YOUNG LEARNERS' USE OF GOOGLE TRANSLATE AND GLOSBE IN A WRITING TASK: A CASE STUDY

Mirela Simić

Pan-European University APEIRON, Banja Luka, Bosnia and Herzegovina, mirela.p.simic@apeiron-edu.eu

Abstract: The aim of this study was to examine the use of digital translation tools by near-beginner adolescent foreign language learners and their beliefs about the potential of these tools for language learning. A group of 15 participants, aged 13 and 14, enrolled in a German language course at a language studio, completed a writing task using the Google Translate and Glosbe tools. Semi-structured interviews provided insight into their usage of these tools and revealed contrasting beliefs. Some learners, in favor of using digital translation tools in language classes, argued that the tools facilitated communication and helped them acquire new vocabulary, conjugation patterns, and syntax. In contrast, others expressed that they had learned little, were critical of translating entire texts, and were concerned about becoming dependent on the tools and developing a false sense of competence. The lack of reflexivity and the challenges faced by some students underscore the importance of providing guidance and support to learners at this stage when using digital translation tools.

Keywords: digital tools, machine translation (MS), online dictionary, language teaching, foreign language learners

INTRODUCTION

Machine translation (MT) tools have undergone significant advancements over the past decade. For instance, Google Translate, which was launched in 2006 with support for just two languages and a relatively small user base, has now expanded to include 133 languages and serves hundreds of millions of users globally [1]. This rapid growth reflects the increasing demand for cross-linguistic communication in our interconnected world and highlights the substantial improvements in MT technology. Notably, the transition from statistical machine translation (SMT) models to neural machine translation (NMT) in recent years has significantly enhanced the quality and accuracy of translations provided by these tools [1] [2].

These advancements have also significantly impacted the field of research. In the initial years following the introduction of MT, studies primarily focused on its limitations and the potential risks it posed to foreign language education [3] [4]. However, the qualitative improvements in MT over the past decade have shifted the research focus. Increasingly, scholars are exploring the potential applications of MT as

a tool for enhancing language teaching and learning, recognizing its value in supporting multilingual communication and language acquisition [5] [6]. Current research typically examines several aspects of how MT impacts language learning. This includes investigating the qualitative differences in learners' text production with and without the assistance of MT, exploring the effectiveness of text editing strategies such as pre-editing and post-editing with MT [7], and analyzing the beliefs and attitudes of both learners and educators toward the integration of MT in the language learning process [8] [9] [10].

Studies on the use of digital translation tools and online dictionaries in foreign language learning (FLL) indicate that the majority of learners regularly utilize these resources, particularly when writing in the target language or to address gaps in their lexical knowledge [9] [11] [12]. This trend has grown significantly over the past 15 years [12]. In general, users appear to recognize that digital translation tools are a permanent part of language learning [13]. However, teachers hold divergent views on how to integrate these tools into FLL. While some advocate for the constructive use of these resources, emphasizing their advan-

tages and disadvantages in the classroom, others argue for a complete ban on digital translation aids in FLL [3] [4]. There is currently no definitive empirical evidence to confirm whether digital translation tools directly promote language learning. However, existing studies suggest that these tools can contribute to the development of metalinguistic awareness [6] and improve outcomes in foreign language writing [14]. It is also hypothesized that learners with high levels of language learning anxiety could particularly benefit from digital translation tools. The ability to resolve linguistic ambiguities allows them to gain confidence, which, in turn, may help alleviate negative emotions associated with FLL [15]. Additionally, various studies suggest that the use of these tools in the classroom enhances the quality of texts and translations, a factor shown to positively impact students' self-confidence [6] [16] [17].

Notably, most existing studies predominantly focus on the use of MT tools by university-level learners. However, primary school students are also part of this increasingly interconnected world and are frequently exposed to diverse languages and cultures. This exposure occurs through various channels such as interactions with multilingual peers, social media, music, video games, and travel experiences, highlighting the need to consider younger learners in MT research.

The research gap is primarily attributed to the limited technological infrastructure in foreign language classrooms within public schools, a challenge evident in Bosnia and Herzegovina as well. Excluding the most developed countries in Europe and globally, the majority of public schools lack essential resources such as language laboratories, individual computers for students, and consistent internet access. Consequently, conducting the study in public primary schools was not feasible. Instead, the focus shifted to private language institutes, where many school-aged children enroll in courses, particularly in English and German, even though these subjects are part of the regular school curriculum.

