Effective Use of Machine Translation for Multilingualism

Yukiko Ideno[1] and Yoko Sakamoto[2]

[1]Tokiwa University, [2]Hakuoh University

[1]`y-ideno@tokiwa.ac.jp`, [2]`y-saka@fc.hakuoh.ac.jp`

Abstract

We would like to explore new ways of teaching English for multilingualism by using machine translation for speaking and writing English. In addition, using English as an intermediate language challenges students to learn other foreign languages as well.

Keywords

Multilingualism, machine translation, second language acquisition, third language acquisition

1   Introduction

Multilingualism offers significant benefits for university students. Being able to speak multiple languages opens up enhanced career opportunities in today's global job market, making multilingual candidates more valuable for international trade and business. Cognitively, learning and using various languages improves memory, problem-solving, and creative thinking, while also enhancing attention control and task-switching abilities.

Culturally, multilingual students gain a deeper understanding and appreciation of different cultures, fostering open-mindedness and adaptability – essential traits in diverse university environments and in a globally connected world. Academically, multilingual students often have an edge, as the skills developed through language learning, like analytical thinking and improved memory, positively impact other areas of study.

In terms of social benefits, multilingualism enables broader networking opportunities and the formation of relationships across diverse groups, essential for effective teamwork in diverse settings. It also brings personal fulfillment and growth, boosting confidence and encouraging continuous learning.

Moreover, multilingual students have greater ease in traveling, studying, or working abroad, with their language skills making international experiences more enriching and accessible. Overall, multilingualism equips university students with a unique skill set, greatly enhancing their personal and professional prospects by broadening their horizons and opening up a world of opportunities.

2   English for Medium language[1]

Learning another foreign language through the medium of English has many implications, including

1. promoting global communication

2. improving language learning efficiency

3. deepening cultural understanding

4. expanding careers

Learning English as a second language allows students to better connect with different language regions and cultures.

3   Learning third language—Purpose for learning third language—[2]

There are several implications of learning another foreign language through the medium of English. Learning another foreign language through the medium of English can promote efficient and effective learning. There are four benefits of learning a third language as following.

3.1   Global Communication

English, as one of the most widely used languages in the world, serves as a crucial tool for global communication. It's commonly learned as a second language by many, enabling them to connect and facilitate communication with people across various cultures and nationalities. This skill not only broadens one's personal and professional networks but also enhances their international communication abilities. By learning additional foreign languages through the medium of English, individuals can further extend their communicative reach, opening up even more opportunities to engage with a diverse range of people and cultures on a global scale.

3.2   Complementary language learning

English shares a significant amount of common ground with many foreign languages, which can be leveraged to simplify the process of learning new languages. Using English as a foundation or medium to learn other languages can make it easier for learners to grasp common vocabulary and grammatical patterns, bridging linguistic gaps more efficiently. This method of learning not only facilitates the understanding of new languages but also equips students with fundamental skills and strategies essential for language acquisition. Therefore, adopting English as the intermediary in learning another foreign language can lead to a more efficient and effective educational experience, streamlining the journey towards multilingualism.

3.3   Facilitate cultural understanding

Learning a new language through the medium of English offers a unique opportunity to delve deeper into the culture and customs associated with that language. The intricate relationship between language and culture means that gaining fluency in a language also opens a window to understanding the cultural nuances and traditions of its speakers. This exposure to another culture through its language enhances cross-cultural understanding, fostering a greater appreciation for the diversity that shapes our world. Moreover, mastering a foreign language with English as a stepping stone can significantly broaden one's international perspective, allowing for deeper connections with people from different cultural backgrounds. This process not only enriches personal experiences but also contributes to a more interconnected and empathetic global community.

3.4   Global Career Opportunities

The widespread use of English in international business and academia underscores its importance as a global lingua franca. By learning additional foreign languages through the medium of English, individuals can significantly broaden their employment and career opportunities across various linguistic regions. Possessing a global perspective, coupled with the ability to understand and communicate in multiple languages, becomes an invaluable asset in diverse fields including tourism, medicine, and education. This multilingual proficiency not only enhances professional capabilities but also opens doors to cross-cultural interactions and understanding, further emphasizing the importance of language skills in navigating the complexities of the global landscape.

