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Scaffolding of Wikipedia translation for technology-enhanced language learning

Abstract

This paper reports on the findings from training on language learning of pre service language student teachers on the translation of English Wikipedia articles into Oshikwanyama and Oshindonga. The interpretative framework of scaffolding was used to conduct the training. The study involved a group of 24 pre-service language student and teachers from a university in Namibia. Data was generated through the observation of the Wikipedia translation intervention referred to above. An open-ended questionnaire that served as a tool for reflection on the translation was also used. The participants made use of several mediating technological tools (computers, internet, the Wikipedia website, and online dictionaries) as well as language books and dictionaries

to translate articles on the Wikipedia website from English, the students' second language, into Oshikwanyama/Oshindonga, their home languages. The findings suggest that Wikipedia is a good resource for helping student teachers integrate the use of technology into their language learning in the first-language classroom. It also offers student teachers a chance to develop strategies that scaffold learning in a structured way, using both technological and language-mediating tools that are accessible and convenient to use.

Keywords: Wikipedia translation, scaffolding, technology-enhanced language learning, Oshikwanyama, Oshindonga.

1. Introduction

This paper reports on a translation training workshop designed to introduce pre-service language student teachers to Wikipedia editing tools used for the translation of English content into Oshikwanyama and Oshindonga. The student teachers used scaffolding of schemes and techniques for translation, collective action and activities. The purpose of the training was to familiarise the student teachers with the Wikipedia website and the editing tools which they would use not only to translate, but also to offer peer-to-peer support for interactive communication. The techniques used were integrated into the scaffolding process (Carstens, 2016; Walqui, 2006; Van Lier, 2004) whereby the more knowledgeable participants (the research coordinator/ workshop facilitator) support the learning process of the less knowledgeable (the research participants).

According to Warschauer and Grimes (2007), Web 2.0 communication tools such as Wikipedia provide opportunities for communication through audience authorship and the use of online artefacts, which then allow the publication of content in ways that are creative and collaborative (Thomas, 2017). Therefore, this study made use of the Wikipedia platform to explore a series of translation tasks with pre-service language education students at a university in Namibia. These student pre-service teachers were speakers of Oshindonga and Oshikwanyama as first languages and English as a second language. In addition, they were in their fourth year of training as teachers of English as a second language and Oshikwanyama/Oshindonga as first languages in the Senior Primary Phase (grades 4-7). Translation is a component in their Oshindonga/Oshikwanyama First Language national syllabi for grade 4-7, a skill that ought to be imparted to learners and is thus, also included in their BEd. Honours programme for Language Education. The use of the Wikipedia website for translation was therefore expected to involve students (through translation) in the use of “authentic online materials that contain high amounts of ‘flavourful’ language, e.g. collocations, idioms, and humour” (ibid.). This, in turn, could help to enhance the students’ real-time conversations and provide timely face-to-face feedback opportunities. In other words, Wikipedia translation could serve as a potential tool for conducting an online collaborative writing task that facilitates the use of technology in the language classroom.

Teachers of African languages need to be strategic in developing classroom tasks that enhance the use of language in bilingual environments while preserving their own mother tongues as well as developing them further in a digitalized world. According to Simasiku, Kasanda and Smit (2015:9), the students’ mother tongue should be used as a pathway and a resource towards learning the target language (in this context this refers to the participants’ first language) and this should be done in a way that gives students a chance to appreciate and refine their own language.

The central aim of this translation exercise was to use the Wikipedia website as an artefact that emulates the (pen and paper) translation task that takes place in a traditional language classroom. The Wikipedia translation process utilised Wikipedia

as a digital tool for translations from English into Oshikwanyama and Oshindonga through a series of scaffolding techniques. According to Drijvers et al. (2010:214), when technological artefacts are used for specific types of tasks, technical knowledge about the artefact and domain-specific knowledge (language knowledge) must be intertwined. This further means that the Wikipedia translation tasks conducted in this study may not necessarily be part of all language classrooms but might be reserved for language practice necessarily aimed at transforming the language classroom. Therefore, this study attempted to answer the following research questions:

1. How were scaffolding techniques used to mediate language translation and learning during the Wikipedia translation workshop?
2. How did the use of scaffolding techniques influence the students' expressed views of Wikipedia translation in the language classroom?
3. How does participating in a Wikipedia translation mediate the language learning and communication of the student teachers?

2. The role of scaffolding in the language classroom

The role of scaffolding has been highlighted in research on language teaching (Carstens, 2016; Walqui, 2006), especially in studies that deal with second language (L2) approaches that accommodate first language (L1) use in the classroom (Cummins, 2007). Donato (1994:39) noted that “scaffolding is a concept that derives from cognitive psychology and L1 research”. Scaffolding sees language as the main vehicle of thought used to initiate a dialogue or social interaction in a learning situation that is co-constructed through the process of apprenticeship and internalisation (Carstens, 2016:3). In scaffolding, a more knowledgeable participant can create – by means of interaction – the conditions in which a novice participant can extend his or her existing skills and knowledge to another level of competence (Donato, 1994:40). The knowledgeable participant can be a teacher or a peer who gradually scaffolds learning and shifts responsibility to the student or other peers. Collins, Brown and Newman (1989:454) defined scaffolding as “a kind of collaborative problem-solving effort made by teachers and students in which the express intention is for the students to assume as much of the task on his own as possible, as soon as possible”. Scaffolding incorporates the controlling features of the task, such as discovery and joint-construction learning, learning by facilitation, peer-to-peer support, resourcefulness, and modelling. These features are set above the capability of the students and directed by a more capable person to enable the student to complete the task within the limits of their skills. Figure 1 below illustrates Van Lier's (2004:158) model of scaffolding. This model was also instrumental to Van der Merwe's (2020:4) proposed model of using scaffolding process for home language learning, especially when using wikis, in a technology-enabled environment.

