

# Chapter 11

## A Multimodal Approach to Language Learning: Wikipedia as a Tool for Language Translation in a Bilingual Environment



Aletta Mweneni Hautemo and Michele F. van der Merwe

**Abstract** This chapter explores the use of Wikipedia in presenting an educational design using a multimodal approach in structured environments in which interconnected text-based tasks are presented to stimulate dialogical interaction that could lead to a higher level of critical thinking in students. The multimodality of the Wikipedia website is discussed as a platform that involves students (through translation) in the use of authentic online materials to set out innovative language teaching methodologies that respond to the so-called 21st-century skills. Wikipedia was used in this study as a tool for language translation from English second language (source language) into Oshikwanyama and Oshindonga first languages (target languages), respectively, by pre-service language student teachers at a tertiary institution in Namibia. The study explicates the use of Activity Theory as a theoretical framework for the language mediation process. A qualitative research approach and a case study research design were followed. Non-probability sampling was used, and 24 pre-service language student teachers were purposefully selected. Data collection tools such as blogging and artefact analysis of the translated pages were used to obtain an in-depth understanding of the participants' experiences with the Wikipedia translation. The findings show how this Wikipedia translation task responds to the educational demands of the Fourth Industrial Revolution and the promotion and development of the languages of Namibia at the tertiary level. It reveals that Wikipedia translation functions as an authentic language learning tool within a communicative language teaching approach in a technology-rich learning atmosphere that leads to total learning of languages. The study recommends the application of Wikipedia translation as a multimodal method that highlights the notion that bilingualism is seen as an asset instead of a liability in language teaching and learning and that methodologies be developed that respond to the way pre-service language teachers process information in the digital age.

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**Keywords** Wikipedia translation · Multimodal · Bilingual · Communicative language teaching · Computer-mediated communication

## 11.1 Introduction

Web 2.0 tools present a live intercontinental connection and viable communication tools that are receiving wide recognition in academia (Godwin-Jones 2015; González-Lloret and Ortega 2014). These tools offer a wide range of support that contributes to technology-enhanced language learning. With recent developments in the use of the Internet and Web 2.0 tools, the multimodality of Computer-Mediated Communication (CMC) is seen as an illustration, or source, of enrichment, which has become the focal point for language teaching and learning with technology. According to González-Lloret and Ortega (2014:3), “Web 2.0 technologies create unprecedented environments in which students can engage in ‘doing things’ through technology-mediated transformation and creation processes”. Further, Warschauer and Grimes (2007) posit that Web 2.0 communication tools, such as Wikipedia, provide opportunities for communication through audience authorship and the use of online artefacts, which allows the publication of content in creative and collaborative ways. The multimodality of the Wikipedia website may 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, helps to enhance the students’ real-time conversations and provides timely face-to-face feedback opportunities.

This study presented Wikipedia translation as a real-life communicative task in which fourth-year pre-service language education student teachers (majoring in English Language Education and Namibian Language Education) were engaged in choosing, editing and recreating content from the English language into a Namibian indigenous language. These student teachers were second language speakers of English, a second language they were being trained to teach in the Senior Primary phase (Grades 4–7) at the time of the study, in addition to a Namibian first language (Oshikwanyama and Oshindonga). Thus, in this study, Wikipedia was used as a tool for language translation from English second language (source language) into Oshikwanyama and Oshindonga first languages (target languages), respectively. This means that these students made use of English Wikipedia articles on the Wikipedia site, then translated those into the Namibian languages (Oshikwanyama and Oshindonga) and later reposted the translated articles on the site with the purpose of displaying them for a wider readership on the Internet or using them in the first languages classroom.

For student teachers to benefit from technology in the language classroom, they need to be imparted with knowledge related to the use of technologies available at their disposal so that these influence the way they communicate with one another. They also need to be introduced to communicative language teaching techniques that integrate tasks in the technology-rich classroom to develop the ability to devise

classroom tasks in a way that leads to total learning of languages in a bilingual environment. Bloch (2002:19) asserts that “meaningful education comes through recognising that the various aspects of language in multilingual contexts (speaking, listening, reading and writing, as well as interpreting and translating) are not learned in separate and mutually exclusive ways”. Thus, it was relevant for the pre-service student teachers involved in this study to find the value of using Wikipedia translation in the bilingual education context while still at university so that they would be able to integrate technology successfully in their future classrooms.

Swarts (2002) maintains that bilingual education should not be seen as an obstacle to communication but rather as an iterative process whereby both the first and second languages complement each other. This study is embedded in the LCE methodology of Communicative Language Teaching (CLT) to develop oral and written communication skills while working in collaborative groups. The emergence of CLT in language learning points to translation as a skill that allows students to be more flexible, analytical and interactive (Leonardi 2010). According to Cummins (2007), translation plays an important role in enabling bilingual students to actively participate in their learning. Moreover, translation highlights the need to explore the appropriate application of language within a communicative language classroom (Leonardi 2010). Translation is a task that involves negotiation for meaning and problem-solving through social interaction (Hautemo 2014). This study was motivated by indications in the body of knowledge that the extent to which translation is done in first language learning is limited. Much emphasis has been placed on second language acquisition (Leonardi 2010). Other studies conducted on translation are limited to language translation in the language classroom, and very few attempts have been made to study the impact of online translation as a tool for localising online content into African languages (Dalvit 2009; Hautemo 2014). A more sociocultural research approach to translation through e-Learning lenses was sought, whereby Wikipedia translation is seen as a social phenomenon in which pedagogy is socially situated and culturally mediated.

The premise of this study was to use translation as one of the tools through which students could transmit their cultural knowledge and information about the native societies to the world in their first languages, using technology. This bridges the gap of the digital divide through the translation of online content (Hautemo and Dalvi 2014) by providing written narratives in the students’ native languages. This could be done as both a synchronous and an asynchronous activity inside and outside the classroom. Pedagogically, it could be done as a task that students undertake in the classroom to learn different languages so as to promote language learning (Dalvit 2009; Hautemo 2014).

The objectives of this study were to:

- explore the use of Wikipedia translation as a tool for mediating dialogical communication between pre-service first language student teachers;
- explore the use of Wikipedia translation as a tool for language learning through communication, involving negotiation for meaning in a collaborative environment;

- explore the use of Activity Theory as a framework for integrating technology in the translation of languages in a tertiary learning environment.