4   The reason why Multilingualism is important

Multilingualism, or the ability to speak multiple languages, offers several benefits for university students. Here are some of the key reasons why it is effective and beneficial:

Enhanced Career Opportunities:
In today's globalized world, the ability to speak more than one language can open doors to international job markets and diverse career paths. Employers often value candidates who can communicate in multiple languages, as it can be a significant asset in global trade and business.

Improved Cognitive Skills:

Learning and using multiple languages can improve cognitive abilities. It enhances memory, problem-solving skills, and even creative thinking. Multilingual individuals often exhibit better attention control and are able to switch between tasks more efficiently.

Cultural Understanding and Openness:
Multilingualism fosters a deeper understanding of different cultures. It allows students to view the world from different perspectives, making them more open-minded and adaptable to diverse environments. This is particularly beneficial in university settings where cultural exchange is frequent.

Academic Advantages:
Research suggests that multilingual students often perform better academically. The skills gained from learning additional languages, such as analytical thinking and improved memory, can be applied to other academic areas.

Networking and Relationships:
Speaking multiple languages enables students to communicate and form relationships with a wider range of people. This can lead to better networking opportunities and the ability to work effectively in diverse teams.

Personal Fulfillment and Growth:
Learning a new language can be a fulfilling personal achievement. It can boost confidence and provide a sense of accomplishment. Additionally, it often encourages further personal and professional growth.

Travel and Study Opportunities:
Multilingual students may find it easier to travel, study, or work abroad. Language skills can enhance the travel experience, making it more enriching and less daunting. Moreover, many academic exchange programs and international internships require or prefer candidates who speak multiple languages.

In conclusion, multilingualism equips university students with a unique set of skills and opportunities that are valuable in both their personal and professional lives. It's not just about language proficiency, but about opening up a world of possibilities and broadening one's horizons.

5   Questionnaire on purpose of translator use

We surveyed 328 first-year students at four Universities in 2022 about the purpose of using a translator.

Kanagawa Dental University=KDU   *N*= 96 (Instructor: SAKAI Shien, IDENO Yukiko)

Chiba University of Commerce=CYC   *N*=70 (Instructor: SAKAI Shien)

Tokyo Seitoku University=TSU   *N*=125 (Instructor: TSUCHIYA Kagari)

Waseda University=WASEDA   *N*=37 (Instructor: SAKAI Shien)

Table 1[3]   Purpose of using machine translation by each university

	CUC	KDU	TSU	WSD
Foreign Language Learning/Comprehension	20	35	32	19
Communication with Foreigners	4	12	11	0
School assignments, etc.	31	38	74	16
Traveling or studying abroad	1	5	1	0
No answer	0	0	1	1

Figure 1   Total : Purpose of using machine translation   n=328

- ■ Foreign Language Learning/Comprehension
- ■ Communication with Foreigners
- ■ School assignments, etc.
- ■ Traveling or studying abroad
- ■ No answer
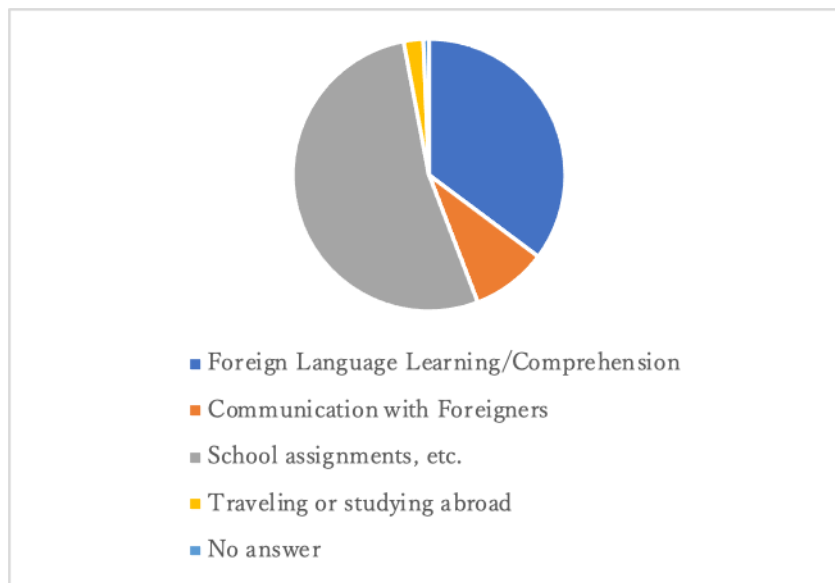
6   Perspective (1)