In those increasingly tech-equipped classrooms, young learners have widespread access to the internet and, consequently, to MT tools. Regardless of whether a child learns a foreign language in a public school or a private language institute, the use of MT tools' raises several critical questions for foreign language education. To what extent can learners at this age, often with relatively low proficiency in the target language, use these tools in a reflective and purposeful manner? How does the use of MT tools influence their language acquisition and motivation to learn a foreign language? Are certain translation tools more effective or appropriate for classroom use than others? Moreover, what are students' perceptions of using MT tools as part of their language learning experience?

Limited insights into the usage behaviors of younger learners are provided by the study conducted by Vázquez-Calvo and Cassany [18], which explored the application of MT among 11- to 17-year-old students in foreign language classes within the Catalan primary school context. In their analysis, Vázquez-Calvo and Cassany drew on a comprehensive dataset, including 1,020 minutes of classroom observations, 17 screen recordings of three distinct online activities, and insights from semi-structured interviews with 12 learners. This data was gathered as part of a broader study investigating the use of online language resources in the classroom. The findings of Vázquez-Calvo and Cassany's study indicate that learners utilized machine MT for a range of tasks, including understanding, producing, and revising texts, with varying levels of success and complexity. The most frequent use of MT involved fully translating foreign language texts to achieve a general understanding. Additionally, learners often employed MT unconsciously as a writing aid, composing texts in their first language (L1) and then translating them into the target language without reviewing or revising the output. At the sentence level, MT was also used to look up vocabulary and resolve grammar-related queries. The study did not identify any notable differences in the use of MT tools based on the age or foreign language proficiency of the learners, despite the wide age range of participants. This is particularly intriguing and suggests a potential area for further investigation. Additionally, the study did not explore the learners' underlying considerations, beliefs, or emotions when employing these MT methods, highlighting a significant gap in the current research literature.

To explore this specific student perspective, a case study was conducted in October 2023 at the Mirelingua German and English Language Studio in Banja Luka. The study involved a group of students who

completed a writing task, followed by recorded semi-structured interviews. This research was part of a broader doctoral study project. The writing task was partially completed using two widely utilized translation tools in the Serbian-speaking world: Glosbe and Google Translate. These tools were deliberately selected for their distinct functionalities. Glosbe serves as an online dictionary, offering a search function for individual words along with supplementary information such as example sentences and conjugation. In contrast, Google Translate is a neural machine translation tool capable of translating entire sentences and texts, providing alternative translation suggestions with a simple mouse click.

Glosbe is a multilingual, community-driven dictionary platform similar to Wikipedia, supporting all major world languages. It offers free access to dictionaries with in-context translations through a „translation memory" feature, providing users with translated sentences. Beyond simple translations, Glosbe delivers extensive resources, including thousands of example sentences, pronunciations, images, and illustrations to assist users in finding accurate translations. The platform also includes conjugation and declension tables, which are particularly useful for languages with complex grammatical structures [19]. Despite its numerous advantages, Glosbe's primary limitation is often attributed to its community-driven nature. The platform's creators are unable to fully verify all user-generated content, including example sentences, which can lead to inconsistencies in quality. However, the active involvement of Glosbe's community, comprising over 600,000 users, is also considered one of its unique strengths. This extensive user base allows for real-time corrections and improvements, providing an opportunity for continuous enhancement of translations.

Google Translate is a free, web-based translation service capable of translating various types of text and media, including words, phrases, and entire webpages. Initially launched as a statistical machine translation (SMT) system, it required input text to be translated into English first before being converted into the target language. Due to the predictive algorithms used in SMT, the service initially struggled with grammatical accuracy, often resulting in less precise translations. In 2016, the quality of machine translation significantly improved as Google Trans-

late and other translation services moved away from the traditional word-for-word translation approach and adopted neural network-based systems. This shift marked a transition to the use of artificial intelligence, where the system mimics the structure of the human brain and is trained on large volumes of data. Each sentence is translated multiple times, allowing the model to refine its accuracy. Google Translate transitioned to neural networks in October 2016, and the improvement in translation quality was immediately evident, particularly for language pairs involving English [1]. A major challenge for machine translation had been the sentence structure of languages like German, where the verb's position often led to numerous translation errors. With the integration of neural networks, the software can now recognize these and other grammatical variations from an extensive database and apply them to improve translation accuracy.