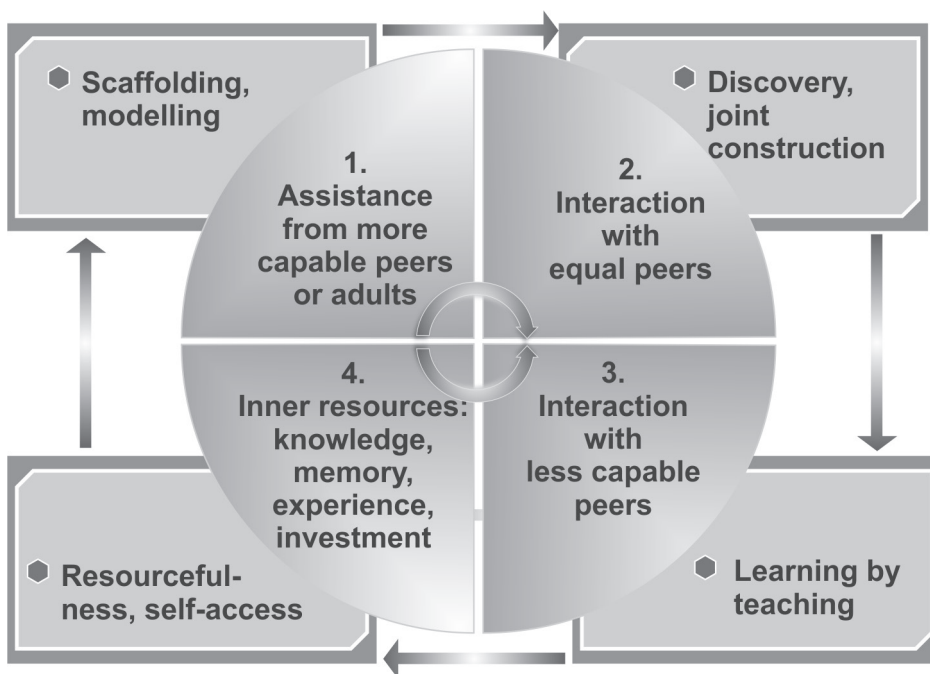


Figure 1: Van Lier's schematic representation of the scaffolding model

Source: Van Lier (2004:158)

The **top left quadrant** of the model which, according to Van der Merwe (2020:5), represents the canonical understanding of scaffolding, presents a situation wherein a less knowledgeable peer enters a learning context that is new or less familiar while possessing only foundational knowledge, which needs support from a more experienced peer or adult. The **top right quadrant** presents a discovery point by which novice students, through the provision of scaffolding, move to the point of being equipped with knowledge that enables them to do things that they could not do otherwise. This may be done through a collaborative effort with peers or more knowledgeable members. **Quadrant three** (bottom right) presents a situation in which all members of the learning environment begin to learn equally from one another, i.e. the *more* knowledgeable peer learns through explaining unfamiliar concepts to the *less* knowledgeable peer and the *less* knowledgeable peer learns through explaining unfamiliar concepts to the *more* knowledgeable peer. In the **fourth quadrant** (bottom left), the peer who was once considered as *less* knowledgeable has internalised the resources and knowledge and

has developed the ability to self-regulate and have self-access to information, which, in turn, leads to the activation of student autonomy in a learning environment. According to Van der Merwe (2020:6), “the third and fourth quadrants include the development of cognitive and metacognitive structures that facilitate learner autonomy.” This enable the students to become self-reliant in solving tasks.

3. Scaffolding techniques applicable to translating Wikipedia content in the language classroom

In 2006, Walqui proposed six types of scaffolding techniques (Walqui, 2006:171) that are deemed to enhance students’ performance in the language classroom. These are modelling, bridging, building schema, contextualisation, re-presenting and developing metacognition. These techniques are discussed separately in the following subsections.

Modelling

Modelling involves the provision of clear examples of the final product by displaying and showing previous work, published texts, photocopies, etc. In technology-enhanced learning, modelling may include a broadcast of a complete online work or a screenshot or a video to show how a certain task was executed. The modelling of desired acts may include think-aloud modelling, talk-aloud modelling and performance modelling that indicate how the student should feel, think, and act within a given context or situation. According to Walqui (2006:171), the teacher can provide students with handouts outlining steps with instructional information on how to perform a certain task. This may include examples and the type of terminology or language the students ought to use as they perform the task. In language translation contexts, tools such as dictionaries and thesauruses can be used to provide the meanings of specific terms or references that may aid the flow of translation. In language learning situations, the modelling of appropriate language use can help students to easily compare, summarise and evaluate the ability to perform tasks using technology tools such as Wikipedia.

Bridging

This technique values and recognises “students’ prior knowledge and literacies through linking new knowledge” to prior understanding (Carstens, 2016). This is very important in a language learning situation, as it helps to build students’ confidence by valuing their existing knowledge. In technology-enhanced language learning situations, this involves the use of digital tools. Bridging may help to close the digital divide between the Information Communication Technology (ICT) tools and tasks that students are able to execute on their own with tools alien to them and that they still must become acquainted with to learn languages. Bridging enlists the student’s interest in a task. This could include their

adherence to the requirements of the tasks. Recruitment, which involves the enlisting of the candidates to participate in a task, is a kind of bridging task which can be done through *offering explanations about the nature of the task* (Roehler & Cantlon, 1997). According to Carstens (2016:5), bridging has “a collaborative component (the ability to share and discuss prior knowledge) and an autonomy-building component (the ability to take stock of the acquired skills and knowledge and reflect on how this knowledge can be used to internalise new knowledge).” Walqui (2006:171) proposes the provision of anticipatory guides to serve as classroom activities that may aid students to predict or infer more than they know and what they do not know, about a subject. For bilingual tasks such as translation, students can use the L2 to explain a task in collaborative groups, negotiate meaning and confirm understanding or the production of L1 structures (Cook & Hall, 2012:282). This is important, as it enables students to establish a personal link between them and the subject matter, showing how relevant the new task is to the student’s life as an individual and as a group member (Walqui, 2006:171).

