z	N	z
~ <u>-</u>	<u>ب</u>	/R	ĥ	ZR	R	wR	JR	Å	R	2
2	rZ	vZ	fZ	ZZ	hZ	wZ	nZ	ZX	gZ	i
B 1	ЪВ	vB	ß	zB	hB	wB	uB	хВ	B	ΪB
	<u> </u>	>	ų	И	-	8	n	×	Ø	
	IIVX	XVIII	XIX	XXzo o	IXX	IIXX	IIIXX	XXIV	XXV	XXVI soci o

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	Supernatura I being	
9predi cates E	bE	Causee
∞ ⊻	ЬК	Static Causer
7 C	bC	Dynamic Causer
9 Q	РА	Contact ee A
<u></u> – 5	bТ	Static Contactor
4 Z	Nd	Dynamic Contactor
к ч	bR	Reference
2 Z	Zq	Non- Change Bearer Z STATIC
B 1	bB	Change Bearer B DIENG
	٩	
	XXVII tran sol.s uper	

The ascending order of complexity of conceptual entities seems to correlate with the puin [5].

- [5] i) a p logic
 - ii) a o mathematics
 - iii) a r physics and chemistry
 - iv) a v biology
 - v) a-f botany
 - vi) a z zoology
 - vii) a g psychology
 - viii) a-i sociology
 - ix) a b "transology" (for lack of an already existing precise term)¹¹



APPENDIX XII: WORD ANALYSES USING CONCEPTUAL ENTITIES

With language at our disposal, we can discuss concepts in any discipline. For example, language as a system can ably help us map Newtonian and Newtonianised reality on the screen of the human mind.¹² Consider the following example:

Absolute/relative (non-)change, i.e. force = mass x acceleration = 0 involves the simple/complex predicates: [B], [BR]; [Z], [ZR]. Dynamic/ static contact, i.e. force₁₂ = force₂₁, involves the complex predicates [NA], [TA]. Dynamic/ static causation, i.e. force = mass x acceleration \neq 0, involves the complex predicates [CE], [KE].

Conceptual analysis/synthesis is formalisable as shown in [6].¹³

```
[6] i) The door opens rB
```

r

[B]

ii) The door is open rZqR

r [ZR] q

iii) The warden finds the key hNrA

h [NA] r

iv) The warden has the key hTrA

h [TA] r

v) The key opens the door $r_1C[r_2B]E$

 $r_1 \quad C[B]E \quad \ r_2$

vi) The warden opens the door $hC[r_2B]E$

h C[B]E r₂

vii) The warden opens the door with the key $hC[r_1C[r_2B]E]E$

h C[C[B]E]E r_2 r_1	
viii) The student is learning the theory	hNxA
h [NA] x	
ix) The student knows the theory	hTxA
h [TA] x	
x) The lecturer is teaching him the theory	h ₁ C[h ₂ NxA]E
h1 C[NA]E h2 x	

Propositions [6 (vii)] and [6 (x)] are paraphrasable as in [7]:

[7] (i) The warden causes the key to cause the door to open.

(ii) The lecturer is causing the student to learn the theory.

If conceptual predicates are juxtaposed with sentence patterns, interesting correspondences become evident, as is shown in [8]:\

[8]	(i)	[Σ]	<u>S</u>	<u>V</u>		
wher	re Σ = B/	Z				
	(ii)	[ΣR]	<u>S</u>	V	<u>C/Ac</u>	<u>II</u>
	(iii) wher	[ΨΑ] e Ψ = N/ T	<u>S</u>	V	<u>0</u>	
	(iv) wher	Φ[Σ]Ε e Φ = C/ K	<u>S</u>	V	<u>0</u>	
	(v)	Φ[ΣR]Ε	<u>S</u>	V	<u>0</u>	<u>C/Adl</u>
	(vi)	Φ[ΨΑ]Ε	<u>S</u>	V	<u>0</u>	<u>0</u>
	(vii)	Φ[Φ[Σ]Ε]Ε	<u>S</u>	<u>V</u>	<u>0</u>	<u>0</u>

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APPENDIX XIII: AFFIXES IN LOCAL LANGUAGES

(a) ja-(jo) – i) agent/doer j)
(a) ja-(jo) – i) agent/doer j) (b) a-(wa-) first
) ja-(jo) – j) agent/doer j)) a-(wa-) first person
ja-(jo) – i) agent/doer j) a-(wa-) first person i-(wi-) –
a-(jo) – i) agent/doer j) a-(wa-) first person -(wi-) – second
ja-(jo) – j) agent/doer j) a-(wa-) first person i-(wi-) – second person
ja-(jo) – j) agent/doer j) person – i-(wi-) – second – person – o-(jo-) –
i ja-(jo) – i) agent/doer j) a-(wa-) first person second person third person
) ja-(jo) – j) agent/doer j) a-(wa-) first person i-(wi-) – second person third person third person
) ja-(jo) – j) agent/doer j) a-(wa-) first person i-(wi-) – second person o-(jo-) – third person nya- adverbial
ja-(jo) – i agent/doer j a-(wa-) first person – i-(wi-) – second person – o-(jo-) – third person nya- adverbial marker
 a) ja-(jo) agent/doer agent/doer a-(wa-) fir person i-(wi-) i-(wi-) i-(wi-) berson adverbial marker
agen agen agen (b) a-(wi bers((c) i-(wi- seco seco (d) o-(jo da third adve mark
a) 'a-' jita -' bodaboda (maleria) 'ai' (ibankinga (ipulaninga)
 (a) 'a-' ajita b) 'e ebodabod ebodabod ebodabod aibaderia aibankinga aibulaning Gender
(a) aji (a)
6
(b
 [a] place reference: i-/e- iMbale,iKampala, b]demonstrative prefix: a-no,a- wo, yu-no,ba-no,u-yo,a-bo, i- sho i-lvo-a-ko.u-kwo.li-no.ka-
An affix that
Prefix