Despite its vast database, Google Translate still lacks the capability to translate entire Word and PowerPoint documents. Additionally, a small test example highlights a limitation in its translation accuracy. The German sentence „Du hattest Schwein" was literally translated as „You had a pig", whereas the correct meaning is „You were lucky". This example underscores the challenges that machine translation systems still face in capturing idiomatic expressions and context. The same sentence was entered into Glosbe, where the translation provided was also inaccurate. However, the platform offered numerous correct examples of translations in the example sentences below, which highlights the value of community-driven dictionaries.

The following two research questions were defined for this study:

How do primary school learners use the translation tools Glosbe and Google Translate to complete a criterion-based writing task, and what emotions are associated with their use?

What are learners' beliefs about the effectiveness of translation tools, particularly Glosbe and Google Translate, in supporting their language learning progress, and how do they feel about the potential for future use in foreign language lessons?

METHODS AND MATERIALS

Task and Participants

This study involved a writing task conducted with 15 learners of German (10 female, 5 male) enrolled in the A2.2 German course at the Mirelingua Language Studio in Banja Luka. The participants, aged 13 and 14, were in the eighth or ninth grade of primary school. The task was completed over two sessions, each lasting 45 minutes, with a one-day interval between the sessions.

In the writing task, learners were asked to describe the best weekend they had ever experienced. The task was structured into three variants, each differing in the timing and use of the two translation tools, Glosbe and Google Translate:

Variant 1:

In the first step, students wrote a German text without any external aids. In the second step, they revised their original text using either Glosbe, Google Translate, or both tools.

Variant 2:

In the first step, students composed a German text using Glosbe. In the second step, they rewrote the same text using Google Translate.

Variant 3:

In the first step, students wrote a German text without any external aids. In the second step, they used Google Translate to translate their text from German back into Serbian and checked if the Serbian translation accurately conveyed their intended meaning. In the final step, they revised their original text using Glosbe, Google Translate, or both tools.

The variation in the tasks was designed to diversify the user experience while also aiming to reveal potential influences of each variant on the learners' affective user experience and beliefs.

The two translation tools and the writing task were presented to the students in detail before they began. To assess the suitability of the concept and the three task variants, a preliminary test round was conducted in the course prior to the main study. In this phase, students were asked to translate 10 sentences into German using the tools. This initial round also allowed students to reflect on which variant they preferred to use during the main task.

The writing task was designed based on specific criteria. At the teacher's request, recently covered topics were incorporated, including the use of the *Perfekt* tense, modal verbs, subordinate clauses (particularly causal clauses to explain why it was the best weekend), and expressions of location. This criterion-based approach aimed to provide students with guidance and ensure the task was not overly open-ended. Conversely, the degree to which students adhered to the given criteria was also intended to offer insights into the reflectiveness of their tool usage. The requirement to use the *Perfekt* tense posed a specific challenge, as machine translation programs like Google Translate often render the *Perfekt* as the *Präteritum* - a grammatical structure that is not yet familiar to the learners.

Conducting and Evaluating the Interviews

Following the writing task, learners were interviewed about various aspects of their tool usage and overall task experience. The interview format combined elements of a semi-structured interview and stimulated recall [20]. Gass & Mackey [21] advocate for minimizing the structure during the recall process, allowing participants to verbalize their thoughts during the task or reflect on their actions without external influence. Given the learners' limited verbalization skills at this age, some guiding questions were employed to help steer the recall process and facilitate the articulation of their thoughts. This approach involved accepting a certain degree of deviation from a purely introspective process, as well as the potential influence of the guiding questions on the learners' responses. The texts produced during the writing task served as stimuli for this retrospective survey.

The 15 interviews were recorded, with each session averaging 15 minutes in length. The audio transcripts were then analyzed using Mayring's qualitative content analysis [22]. This method involves a coding process aimed at categorizing the data to systematically address the research question. The analysis can be conducted deductively, using a theoretically based category system, or inductively, allowing categories to emerge directly from the data. This study employed Mayring's inductive category formation process model, resulting in a category system comprising 10 codes. These codes were subsequently interpreted in relation to the research questions.