The effective use of machine translation by university students can greatly enhance their journey towards multilingualism in numerous ways. It serves as a learning aid, helping students understand and learn new languages by translating texts, which allows them to compare the original and translated versions. This comparison aids in expanding vocabulary and comprehending grammar and sentence structures.

Machine translation also plays a key role in enhancing communication. Students can use these tools to communicate with peers and instructors who speak different languages, effectively breaking down language barriers in multicultural university settings. Furthermore, it enables students to access a broader range of academic materials and resources not available in their native language, thus expanding their research scope and knowledge base.

For real-time language practice, instant translation availability is invaluable. It helps students understand and respond in different linguistic contexts, thereby improving their language proficiency. Additionally, for non-native speakers, machine translation can be a useful tool for proofreading and editing written work in a second language, ensuring greater accuracy and fluency.

Importantly, translating materials from different cultures allows students to gain insights into the cultural nuances and contexts of other languages. This enhances their cultural awareness and sensitivity. However, it is crucial for students to recognize the limitations of machine translation in terms of accuracy and contextual understanding. Learning to use these tools as a complementary aid rather than a sole reliance, and combining them with traditional learning methods, can lead to a more comprehensive language learning experience.

In summary, machine translation offers university students a powerful support in their pursuit of multilingualism, providing benefits ranging from learning support to enhancing communication and cultural understanding. Yet, judicious use of these tools, understanding their limitations, and integrating them with traditional language learning techniques is key for achieving the best results.

7   Questionnaire on machine translation

We conducted a survey of students' attitudes about whether it is good or bad to use machine translation. In the past, using machine translation was treated as if one was cheating, but in recent years, it has become a part of digital citizenship education. It seems that students' awareness is changing.

Figure 2   Is it good or bad to use machine translation?   n=328

legend: good, Somewhat good, Can't say either, Somewhat bad, bad
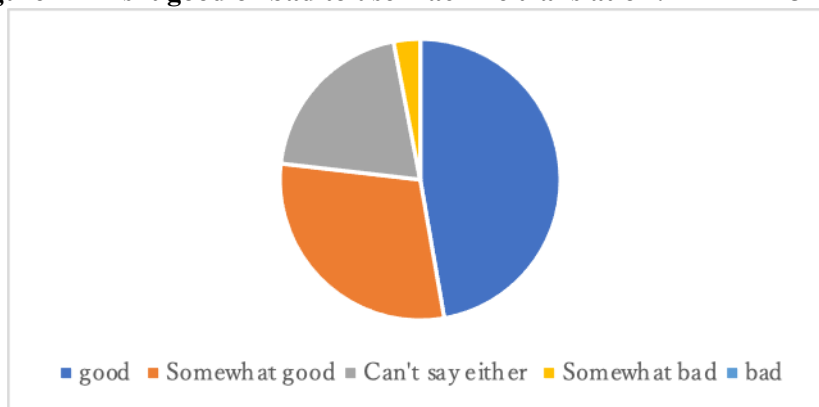
8   Perspective (2) – toward Digital citizenship education[4]

The necessity of incorporating machine translation into digital citizenship education is an important consideration in today's globally connected world. Digital citizenship education aims to equip individuals with the skills and knowledge to navigate the digital world responsibly and effectively. Machine translation, as a tool, plays a significant role in this landscape for several reasons.