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LEBLANGO		
рнорарнога	g) wod- male/son of female/dau ghter of	 (a) -e (tyend-e) objective/ref lexive marker (b) -o verb infinitive marker (myen-o-) (c) -i- imperative marker (d) -irok- reciprocal marker (myen-irok)
ATESO		a). Tense marker 'kin' aikor- akorakin aiped- apedokin apedokin aikur- akurokin b) Plural; 'a', ekisil ikisila
LUGBARATI		 a) -ka as in acika acika acika acika acika acika b) -a as in werea c) -fi e.g anyafi d) -ko e.g ondiriko e) -le e.g urule f) -pi e.g atapi g) -ri e.g aliari
RR ₁		
LUMASAABA		a) derivational suffixes : -le -short while past -ebwa/-ibwa- -esa/-isa,-causative -ilisa/-elesa -ekha/ikha -lela/-lila -na-reciprical
LUGANDA		Ô
Concept description		An affix that appears at the end of or after a root/stem of a word.
Affixes		b) Suffix

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LEBLANGO																					
рнорарнога	(e) -ere –	reflexive	marker	(myen-ere)	(f) -o	deadjectival	nominal	marker (ber-	п О	goodness;	ler-o =	brightness)									
ATESO	aicorakinet	Ø		c)	Adjectives'	'ak'	- sngl	ibusak	eoja- eojak	eedit -	edisiak			(e)							
LUGBARATI	h) - ru e.g	aliaru	i) - ru e.g.	Candiru	j) -o	k) -ria	I) -lerile	m) - ako	- (u	(ma)tar	g	o) - za	p) - ta	q) –(ma)tara	r) - risi	s) -ni	t) -niri	u) -vuko	v) - yi	
RR																					
ASAABA																					
NDA LUM																					
ot LUGA otion																					
Concerdescrip																					
Affixes																					

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Affixes C	5	c) Circum A	fix th	g	q	q	Ø	G	ĭ	0	g) Infixes A	Ŧ	Ø	Ŧ	0	Z	-
Concept	lescription	vn affix	hat	ppears	oth at the	eginning	ind the	nd of a	oot/stem	of a word.	vn affix	hat	ppears in	he middle	ıfa	oot/stem	
LUGANDA																	
LUMASAABA																	
RR ₁																	
LUGBARATI				Ś													
ATESO																	
DHOPADHOLA		(a) a-X-a	deverbal	adjectival	suffix:	a-bul-a	(roasted); a-	ted-a	(boiled).								
LEBLANGC																	

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APPENDIX XIV: Lexeme Formation Rules

This is a systematic generation of new affixes on the pattern/basis of alreadyexisting ones or the intensified application of already-existing lexeme formation rules. Presumably, all languages subtly tend to meet the subcriterion of economy by developing affixes to form new words. (See appendix XIII).

The formation of the mutative suffix "-en" in [10]:

is an apt illustration of sentence pattern reduction exhibited in [11]:

- [11] (i) $[\Sigma]: < \underline{S} \ \underline{V} >$
 - (ii) $[\underline{\Sigma}]: \leq \underline{S} \underline{V} \underline{C} / \underline{Adl} >$
 - (iii) $[\Psi A] / [\Phi[\Sigma]E]: \langle \underline{S} | \underline{V} | \underline{O} \rangle$
 - (iv) $[\Phi[\Sigma R]E]: \leq \underline{S} \ \underline{V} \ \underline{O} \ \underline{C} / \underline{Adl} >$
 - (v) $[\Phi[\Psi A]E]/[\Phi[\Phi[\Sigma]E]E]/: \langle \underline{S} \ \underline{V} \ \underline{O} \ \underline{O} \rangle$

The most generalised expressional labelling of conceptual predicates in Luganda concurs extrapolatively with [10] and [11], as shown in [12]:

[12](ia) [B]: **okukyuka/ okufuuka**; khushuukha,

(ib)[Z]: **okuba**

Runyoro-Rutooro = okuba

Lumasaaba = khuuba

- (iia) [BR]: okukyukila/okufuukila
 Lumasaaba: khukhebulila
 Runyoro-Rutooro: okuhinduka/okufooka
 - (iib) [Z]: okubeela Acoli = me bedo kamo Lumasaaba= khuuba ... Runyoro-Rutooro= okuba





- (iiia) [NA]: okukuuta-ku/okukwata-ku Lumasaaba= khuwaamba/khunyoola/khutuya Runyoro-Rutooro: okukwata ha.../ (iiib) [TA]: okwekuusa-ku/ okukwata-ku/okufa-ku Runyoro-Rutooro: kukwata-ho/kufaa-ho (iv) $[\Phi[\Pi]E]$: okuleet(el)a, where $[\Pi] = [\Sigma]/[\SigmaR]/[\PsiA]$ Runyoro-Rutooro: $[\Phi[\Pi]E]$: okuleet(er)a, where $[\Pi] = [\Sigma]/[\SigmaR]/[\PsiA]$
 - (v) [Φ[Φ[Π]E]E]: okuleet(el)a okuleet(el)a,
 In Acoli: me kelo pi-{to bring for}
 Lumasaaba=khu-reerera

For the benefit of the reader who may not be familiar with the Luganda labels in [12], the renditions suggested in [13] may prove handy, respectively.