Table 1: Overview of the Codes Used

Code	Category	Subcategories
C01	Experience with Translation Tools	C01.1 Experience at home C01.2 Experience from class C01.3 Experience with the dictionary C01.4 No experience
C02	Beliefs about the Usefulness of Translation Tools	C02.1 General usefulness C02.2 Usefulness of Glosbe (advantages over Google Translate) C02.3 Usefulness of Google Translate (advantages over Glosbe)
C03	Choice of Translation Tool	C03.1 Preference for Glosbe C03.2 Preference for Google Translate C03.3 Use of both tools (Glosbe and Google Translate)
C04	How Glosbe is Used	N/A
C05	How Google Translate is Used	N/A
C06	(Un)Critical Use of Translation Tools	N/A
C07	Beliefs about the Usefulness for Learning Progress	C07.1 Useful for learning C07.2 Not useful for learning C07.3 Conditional usefulness for learning
C08	Affective Experience During Task Completion	C08.1 Uncertainties, excessive demands C08.2 Enjoyment, interest C08.3 Other emotions
C09	Feedback on Tasks and Materials	C09.1 Feedback on the tasks C09.2 Feedback on tutorials C09.3 Feedback on criteria grid
C10	Ideas and Attitudes Regarding Future Use	C10.1 Suggestions for future use C10.2 Opposition to future use in language teaching

The following excerpts from the interview with participant P01 illustrate the application of this coding system in the transcript:

1. *It was so great to have a tool to help me write a good text without always having to think: What is that word? (C08.2) I would love to have that in school too! (C10.1)*
2. *But sometimes I was thinking: Am I really allowed to use all of this? (C06)*

The coded text passages were gathered for each analysis category, summarized, and attributed to the individual participants to identify trends and connections. As a result, statements such as the one in example (2) were categorized under C06, labeled as „critical use".

The student texts were not subject to a systematic evaluation; however, they were included in the analysis of the transcripts to gain a more comprehensive understanding of the students' statements. Furthermore, each text was examined to determine whether any tenses were used that contradicted the specified requirements.

RESULTS

Usage of Translation Tools and Task Experience

The analysis of the transcriptions revealed that the surveyed learners predominantly utilized translation tools to look up unfamiliar words or to verify the accuracy of words or sentences they had composed. Both Glosbe, an online dictionary primarily designed for word searches, and Google Translate were employed for searching individual terms. Additionally, Glosbe was used to verify specific verb conjugations, noun articles, and to cross-check the translations suggested by Google Translate. Several learners reported entering multiple words or entire sentences into Google Translate, noting that they found this tool more effective than Glosbe for such tasks. Additionally, two learners expressed a preference for Google Translate when translating individual words, as it provides a single translation option, whereas they felt overwhelmed by the extensive list of translation suggestions offered by Glosbe.

For five learners, the choice of translation tool was predetermined by the specific variant of the writ-

ing task (variant 2). In the final sub-steps of variants 1 and 3, where the tool or the combination of tools could be freely chosen, the analysis of text production and conversational data indicated a clear preference for Google Translate, with Glosbe being used only minimally. Some statements suggest that the learners' choice of tool was partially influenced by a misunderstanding of the tools' functionalities. For instance, three learners believed that Google Translate provides only a single correct translation, which was perceived once as a disadvantage and twice as an advantage. Additionally, one participant noted that Google Translate was deemed effective only for translating individual words or a single sentence, as the translation output changes when additional sentences are entered.

The ability to choose between various translation suggestions was perceived differently among learners, with some considering it advantageous, while others viewed it as challenging. One strategy mentioned for handling search results on Glosbe was to select the top-listed word. Notably, the example sentences, despite being demonstrated during the trial lesson prior to the writing task, were not utilized by the learners. However, three participants reported that they had explored alternative translation suggestions on Google Translate by clicking on specific words and found this feature beneficial.