Building schema

Schema-building helps students to organise, analyse, store and retrieve knowledge and experience. This helps them to build “clusters of meaning which are interconnected and which help weave new information into pre-existing structures of meaning” (Walqui, 2006:171-172). Building schema may include reducing the degree of freedom by simplifying the task to ensure its successful execution by the participants. This may also include offering the students immediate feedback to motivate them in their pursuit of a task. According to Carstens (2016:6), the teacher in a multilingual class can organise learning in more than one language “to enable students to use L1 for triggering declarative and procedural knowledge”. This, in turn, may help students to organise their conceptual schema (Novak & Canas, 2009, cited in Carstens, 2016) by assimilating new learning into existing knowledge and concepts in the student’s mind. Pellatt (2009:345) noted that translation indeed facilitates “schema-building by providing the translator with a means to write down word by word, sentence by sentence”, which later becomes a concrete written record of the writer’s thought process. In technology-enhanced language teaching, Wikipedia translation as a new concept could be shared collaboratively among group members who are then required to translate, either by mapping with closely related terms or by plotting the relationship between them.

Contextualisation

This is an important technique in a technology-enhanced translation, during which language is in essence, decontextualised on an online platform. In this type of translation, contextualisation means that an online article (specifically in Wikipedia) is changed from its usual content to one that suits the target language. Using this technique may necessitate that students use authentic tools and objects to bring ideas or stories closer to their real-world experiences or contexts, using authentic language. This may further require students to use multiple literacies to simplify and disambiguate complex terms

and concepts (Carstens, 2016:7) that may hinder the understanding of meaning. In the virtual world of technologies, students may reconstruct meaning using pictures and objects, which may strengthen the meaning of concepts.

Re-presenting text

According to Carstens (2016:7), this technique refers to “the process and product of translation of a text with a different purpose, style, language or structure”. Re-presenting a text takes into consideration the type of audience on which the text is focused and the kind of language (vocabulary and grammar) to be used for linguistic construction from one genre to another. In translation, re-presentation can be used to place the emphasis on the type of communication being carried out, rather than on the formal aspects of language use (Walqui, 2006:175). Translation involves the re-presentation of the same text in another language, which may involve bilingual equivalence procedures such as literal translation and paraphrasing. Through re-presentation of a text, translation may just be referred to as an important aspect of scaffolding in which bilingual language learning content is presented using dictionaries and glossaries. This means that the students can highlight relevant features of the task and identify and interpret discrepancies between what they have produced and the ideal solution (Zoiijier, 2009:345).

Developing metacognition

Carstens (2016:8) describes metacognition as “the ability to choose the most effective strategies in order to monitor, evaluate and adjust performance during the activity and plan future performance based on the evaluation of the past performance”. Through metacognition, a person is enabled to monitor his/her current level of understanding and decide when it is not enough (Walqui, 2006:176). According to Walqui (*ibid*), metacognition refers to “the ways in which students manage thinking by consciously applying learned strategies while engaging in the activity” through monitoring and adjusting performance during the activity and planning for future performance based on the evaluation of past performance. Metacognition enables the use of reflective tools such as assessment rubrics or/and grading criteria, for example, to carry out self- or peer assessment. Metacognition is essential in an online language translation environment where students are required to engage in thorough reflection and evaluation upon completion of a task to test the effectiveness of the task in the language classroom.

4. Methodology

This is a qualitative case study that was conducted at a university in Namibia. A sample of 24 pre-service language student-teachers were purposefully selected from a population of 56 students in the Namibia Language Education and English Language Education academic year 4 group. Although these students had never been trained in professional

translation, they were selected based on their high level of proficiency in both spoken and written source and target languages. Furthermore, these pre-service student teachers were well acquainted with the translation of languages in the language classroom, as it is a component in their programme of study and part of the First Language school syllabi for the senior primary phase they are being trained to teach. In addition, the participants were at the intermediate level of Information Communication Technology (ICT) literacy, since they had completed the Integrated Media Education and Computer Education modules 1 and 2. A translation workshop was conducted for two days, for a total of four hours and thirty minutes in the computer laboratory at the research site. During the workshop, the participants were organised into groups of three per computer. Eight heterogeneous (mixed male and female) groups were formed; five groups were constituted by Oshikwanyama translators and the three other groups had Oshindonga translators. In addition, a research team of four persons including the researcher and three facilitators were involved in the study.

The researcher adopted the role of an observer-as-participant (Tinkel, Wallen & Hyun, 2012). This means that the researcher played the role of a coordinator/workshop facilitator and did not participate directly in the study. For the researcher to remain self-reflective throughout the research process, a reflective journal was used during the observation to record events and interpretations of the Wikipedia translation task. The observation was carried out in the computer laboratory where the training took place. An observation schedule with variables related to the use of Wikipedia site for translation was given to the research co-observers (three lecturers, who were not part of the lecturers in the Year 4 group, both being from the Junior Primary phase) to record the participants' interactions and involvement in the pre-translation task. An open-ended questionnaire with structured questions was handed to the participants after the Wikipedia training to give them an opportunity to reflect critically on their learning experience. Data from the observation notes, reflective journals and the self-reflective questionnaire were analysed using thematic analysis (Sarantakos, 2013). This study used methodological triangulation (Denscombe, 2010:351) whereby different data-collection methods are used at different times for different purposes. First, observational data were collected by the researcher and co-observers while the students were with translation. The observed data were recorded on the observation tools and in a reflective journal. Secondly, an evaluation of the translated pages was carried out. Lastly, the self-reflection questionnaire was given to the participants to give an overall review of and reflection on the translation task. All these methods were employed with the intention of being open-minded in obtaining credible results.