## 11.2 An Overview of Technology and Translation Tasks

The knowledge society (KS) presents the world of innovation and technologies to be incorporated into the education of the 21st-century student. Consequently, many researchers are trying to integrate the different modes of online learning into first language learning (Hautemo and Dalvi 2014; Lai and Li 2011). In the light of these developments, González-Lloret and Ortega (2014) warned that, no matter how exciting new technologies for language learning may seem, they can become nothing more than entertainment, unless their design, use and evaluation are guided by viable educational and language development rationales. Consequently, Gonzalez-Lloret and Ortega (2014: 4) identified definitional features of a task in the context of technology and task integration: (1) primary focus on meaning; (2) goal orientation; (3) learner-centeredness; (4) holism; and (5) reflective learning. In the light of this, Long's (1996) interactional hypothesis stresses the process of negotiating for meaning to elicit corrective feedback that primarily focuses on generating meaning through clarification requests, recasts, confirmation checks, reformulation of utterances, etc. Negotiation for meaning—which occurs in the context of performing tasks—permits students to engage in the cognitive process needed for language acquisition and learning. The use of technology in translation tasks should enhance the development and organisation of goal-oriented tasks, which enable collaborative learning in a communicative context (Thomas and Reinders 2010: 18). These could have communicative outcomes through the production of oral or written messages as well as non-communicative outcomes that allow students to have a sense of achievement at the end of the task.

The features discussed by Gonzalez-Lloret and Ortega (2014) are essential in the educational context that especially tries to inculcate new methodologies and pedagogies in the higher education context. These features were integrated into the training of and research on the participating language student teachers to develop the learner-centred principle in the teaching of languages, which enables student teachers to develop authentic goal-oriented tasks that are focused on meaning-making, using technological tools. This study made use of the same technological tools that the students were using at the time in their daily lives, such as the computer, the Internet, and Wikipedia.

### 11.2.1 *Translation Revitalisation Through Technology*

Leonardi (2010: 17) observed that “translation plays a very important role in an increasingly globalised world and in increasingly multilingual Europe where it is

used on a daily basis”. In recent years, the world of technology has been experiencing a surge in translation innovation, using developed applications for language translation and editing—such as Google Translate, Wikipedia, Lexiphone, Vocre, etc.—which recognise both print (written) and vocal (speech) translations. These are accompanied by some linguistic rules that enable the translator to detect grammatical rules and vocabulary. Importantly, these innovations in translation programmes are made accessible to education sectors around the world through the integration of ICTs into education systems. In this digital world, some university students are increasingly using their roles as digital natives by interacting with other students in different areas of the world in the languages of their choice, using internet devices and applications. These were the types of students involved in this study: students who are hooked on the use of Web 2.0 social-networking tools that enabled them to communicate with other people around the world in the language of their choice.

Technology should be used in translation to enhance the development and organisation of goal-oriented tasks which enable collaboration and the mediation process of language learning in a communicative context. Therefore, the translation task should:

- have communicative outcomes through the production of oral or written messages as well as non-communicative outcomes that allow students to have a sense of achievement at the end of the task;
- address the students’ linguistic and non-linguistic needs, and, thus, it needs to be analysed well to fit into their learning context or situation. Such analysis may lead to the recruitment of students’ own linguistic and non-linguistic resources and skills that allow them to execute the translation task with “flexibility and diversity” (González-Lloret and Ortega 2014: 3) which enable them to learn two languages simultaneously;
- have a sense of authenticity and reality in the task that enables the students to experience real-world relationships in a real-world context;
- require students to evaluate and assess the learning experience. Assessment should be embedded in the translation task and should present opportunities for both lower-order and higher-order reflective learning.

### ***11.2.2 Contributions of Technology to Language Translation***

Technology has become a prominent subject in language research, with many researchers contributing to this discussion (Hautemo and Van der Merwe 2021; Gonzalez-Lloret and Ortega 2014; Thomas 2017). The use of technology in translation encourages language development of digital literacies needed in the 21st-century, and it also activates and demands the use of cognitive, attitudinal, social and behavioural mechanisms for language learning (Hautemo and Van der Merwe 2021). A technology-enhanced language learning environment entails:

- a selection of several avenues and resources needed to perform and execute a task. Lai and Li (2011: 501) argue that tasks in a technology-enhanced environment represent “holistic activities in which students make use of their language and cross-cultural communicative resources to achieve some non-linguistic outcome through stretching their linguistic, internet-based communication and digital literacy skills”;
- the use of technology tools that aid the exploration of instruction through collaboration and communication. Through this, real-life tasks are designed to represent real-life content being executed in real-life contexts;
- the use of different objects, mediating tools and artefacts that enable the students to use their receptive and productive skills to explore, collaborate and communicate. These tools are needed in a sociocultural learning environment that needs to cultivate dialogic communication in the language classroom.

Hoven (2006: 238) postulates that a technology-enhanced learning environment does not only include the physical space but also consists of the “intangible conflux of teachers and their pedagogies, beliefs and roles. It includes the students as individuals and as groups with their need-driven goals, competencies, learning styles and strategies”. There are physical resources, which include libraries and technological equipment, and soft or virtual tools, which include internet facilities, software, networks, and others. Thus, using a Web 2.0 tool serves as a point of departure where students would see Wikipedia as a language learning tool but not as a social tool as it is perceived to be. This study intended to locate translation, which, at the time of this study, was a neglected concept in the first language learning context in technology. Consequently, translation is considered as a pedagogical task which is complex for language students, who do not perceive it as a task that leads to communication in the classroom.

### ***11.2.3 Wikipedia as a Technological Tool for Language Translation***

Increasingly, synchronous and asynchronous Computer-Mediated Communication (CMC) has been incorporated into language learning. Thomas and Reinders (2010: 84) presented a broad differentiation between the two CMC concepts. According to them:

[synchronous CMC (SCMC) refers to] situations where participants involved in the communication take place virtually in real-time, while asynchronous CMC (ACMC) refers to communication where participants do not need to be online at the same time and can read and respond to messages in their own time.

With the recent adoption of technology tools in education—which emphasises multimodal capabilities—CMC use is also changing to accommodate the use of the Internet as a communicative tool for language learning. SCMC exposes students to

real-time language learning interaction, and it uses real-time communication tools such as chats, forum discussions, video conferencing, etc.