The students' own text production was not solely compared with suggestions from a single tool; in some instances, both tools were used complementarily. Three respondents indicated that they utilized Glosbe to verify or better understand translations of passages suggested by Google Translate that appeared unclear or questionable. Additionally, Google Translate was employed for back translations into Serbian, a procedure explicitly included in variant 3 of the writing task. One participant (P02) engaged in back translation, despite this not being specified in their assigned task variant. Three learners reported mentally translating their German text into Serbian before entering it into Google Translate. They then compared the German translation provided by Google Translate with their own original German version. Consequently, one participant adjusted the Serbian input until the resulting German translation was coherent. Similar strategies were identified in the study by Vazquez-Calvo and Cassany [18] among

learners at this level, where they were categorized as uses involving a higher level of complexity. However, the data do not allow for a determination of whether there is a relationship between the complexity of tool usage and learners' beliefs about the effectiveness of these tools for language learning.

In the interviews, 9 out of the 15 students indicated an awareness of the importance of a critical approach when using translation tools. Six students, for instance, expressed a level of mistrust towards the translations suggested by Google Translate. However, a comparison with the learners' text productions suggests that this critical approach was likely confined mainly to checking the meaning of individual words. For example, two-thirds of the participants either accepted or did not notice an incorrect verb tense (typically the *Präteritum*) in their texts, despite the criteria grid specifying the use of the *Perfekt*. One participant (P10) candidly admitted to translating as much as possible and directly copying the output. These findings align with the conclusions of Lidström's study [10], which noted that learners at this level experience challenges in critically evaluating suggested translations.

Regarding the affective experience of completing the task, participants reported both positive and less favorable feelings. Some described the task as engaging, educational, a refreshing change, and an exciting experience. Two participants noted increased confidence and satisfaction with the quality of their text after using the translation tool - sentiments that have also been reported by advanced university students in previous studies [9] [8]. Conversely, some learners found it challenging to write a text in German without the assistance of translation tools during the initial phase of the task (variants 1 and 3) and perceived the use of the tool as beneficial in successfully completing the assignment. The advantage of being able to produce longer and higher-quality texts with the assistance of translation tools was frequently mentioned in relation to their perceived usefulness, a benefit previously highlighted in the study by Jolley and Maimone [12]. The criteria grid was viewed variably by participants; some found it supportive, while others perceived it as an additional challenge. Three learners reported feelings of uncertainty or confusion when faced with selecting a translation from multiple, sometimes unfamiliar, suggestions.

Additionally, significant discrepancies between their own versions and the Google Translate output were experienced as unsettling.

Beliefs about the Usefulness of Using Tools for Learning

The analysis of the learners' statements revealed a range of beliefs, some of which were contradictory. However, the findings also indicated that very few learners viewed the use of translation tools as unequivocally beneficial or detrimental to their learning. Ten out of the 15 respondents identified both opportunities and risks associated with the use of these tools for their learning progress. The reasons cited for the perceived usefulness of translation tools included the ability to check their own texts, as well as the opportunity to learn new words, sentence structures, and verb conjugations. Advanced university learners in other studies have also acknowledged the usefulness of translation tools for this purpose [9] [12] [8] [6]. However, seven participants in this study identified the potential risk of relying on a tool like Google Translate to copy translations without critical thinking, thus failing to learn effectively. While this behavior represents a conscious decision to limit cognitive engagement, three of these participants went a step further, arguing that using such tools diminishes their cognitive involvement. They contended that the mental effort required to select the correct words and construct sentences accurately is supplanted by tools like Google Translate. From their perspective, using the tool thus hinders the development of the ability to express oneself successfully with existing linguistic resources. In this context, one participant expressed concern about becoming dependent on translation tools, potentially fostering a distorted perception of their own language competence. These feared negative outcomes align with the risks identified in studies by Jolley & Maimone, Knowles, and Steding [12] [3] [4].

For these reasons, several learners linked the usefulness of translation tools to the condition that their use occurs within a controlled environment, such as a language school, and is limited to individual passages. A third of the learners also considered using an online dictionary, such as Glosbe, to be more beneficial, as it does not allow entire sentences to be copied and focuses on individual words, which are easier to remember. To enhance the likelihood of retaining the words or constructions encountered, learners emphasized the importance of paying additional attention to them, both within and outside of the exercise. This aligns with findings from other research on the effectiveness of tools for vocabulary learning, which similarly suggests that retention is improved when learners engage actively with the material [5]. Participants in this study mentioned strategies such as writing down the words they looked up or using them repeatedly as potential methods to reinforce learning.