5. Data Analysis and Interpretation

The findings of this study are presented and interpreted in the order in which the translation workshop tasks for pre-service language student teachers were structured.

Scaffolding of interactive communication during the Wikipedia translation

Six scaffolding techniques were used to guide the participants in the use of the mediating tools: modelling, bridging, building schema, contextualizing, re-presenting text, and developing cognition. A summary of the scaffolding techniques applied during the translation workshop is presented in Table 1.

Table 1: Summary of the scaffolding techniques used during the translation workshop

TIME	SCAFFOLDING TECHNIQUES	ICT TOOL(S)
DAY 1 <i>First 30 minutes for theoretical training</i>	MODELLING <ul style="list-style-type: none"> ▪ Technical demonstration ▪ Showcasing Wikipedia platform ▪ The languages and content of Wikipedia ▪ Assimilation of new learning. 	Smart board
DAY 1 <i>Next 60 minutes for theoretical and practical training</i>	BRIDGING <ul style="list-style-type: none"> ▪ Providing etiquette and rules to follow in translation. ▪ Discussing prior knowledge (typing, navigating and browsing the internet, vocabulary and semantics, morphology) and new knowledge on ICT skills and language translation ▪ Saving and retrieval procedures ▪ Opening Wikipedia accounts for each group. 	Smart board Computers
DAY 1 <i>Next 30 minutes</i>	BUILDING SCHEMA <ul style="list-style-type: none"> ▪ Building schema to organise data ▪ Procedural knowledge on Wikipedia translation. ▪ Challenges on the platform 	Smart board Computers

TIME	SCAFFOLDING TECHNIQUES	ICT TOOL(S)
DAY 1 <i>Last 60 minutes for theoretical and practical training</i>	CONTEXTUALISING <ul style="list-style-type: none"> ▪ Selection of a Wikipedia article from Africa and Namibia to translate ▪ Developing a glossary of words and vocabulary ▪ Guiding students in the use of different translation strategies (i.e. borrowing, word-for-word, omission, etc.) 	Computers
DAY 2 <i>First 60 minutes for practical exercise of the translation task</i>	RE-PRESENTING THE TEXT <ul style="list-style-type: none"> ▪ Guiding students to the correct syntactical and semantical terms to use in the translation ▪ Bilingual equivalence procedures such as literal translation and paraphrasing ▪ Pedagogical suggestions on translating the articles from English into Oshikwanyama and Oshindonga. 	Computers
DAY 2 <i>Last 60 minutes for post-translation reflections</i>	DEVELOPING META-COGNITION <ul style="list-style-type: none"> ▪ Monitor, evaluate and adjust performance ▪ Planning for future performance ▪ Doing peer reflections and group assessments of the pre-translation task. 	Computer-printable hard copies for reflection and questions

Modelling

At this stage, the research coordinator/workshop facilitator presented a technical demonstration to showcase Wikipedia translation to the participants. This was done in a real-time web-browsing presentation using a smart board for all the participants, including the research facilitators, to observe how the workshop facilitator browsed through the website, demonstrating how to open Wikipedia accounts and explaining the Wikipedia editing tools. None of the participants had previously opened a Wikipedia account before. They had used Wikipedia only for research purposes. In doing this, the workshop facilitator introduced the participants to the Wikipedia website, the languages and contents of Wikipedia, and how pages are created, edited, manipulated and saved.

The research coordinator modelled the task for the participants by explaining the process of translating the content on the Wikipedia website to the participants and introduced all mediating tools and artefacts, such as the website itself language tools such as online dictionaries, a thesaurus and books (library resources). The participants were excited to note the diverse uses of the Wikipedia website, its languages, content, and editing tools.

Bridging

The facilitator, together with the participants, explored the potential and benefit of the artefact for language translations by building techniques for conducting the Wikipedia translations. These included decisions on the way the task was introduced, hands-on practices and roles played by the participants in their groups. The researcher-coordinator explained the contents of the Wikipedia articles and how the participants could search for articles which were related to their own sociocultural context using the search box. The participants were given access to computers and the virtual platform (Wikipedia) to browse through the website and search for different articles and select a possible article for translation. Since none of the participants had ever heard of translation of the Wikipedia content before, or had a Wikipedia account, they asked many questions related to the page set-up. The participants observed the research coordinator/workshop facilitator explaining the contents of the Wikipedia pages, and how they could use the search box to search for articles related to their own socio-cultural context. Each group was required to register for a password-protected login into the website. The participants had to set up only one Wikipedia account per group and worked collaboratively.

Building schema

To build schemas of translation, all the groups were asked to decide on just one short article that would be translated by all the participants to provide a benchmark for the type of translation needed at the end of the study. Most of them had concerns about the saving and retrieval of their translated tasks. Some were concerned about the accessibility of the translated content, and whether it would be permanently available on the Wikipedia website. The research coordinator/workshop facilitator explained that the content would be stored on the site repository after it was saved successfully, where the users could access it by clicking on the 'View History' button. See the editing tool in Figure 2 below:

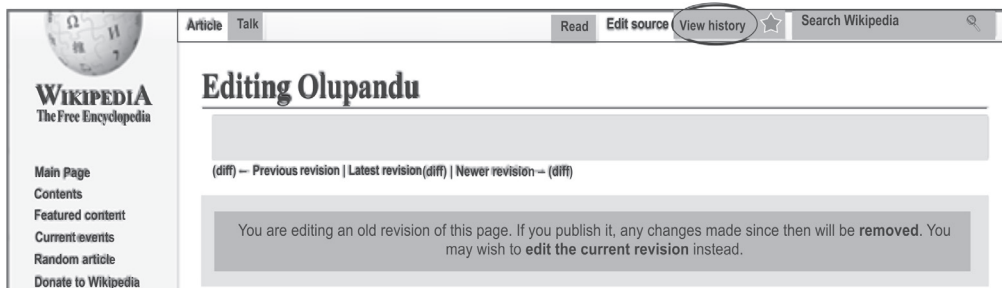


Figure 2: Wikipedia editing tool

Contextualising

The participants engaged in a hands-on (practical) activity as they explored the usefulness of the Wikipedia website for language translation in their groups. They discussed what was transpiring on the screen the moment they started interacting with the platform and the editing tools (see Figure 2 above). The participants were encouraged to use mediating tools (semiotic tools and ICT tools) to translate the Wikipedia content from English (source language) to Oshikwanyama/Oshindonga (target language) and to mediate peer-to-peer interaction. During this mediation process, they decontextualised an online article (specifically in Wikipedia) by changing it from its usual content in English to one that suits the target languages, which were Oshikwanyama and Oshindonga. At this stage, students used authentic tools and objects in order to bring ideas or stories closer to their real-world experiences or contexts, using authentic language and multiple literacies to breakdown words, complex terms and concepts which might not be available in the target languages (see Casterns, 2016). As mentioned in the previous section, all the groups were asked to decide on just one common article that would be translated by all the students to provide a benchmark for the model of translation desired for use in the language classroom. The participants selected a short article titled 'Olupandu', which refers to a village in Namibia, to translate from English into Oshikwanyama and Oshindonga. Figure 3 shows the screenshot of 'Olupandu' in the source language (English) before the translation. The original version is accessible online at: <https://en.wikipedia.org/wiki/Olupandu>

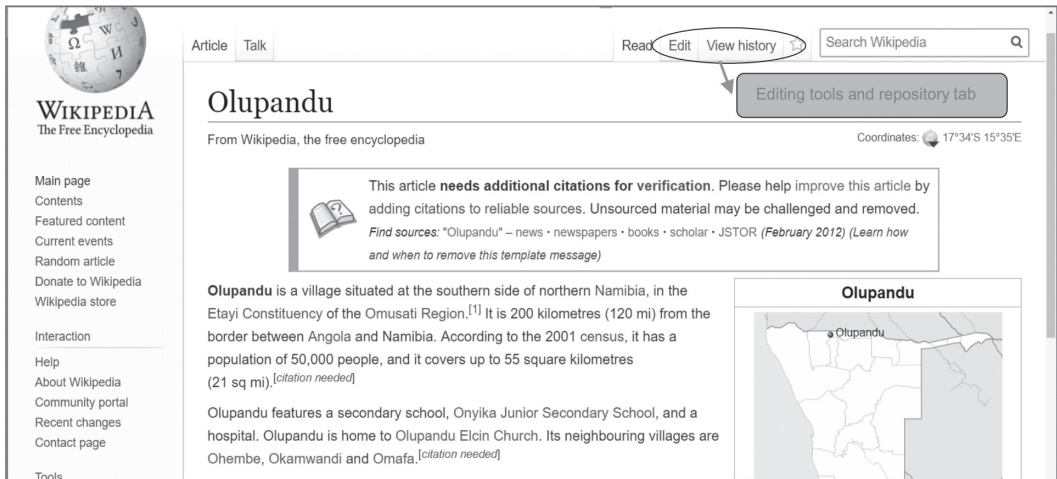


Figure 3: The English (original) version of the ‘Olupandu’ article

The participants chose this short article for two reasons. Firstly, it was a training session, with the primary focus on learning and gaining practical knowledge on how to carry out a Wikipedia translation. Thus, it was deemed appropriate that the participants should start by exploring a short article and concentrate more on gaining procedural knowledge concerning how to perform the Wikipedia translation. A longer more difficult and detailed article could easily have undermined the morale of the students, causing them to give up before they started the actual translation task. Secondly, a short article was a good way to prepare the students for bigger and more challenging translation tasks and to develop peer-to-peer communicative skills and whole-group collaborative skills.

Re-presenting the text

The participants were involved in the re-presentation of the Wikipedia text from the English SL to Oshikwanyama/Oshindonga TL. At this stage, the participants were involved in various written language aspects such as sentence rewriting and reconstructing of vocabulary from the article and converting terms from the English language into Oshindonga and/or Oshikwanyama. Some groups were observed translating on a piece of paper first before they typed the translation into the editing space on the Wikipedia platform. The participants stated that they translated on the paper first to ensure that they were writing the terms correctly in Oshiwambo and to capture the correct meaning. Some participants were seen writing meanings, then choosing the most appropriate one for the translation. This means that the participants (who were not translation students, but rather language student teachers) were using their habitual techniques of translation using paper and pen to enable them to translate on the virtual platform by typing. The

participants were really seen collaborating with one another in the groups where they were seeking clarification of semantics and vocabulary from others and confirming the spelling of words and terminologies. The participants were also observed negotiating for meaning with their group members to refine their translations before posting them on the Wikipedia website. Many participants lacked the necessary typing skills, so they were very slow in typing. They therefore took turns, which made this part of the process time consuming

After the translation was completed, the groups saved their translated articles on the Wikipedia platform. Figure 4 presents a screenshot of the translated article for ‘Olupandu’ by one of the groups after translation into Oshikwanyama. The original English Wikipedia article for Olupandu can be accessed on <https://en.wikipedia.org/wiki/Olupandu> and the translated version is accessible at <https://en.wikipedia.org/w/index.php?title=Olupandu&oldid=851745249>.

