SIASAT
Journal of Religion, Social, Cultural and Political Sciences

Extent of the Use of Computer-Aided Translation Tools in French to Igbo Language Translation among French Language Students in Colleges of Education in South-Eastern Nigeria

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Abstract

Due to the global orientation of the international economy, the availability of data in several languages, and the creation of previously unheard-of communication channels, there has been a significant increase in the need for professional translation services in recent years. Manual translation techniques are no longer sufficient for translators to fulfill the expanding demands of clients and companies. As a result, several translation technologies have been created to aid both experts and students of translation in creating high-quality translations. Therefore, the purpose of this study is to determine the extent of the use of computer-aided translation tools in French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria. The study adopted survey research design in which a validated 10 items questionnaire termed the 'Scale for Measuring the Effectiveness of Computer-aided Translation Tools (SMECTT)' was developed by the researcher in line with the research questions, and was used to elicit information from respondents in the zone. Cronbach alpha was used to determine the instrument's dependability. Data were collected from 130 participants. Analyzing the data produced from the study will involve using descriptive statistics. The findings reveal variations in tool exposure and usage among students, with preferences for specific tools such as Google Translate. However, limitations are observed in addressing grammar and syntax errors. The study highlights the importance of training and guidance in tool utilization, suggesting potential improvements in language education and translation practices for French language students in South-Eastern Nigeria.

Keywords
Effectiveness; computer-aided translation tools; french

I. Introduction

The translation industry has changed significantly in recent years as a result of globalization and technical advancements. The results of computer-aided translation tools have greatly improved as a result of the enormous advancements in computer systems and information technology, where expectations are rising in response to recent research. The demand for translation has increased significantly during the past few years, considerably outpacing the ability of the professional translators. There is a tremendous increase in information flow across wider global markets as a result of the growth of telecommunications, trade, fashion and internet usage, necessitating translations into more languages (Hulsink, 2012; Azonuche, & Anyakoha, 2018). This has compelled many institutions to invest more and more resources in computer processing of natural languages. Localization issues are another factor contributing to the demand for technical

DOI: https://doi.org/10.33258/siasat.v8i3.155

translation. The user manuals and other pertinent materials must be accurate, consistent, and easy to grasp by the recipients for the nations exporting technological goods.

There are many risks associated with conducting business abroad, but these risks can be reduced by improving one's command of the local tongue. Several nations that make up French-speaking Africa are loosely categorized as a group due to their shared language and colonial history. Benin, Burkina Faso, Burundi, Cameroon, the Central African Republic, Chad, Comoros, the Democratic Republic of the Congo, Congo, the Côte d'Ivoire, Djibouti, Gabon, Guinea, Madagascar, Mali, Niger, Rwanda, Senegal, the Seychelles, and Togo are the region's major economies where the Igbo and other Nigerians conduct business. Evidently, Nigerians in general, and the Igbos in particular, are beginning to see francophone Africa as an attractive place to do business (Isyaku, 2018).

In actuality, traders of Igbo descent are in charge of crucial industries in 31 states and the Federal Capital Territory outside of the five states that make up the South East geopolitical zone (Mudashir, Matazu, Umar, Oloyede, Hunkuyi, Willie, Umo & Alade, 2021). Like most other indigenous peoples, the Igbos emphasize preserving not only their language but also other cultural norms and values. Commercial development and continuity are crucial for the Igbos in particular to ensure that there are trans-national business legacies. Therefore, the requirement for varied translation services becomes unavoidable in order to sustain friendly commercial connections with French-speaking African nations, grow, and reach new individuals in new markets.

In an effort to stay up with the development of automated and computer-supported translation for other languages, research projects that analyze and strive to create Igbo language automated translation systems have increased significantly in recent years (Ezeani, Rayson, Onyenwe, Uchechukwu & Hepple, 2020; Adebimpe & Oladosu, 2021; Maryann, Anigbogu, Uzoamaka & Chinedu, 2021). Despite the rise in research, Igbo language translators have been slower to adopt new computer-aided translation methods than other Nigerian language translators (Evelyn, Bennett & Taylor, 2019; Ayogu, Adetunmbi & Ojokoh, 2018). Apart from Nkoro, Eke & Iwunze (2020) who studied problems of French-Igbo prose translation; detailed investigation in the effectiveness of computer-aided translation tools in French to Igbo language translation is scarce in literature.