SCMC has been criticised by some linguists as putting a heavier load on students because they have less time to plan their responses since they are doing the activity in real-time, which results in less accurate outputs (González-Lloret and Ortega 2014; Thomas and Reinders 2010). On the other hand, ACMC is deemed to allow more time for students to read, organise and compose their output, as they do these at their convenience with no restrictions (Thomas and Reinders 2010). This allows students time to search for physical resources and references that often result in well-composed and organised output. Media use in CMC is categorised as multimodal, which includes the media employed to communicate and the channels used by students to interact with and within the media (Hoven 2006). It is necessary that these media be used in a first language classroom where students are presented with authentic tasks that aid authentic language use, which also aids communication between students in the classroom. These include:

- the available media that could be used with activities around them;
- skills development and related subskills; and
- the media as illustrations or enrichments that promote cultural and linguistic awareness.

According to González-Lloret and Ortega (2014:3), “Web 2.0 technologies create unprecedented environments in which students can engage in ‘doing things’ through technology-mediated transformation and creation processes”. Hoven (2006) claims that the emphasis on the use of technology is on:

- exploratory learning, such as task-based approaches such as Wikipedia translation;
- learning through communication, involving the negotiation for meaning through chats, blogs, etc.; and
- collaborative and negotiated learning of problem-based learning such as computer-mediated collaborative learning and/or Web-supported collaborative learning.

Web 2.0 technologies present students with the resources needed to interact using more than one form of communication. It uses real-world tasks from the daily lives of the students that resemble real-life. This may include tasks such as creating a blog page to engage fellow bloggers to contribute to discussions of social issues; creating a Wiki page for peer collaboration; writing in the language classroom; or creating a Facebook page or a WhatsApp group for class information sharing, etc. University students are generally acquainted with these tasks. This is where many students’ interests lie; hence, using these tools could stimulate their interest in learning because it is done on the platforms with which they are most familiar. Both SCMC and ACMC tools introduce students to social orientation, instead of only cognitive orientation, and this, in turn, shifts students’ participation from passive to active, as it is in a naturalistic setting that enables them to use language for meaning-making and learning.

### ***11.2.4 Wikipedia as a CMC Tool for Language Translation and Learning***

A wiki is “an asynchronous web-based environment where students could log in at any time and generate, add, change, delete and edit text, while the system tracks the history of all user activities and created content” (Elola and Oskoz 2010: 52). A wiki presents a collective and collaborative writing process that entails a range of topics, from content development, language localisation and translation of content, cultural topics, and language writing development tasks. Wikis present an educational design that uses a multimodal approach in structured environments in which interconnected text-based tasks are presented to stimulate dialogical interaction that could lead to a higher level of critical thinking in students.

According to Godwin-Jones (2015: 11), “much of the activity in globalised online spaces is within genres that are primarily text-based”. One of the Web 2.0 tools used in the language classroom, which is primarily text-based, is Wikipedia, which provides a text-based CMC that “creates affordable learning conditions to support both meaning-oriented communication and reflection” (Lee 2010). Text-based CMC also presents a self-paced setting that increases students’ “opportunities to take notice of errors and make output modifications”, including self-correction (ibid.). Godwin-Jones (2015) observed that students use Wikipedia as their sole reading source, whereas they can also use it to learn the other four language skills. According to Lai and Li (2011: 502), a text-based CMC such as Wikipedia is found to “increase the amount of language that students produce during task performance because they found this context more motivating and themselves less anxious in producing the target language”. Wikipedia can be used for both oral communication and written discourse, which are technologically enhanced to erect complex language structures and obtain greater grammatical accuracy in students’ performance. Blake (2016) suggested that Web 2.0 tools, such as Wikipedia, can be used in learning contexts because they allow users to comment or elaborate on someone else’s written entries, thereby promoting the practice of collaborative reading and writing, and in so doing, creating opportunities for translation of languages.

Wikipedia translation affords the teacher and the students a chance to interact with digital tools and use technology to “learn by doing” in the traditional face-to-face context (Blake 2016). It presents a learning context that stimulates students to discuss and communicate with a “fluency that more closely mirrors the spontaneous turn-taking behaviour found in real-world, face-to-face” conversation (Blake 2016: 130). The multimodality of the Wikipedia website may 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, helps to enhance students’ real-time conversations and provides timely face-to-face feedback opportunities. This further helps students to have a limited understanding of the source or target language to work in groups to increase their linguistic capabilities and development.



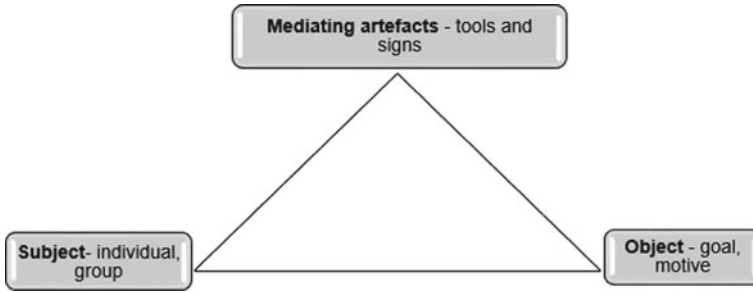
According to Blake (2016:136), “any digital tool that helps L2 learners engage in the editing process is bound to produce an improvement over the long run, as students are engaged in an iterative design process”. Wikis like Wikipedia combine the essence of reading and writing, which are necessary for the translation classroom and, more broadly, in a language learning context. As a digital tool, Wikipedia can be used to plan and revise the translation process and gives a reflection using other Web 2.0 tools, such as blogging, whereby students can have synchronous discussions and review their projects using either L1 or L2. This presents students with a multicultural and multilingual space, which also enables problem-solving and negotiation for meaning, while personally investing in language acquisition and learning.

The process of implementing Wikipedia translation could be challenged by teachers’ inability to find relevant activities on the Internet that enhance students’ ability to communicate. This could necessitate negotiated interaction as well as develop learners’ language identity. In considering methodological approaches, teachers should adopt a holistic approach that bridges the gap between what is done online and what happens in real-life. They should thus identify the different responsive ways of using a variety of multimodal data sources in effecting students’ holistic language acquisition and learning.

### 11.3 Theoretical Framework

This study adopted sociocultural theory (SCT) as its theoretical framework. Both SCT and Wikipedia translation attempt to re-contextualise the classroom as a place for studying and developing language, with a focus on meaning. Duff (1994:175) clarifies a translation task as “the behaviour that is produced when an individual (or group) performs a task. It is a process as well as the outcome, where the task is examined in its sociocultural context”. In this study, SCT was used to link tasks to the language mediating tools (Vygotsky 1978) by investigating the social interaction between student teachers, negotiation for meaning, and the use of artefacts, such as English Wikipedia articles, through the computer and the Internet. Considering SCT, Wikipedia was used to promote a Web 2.0 language learning exercise, which was deeply rooted in the adaptation of online content through careful planning, coordinating and configuring of technological materials, in this case, the Wikipedia site, for online language translation.