[13] be/exist"	(ia)	[B]: "to change/become"		(ib)	[Z]:		"to
	(iia)	[BR]: "to relatively chang	e/ become	e"(iib)	[ZR]:	"to	be
relative"							
	(iiia)	[NA]: "to contact"	(iiib)	[TA]:	"to	be	in
CO	ntact w	vith"					
	(iv)	[Φ[Π]E]: "to cause"					
	(v)	[Φ[Φ[Π]E]E]: "to cause to	cause"				
[17]	(i) circ	:um•X≡oku•S•buga	oku•R	•abug•a	Ì		
		F•S•bug•a	F•R•	•abug•L	ocal La	angua	age
	(iia) ci (iib) c	rcumlunar≡F₃•ezi•bug•a ircumscribe≡oku• wandi	□omu•ezi iik•abug•a	i• "moo □oku	on" •wand	iik•a	"to
write"							

From the data in [18], we extrapolate the rule in [19]:

[18]	(i) [eki•ntu "it	ki•tt•a kills	abantu] people"	eki•tt•a•bantu "genocide"
Runyo	oro-Rutooro: e	ki.ntu ki.it.a	abantu	eki. it. a. bantu
	(ii) [eki•ntu	ki•banj•a	mpola]eki•ba	nj•a•mpola
	"it	duns	softly"	"soft loan"
Runyor	o-Rutooro:			
(ii) [ek	ki•ntu ki•ban	j•a mpola] eki•bai	nj•a•mpola
	"it	duns	softly"	"soft loan"
	(iii) [omwana	a•ggul•a	enda]	omu•ggul•a•nda
	"child	opens w	vomb"	"first-born"
	(iv) [omwana	a•ggal•a	enda]	omu•ggal•a•nda
	"child	opens	womb"	"last-born"
	(v) [omuntu	a•yagalw•a	abantu]	
omw•ayagalw	∕•a•bantu			
	"He/she	is liked by	the people"	"popular person"
(v) [on	nuntu a•gonz	.eblw•aabantı	u] omu•g	gonz•ebwa
	"He/she	is liked by	the people"	"popular person"
Lu	masaaba: [orr	nundu ukanibw	/a] ['um	anyikhanile']
[19]	[F•S F _{pro} •R•a/ v	va Z] → F•R•a/ v	wa/ (y)e•Z*	
The ex	trapolated par	t of [19] is exer	nplified in [20]	:
[20] letter badlv"	[omwana awa	andiise bubi e	bbaluwa] → "o	child has written the
····)	[ebbaluwa em	npandiike obul	oi] → empandiil	kebubi

"the badly written letter" "the badly-written"

The extrapolation in [22] is supported by data in [21]:



[21]	(i)	[mu•ko li•lomi] → mu•ko•ddomi
		$F_1 \bullet S_1 \qquad li \bullet S_2 \qquad F_1 \bullet S_1 \bullet S_2^+$
		"in-law male" "male in-law"
Lum	asaaba	: paapa.umu.masaala. Umu'masaala we saani.
	(ii)	[nnam•pulil•a li•zib•i] → nnam•pulil•a•zzib•i
		$F_1 \cdot R_1 \cdot a$ $Ii \cdot R_2 L$ $F_1 \cdot R_1 \cdot a \cdot R_2^+$.Local Language
		"hearer hard" "a person who is hard of hearing"
	u.re	ekeeres.a
	(iii)	[omu•wala li•lume] → omu•wala•ddume
		$F_1 \bullet S_1 \qquad li \bullet S_2 \qquad F_1 \bullet S_1 \bullet S_2^+$
		"girl male" "tomboy"
	(iv)	[omu•wala li•yana] → omu•wala•jjana
		$F_1 \bullet S_1 \qquad li \bullet S_2 \qquad F_1 \bullet S_1 \bullet S_2^+$
		"girl young" "well-developed teen-age girl"
	(v)	[oku•sek•a li•buniz•a] → oku•sek•a•bbuniz•a
		$F_1 \bullet R_1 \bullet a$ $Ii \bullet R_2 \bullet a$ $F_1 \bullet R_1 \bullet a \bullet R_2 \bullet a$
	kh	nu-tsekh-a
[22]	$[F_1 \bullet S_1 /$	$(R_1 \cdot Local Language)$ li ·S ₂ / R ₂ ·Local Language] → F ₁ ·C ₁ ·C ⁺ ₂

While the rule in [15] leads to complex lexemes, those in [19] and especially [22] can be invoked to deal with virtually all English combining-form compounds with hardly any palpable apprehension. Let us look at examples of combining-form words in [23]:

[23] (i) $F \cdot tono \rightarrow Z \cdot ttono \equiv micro \cdot X$

Runyoro-Rutooro "ke"

"small"

(i) $F \cdot nene \rightarrow Z \cdot ddene \equiv macro \cdot X$

Runyoro-Rutooro

- (ii) "kooto" "large"
- (iii) $ama \cdot meme \rightarrow Z \cdot mmeme \equiv electro \cdot X^{14}$ "electricity"

- (iv) en•kasi → Z•kkasi ≡ cyber•X"oar"
- (v) $em \cdot baziso \rightarrow Z \cdot bbaziso \equiv computer \cdot X^{15}$

Runyoro-Rutooro

- (i) $em \cdot baziso \rightarrow Z \cdot bbaziso \equiv computer \cdot X^{15}$ "computer"
- (ii) $ama \cdot ka \rightarrow Z \cdot kka \equiv eco \cdot X$

Runyoro-Rutooro

ama.ka

"home"

(iii) oku•tuuka \rightarrow Z•ttuuka \equiv ortho•X

Runyoro-Rutooro:

(iv) oku•hika \rightarrow Z. hika \equiv ortho•X

"to become right"