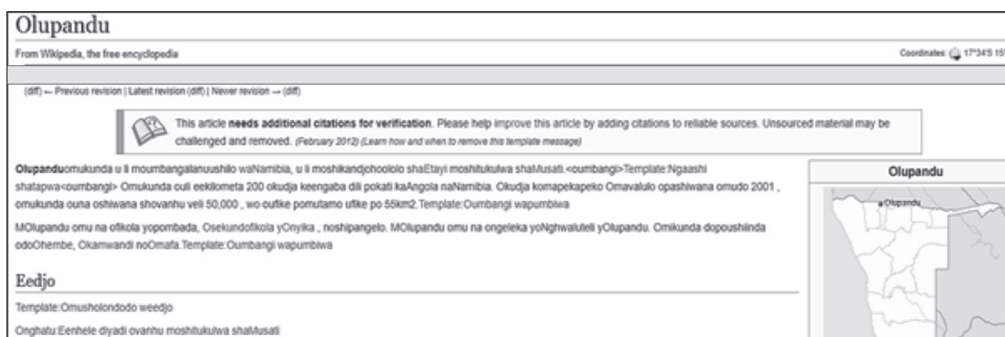


Figure 4: The Wikipedia translation page: Olupandu

Developing metacognition

This technique involved the participants in an evaluation of and reflection on the Wikipedia translation tasks, which they completed during training. In their groups, the participants were asked to evaluate their performance in the use of the Wikipedia website for translations, the translation strategies used the communication that took place in the groups and lastly, the quality of the training and facilitators. This was done to assist the participants in developing metacognition (Carstens, 2016:8) that enabled them to think critically about the strategies used during the training and to plan future adjustments to improve their performance in future translation tasks. The participants developed metacognitive abilities from doing peer evaluation of the Wikipedia translation, and of the

influence of the task on the use of languages in group communication and performance. They were guided into a process of reflection through a whole-group discussion on their roles and contributions as individual members of the group. Each group also reflected on the quality of their translation against that of other groups. The participants reflected that they worked and communicated well with one another to find the most equivalent words or phrases to translate. Different group members shared the meanings of words across the whole room, regardless of the group they belonged to. This is an indication of the excitement evident among the students while they were sought clarity on the use of terminologies. At the end of the translation exercise, the students had time to read their group translations aloud, so that they could experience appreciation of their own language on the website and feel its importance to society. The participants were given a self-reflective observation tool with structured questions to record their performance in the translation workshop, group involvement and the facilitation process. They also had space for comments that would allow them to provide in-depth reflections on the main aspects of the Wikipedia process.

Findings from observation of Wikipedia translation

This section presents the analysis of the themes that emerged from the observation of the participants' interactions throughout the Wikipedia translation task. The main focus of the observers (i.e. the three lecturers) was on the participants' use of ICT or language translation issues. This was determined by observing and recording how the students engaged the co-facilitators in different conversations during the task. The research coordinator/workshop facilitator observed how the co-observers/co-facilitators were guiding the students throughout the translation task. At times, the research coordinator/workshop facilitator would move from one group to another to listen to their interactions. Direct quotes regarding how the events were unfolding were recorded verbatim in a journal (Addendum F – co-observers' observation tool). The research coordinator/workshop facilitator and the co-observers listened to how the participants used the virtual platform to convert content from the source text (English) and the target text (Oshikwanyama and/or Oshindonga). Particular attention was paid to the use of communication strategies among the students in their respective groups. This included both verbal and non-verbal communication cues used, negotiation for meaning (NfM), translation strategies, clarification, and confirmation checks. The research coordinator also observed how Wikipedia content displayed on the screen evoked communication between students in groups, individually and the whole class. Two sub-themes emerged from these observations:

Scaffolding of translation strategies and procedures

The participants made use of a range of translation procedures such as word-for-word translation, omission and borrowing of words. There were cross-group discussions and communication, whereby some group members asked the next group for the meaning

of words since they were all translating the same article. For example, there was a heated debate about the phrasing of the sentence **“Olupandu is home to Olupandu Elcin Church** in the article.” Some participants felt that it should be translated directly as *“Olupandu eumbo kOlupandu Ongeleka yaElcin”*, which reflected word-for-word equivalence. Others (five groups to be exact) felt it should just be summarised to avoid repetitions of words: *“MOlupandu omu na ongeleka yOnghwaluteli.”* This is how different groups translated the sentence, “Olupandu is home to Olupandu Elcin Church.”

- *Olupandu ola idilila ongeleka olupandu ya elcin* = Olupandu is housing a **church** Olupandu of **Elcin**.
- *Olupandu eumbo longeleka onghaluteli ya elcin* = Olupandu is home to **Lutheran** of **Elcin**.
- *Olupandu eumbo kongeleka ya elcin* = Olupandu is home to **Elcin church**.
- *Olupandu onghalutelingeleka yaELCIN* = Olupandu is Lutheran **church** of **Elcin**.

The four sentences show repetition in the occurrence of the word ‘church’ and in the acronym ‘ELCIN’, which stands for the Evangelical Lutheran Church in Namibia. This means that the two terms are unavoidable in this sentence. The terms church and ELCIN were used repeatedly in one sentence. This shows a repetition in the noun **‘church’**, which is represented by the **C**, in the acronym ELCIN. The above translations further indicate that many groups resorted to direct translation, which could be to the result of a lack of formally equivalent vocabulary in Oshiwambo. The participants used online dictionaries to search for the meanings of words and phrases in their local vernacular as the target language. Some English words were borrowed into Oshikwanyama/Oshindonga. This included, words such as, ‘kilometres’ = *okilometa*, and ‘secondary school’ = *osekundofikola*. Some terms such as, for example, ‘square kilometres’ = *eekilometa doule ufike pamwe* were left untranslated. The above translations also point to the undisputed impact of English on an African indigenous language platform, where the participants’ writing reflects the pivotal role of English as the language of teaching and learning, especially its influence on first language learning. This means that although the participants tried to get the translation right, they had to translate words which did not have an exact equivalent in Oshiwambo. This led to debates on appropriate word choices. The research coordinator advised the participants that the most important thing to consider in translation should be to convey the correct message without deviating from the original text.