As a result of the growing need for translation services, technology applications to the study of translation have long been a top priority for specialists in both translation and education (Christensen, Flanagan & Schjoldager, 2017; O'Hagan, 2013). This is owing to the undeniable truth that modern translation techniques do not adequately meet the expectations of users everywhere, especially in light of the unmatched accessibility and availability of data and information in many languages. Different technology tools have been brought to the area of translation in an effort to provide new systems that meant to improve the process of translation, both in quality and delivery, based on the premise that there are new needs in the field (Nzuanke & Chinaka, 2018; Klimova, Pikhart, Benites, Lehr & Sanchez-Stockhammer, 2022).

In order to enhance the translation process and provide answers for the various issues that translators may run into, other technical applications have also been introduced to the sector. These include Facebook, Microsoft, and Google Translate. Importantly, these programs frequently facilitate the provision of translation services and facilitate user interaction and communication (Van-Lieshout & Cardoso, 2022; Bowker & Blain, 2022). Many educational institutions still oppose the use of translation technologies and software

in instruction and learning processes, despite the enormous progress and improvement in software technology in education in general and in translation in particular.

This is evident from the insistence of translation professors who maintain that such technologies are unnecessary for translation. They justified their viewpoint by asserting that while translating any material, translators should solely rely on their prior expertise (Usman, Dahlan, Daud & Mahmud, 2022; Gafiyatova & Pomortseva, 2016). Other reasons for people's unfavorable attitudes regarding new technologies include their difficulty to become comfortable with them, the regular updates these technologies receive, and the lack of language technology. It is important to note that the world's current rapid technological development, as well as the various technological applications in various facets of life, along with the unprecedented level of communication among people, businesses, and institutions, pose some challenges to the ability of conventional translation to be in compliance with users' needs in such a technological environment.

Translation from French to Igbo has not kept up with advances in technology. There are opinions in the literature that translators of the Igbo language have been hesitant to employ computer-aided translation technologies. The difficulties that translation software might pose when utilized for Igbo language translation can be one of the reasons for hesitations in their use. Therefore, it would not be practical to invest time or money in a technology that would result in more issues than benefits. Due to the Igbo language's distinctive traits contrasted to those of other indigenous languages in general, these limits frequently emerge. The Igbo language is one of the most difficult to process for written and spoken language due to its morphological, syntactic, phonetic, and phonologic features.

The fact that typical translation instruction just teaches translation theory, a fundamental method for honing students' translation abilities via practice, only serves to exacerbate the issue. This instructional approach is essentially teacher-centered, discourages student initiative and creativity, and does not support the high-level development of students' integrated translation abilities. This model struggles to handle a range of real-world translation jobs because it lacks the real-world context of translation abilities. Additionally, the objective of preparing students for practical translation competence could not be met due to the quantitative insufficiency of the translation assignments and species of this translation teaching style, as well as the lack of authenticity of the translated materials. As a result, the traditional approach of educating translation cannot satisfy the market's need for students with broad, application-focused translation skills.

Research Objectives

The general objective of this study is to investigate the effectiveness of computer-aided translation tools in French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria. Specifically, this study would:

1. determine the extent of the use of computer-aided translation tools in French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria;
2. determine the preferred computer-aided translation tools for French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria

II. Literature review

2.1 Benefits of using computer-aided translation tools

a. Consistency: Translation professionals aim for uniformity throughout the text regardless of the sort of information they are translating. Throughout, acronyms, names, and terminology should all be utilized consistently. The most crucial thing to keep in mind when investing a lot of time and money in translation is that translators want things to be consistent throughout all material, whether it's being translated for a brochure, website, or manual (Karpińska, 2017). The reuse feature, which enables translators to retain track of the phrases and terms they have previously translated and fall back on these forms moving ahead, is the beauty of utilizing any computer-aided translation tool. This is crucial for the review process as well, so the second translator can retain the consistency.

When it comes to translation, all three factors are important. It is well known that manual operations increase mistake rates. The database of previously translated information in any computer-aided translation program helps translators reduce errors. A built-in quality-assurance function is a common component of computer-aided translation software that helps to auto-correct typos, discover grammatical mistakes, inconsistencies, missing translations, and more. Any computer-aided translation that saves text in segments makes it possible for the translator to quickly look for stored segments and replace copied material without having to make manual changes later on in the process.

b. Reduced costs: The benefits realized will become clear over time, especially for clients that regularly translate large amounts of material. As computer-aided translation advances, the amount of repetitive content will also rise. This repetitive content is exploited by using prior translations as leverage.

c. Quality assurance checks: Most computer-aided translation software offer built-in quality assurance capabilities that help the translator as they complete a project, such as auto-correct, automated flagging of grammatical or formatting issues, missing tags, incorrect numbers, missing translations, etc. This assists with the translation project's cleanup phase as well, saving time overall.