Regarding the future use of translation tools in foreign language teaching, seven learners considered the tasks used in this study - particularly writing a story - to be useful, and they also viewed these tools as valuable aids for preparing presentations and understanding texts. However, one third of the participants expressed opposition to the continued use of translation tools in teaching, citing concerns about the potential negative effects of relying on these tools.

The data do not suggest any correlation between the variant of the writing task and the learners' beliefs about the usefulness of translation tools.

DISCUSSION

This article began by noting that advancements in the field of MT also raise important questions for foreign language teaching, particularly with primary school students. As highlighted in the overview of the current state of research, there is a notable lack of studies examining the use of translation tools by younger learners in foreign language education. The study presented in this article serves as an exception in this regard, offering initial insights into the use of translation tools by primary school students and the perceptions of their use by teachers at this level [10] [18]. By describing how primary school students use the translation tools Glosbe and Google Translate, this article addresses this research gap and contributes to a better understanding of the student perspective, particularly by shedding light on learners' feelings and beliefs.

Previous studies have demonstrated that translation tools enable learners to produce higher-quality and more extensive written work [9] [12]. This communicative potential was also reflected in the statements of the learners in this study. Several participants reported difficulty in writing their text without

the assistance of the tools but expressed greater confidence and satisfaction with the quality of their revised text when using the tools.

Nevertheless, most learners in this study expressed mixed feelings about the inclusion of translation tools in language teaching. On one hand, many participants found the tools helpful for learning new words or constructions, a finding consistent with that of advanced university learners in other studies [9] [12] [8]. On the other hand, many learners emphasized certain conditions for their use and expressed concerns about the potential for mindless copying of suggested translations. Additionally, some learners associated the use of these tools with reduced cognitive engagement and the risk of dependency, issues also addressed in the studies by Knowles and Steding [3] [4]. As a result, one third of the participants did not view the future inclusion of translation tools in foreign language teaching as beneficial.

The partially uncritical and thoughtless use of the two tools suggests that the concerns raised by these learners are not unfounded. The use of unfamiliar or incompatible tenses in two-thirds of the texts indicates that learners at this age struggle significantly with critically analyzing the suggested translations. This observation aligns with assessments made by teachers at this level in Lidström's study [10]. Additionally, some students reported feeling unsettled when using the translation tools, due to the sometimes significant deviations in the suggested translations, or because of misunderstandings regarding how these tools function.

The results indicate that primary school students are not yet highly competent in using translation tools and tend to use them without critical reflection. Given the more positive assessments found in studies with advanced learners [9] [12] [8], it is reasonable to infer that a certain minimum level of foreign language proficiency is necessary to effectively benefit from independent use of tools for language learning. However, it appears questionable whether the learners' sometimes contradictory views on the usefulness of translation tools can be explained solely by differences in their language proficiency. The findings suggest that the reflective nature of tool use plays a significant role in this process. Several studies also emphasize the importance of metalinguistic awareness in the effective use of translation tools [7] [5] [6].

Conclusion

Given the continuous advancements and improvements in the field of MT, it is anticipated that the role of translation tools in foreign language teaching will attract increasing research attention in the coming years. Future studies could explore the effects of regular tool use on learners' motivation to learn a foreign language. Additionally, there is a growing need for concrete teaching concepts and materials designed to address the use of these tools. The results of this study suggest that it would be beneficial to train learners of this age in the critical use of translation tools, enabling them to utilize these tools more effectively and in ways that support learning and enhance communication in foreign language acquisition.

References

[1] S. Pellone, "Der Aufstieg von Google Translate: eine etwas andere Liebesgeschichte," Supertext.ch, 30 August 2021. [Online]. Available: https://blog.supertext.ch/de/2021/08/der-aufstieg-von-google-translate-eine-etwas-andere-liebesgeschichte/. [Accessed 2023].

[2] L. Volkart, „Traduction automatique statistique vs. neuronale: Comparaison de MTH et DeepL a la Poste Suisse," Universite de Geneve, Geneva, 2018.

[3] C. Knowles, "Investigating instructor perceptions of online machine translation and second language acquisition within most commonly taught language courses," The University of Memphis, Memphis, 2016.

[4] S. Steding, "Machine translation in the German classroom: Detection, reaction, Prevention," *Die Unterrichtspraxis/Teaching German,* vol. 42, no. 2, pp. 178-190, 2009.