Furthermore, framed by SCT, Activity Theory (AT) (Engeström 1987) was used to provide a framework for analysing the student participants’ reflections on the translation activity. The Activity System (AS) community comprises the subject (student teacher), the subject collective (students in the collaborative groups), the object (Wikipedia translation), and the mediating tools (computer, the Internet, and language tools), and the outcome (translated Wikipedia pages). Vygotsky (1978: 40) defined mediation as the “part played by other significant people in the learner’s lives, people who enhance their learning by selecting and shaping the learning experiences presented to them”. According to him, cultural artefacts, such as instruments,



**Fig. 11.1** Mediation triangle (Vygotsky 1978: 40)

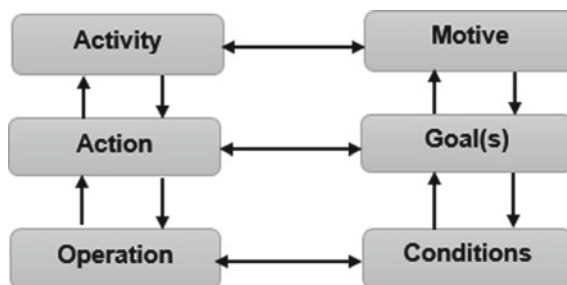
concepts, diagrams, structures and language, facilitate human activity. Symbolic tools are used to mediate people’s relationships with one another and the objects around them. Vygotsky (1978) describes the subject, mediating artefacts, and object to human actions as well as their effect on human cognitive development. As such, he developed a basic mediation triangle to describe human activity. The mediation triangle is illustrated in Fig. 11.1.

Activity Theory (Engeström 1987; Leont’ev 1981) emanates from Cultural-historical Activity Theory (CHAT), a paradigm that has its roots in Vygotsky’s SCT (1978). This paradigm regards the history and culture of the context as a holistic entity where humans, as agents of change, interact using different tools that comply with or break the rules, which operate within the community, which are directed to managing tasks through the division of labour (Blin and Appel 2011). Vygotsky (1978) developed the notion of mediating artefacts or tools, which asserts that the individual can no longer be understood outside of culture because they interact with the tools and objects embedded in that culture or society. The forms of cultural practice are used in the activity to provide educational affordances. These affordances include technological, social and linguistic elements that support the development of new pedagogies and skills for 21st-century students. Lantolf and Thorne (2006: 210) argue that CHAT is in the “practices of everyday life, including the cultural and material structuring of environments, as well as the manner of our participation in them”. In educational environments, language learning pedagogies may present problems, such as developing new collaborative teamwork that uses Web 2.0 applications to open possibilities for collaborative writing through Wikipedia translations.

This study first examined the generation of CHAT, which is based on Vygotsky’s (1978) concept of mediated actions, which investigates the role of tools and human labour as the means of transforming nature and individuals. Figure 11.2 shows Leont’ev’s (1981) hierarchy of activities, actions and operations.

In order to apply Leont’ev’s activity hierarchy (1981) in a study that dealt with technology-enhanced translation tasks, we needed to look at the motives for the activity. Lantolf and Thorne (2006) explain that (1) *activity* asks why something is done (what motivates the involvement in the activity); (2) *action* describes what takes place (what are the goals or product of the activity); and (3) *operation* says

**Fig. 11.2** The activity hierarchy. 1981 Adapted from Leont'ev (1981: 161)



how it is carried out (what are the procedures and conditions under which something is done). Students have different motives that encourage them to become involved in language learning activities. In some cases, students get involved to develop their communication skills or to learn languages using computers, etc. Some students may just focus on task completion, just to prove a point that they can translate successfully, but for others, it might be that they want to develop translation skills for future language use. For the task to be meaningful to students, it should be located within their authentic sociocultural contexts and goal-oriented to meet their needs and respond to their conditions.

Furthermore, this study considered the use of second generation CHAT (Engeström 1987). Engeström re-organised the structure of the activity described in the first generation of AT by illustrating the “role of cultural mediation, the social-cultural-historical context of the activity, and the relationship between the individual and collective” (Westberry 2009: 62). Engeström (1987) found that the activity system (AS) enables an analysis that focuses on the entire collective AS of a language translation task, which has a complex mediational structure that is shaped by its subjects and objects. Duff (1994: 175) explained that activity “comprises behaviour that is produced when an individual (or group) perform a task”. This indicates that there is a strong connection between the motive for the activity and the goal. Motive describes the impetus for attaining a certain outcome by the subject through enacted rules which are established and decided by a community of people who decide on who does what in performing the task. As such, AT forms a unit of analysis for executing a mediation activity within a certain sociocultural system. Figure 11.3 presents Engeström’s (1987: 78) second generation of AS for this study.

Engeström (1987) presents an activity system which is based on a triangular structure that is constituted of multifaceted interconnections. The six components of Engeström’s model present a good analytical base for technology-enhanced translation tasks. The Wikipedia translation task served as the unit of analysis, which was directed at an object in the form of a communicative outcome. According to Engeström (2008: 26), an activity is “a collective systemic formation that has a complex mediational structure”. The Wikipedia translation task presented a collective, artefact-mediated and object-oriented activity which was enacted between different components of the activity system. These components are discussed next.

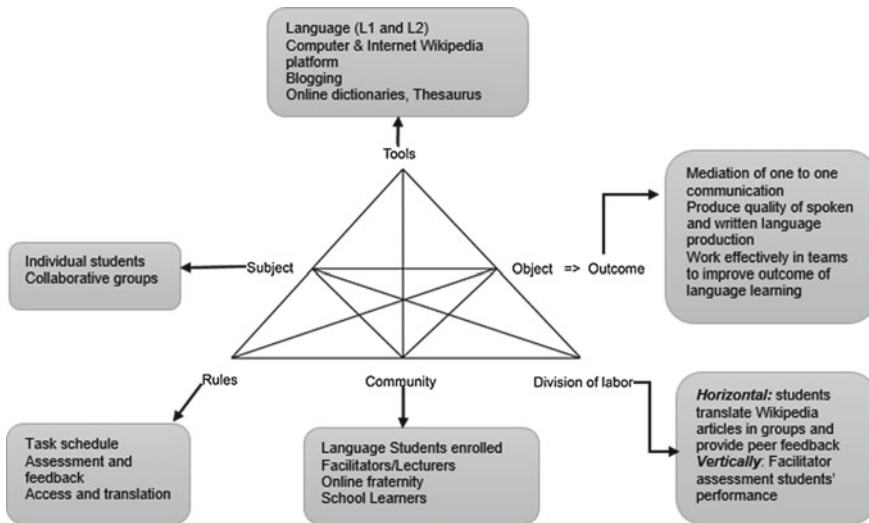


Fig. 11.3 Representation of Activity System of translation task based on Engeström (1987)