The use of semiotic and language tools to aid translation

One of the most exciting and surprising moments of this translation task was to observe the participants consulting language books and dictionaries. For instance, a group of Oshikwanyama First Language participants brought a poetry book *“Oikuko ya wa*

ongali nomayoo”, an anthology of poetry by A. L. Nghifikua (1992). When asked the reason for bringing the book, they confirmed that they opted to bring along some books of literature representing the Namibian context, since they were asked to consider selecting articles from the Namibian context. The students thought it would be a good idea to select texts like those in their poetry class to help them with the choice of language. Similarly, the students specialising in Oshindonga as First Language brought the bilingual *English-Oshindonga Dictionary*, compiled by P. A. Mbenzi and D. N. lithete (1996). Such language mediating tools were necessary, as Pargman, Nouri and Milrad (2018:219) explain, because they confirm the relationship between what happens in the technological environment and how this is represented in the conventional language contexts of pen and paper, books and hard copies. Non-technological tools such as the online Concise Oxford Dictionary also assisted in searching for word meanings in the documents.

Findings from participants’ reflections on the translation task

As indicated earlier, on completing the translation task, the participants were given a structured self-reflection tool in the form of open-ended questions to complete and to evaluate the quality of the training provided, assess the guidance provided by facilitators to obtain the new knowledge in navigating through the Wikipedia website and the use of the editing features. Four sub-themes were derived from the reflective tool. The findings are discussed below:

Content and organisation of the translation task

The participants were asked to comment on the content and organisation of the Wikipedia translation task workshop. The participants indicated that they were very curious about the Wikipedia website and its interactive nature to enable online translations. All candidates indicated that, although they had used Wikipedia for research-related matters before, this was the first time they used its website for translation. The students, given pseudonyms (P) for participant and (1) for number, presented their reflections on the content and organisation of the translation task. Below are some verbatim comments on the content and organisation of the Wikipedia translation task as captured from the questionnaire.

It was a new experience; I was not familiar with the whole Wikipedia portal.
[P1]

It was the first time ever using a wiki to translate a writing to my home language and just having an account. [P15]

This whole exercise was a great deal to me because I have never used Wikipedia translation before. Given the opportunity, it felt great gaining

new knowledge and skills on translating articles in my own language on Wikipedia. [P3]

I got knowledge on how Wikipedia works; I am well informed now on how to carry out the translation. [P9]

I have learned how to use Wikipedia and to create an account and edit pieces of text. [P23]

All was awesome and enjoyable throughout my participation. There was a good communication between the participants and the facilitator. [P6]

It is evident from these comments that Wikipedia translation provided a new learning experience for the participants. The whole exercise stimulated their curiosity about translating on Wikipedia, a task that enabled good communication between the participants and the facilitators. The remarks from the students relate back to Hutando's (1996) comment (cited in Carreres & Noriega- Sánchez, 2011) on the benefits of a scaffolding and translation combination exercise, which he stressed, focuses on the process rather than the product. The process was designed to utilise scaffolded tasks that enabled the participants to progress through a series of complementary translating stages. These, at first, seemed alien to them, but progressive guidance and collaborative effort enabled the participants to enjoy the whole process.

Group involvement and progress during the translation task

As pointed out before, the participants were organised to work in groups of three. Eight heterogeneous groups were formed; five groups were made up of Oshikwanyama translators and the three remaining groups of Oshindonga translators. The findings show that the translation task assisted the participants to develop new skills in working well with other members in the groups. One student noted, "*I have developed new knowledge on how to deal with partners and avoid conflicts*". Other participants also indicated that they had developed great strategies to deal with conflict situations. The participants noted that the exercise groomed them to work together as groups by complementing each other's ICT and linguistic skills. The observation notes indicated that the students communicated well with one another in the groups; at some point they debated word choices, which helped them to arrive at a sound translation. The translation task, therefore, promoted communication in the classroom, which enhanced the students' capacity to learn languages collaboratively.

The use of the Wikipedia platform for language learning and translation

The participants reported, upon reflection, that Wikipedia translation facilitated their learning of 21st-century skills such as the use of ICT tools in group-based activities directed by a learner-centred pedagogy, and that it also helped them develop communicative

skills. Some felt that the Wikipedia translation task resembled real-life communicative activities, as it was guided by the use of an authentic text in an authentic context. Wikipedia translation was therefore seen as one of the best approaches to communicative language teaching, which presented the students with real-life tasks performed within an authentic learning context such as the computer laboratory. This resembled the language classroom where students worked in groups and shared responsibility and accountability for group achievement. Some participants remarked on the website and the influence it has on their language learning as follows:

This translation is very constructive, and I personally think it should be recommended to language students as it improves their communicative skills. [P7]

I learned how to translate articles into another language and unfamiliar vocabulary in another language, like from English to my first language Oshikwanyama. [P4]

This workshop taught me a lot, it made me feel ready to teach and integrate ICT into my First language classroom next year. [P19]

I have learned how to translate an article from English to Oshikwanyama, which made me realise that I can be a good language teacher someday and that I can research more and have various activities when teaching my mother tongue using translating activities... This has boosted my knowledge and capability of translating from other languages. It was enjoyable. [P16]

As a future teacher, I have learned more about the importance of creating a cheerful learning environment, most importantly when using ICT tools. [P11]

The above comments reflect the participants' recognition of the relevance of Wikipedia website to language learning and translation. The findings indicate that the Wikipedia translation task presented a learning context or environment in which they communicated through group collaborations. The benefits of the task were a surprise to the students. They were able, for the very first time, to use their first language on Wikipedia, an exercise they all considered beneficial to them as language teachers. In addition, they remarked that they could not wait to use similar exercises in their own lessons once they were employed as teachers. It was evident during the translation task that many students were eager to begin the actual typing of the translation.