(v) $en \cdot si \rightarrow Z \cdot ssi \equiv geo \cdot X$

Runyoro-Rutooro

- en•si → Z•nsi ≡ geo•X "earth"
- (vi) $obu\cdotlamu \rightarrow Z \cdot ddamu \equiv bio \cdot X$

Runyoro-Rutooro

obu•omeezi \rightarrow Z•omeer.a \equiv bio•X "life"

- (vii) $F \cdot kise \rightarrow Z \cdot kkise \equiv crypto \cdot X$ "hidden"
- (ix) kyenkana \rightarrow Z•kkyenka \equiv virtual•X

Runyoro-Rutooro

(x) kingana \rightarrow Z• ingana \equiv virtual•X "virtually"



APPENDIX XV: RENDITION OF X.ILLION

.X. LLION		Vingitillion	Novemdecillion	Octodecillion	Septendecillion	Sexdecillion	Quindecillion	Quattuordecillion	Tredecillion	Duodecillion	Undecillion	Decillion	Nonillion	Octillion	Septillion
Concept	description	10 ⁶³	10 ⁶⁰	10 ⁵⁷	10 ⁵⁴	10 ⁵¹	10 ⁴⁸	10 ⁴⁵	10 ⁴²	10 ³⁹	10 ³⁶	10 ³³	10 ³⁰	10 ²⁷	10 ²⁴
LUGANDA															
LUMASAABA															
RR1															
LUGBARATI															
ATESO															
DHOPADHOLA															
LEBL	ANGO														

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X. LLION	Concept	LUGANDA	LUMASAABA	RR1	LUGBARATI	ATESO	DHOPADHOLA	LEBL
	description							ANGO
Sextillion	10 ²¹							
Quintillion	10 ¹⁸							
Quadrillion	10 ¹⁵							
Trillion	10 ¹²							
Billion	10 ⁹							
Million	10 ⁶							
Thousand	10 ³							
Hundred	10 ²							
Ten	101							



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APPENDIX XVI: RENDITION OF SI PREFIXES

Affixes	Concept	LUGANDA	LUMASAABA	RR ₁	LUGBARATI	ATESO	DHOPADHOLA	LEBLANGO
	description							
quecca-	10 ³⁰							
ronna-	10 ²⁷							
yotta-	10 ²⁴							
zetta-	10 ²¹					<u> </u>		
еха-	10 ¹⁸							
peta-	10 ¹⁵							
tera-	10 ¹²			2				
giga-	10 ⁹							
mega-	10 ⁶							
kilo-	10 ³							
hecto-	10 ²							

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APPENDIX	XVII: KENDI	LION OF CH	EMICAL AFFI	E S				
Chemical affixes	Concept description	LUGANDA	LUMASAABA	RR1	LUGBARATI	ATESO	рнорарнога	Ë
aqua-								
aza –								
azido –								
but –								
bromo-								
sec –								
tert-								
catena-								
chloro –								
nitro -								
-ene								
-ate								
y-ne								
-ase						5-		
-ose								
$\mathbf{\Sigma}$								

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APPENDIX XVIII: RENDITION OF ZOOLOGICAL TAXONOMIES

NGO							
LEBLA							
арнога	m = ker						
ИОНО	Kingdo						
ATESO	Akabakaanut		Ateker	Aturi	Atutupeta	Alibunet	Ekale/Ekek
LUGBARATI							
RR1							
LUMASAABA	Nabwami Nalulama Bibikhoomba		Omutuba	Lunyilili	Intsu	Lulwikulilo	Kumuliango
LUGANDA	Obwakabaka Akasolya Essiga	Omutuba	Olunyilili	Ekikulilo	Enju		
Concept description							
Zoological taxonomies	KINGDOM	PHYLUM	CLASS	ORDER	FAMILY	GENUS	SPECIES



ADDENDIX XIX. DENDITION OF THE TAYONOMY OF THE DOG

	LEBLANGO																	
	рнорарнога		Kingdom = ker															
	ATESO		Akabakaanut					Ateker									ŝ	
	LUGBARATI																	
	\mathbf{RR}_{1}																Ê	
IMONOVAI	LUMASAABA		Nabwami	Nalulama	Bibikhoomba		kumutuba	Lunyilili	Lunyilili lwe	asi	Shibiina	namaani	Shibiina	Shibiina she	asi	Lituuli lye	akari	Lituuli
	LUGANDA		Obwakabak	a	Akasolya	Essiga	Omutuba	Olunyilili										
V. KENULL	Concept	description																
AFFENDIA AI	Taxonomy of	the Dog	REGNUM				SUBREGNUM	PHYLLUM	SUB-PHYLLUM		SUPPER	CLASSIS	CLASSIS	SUBCLASSIS		INFRACLASSIS		COHORTUS

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RII LUGBARATI ATESO DHOPADHOL							
LUMASAABA R	Angaaki wa oda	Lituuli lye tsingo	Aasi wa familia	Ifamilia namaani	Familia	Ifamilia ye asi	
Concept LUGANDA description							
my of	ORDO		DO	FAMILIA	T	MILIA	S

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APPENDIX XX: RENDITION OF THE TAXONOMY OF THE HUMAN

LEBLA VGO												
ATESO												
LUGBARATI												
RR1												
LUMASAABA												
LUGANDA												
Concept description												
Taxonomy of the Human	REGNUM	SUBREGNUM	PHYLLUM	SUB-PHYLLUM	SUPERCLASSIS	CLASSIS	SUBCLASSIS	ORDO	SUPERFAMILIA	FAMILIA	GENUS	SPECIES

\checkmark
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X
$\sum_{i=1}^{\infty}$
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APPENDIX XXI: CLASSIFICATION OF NUMBERS