- The *subject or subject collective* is the individuals or collaborative groups of people whose viewpoints are adopted for use. In this task, the subject collective refers to the student teachers who were tasked with doing the Wikipedia translation, using their linguistic and communicative skills to negotiate meaning verbally or in written forms using English L2 as the source language and Oshikwanyama/Oshindonga L1 as the target language.
- The *object* refers to the raw materials or problem space, which is moulded or transformed into the outcomes at which the activity is directed, with the assistance of physical and symbolic external or internal tools. Lantolf and Thorne (2006: 223) posit that the object of the activity is “the nexus of power and resistance in language education context which describes how the outcome will be evaluated, by whom and with what effects and how tightly the actions and operations will be monitored”. In this task, the object is the successful translation of Wikipedia pages using L1 and L2 linguistic features to aid communication and negotiate meaning.
- *Tools and mediating artefacts*—Engeström (2008) proposes four categories of mediating artefacts: (1) what artefacts are used to identify and describe objects; (2) how artefacts are used to guide and direct processes and procedures on, within or between objects; (3) why artefacts are used to diagnose and explain the properties and behaviours of objects; and (4) where artefacts are used to envision the future state or potential development of objects, including institutions and social systems. In this task, mediating artefacts included technologies such as the Internet and the Wikipedia platform that enable students to collect and retrieve information or texts for translation. The technological tools included Web 2.0 platforms, such as blogs, which are created for further interactions and symbolic tools, such as

language resources, which, in a bilingual environment, may refer to the use of L1 and L2 to communicate and negotiate meaning. Physical linguistic tools, such as dictionaries, thesauruses and online language translation programs, are applicable.

- The *community* refers to all members of the AS. It comprises the multi-voiced social constructors such as the facilitator of the Wikipedia translation, who is a language expert and who orientates the subject collective to the task. It also refers to the external users or benefactors of the translated Wikipedia content, uploaded to the Wikipedia platform for a wide audience outside the framework or social context of the subject collectives. These benefactors may include the language students at the university, school learners, lecturers, and all the people who will access the translated pages on the Wikipedia website.
- The *rules* can either be explicit or implicit norms that regulate actions and interactions within the system. In this translation, the rules are extended to the expected mode of interaction, translation strategies and online etiquette and behaviour.
- Lastly, the *division of labour* involves the division of tasks and the roles of the subject collectives within the activity system completion. In this task, this may refer to the roles of collaborative group members, the individual contribution towards a collective effort, and the role of the community in offering mutual facilitation. Division of labour includes the vertical and horizontal division of power and status among different group members—in this case, motivated by their pre-technological and linguistic skills and abilities. This means that, among the participants, there could be students who are knowledgeable about technology and its use in language learning and would want to demonstrate their technological skills to others, whereas others may be more linguistically-oriented and would be more inclined towards using appropriate language translation strategies. Regardless of the power and status that comes with the division of labour, all roles are allocated to support both task design and execution.

Through the enactment of AT, systemic tensions, breakdowns and contradictions may occur (Kuutti 1996). These, according to Engeström (2008), are essential actions that deviate from the unexpected course of normal procedures that offer potential lenses for understanding the interplay between the different components of the activity system. In translation, these tensions, breakdowns and contradictions could be caused by a multitude of competing voices, also referred to as multivoicedness (Cole and Engeström 1993). Multivoicedness is related to the multiple perspectives, interests and traditions of the subjects; as members, they carry diverse histories which are related to the tools and mediating artefacts and rules employed. These contradictions are necessary for peer/self-reflection, which may lead to the actual self-regulation.

Concerning technology use in the language teaching context, tensions may arise because of the introduction of a new tool into a community, which might lack an appreciation of how to use it (Westberry 2009). In Wikipedia translation, this could relate to some students' lack of awareness of the Wikipedia platform as a translating tool, or because of students being technophobic, i.e., having a fear of breaking or even dealing with some aspects of technology, such as typing on the computer, anxiety and

eagerness to complete the work, and doubting one's capability. These tensions may cause conflicts and stress to develop between the subjects and subject collectives.

## 11.4 Methodology

The study is underpinned by the interpretive research paradigm and its associated philosophical assumptions. The empirical research design method used was a single exploratory case study, as informed by the qualitative research approach. This study used non-probability sampling techniques to select the sample purposively (Saran-takos 2013). A sample of 24 student teachers was purposefully selected from a population of 56 Namibia Language Education and English Language Education year-4 groups. The participants were selected because of their good level of proficiency in both the spoken and written source and targeted languages (i.e., English as SL, and the Namibian language as TL). In addition, these student teachers were at the intermediate level of ICT literacy, since they had completed both the Integrated Media Education and Computer Education Modules 1 and 2. The student teachers were divided into 8 collaborative groups (three students per group; five groups were Oshikwanyama translators, and three were Oshindonga translators).

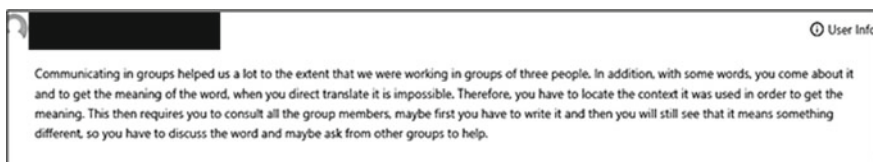
Data for the study were gathered using artefact analysis (of the translated Wikipedia pages) and blog reflection entries. The data gathered were coded into themes using Atlas.ti and were later interpreted and discussed to address the research aims. The trustworthiness of the data and ethical considerations were ensured throughout the research process. For this study, ethical clearance was sought and obtained through the application submitted to Stellenbosch University (PN1913). In addition, permission to access the participants was sought and obtained from the Research and Publication Committee of the university (Ref. EXT/390/2018). Information letters were written using Stellenbosch University's approved format and guidelines (PN1913), explaining the aims and duration of the research, and letters of informed consent were given to all the participants to complete for their voluntary participation. Anonymity was ensured using pseudonyms.