[5] K. Fredholm, "Effects of Google Translate on lexical diversity: Vocabulary development among learners of Spanish as a foreign language," *Revista Nebrija,* vol. 13, no. 26, pp. 98-117, 2019.

[6] S.-M. Lee, "The impact of using machine translation on EFL students' writing," *Computer Assisted Language Learning,* vol. 33, no. 3, pp. 157-175, 2020.

[7] M. Correa, "Leaving the "peer" out of peer-editing: Online translators as a pedagogical tool in the Spanish as a second language classroom," *Latin American Journal of Content and Language Integrated Learning,* vol. 7, no. 1, pp. 1-20, 2014.

[8] A. Nino, "Machine translation in foreign language learning: Language learners' and tutors' perceptions of its advantages and disadvantages," *ReCALL,* vol. 21, no. 2, pp. 241-258, 2009.

[9] J. Clifford, L. Merschel and J. Munne, "Surveying the landscape: What is the role of machine translation in language learning?," *Revista d'innovacio educativa,* vol. 10, pp. 108-121, 2013.

[10] S. Lidström, "Digitally speaking...: How secondary school English teachers perceive the use of digital translation tools in English language learning," The University of Umea, Umea, 2019.

[11] A. Nino, "Exploring the use of online machine translation

for independent language learning," *Research in Learning Technology,* vol. 28, 2020.

[12] J. R. Jolley and L. Maimone, "Thirty years of machine translation in language teaching and learning: A review of the literature," *L2 Journal,* vol. 14, no. 1, pp. 26-44, 2022.

[13] A. D. e. a. Benites, "Machine translation literacy: A panorama of practices at Swiss universities and implications for language teaching," *CALL and professionalisation: short papers from EUROCALL 2021,* pp. 80-87, 2021.

[14] E. O'Neill, "Training students to use online translators and dictionaries: The impact on second language writing scores," *International Journal of Research Studies in Language Learning,* vol. 8, no. 2, pp. 47-65, 2019.

[15] H. Selcuk, J. Jones and H. Vonkova, "The use of Google Translate as an ICT tool in web-based collaborative writing: Self-reported accounts of EFL learners," *Proceedings of IAC 2019 in Vienna,* 2019.

[16] S.-C. Tsai, "Chinese students' perceptions of using Google Translate as a translingual CALL tool in EFL writing," *Computer Assisted Language Learning,* vol. 35, no. 5-6, pp. 1250-1272, 2022.

[17] J. Xu, "Machine translation for editing compositions in a Chinese language class: Task design and student beliefs," *Journal of Technology and Chinese Language Teaching,* vol. 11, no. 1, pp. 1-18, 2020.

[18] B. Vazquez-Calvo and D. Cassany, "Aprender lengua con el traductor automatico en la escuela secundaria: Un dialogo necesario," *Calidoscopio,* vol. 1, no. 15, pp. 180-189, 2017.

[19] Glosbe, "Glosbe," Glosbe, [Online]. Available: https://hr.glosbe.com/.

[20] P. Knorr, "Zur Differenzierung retrospektiver verbaler Daten: Protokolle Lauten Erinnerns erheben, verstehen und analysieren," *Introspektive Verfahren und Qualitative Inhaltsanalyse in der Fremdsprachenforschung,* pp. 31-52, 2013.

[21] S. M. Gass and A. Mackey, Stimulated recall methodology in applied linguistics and L2 research, New York: Routledge, 2016.

[22] P. Mayring, Qualitative Inhaltsanalyse. Grundlagen und Techniken., Weinheim und Basel: Beltz Verlag, 2010.

About the authors
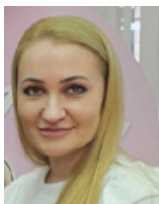
Mirela Simić, MA, is a teacher of German and English as a foreign language at the Pan-European University Apeiron in Banja Luka. She completed her secondary education at a language high school in Switzerland and is currently pursuing a doctoral degree in Language Science at the Faculty of Philology, University of Banja Luka. In addition to her teaching role, she works as a court interpreter and translator and prepares candidates for internationally recognized language exams such as the ÖSD, TELC, Goethe-Zertifikat, IELTS, and TOEFL.

For citation