				1				
CLASSIFICATION OF NUMBERS	Concept description	LUGANDA	LUMASAABA	RR1	LUGBARATI	ATESO	рнорарнога	LEBLANGO
NATURAL NUMBERS								
ZERO								
WHOLE NUMBERS								
NEGATIVE WHOLE NUMBERS								
RATIONAL NUMBERS								
IRRATIONAL NUMBERS								
FRACTIONS WITHOUT DOMINATOR 1								
REAL NUMBERS								
IMAGINARY NUMBERS								
COMPLEX NUMBERS								



APPENDIX XXII: ANATOMICAL STRUCTURES

ATESO DHOPADHOLA LEBLANG								
Ri LUGBARATI								
LUMASAABA RF								
LUGANDA								
Concept description								
Taxonomy of the Human	BODY	ORGAN SYSTEM	ORGAN	TISSUE	CELL	ORGANELLE	BIOCHEMICAL	

APPENDIX XXIII: Anatomical Directions

Taxonomy of the Human	ORAL	ADORAL	ABORAL	ANTERIOR	POSTERIOR	DORSAL	VENTRAL	CAUDAL	LATERAL	MEDIAL	PROXIMAL	DISTAL	CEPHALIC	CRANIAL	SUPERIOR	INFERIOR
Concept description																
LUGANDA		4														
LUMASAABA																
RR1																
LUGBARATI																
ATESO																
рнорарнога																
LEBLANGO																



APPENDIX XXIV: Methods of Term Formation

Terms are items of designation 'characterised' by special reference within a discipline', and the totality of terms of a discipline form its *terminology* (Sager, 1990, p. 19). The purpose is often to facilitate communication of specialised knowledge units or knowledge structures that were either previously non-existent in the conceptual universe of speakers of a certain language, or unattested in a form considered adequate for new demands of communication (Antia, 2000, p. 33).

Although terminology resources are meant for various target audiences (e.g. in teaching and learning, mass media, translation, authoring, and so on) with different needs (Arntz, Picht, & Schmitz, 2014, p. 298), terminology development in language planning contexts of the developing world is fundamentally linked to the management of knowledge growth or change. It therefore requires attention to knowledge structure. There are many methods of terminology development and these methods may vary from one language to another (Sager, 1997; Picht, 1985; Kiingi, 2023; Terminology Coordination Unit, 2023).

Several term formation methods such as compounding, blending, abbreviations, acronyms, clipping, initialisation, derivation, eponyms, semantic expansion, borrowing, back-formation, and circumlocution have been discussed under six clear-cut categorial processes, including: composition, morphophonemic change, semantic change, neologism and borrowing, functional change, and miscellaneous.

1.1.1. Blending

Blending is the complex cutting involving the removal of multiple parts from multiple words and joining the remaining fragments or morphemes into a single term to describe a new invention or phenomenon that combines the definitions or traits of two separate existing words. Simple blending of the beginning of one word with the end of another produced the following terms:

- a) boffle (from box baffle)
- b) thermistor (from thermal resistor)
- c) electret (from electricity + magnet)
- d) wavicle (from wave + particle)
- e) varactor (from varying reactor)
- f) camcorder (camera + recorder)
- g) Microsoft (from microprocessor + software)

Other simple blends were formed from the beginning of the first word and the entire second word, as indicated in the following examples:

- a) contrails (from condensation trails)
- b) permafrost (from permanent frost)
- c) vocoder (from voice coder)

Overlap blending, in which the antecedent words have common phonemes at the point of juncture, can also be represented in the following scientific terms:

- a) transistor (from transfer resistor)
- b) positron and negatron (from positive and negative electron)
- c) dynamoter (from dynamo + motor)
- d) brunch (from breakfast + lunch)
- e) motorcade (from motor + cavalcade)

Word blends therefore result in change in spelling and can also be created by joining a full word with a splinter of another word. Blending and new blends are inevitable in African indigenous languages, considering the need to articulate science and other specialised fields. Thus, new word blends are being created all the time as cultural and technological trends emerge, and this has not excluded our native languages. Some of the Luganda words that have been formed by blending words in catch phrases include:

- a) Ssembuule (blended from personal names from Ssembuya + Bbuule)
- b) Kase (blended from personal names Kato + Ssekandi)
- c) Runyakitara (blended from names of languages Runyankore-Rukiga-Runyoro-Rutooro)
- d) Lusoganda (blended from names of languages Luganda and Lusoga)



1.1.2. Acronymisation

Acronymy and initialisation both pertain to the creation of new lexical units from the initial letters of a phrase, but here the term acronymy is reserved for letter groups or syllables that are pronounced as words rather than as groups of initials. Examples of scientific English acronyms include the following:

- a) laser (from light amplification by stimulated emission of radiation)
- b) maser (from microwave amplification by stimulated emission of radiation)
- c) elsie (from electronic letter sorting and indicating equipment)
- d) hermes (from heavy element radioactive material electromagnetic separator)
- e) zeta (from zero energy thermonuclear apparatus)
- f) RADHARD (from Radiation Hardness)
- g) NOMAD (from Neutrino Oscillation Magnetic Director
- h) LEAR (from Low Energy Antiproton Ring)
- i) HEP (from High Energy Physics)

It should be further emphasised that, acronymy at times uses syllables, and they can also be a mixture of syllables and can be pronounced as words (see (j)-(n)) or as individual letters (see (o) - (q)) below:

- a) Benelux (short for Belgium, the Netherlands and Luxembourg)
- b) MIDAS (Missile Defence Alarm System).
- c) UNESCO (United Nations Educational, Scientific and Cultural Organization)
- d) NASA (National Aeronautics and Space Administration)
- e) NATO (North Atlantic Treaty Organization)
- f) ATM (Automatic Teller Machine)
- g) FBI (Federal Bureau of Investigation)
- h) GMA (Global Media Arts)