## 11.5 Presentation of Findings

The analysis below provides insight into how technology was used as a medium of communication and a tool through which the language was translated, used and learned. The discussions are embedded in both the CLT and AT frameworks, which are shaped by the participants' blog reflections on the learning environment.

### ***11.5.1 Subject Approach to an Interactive Language Learning Activity***

The participants approached the Wikipedia translation activity interactively, where they worked in small groups of three to make a total of eight groups of translators. The study revealed that working in small groups helped the participants to become more critical and inquisitive in giving a detailed analysis of the learning issues, concepts, strategies to use and, most importantly, to participate cooperatively. The participants remarked that working in groups provided an opportunity for them to learn and gain knowledge and experience from one another. One group member remarked:



The reflection indicates that collaborative group work helped the participants as the subjects of the study to scaffold one another's knowledge and skills and build good communicative abilities in the process. It also shows that, in a communicative language learning exercise such as this, participants are not only required to communicate verbally but also need to use their writing skills to translate the pages.

### ***11.5.2 Rules and Division of Labour During the Task***

Under the guidance and support of the research coordinator and the research co-observers/co-facilitators, the participants were introduced to the task in which they were organised into groups of three members. The rules were more concerned with the roles of individual group members. It was decided that one member should serve as the team/group leader, and one member should be the scribe, who acts as the group secretary and the lead typist. The last member served as the group convener and the lead researcher, who was responsible for research and information gathering. The roles of each collaborative group member were well explained to the participants and the role of the whole translation community as being facilitative members. The students reflected that they did not have any prior experience of translating on Wikipedia. This translation was a first for them, but because of the clear rules and instructions given to them, it was not so difficult. One student reflected that, due to the lack of knowledge about the platform, many things needed to be done to allow successful translation:

#### 📌 Negative implications observed in translating Wikipedia contents from English to a Namibian indigenous language

Some of the negative implications were the wrong translations we made and only came to realise it when it was too late. For instance, we translated South Africa as SuidAfrika which we later found out that we translated it to Afrikaans rather than to Oshiwambo. Other implications were being unable to create a Wikipedia account and being unable to publish our translated articles online, this was time consuming as we had to wait for assistance from the mediator who was assisting group by group. There was a time we were trying to publish our article just to end up losing it. Obviously, we had to start from scratch. The additional information I would request for better future translation is that we get advanced tutorials to equip us with the knowledge needed to operate the platform. I would also suggest that linguistics publish more Oshiwambo dictionaries so that we can improve our Oshiwambo vocabulary. Also, Let us translate nor and more as practise makes perfect.


The above reflection highlights the view expressed by Leont'ev (1981), who recommends emphasising the relevance of activity, action, and operations for the execution of an activity. Leont'ev postulated that there is a need to look at the motive of the activity and explain the motivation behind involving the participants in the activity. The findings of the study indicated intrinsic motivation, which includes the need to learn two languages, i.e., Oshiwambo and English, through bilingual interactions, consequently leading to an improvement of communicative, interpersonal and technological skills. One participant reflected:


This was my first time translating something in written form from one language to the other, so this was an amazing thing to do. At first, it was not easy but, in the end, all was falling into place. I was doing this activity whole-heartedly because I have been living with a question in my heart as to why we do not have something published in Oshiwambo on the internet and finally my whole question got answered. I felt so honoured that for now, we will be reading things on the internet in our mother tongue. Having this platform, for now, will not just end here but I will try to publish as many articles as possible. (BR18)

The rules set for this task enabled the action to be facilitated in such a way that a series of operations was enacted within a finite duration of time, and the participants were allowed enough time to plan, practise and execute the task. This then helped to place the participants in their sociocultural realm, where they had time to interact in their groups with the mediated artefacts and tools that transformed the learning context.

### 11.5.3 *Interacting with Mediating Tools*

This study made use of real-time Wikipedia translation, which the students had to execute in small groups. It was noted that, right from the beginning, many students had no idea that the Wikipedia website could be used for content translation. Some students had an idea that the content could be uploaded, although none of them had ever tried to upload content before. A reflection on students' prior experience with the Wikipedia platform is shown below:



 User Info

14 days ago

I now have a wikipedia account that I can log in to anytime. I mean, this is a big achievement for me. We managed to translate an English text to Oshikwanyama and also succeeded in publishing our translated article. Basically, we were successful in many ways possible as we gained knowledge on how to operate a Wikipedia page and also how to create one. I am planning on teaching my friends and family about this great experience.



In their reflections, the participants indicated that it had never occurred to them that they could learn first languages using ICT tools. One participant reflected on the historical background of African indigenous or first languages by indicating:

Long time ago, people were reluctant to use ICT tools because they feared that they do not know how to use them, and the language they use (English) was not understandable to them. ICTs were not used in African written languages. I guess this has changed in the modern world. (BR7)

This reflection indicates that the fear of ICTs, which were deemed to be European tools, was also accompanied by a lack of knowledge and understanding of European languages. One student reflected on the factors that caused teachers to use technology in the language classroom by saying:

Oteknologi iha i longifwa unene mongulu yofikola okuhonga, shapo ongeenge omuhongi oye a hala oku i longifa mefimo lonhumba ngeenge ta hongo oshihongwa opo i ulike omafano taa kwafele ovahongwa mokuudako. (**Technology is not used for teaching in the classroom unless it is when the teachers want to use the projector to show pictures that may help students to understand certain aspects very well**). (HR3)

Furthermore, the participants felt that Namibian first (home) languages are not languages of the Internet. One student reflected:

Our language is not on the internet because we do not have people who are capable of translating them into English. In history, our language was overlooked because of colonialism and the lack of development. We have a scarcity of words, thus making it difficult to translate. (HR13)