Firstly, machine translation fosters global communication and understanding. As digital citizens, students often interact with diverse cultures and languages online. Machine translation tools enable them to bridge language barriers, promoting inclusivity and mutual understanding in global interactions.

Secondly, teaching students about machine translation helps them understand its capabilities and limitations. This awareness is crucial for responsible digital citizenship, as it encourages critical thinking about the reliability of translated information and the importance of cross-verifying sources for accuracy.

Moreover, machine translation can aid in accessing a vast array of information and resources that might otherwise be inaccessible due to language constraints. Educating students about these tools empowers them to tap into global knowledge bases, enhancing their learning and broadening their perspectives.

However, it's also important to educate students about the ethical considerations of using machine translation, such as respecting intellectual property and understanding cultural nuances that may not be fully captured by automated translations. In conclusion, incorporating machine translation into digital citizenship education is beneficial. It not only enhances global communication and understanding but also fosters critical thinking, information literacy, and ethical awareness in navigating the digital world. As digital environments become increasingly multilingual, understanding and using machine translation becomes an essential component of being a responsible, informed digital citizen.

9   The relationship between digital citizenship education and multiculturalism[5]

The intertwining of digital citizenship education with multiculturalism is crucial in today's interconnected world. Digital citizenship education equips individuals to navigate the online world responsibly, while multiculturalism promotes recognition and appreciation of cultural diversity. This combination is vital for ensuring respectful global connectivity, cultural sensitivity, combating online discrimination, and promoting inclusive digital communities. It also involves developing cross-cultural communication skills and ethical considerations. Ultimately, this integrated approach fosters a digital space that respects and celebrates cultural diversity, ensuring a positive and inclusive environment for all.

In the context of digital citizenship education, understanding and embracing multiculturalism is essential for several reasons:

Global Connectivity:
The digital world connects individuals across different cultures and geographies. Digital citizenship education teaches individuals how to engage respectfully and effectively in this diverse environment.

Cultural Sensitivity and Awareness:

As part of being responsible digital citizens, individuals must understand and respect cultural differences. This involves recognizing that online interactions may involve participants from various cultural backgrounds, each with their own norms, beliefs, and values.

Combatting Online Discrimination and Stereotyping:
Digital citizenship education addresses issues such as online discrimination, hate speech, and cultural stereotyping. Educating individuals about multiculturalism within this framework encourages empathy and fosters a more inclusive online community.

Promoting Inclusivity in Digital Spaces:
Understanding multiculturalism helps digital citizens to create and participate in more inclusive digital environments, where diverse voices and perspectives are valued and where everyone feels safe to express themselves.

Cross-Cultural Communication Skills:
Effective digital citizenship education includes developing skills for cross-cultural communication, understanding that digital communication tools may be used differently across cultures, and learning to interpret and respond appropriately.

Ethical Considerations:
Multiculturalism in digital citizenship education also involves ethical considerations, such as respecting cultural intellectual property and being mindful of cultural appropriation in digital content creation and sharing.

In conclusion, digital citizenship education and multiculturalism are intrinsically linked. The digital world is a melting pot of cultures, and being a responsible digital citizen requires an understanding and appreciation of this multicultural landscape. This relationship underscores the importance of teaching digital citizenship in a way that respects and embraces cultural diversity, ensuring that the digital world is a respectful, inclusive, and enriching space for all.

10   Conclusion

It is clear that college students use machine translation for both university assignments and cross-cultural activities.

- Allowing students to use English as a medium for other languages would broaden the scope of their perspective.
- Table 1 shows that nearly half of the students use more than one translation software.
- The top two reasons for doing so were for assignments and to understand the culture as shown in Table 2.
- This indicates that students are actively using translation software not only to work on university assignments, but also to understand the culture.