It should be noted that, when an acronym takes a full transition to an English term, then it is rarely capitalised as in ((a) and (b)). As a method of term creation, acronymisation has also been witnessed in some Ugandan native languages, especially in relation to names of political parties and associations, to mention but a few:

- a) GUZU (Gula Uganda Zimba Uganda) (proper name of an association agitating for local consumption)
- b) BABA (Bazzukulu ba Lwomwa) (proper name of an association uniting Sheep clanmates)
- c) KY (Kabaka Yekka)
- d) BABU (Bataka Bbu) (name of Baganda association of the past)

1.2. Morphophonemic change

Morphophonemic processes alter form but not meaning or function class. Morphophonemic changes are evidenced by the various clipping processes by which a new term is formed from a shortened original longer term, often reducing it to one syllable. Many examples of such formations are informal.

According to Dubic (1997), clipped forms come about as a result of either front clipping (fore-clipping), back-clipping (hind-clipping) or middle clipping (mid-clipping). Combined clipping (front-clipping and back-clipping) does also occur although rarely.

1.2.1. Front-clipping (fore-clipping)

Two possible examples of front-clipping were found: holder and crop, which Collocott (1971) indicates are short forms of lamp-holder and outcrop. Webster's *Third Dictionary* lists outcrop as one of the definitions of crop, but for holder, it only says "a device... in which something is held". Examples of front-clipped words include the following ((a)-(c)):

- a) university = varsity
- b) internet = net
- c) telephone = phone



1.2.2. Back-clipping (hind-clipping)

The English terms formed by back-clipping include the examples (d) – (j):

- a) amp (from ampere)
- b) strobe (from stroboscope)
- c) dis (from discontinuity)
- d) pot (from potentiometer)
- e) math (from mathematics)
- f) photo (from photograph)
- g) lab (from laboratory)

1.2.3. Middle-clipping (combined clipping)

Front-clipping, the opposite of back-clipping, and double-clipping, which is the combination of the two, are significant term formation processes. However, middle-clipping works by shortening a word through the removal of a group of phonemes from the middle. Examples include *muon* derived from "mu-meson" and *pion* derived from "pi-meson". Today, 'muon' and 'pion' have become new words used in physics (Soudek, 2007, p. 103). In health, the word "flu" has been shortened from "influenza". The fact is that middle-clipping has been proven to be more productive than both front-clipping and double-clipping. These processes therefore deserve further investigation in relation to their applicability to African indigenous languages.

In Luganda, this method of word formation has been so popular in the proper personal names and also in toponyms but can also be identified elsewhere. Examples of clipped forms in Luganda include (n) - (t):

- a) Buddukiro = Buddu (the name of a county in Buganda)
- b) Zaamufuula = Zaamu
- c) Basajjamivule = Mivule
- d) Zirabamuzaale = Ziraba
- e) Nantongo = Ntongo
- f) Najjalwambi = Najja
- g) Ssekkadde = Sseeka

1.3. Semantic change formation processes

The processes of semantic change alter meaning but not form or function class. Semantic change was by far the most productive of the categories, and the most common type of semantic change was the widening of the meanings of established words.

1.3.1.Adoption

Meaning widening can be effected by simple adoption, which alters the use of a word by giving it a new specific meaning but one still within its established general meaning. An example is the adoption of the general term 'accumulator' into the jargon of electrical engineering to refer specifically to a device for accumulating electricity, a storage battery.

1.3.2. Semantic expansion

A more radical process is expansion of meaning, by which a new denotation, with perhaps little or no relation to previous denotations, is given to an established word. Caso (1980) observes that "[n]uclear physicists expanded the meaning of dollar to designate a certain quantity of atomic reactivity. This quantity was then divided into 100 parts called cents."

The semantic extension of words already available in the language is a powerful source of qualitative development of the vocabulary despite the fact that it does not necessarily add to its numerical growth. It is only the split of polysemy that results in the appearance of new vocabulary units, thus increasing the number of words. In semantic extension, archaic or obsolete words may be resurrected in the language or dialect in order to accommodate the burden of new technical meanings. "A great number of new meanings develop in simple words which belong to different spheres of human activity" (Semantic extension, 2023). These new meanings appear mostly in everyday general vocabulary, for example:

- a) beehive = 'a woman's hairstyle'
- b) lungs = 'breathing spaces', such as small parks placed in congested areas
- c) bird = 'any flying craft'





- d) vegetable = 'a lifeless, inert person'
- e) clean (slang) = 'free from the use of narcotic drugs
- f) uncap (slang) = to disclose.

There is a strong tendency for specialised terms to develop non-specialised meanings, for example, the technical term "feedback" developed a purely non-technical meaning: 'a reciprocal effect of one person or thing upon another'. It is important to note that many new meanings are stylistically and emotively non-neutral and marked as colloquial and slang, for example:

- a) juice (US sl.) 'position, power, influence, favourable standing'
- b) bread (sl.) 'money, food'
- c) straight (sl.) 'not deviating from the norm in politics, habits; conventional, orthodox'

Scientific and technical terminological meanings appear as a result of specialisation as in *read* (genetic) - 'to decode'; *messenger* - 'a chemical substance which carries or transmits genetic information'. New terminological meanings also appear as a result of expansion of the sphere of application, that is to say, when terms of one branch of science develop new meanings and pass over to other branches.

It is worth noting that new meanings appear not only as a result of semantic development of words but also as a result of semantic development of affixes, for example the prefix 'anti-' developed two new meanings: 1) 'belonging to the hypothetical world consisting of the counterpart of ordinary matter' such as anti-matter, anti-nucleus etc.; 2) 'that which rejects or reverses the traditional characteristics', for example anti-electron, anti-novel etc.; the prefix 'non-' also developed a new meaning 'sham, pseudo', for example non-actor, non-book etc.