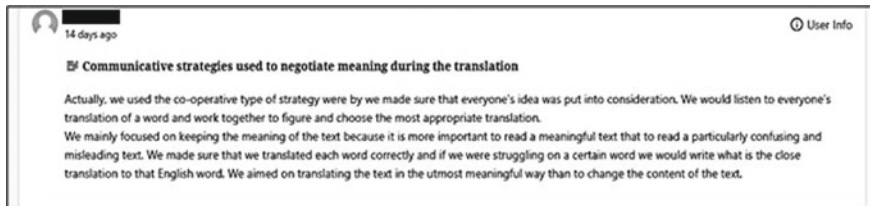
This assertion shows a deep reflection on the history of Namibian languages, which are underdeveloped compared to English. It also points to political factors that applied before independence and immediately after independence, when English was selected as the official language and medium of instruction in all Namibian schools. Participants asserted that these factors had led to a lack of English equivalents. According to the participants, English and Oshikwanyama/Oshindonga differ in the sense that, if they are directly translated, the meaning might be lost or get distorted. This also affects the syntactical structure of words in that the phrases and arrangement of the clauses will no longer be logical. Moreover, it was found out that Oshikwanyama/Oshindonga languages do not have sufficient terminology, which then led to omission, borrowing and adaptation of terminologies from the source language/text. The students used dictionaries to help them translate. This assisted the participants to search for the meaning of words that could not be comprehended in English to simplify them for use in the Oshiwambo language. The findings also indicated that the use of e-dictionaries and online thesauruses produced a substandard translation, since the participants opted to search for any meaning of terms in a Google search engine, which led to a lot of pages popping up and giving diverse meanings, of which some were not really from credible (authentic) sources. Thus, the provision of diverse meanings led to many debates concerning which meaning was correct and appropriate to use.

### 11.5.4 *The Community in the Working Space*

The community comprised of the student teachers, who shared a common object, which was to translate the Wikipedia pages successfully for the benefit of their language learning and the enhancement of their communicative skills. The community shared common rules for executing the task as well as the horizontal division of tasks among members and the vertical division of power and status in the group. One group member reflected on the use of group work:

There is nothing sweeter than working in groups. Working in groups was the best thing ever and we really learnt from each other because what you know is not what the other person knows. The work was not that difficult because we were sharing it among ourselves. (BR14)

Students reflected that working in a community provided an opportunity for them to interact positively and share ideas, experiences and knowledge on how to translate a text into a readable standard.



The community also included a well-established internet platform which had online dictionaries, Google websites, an online encyclopaedia, meaning finders and platforms such as Web 2.0 social network tools which provided online resources for the participants to consult on the meaning of the terms. This shows that the tasks and language learning are mediated using technological devices and platforms available in a virtual learning space. Regarding human-machine interaction, students observed that it had never occurred to them that they could learn first languages through technological platforms such as Wikipedia, and they were amazed and overwhelmed by the experience. A student reflected:

Some people believe technology is only useful when it comes to the English language, and they do not really use technology for other languages. However, here we tried to use technology to translate the English words into Oshiwambo. It is such a good feeling. (HR7)

Another student reflected:

Technology should be used more in African language classes, to give a deeper understanding to scholars. It will also help them to search for meaning and definition of words, as quickly as possible, using the internet rather than just waiting to carry a dictionary or even go to the library. (HR14)

This reflection affirms that the virtual learning space has become such an important part of the physical world in a way that it offers reliable benefits, which makes learning

social, interactive and supported by a network of contributors. This Wikipedia translation task confirms Donnelly's (2008) opinion that communication technologies have made it possible to compress the space-time dimension and helps in breaking through barriers of national and regional boundaries. Thus, it was essential for the translators involved in this project to have a sense of concern and responsibility towards their audience so that the translation they uploaded to the website was relevant, truthful and contained accurate information.

### *11.5.5 Object or Outcome of the Study*

The focus of this study was on the Wikipedia platform on which the translation task was performed. Wikipedia created a space where the task was directed and moulded to be transformed into appropriate outcomes with the help of the mediating tools and instruments. The study generated different outcomes that benefited language learning and the enhancement of communicative skills. The participants learned how to successfully translate the Wikipedia content from English into Oshindonga and Oshikwanyama and to repost the article on the Wikipedia platform. One participant postulated:

The whole Wikipedia translation exercise was not really an easy task to execute, due to the lack of skills in using ICTs, but with proper guidance, we were able to translate and have our article online. We felt good that at least we can now go back to the site and find something that we have created ourselves. It is such a good feeling. (BR23)

This outcome revealed both the positive and negative sides of Wikipedia translation. First, one needs to be knowledgeable on the use of ICT or rather be guided well by a knowledgeable peer or adult to be able to translate successfully. Second, the remark was influenced by the inner sense of gratitude that the participants had in knowing that they had recreated content in their language, which they could proudly use and read. This reflection was complemented by another student who realised the following:

Monghalamwenyo yopaife otwa teelela ovahongi va honge onunona okudja pedu, ooi va dule okulihonga okukufa elaka loshiingilisha tave li tula mOshiwambo. Eshi oshinima shiwa lela **(In this life, we expect teachers who will teach learners from an early age to learn how to translate from English to Oshiwambo. It is such a good feeling).** (HR16)

This translation was a good task to exemplify using tasks as the basic building blocks to execute online classroom activities and allowed the participants to both sequence the task and assess their outcomes. At the same time, the participants created reasonably authentic parameters within which they could communicate with each other. Most importantly, the findings indicated that this activity allowed the participants to focus on what was said to each other rather than on how it was said. This had a significant impact or influence on the outcome of their written dialogues, as it is evident in the translated pages posted on the Wikipedia portal. Moreover, the students were given a good platform to assess their work: five out of eight groups

confirmed that teachers could use the translations in the class, as they are reliable. The participants cautioned that, in case their articles would be used in the classroom, they should be compared with the latest English version, since Wikipedia is an open-source platform on which content could be updated and edited by anyone, anytime. This is important, since the Wikipedia content can change anytime, due to the openness of the platform, and this has an impact on the translated content. Furthermore, the participants also alluded to their dissatisfaction related to the lack of technological skills and vocabulary in Oshiwambo as compared to English, which was deemed to be more advanced than the Namibian languages. One group member reflected:

Due to the scarcity of words in African Languages, some words were written repeatedly or copied exactly as they were, while at some point, they had to give a detailed explanation just for one word, to convey correct meaning, for instance, marble – **oumanya hava vema voumaaabulu**, tarred road – **opate ya kolongwa yoteya**. (HR19)

Participants reflected on how they debated the use of certain words or phrases—some indicated that they sought help from a third party (another group); some had to use opposing opinions on the word choice and the phrasing of sentences. Students also revealed that it was difficult for them to translate into well-phrased sentences because some of them had never translated the English words into Oshiwambo, even when they were at school. Thus, they resorted to word-for-word translation, which they later found had completely changed or distorted the meaning of the original text.