Some challenges were experienced during the Wikipedia translation workshop. One, the internet was very slow and limited due to the conflict in the shared internet provider (IP) address. Some groups had to restart the translation task due to conflict in the Ethernet connection, which is located within one network server, meaning that the eight computers, including the smart board, were connected on one network

distribution centre. The other technical issue involved saving the translated document upon completion of the translation. The participants wanted to display the articles of all eight groups at the same time following the translation so that they could compare the uploaded group translations. This was not possible because the eight groups translated the same article, the last version of which would be uploaded onto and displayed on the Wikipedia platform. This means that the system automatically replaces the old upload with the newest version and stores it in the repository. The participants therefore had to save the group translations of the article 15 minutes apart, so that they could see it as an original Wikipedia article and read it aloud to other groups before it was saved in the 'History' folder/repository of the Wikipedia website.

Facilitation of new learning

Facilitation plays an important role in the scaffolding of learning with technological tools, as that is where the practicability of the tools in the language classroom is showcased. The utilisation of the artefacts such as computers by the participants was practised through activities and tasks. The researcher served as a coordinator/facilitator of the translation process, provided guidance through practical demonstration by modelling and explaining the Wikipedia translation processes and procedures to the participants. This process went beyond the technical demonstration of how to use the website, explaining the language translation procedures and guiding students to communicate to other group members through their choice of terminology. At the end of the translation task, the participants were asked to reflect on the new learning that took place during the Wikipedia translation process. The participants commented on the pleasure they derived from the activities:

Firstly, I got familiar with Wikipedia that I never encountered before, as if you need to create an account and log in, I managed to translate some articles from English to Oshikwanyama, an experience that I have never had before. [P20]

The translation was somehow a revelation because most of us knew Wikipedia just as a website, but we never knew that you could create an account and actually translate the content. We had a chance to communicate with other groups to confirm where we have doubts. [P13]

The participants further indicated that the translation training was a communicative task that prepared them to do future Wikipedia translation in the language classroom. They also learned how to regulate the task using mediating tools to perform it efficiently. The translation task helped students to develop both group regulation and self-regulation skills, which they were able to internalise for working cooperatively with one another.

6. Discussion of the findings

The findings of the study demonstrate how Wikipedia translation can be an effective technological platform for technology-enhanced language learning. The Wikipedia platform/website was used as an instrument to facilitate translation from the source language to the target language. This, in turn, demonstrated its potential to be a pedagogical tool in learning and teaching language.

As observed from the participants' reflections, the structure of the task enabled them to learn through accumulating knowledge in a series of well-structured tasks ranging from the general to the specific while doing the Wikipedia translation. The participants were led through a process that corresponds well with Van Lier's (2004:158) model of scaffolding, wherein the modelling for using Wikipedia for translation was presented by means of a technical demonstration. The participants collaborated with one another and interacted in groups to translate a common article. The different translation techniques that were used helped them to develop a bridge between their prior knowledge and the newly acquired knowledge and skills (Carstens, 2016), which helped them communicate messages among their peers successfully and enabled them to translate. The findings indicate that students were able to contextualise the use of authentic tools in their real world throughout the process, re-present the Wikipedia content in the translated versions in the Oshikwanyama and/or Oshindonga target languages in a similar style and structure as the English SL content., The participants were involved in interactive communication throughout, while discussing and debating the meanings of words and writing collaboratively as a team.

The study shows that Wikipedia, as a tool for translation, uses corresponding language activities and actions that activate real language learning. This involved a restructuring of language classroom tasks from pen and paper translation to an online (Wikipedia) translation. Drijvers et al. (2010:214) assert that, to "help teachers benefit from technology in everyday teaching, it is important to have more knowledge about the new teaching techniques that emerge in the technology-rich classroom", as well as the ability to impart that knowledge to student teachers so that they are enabled to integrate it in the classroom. The findings show how the research facilitator guided the participants into the activities and offered some scaffolded support concerning language use, as well as other more technical issues pertaining to editing and saving information. Lastly, observation revealed how the participants took the opportunity to contextualise their Wikipedia translation and its relevance to the language classroom, a new learning experience that emphasises the important role of online translation in the mother tongue using Wikipedia for developing the minority languages in Namibia. The participants were then able to re-present the translations for their audience on the virtual platform and at the same time, extend the readership of these languages. In the process, they developed metacognitive abilities that assisted them to use language in communication and translations.

7. Conclusion

The study suggested a sound collaborative learning environment, where students were not only focused on individualised learning, but rather enjoyed working collaboratively with one another to arrive at a good translation, which demonstrated the value of language learning using technological tools. The study recommends Wikipedia, a digital tool, to be used to plan and revise online translation and provides an opportunity for one to reflect on the multimodality of Web 2.0 tools for students to experience real-time communication, discussion and review of projects using either L1 or L2 in a communicative language teaching classroom. This presents students with a multicultural and multilingual space, which also enables problem-solving and negotiation of meaning, while personally investing in language acquisition and learning. The findings of this study have provided strong evidence that African languages can be revitalized using modern technologies such as Wikipedia. This translation exercise can thus be regarded as one of the grassroots interventions to be used to combat the lack of reading resources in Oshikwanyama and Oshindonga and other minority languages in Namibia, through the translation of online content using online translation and editing tools such as Wikipedia.

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