In a nutshell, the semantic development of words already available in the language is the main source of the qualitative growth of the vocabulary, though it does not essentially change the vocabulary quantitatively.

In Luganda we have a number of words which have undergone semantic extension:

- a) **Okubala** = to count (original meaning); to think hard; to plan (extended meanings)
- b) **Okutema** = to cut (original meaning); to go; to give (extended meaning)
- c) Okulya = to eat (original meaning); to get a position of influence (extended meaning)
- d) **Omusaayi** = blood (original meaning); money (extended meaning)
- e) **Caayi** = tea (original meaning); bribe (extended meaning)

1.3.3.Metaphor

Another common variety of widening is metaphorical use, which lies between adoption and expansion in the degree of semantic change made. The following metaphorical example expression from plasm physics can be illustrated: = doughnut (to refer to a doughnut-shaped apparatus).

1.3.4. Eponymy

Somewhat similar to expansion is the process of eponymy, which widens a proper name into a common noun. Etymologically, the word 'eponym' came into use around 1833 and comes from the Greek word 'eponymos', structurally broken into 'epi', meaning 'after/upon', and 'onyma', meaning 'name'. Simply put together, it is: 'name after'. The English language, like other languages of the universe, has a large number of eponyms. An eponym is a person or a thing, whether real or fictional, after whom or which a specific discovery, place or era is believed to be named. Thus, the person becomes the 'eponym' of that thing. Eponymous words/terms cover a wide range of subject fields, for instance, astronomy and zoology, geographical exploration and physics. It should be noted that the name-giving part of the term is mostly capitalised in the English language while the common noun part is not capitalised.



In physics, particularly, eponymy is a more favourite process, where the practice of naming units of measure after distinguished scientists has become popular. It has given us several examples:

ampere, coulomb, curie, fermi, gilbert, henry, hertz, newton, ohm, rutherford, watt etc.

When the eponym is too lengthy for convenience, eponymy is often employed in conjunction with back-clipping. Joint products of eponymy and backclipping include:

- a) torr from Torricelli
- b) gal from Galileo
- c) farad from Faraday
- d) volt from Volta

Six types of eponyms can be identified:

- i) Simple eponyms in which a proper noun has been fully adopted and become the common noun of something else such as 'Atlas' (now used as a common term for a book of maps).
- ii) Compounds and attributive eponyms; these eponyms combine names and attributes such as 'The Loganberry' (named after the United States lawyer, James Logan).
- iii) Possessive eponyms, which are written in the possessive style and attribute ownership of their namesake, such as 'Newton's laws' of physics (named after the physicist, Sir Isaac Newton).
- iv) Suffix-based derivative eponyms, which are eponyms in which the name of the person is combined with a suffix to make a new word, for example, 'Mesmerism' (is named after a German physician, Franz Mesmer).
- v) Clipped eponyms, which are the eponyms where the names have been shortened or adapted, for instance, a 'gal' is the name of a unit of measurement of acceleration shortened from the name of the scientist Galileo Galilei.

vi) Blended eponyms, which refer to eponyms in which two words are blended together to make a new one, as in the term 'Reagonomics', a combination of the name 'Reagan' and the word 'economics', and refers to the policies of ex-US President Ronald Reagan.

The potentiality of indigenising these eponyms in Ugandan indigenous languages such as Luganda is indisputable, as illustrated in the following examples (g)– (i):

- a) The Napoleonic Code
- = Amateeka ga Napoleon
- b) Newton's Laws of Motion
- Amateeka ga Newton ag'Okwejjulula
 Etteeka lya Akimedizi
- c) Archimedes' Principle
- d) **Omukaabya** (a period of suffering named after Kabaka Muteesa)
- e) **Omuteesa** (a period of dialogue named after Kabaka Muteesa)
- f) Ow'e Ddambwe (deaf) (Named after Kabaka Kiggala)

Observing from (a) – (f) above shows that eponyms can be found throughout pop cultures when names or titles of famous folks such as kings become names of things they have invented, coined, or popularised. Thus, some eponyms can be identified in Luganda and most probably in other Ugandan languages.

1.3.5. Induction antonomasia

Widening by inductive antonomasia (Logan, 1989; Caso, 1980), by which a specific term becomes generic, occasionally converts a trade name into a common noun. A good example is the use of 'aspirin', which has become synonymous with 'painkiller' (UsingEnglish.com, 2023). Further examples are aqualung, fathometer, and gramophone, all of which were previously trade names but are now used to refer to the respective kinds of device, regardless of its manufacturer.

1.4. Neologising and borrowing

The fifth category encompasses processes that introduce new words that were never existent in the language or with no antecedents in the target language.



1.4.1. Neologism

There are genuine root creations in neologisms that spring full grown from the minds of their creators with no prior history. Neologisms are rare; for example, onomatopoetic zoop, a name for a kind of noise sometimes produced by electronic audio equipment. In Luganda, there are many neologisms in general vocabulary, and this is an indicator of the potentiality of term creation using neologisms. Some Luganda neologisms include the following:

- a) ebicupuli (fake money etc.)
- b) ekiwaani (also means fake)

1.4.2. Borrowing

Borrowing "... is the process by which a word from one language is adapted for use in another" (Nordquist, 2023). Borrowing from foreign languages is proving to be the second largest contributor to the specialised term formation, being surpassed only by widening of meaning. The traditional sources of Latin and Greek have been by far outnumbered by borrowings from modern French and German. Physicists and earth scientists apparently prefer commandeering terms from their European colleagues to resorting to the ancients. Geologists, mineralogists and meteorologists also seem happy to accept terms for substances and phenomena from the languages of the locales where they commonly occur and, as a result, the list of terms from the earth sciences donated from different languages include:

- a) breccia (from Italian)
- b) banket (from Afrikaans)
- c) burin (from Russian)
- d) caldera (from Spanish)
- e) carbonado (from Portuguese)
- f) nunatak (from Eskimo)
- g) Swedish (from skarn)
- h) polje (from Serbo-Croatian).