The participants stated that the scarcity of words in African languages compared to English made it difficult to do the translation. Many groups ended up writing the same words repeatedly or writing out descriptions or illustrations in the TL to provide the full meaning of the SL. Another reflected on how the language that was used in the text influenced their selection of the text:

In some cultures, people are lazy to change words in their own language and thus, end up borrowing words. Our text was Namibian, everything said is part of our Namibian culture and most of the words used are familiar, making it easier to translate. (HR22)

Although the findings revealed that the texts selected were culturally friendly for the students as they incorporated many Oshiwambo cultural words, some participants complained that some words from the SL were not from Oshiwambo culture. This fact prompted them to borrow words which did not fit their culture, i.e., marble = **oumaaabulu**, turbines = **etubine**. Some ended up adopting the words exactly as they were in the SL, i.e., *Heroes Acre*, since they totally and completely failed to translate them.

Conflicts and contradictions were observed in this study in the sense that they influenced the outcomes of this study. One contradiction was related to the hegemony of English in the world of ICT and its dominance over African languages. The English language culture and the fact that English is deemed to be the most popular language-diverse vocabulary resulted in more advanced terminology and vocabulary which were not easily available in the Namibian indigenous languages culture. This meant students were unable to translate some of the English words, and they instead omitted

them or transferred them to Oshiwambo, which, in the end, compromised the quality of the translation and hence the outcome of the study. Another contradiction arose in the students' lack of experience to use technological tools, which then caused them to delete the first translated articles. This was a contradiction, because as much as the participants wanted to translate, they were conflicted by their lack of expertise to save the content on Wikipedia. Consequently, the groups had to restart and retranslate the text. This experience had both positive and negative outcomes. On a positive note, the students may have written improved translations, since they were doing the task for the second time. On a negative note, some students may have been frustrated and angry that they had to repeat the translation, resulting in a compromised quality of translation.

Overall, the students developed great respect and appreciation for this Wikipedia translation task, as they regarded it as an eye-opener in respect of their association and communication with other class members and the development of African languages in and out of the classroom. Some of their reflections are indicated below:

I am very much content with the experience that I have gained from the Wikipedia platform as well as with the whole translation process. I feel quite overwhelmed to have been involved in such a wonderful practise. As this was a first time experience, I surely gained new knowledge on the translation of articles through the Wikipedia platform as well as skills on how to operate that very platform. Regarding recommendations, I would indeed recommend my translation to be used in the language classroom as I believe it would make a useful teaching resource. Although, our translated article may not be 100% like the source text which is in English, I highly believe that we kept its meaning. So, yes, the translated article is a true reflection of the English source text. (BR3)

The truth remains that it was my first time to come across with something like that. But ever since I got introduced to it, I realise that this is an amazing experience ever. Am very much satisfied and happy that my own mother tongue will be on the internet. Of course, yes, I would urge/ recommend language teachers to make use of this platform in their teaching and learning process. The translated article gives a true reflection of the source text because nothing much changed except the language, but the content remains as it is. (BR5)

These positive comments point to the value of the outcome of the translation as an activity that the students would like to incorporate into their teaching.

## 11.6 Discussion of the Findings

The aim of taking part in this translation task was to use Wikipedia as a mediating tool that facilitated dialogical communication between students. The findings indicated how the activity was used to enhance the students' spoken and written communication, leading to overall improved language learning outcomes. It also showed that the translated pages would reach a wider range of community members in the real-world, who would be able to read them and share them with others, either in their physical space like schools or in their virtual space using Web 2.0 tools. The findings showed how the use of the Wikipedia website for language translation had created a new language learning environment by assisting the pre-service language

student teachers to interact with the mediating tools (i.e., ICT tools, virtual tools, and online resources). The participants made use of online dictionaries and thesauruses to extend their vocabulary and for confirmation checks on the meaning of terms or phrases.

The study postulates AT as a helpful tool in a language context, as it analyses goal-oriented actions that look at the action and mediating artefacts to reach the objective. It further explicates the action of the collective within their community or social environment as well as the motives or goals for that activity. The motive of the study was more connected to the use of CLT in a technology-enhanced language setting. AT did not only provide an analytical framework but also the theoretical lenses that are located within the sociocultural context in which students collaborated using both SCMS and ACMC in the classroom. This facilitated language learning in the classroom, as students had an opportunity to develop both procedural and declarative knowledge that is induced through language use. The intersubjectivity of language learning in this study was not only located in the interactions between the subjects of the study but also within and through all the people accessing the translated articles on the Wikipedia website.

The findings showed a good example of using Web 2.0 tools, such as Wikipedia, which is an open-source software that has been seen as a controversial subject in the body of research because its content is not peer reviewed. The findings indicated that using AT helps to redefine the identity of the Wikipedia platform as an online language learning environment that assists students to write collaboratively, and facilitates the acquisition of new communication skills by students. Blin and Appel (2011) argue that computer-supported collaborative writing fosters greater awareness of the writing process to help students to gain a sense of audience and create opportunities to focus on form and negotiate meaning. This task required collaborative behaviour that entails collective effort and the motivation of all group members within their sociocultural setting.

## 11.7 Conclusion and Recommendations

The Wikipedia translation task sets a good example of how teachers can apply translation in a technology-enhanced setting for language learning. This emerged in the way that the student participants collaborated well and negotiated meaning through constructive debates. It is concluded that SCT facilitated sound language learning methods that develop students' metacognitive skills that enabled them to focus on the language task and transfer their skills to the real-world context. The skills attained helped the participants to translate in a bilingual setting and to communicate effectively and competently using both L1 and L2. The outcome of the translation task influenced the way the whole learning community perceived translation in the classroom for teaching and learning languages. The results of Wikipedia translation show how translation, which is seen as an almost rejected and abandoned language learning method in school, could be revived using well-structured tasks. It is recommended

that language teachers use technological instruments such as the Wikipedia website to mediate the kind of language learning that may be derived from different kinds of mediation. This would enhance the use of 21st-century pedagogical skills required in the language teaching and learning process.

Theoretically, this study posits AT as a suitable Wikipedia translation framework which involves models of knowledge building, perspectives and artefacts to guide the design of computer-supported collaborative learning activities. This serves as a good model that presents student teachers with insights into their own classroom practices and into the way they can restructure their translation tasks to focus on communication and innovation. The use of AT is significant in addressing internal conflict and doubt in bilingual students when dealing with new learning concepts. This task served as a transformational tool for accommodating bilingual education within a modern framework using modern research tools and pedagogies. Finally, the study recommends the application of Wikipedia translation as a multimodal method that highlights the notion that bilingualism should be seen as an asset instead of a liability in language teaching and learning environments.

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