We believe that using translation software to learn a third language through the medium of English will encourage students to learn both a third language and English and broaden their international perspectives. Incorporating machine translation into the curriculum significantly enriches the intertwining of digital citizenship education and multiculturalism. This integrated approach highlights the necessity of responsibly navigating the digital realm, while deeply valuing cultural diversity. In today's interconnected digital era, embracing multiculturalism through the lens of digital citizenship becomes crucial. Machine translation serves as a vital tool, breaking down language barriers and fostering an environment of understanding and respect across different cultures.

In this context, the digital domain acts as a global hub, connecting individuals from diverse cultural backgrounds. Machine translation aids in navigating this multifaceted environment, ensuring that interactions are not just respectful but also effective. It emphasizes the importance of cultural sensitivity and awareness, allowing individuals to recognize and respect the varied norms, values, and communication styles that exist in the digital space.

Moreover, integrating machine translation in digital citizenship education is pivotal in combating

online discrimination, hate speech, and cultural stereotyping. It fosters empathy and inclusivity, ensuring that digital platforms are spaces where diversity is not just recognized but celebrated. This technology aids in promoting inclusivity, ensuring that all voices are heard and valued, and making digital interactions more accessible and enriching for everyone involved.

Additionally, machine translation enhances cross-cultural communication skills. It enables individuals to navigate different digital communication styles effectively, ensuring that every interaction is respectful and considerate of the diverse cultural tapestry that each participant brings to the table. Furthermore, it introduces ethical considerations, such as respecting cultural intellectual property and avoiding cultural appropriation, ensuring that digital content creation and sharing are mindful and respectful of cultural nuances.

In conclusion, integrating machine translation into digital citizenship education is a stride towards creating a more interconnected, respectful, inclusive, and enriching digital world. It underlines the significance of cultural diversity in shaping responsible digital citizens and ensures that the digital realm is a space where every culture can thrive and contribute positively.

11   References and Appendices

Desope, O. O., Lavin, T., Thompson, T., & Ungerleider, C. (2010). A systematic review and meta-analysis of the cognitive correlates of bilingualism. Review of Educational Research, 80(2), 207-245.

Bialystok, E. (2007). Cognitive effects of bilingualism: How linguistic experience leads to cognitive change. Psychological Science, 18(4), 360-365.

Green, D. W., & Abutalebi, J. (2013). Language control in bilinguals: The adaptive control hypothesis. Journal of Cognitive Psychology, 25(5), 515-530.

Ihara, T., Takahasi, W. & Okumura, N. (2021). Cultural aspects of medical English, Nagano University of Health and Medicine Institution, Vol 6, p. 31.

Kroll, J. F., Dussias, P. E., Bice, K., & Perrotti, L. (2015). Bilingualism, mind, and brain. Annual Review of Linguistics, 1, 377-394.

Laurence, A. (2018). Introducing English for Specific Purposes. Routledge, London, pp 10-11.

Marian, V., & Shook, A. (2012). The cognitive benefits of being bilingual. Cerebrum: The Dana Forum on Brain Science, 13(1), 13.

Morita, Mituhiro (2020). The Impact on English Education of Adopting the Quarter System at Hiroshima University. Center for Research and Teaching of Foreign Languages, Hiroshima University (23), 121-136. The citation is from the abstract.

Sakai, Shien (2022). Practical research on how to use MT as an English learning machine. The citation is from the slides in Language Education Expo.

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[1] The OECD discusses how language learning plays a key role in promoting global understanding and respecting cultural differences. This suggests a connection to the idea of deepening cultural understanding and promoting global communication through learning languages.

[2] the website of Harrow International School Hong Kong   https://www.harrowschool.hk/

[3] The survey was taken at the same time as the PAAL selected paper survey for 2022.

[4] The publication "Digital Citizenship Education: Overview and New Perspectives" was authored by Divina Frau-Meigs, Brian O'Neill, Alessandro Soriani, and Vitor Tomé and was published in December 2019. This work is the first volume in a series of publications on digital citizenship education issued by the European Commission.

[5] UNESCO thematic paper   https://unesdoc.unesco.org/ark:/48223/pf0000381534