The English language has been described by David Crystal (2008) as an 'insatiable borrower' for all fields, both specialised and general (Nordquist, 2023). More than 120 other languages have served as sources for the contemporary vocabulary of English. Today only about five per cent of new English words are taken from other languages. They are especially prevalent in the names of foods such as focaccia, salsa, vindaloo, ramen etc. Present-day English is also a major donor language – the leading source of borrowing for many other languages (Crystal, 2008). We borrow cultural words or phrases to express technological, social or cultural innovations. As Semuwemba (2009) puts it, "one language may possess words for which there are no equivalents in the other language." Nordquist (2023) observes that "there may be words for objects, social, political, and cultural institutions and events or abstract concepts which are not found in the culture of the other language." In Luganda, Semuwemba (2009) observes, "many specialised terms have been adopted and adapted from different foreign languages such as English, Arabic, and so on and the orthography has been indigenised":

a) hydrogen = ayidolojeni
b) carbon dioxide = kaboni-birokisayidi
c) acid = asidi
d) science = sayansi
e) technology = tekinologia
f) oxygen = okisijeeni

When adopting and adapting the chemical names of nitrate, nitrite or oxides, identify the phonological patterns and affixes and decide how to adopt and adapt them in the target language.

1.5. Functional change

This term formation process considers only terminological changes in regard to the functional class, such as noun from adjective or noun from verb, as instances of functional change. Generally, there are only a few cases of functional change, as indicated below:

- a) **Fuse** *n*. 'electrical circuit breaker' from **fuse** *v*.
- b) **Overcast** *n*. 'a covering, especially of clouds' from **overcast** *v*.
- c) Scram n. emergency shutting down of a nuclear reactor' from scram v
- *d)* **Butter** v 'to butter the bread' from butter n.



1.6. Miscellaneous

There are few processes that cannot adequately be classified into any of the above terminological processes. They include folk etymologization, loan translation, anagramming, backformation, concatenation, and circumlocution.

1.6.1. Etymologising

The effect of folk etymologising was stated or implied by Webster's dictionary (Merriam Webster Dictionary, 2023) in the etymologies of felspar, carstone, and carnelian. Felspar is listed as an alteration of feldspar, "influenced by Gfels rock". Carstone is derived "by folk etymology fr. quernstone". Carnelian is entered as an alteration of cornelian, "prob. influenced by Local Language carn-, caro flesh... fr. its flesh-red colour".

1.6.2. Loan translation

Literal translation into English, or loan translation, is sometimes resorted to. Examples are 'after-image', from German '*nachbild*', and 'potstone', from New Latin '*lapis ollaris*'. Partial loan translation results when one of the elements in a foreign compound is translated and the other is borrowed, as in 'eigenvalue', from German '*eigenwert*'. Partial loan translation has been classified as borrowing, but complete loan translation as miscellaneous because, although the latter involves borrowing, it does not introduce any new morphemes.

1.6.3. Anagramming

The only citable anagrams here are those derived through backwards spellings. Some electrical terms, such as 'ohm' and 'farad', are derived from proper names, and refer to dimensions common in electrical calculations. Their reciprocal values are also quite common, and the reciprocal units have been named as in (a) – (c), thus the reverse spelling being seen as analogous to the taking of a mathematical reciprocal.

- a) ohm (the unit of resistance) = mho
- b) farad (the unit of capacitance)= daraf
- c) henry (the unit of inductance) = yrneh

1.6.4. Concatenation

Concatenation refers to a compositional process that joins word elements in ways which seem to break etymological conventions or which are too complex to classify otherwise. Examples are hydrocalumite (from hydro- + c- (from calcium) + alum- (from aluminium) + -ite, kalsilite (from kalium, aluminium, and silicon, with the suffix -ite) and estiatron, which seems to be a distillate of electrostatic + -tron. Hyper- on is probably from hyper- + -on, but these elements seem to be identified as prefix and suffix, respectively, making the word an unorthodox merger of affixes with no intervening stem or base. The same is true of peritron, apparently formed from the prefix peri- and the suffix -tron. Possibly -tron has now become a terminal combining form, and hyper- an initial combining form or a free form.

Appendix I: Post Training Evaluation Form for participants

Kindly tick one option only.

About the training.	Strongly Agree	Agree	Strongly Disagree	Disagree
Adequate time was provided for activities.				
The training area(s) mentioned in the session outcome(s) was(were) adequately covered during the training.				
The training schedule was followed.				
The training was productive.				
	Please, w	r <mark>ite your</mark> a	nswer in th	e space.
What did you like about the training?				
What did you not like about the training?				
What do you think should be improved about the training?				



About the training venue (kindly tick one option only)

Particulars	Excellent	Good	Average	Poor
The training venue is				
hygienic and safe				
The training venue is good				
in terms of space, lighting				
and seating arrangement.				

About training resources (kindly tick one option only)

Were you briefed about the training in advance?	Yes	No
Were you provided with relevant materials for the		
training?		

Briefly comment on the welfare during the training

		•••••••••••••••••••••••	***	•••••
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Kindly tick one option only

	Excellent	Good	Average	Poor
How would you rate this				
training overall?				

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