d. Reduced turnaround times: Any computer-aided translation has several significant benefits, but one of the most important is that it produces more work in less time. The program facilitates text translation more quickly than a manual procedure. Additionally, the time needed for translation is reduced by its capability to look for repeated words and phrases. Faster turnaround times are also achieved by the software's capability to cross-reference previously translated documents. There is frequently a need for rapid turnaround times that nevertheless provide high-quality translations when it comes to international business and translation.

e. Project management benefits: Any computer-aided translation technology that increases productivity and guarantees quality control is highly practical and valuable when it comes to managing a translation job.

e. Variety of source files: With the use of computer-aided translation technologies, translation companies may also deal with a wide range of original source files, such as web-based formats, images and artwork, desktop-published files, application resource files, and many more (Nzuanke & Chinaka, 2018). This means that a computer-aided translation

program can handle and translate practically all file formats. Relevant computer-aided translation techniques created to handle certain content may process more complicated files.

2.2 Features of Computer-aided translation tools

The functionality offered by computer-aided translation tools can vary, but at the most fundamental level, these tools at least give Translation Memory capabilities (including alignment) or Terminology Management tools, or both. At a higher level, the tools' architecture and usefulness are improved.

a. Translation memory and alignment tools

A translation memory is a database of texts and the translation(s) that go with them, segmented, frequently at the sentence level, for later use or reuse. The fundamental benefit of a translation memory is that it makes it possible for translators to rapidly and effectively repurpose earlier versions (Reinke, 2018). Because they enable quick and simple recovery of any previously utilized information and operate by comparing the now being translated source text to previously translated documents, translation memories are especially well suited for technical documentation.

Aligning a source text with its translation is one way to build a translation memory. Alignment is the process of comparing the two texts and matching the pertinent phrases that will develop into translation memory units, or translation memory segments. Many computer-aided translation programs perform the alignment automatically within the program (Karpińska, 2017). It is almost certain that some of the segments will be out of alignment in this scenario, however certain alignment systems provide for this possibility by enabling human post-editing of the alignment process's output.

b. Terminology management

As terminology is a critical role in technical translation, the terminology database, also known as the termbase, is a crucial component of computer-aided translation systems alongside the terminology management. Despite being a database, a termbase varies from a terminology management in that it is used to store and retrieve term-level segments, such as phrases and single words, whereas the terminology management is often used for sentences. The termbase can also be used to store and retrieve several sorts of information about the term, such as gender, definition, part of speech, use, topic field, etc., depending on the level of sophistication of the computer-aided translation tool. Additionally, some computer-aided translation applications have termbases that make it much quicker and more effective to store and retrieve multimedia resources like images, music, or video files (Liang & Ma, 2021). This is in contrast to spreadsheet programs like MS Excel. They may also enable the organization of the information in a hierarchy.

2.3. Using computer-aided translation tools in language learning

There is a wealth of research on the abilities required for language acquisition, but several fundamental abilities, such speaking, listening, reading, writing, grammar, and vocabulary, are typically well established in language education. The concept of utilizing computers to learn languages is not brand-new either. There hasn't been much research on how computer-aided translation technologies in particular may be applied to foreign language acquisition, even though the incorporation of such tools into university curriculum could open up new fields of study and teaching (Zheng & Zhu, 2020).

Therefore, when it comes to dealing with words, translators and students of foreign languages have a lot in common. Both must recognize new words, record them, study them, recall them, and figure out how they relate to other words and to the outside world. This study intends to explore the efficiency of computer-aided translation tools in French to Igbo language translation among French language students based on this shared ground between the duties done by translators and language learners.

III. Research Method

The research methodology utilized in this study is survey research approach. The survey was created using google form and was posted to closed French student groups on Facebook, WhatsApp and Telegram Messengers. The members of the groups are familiar with different translation tools. However, to rule out meaningless contributions, the survey included questions about the participants' knowledge, experience, and their actual use of the tools. 130 students participated in the survey. The survey contained 10 questions, which include both open-ended and close-ended questions. The questions were designed to reveal the background of participants, the extent of the use of Computer-aided translation tools in French to Igbo language translation, preferred Computer-aided translation tools for French to Igbo language translation, the nature of the impact of Computer-aided translation tools in French to Igbo language and, hopefully, their thoughts on particular Computer-aided translation tools that suit French to Igbo language translation. The reliability of the questionnaire was also be established before use. The descriptive statistics was used in analyzing data generated from the study. Data analysis was carried out on Microsoft Excel which is a spreadsheet developed by Microsoft for Windows (vr. 21) and Statistical Package for the Social Sciences (vr. 25).

IV. Discussion

Table 1. Age distribution of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	74	56.9	56.9	56.9
	25-35 years	38	29.2	29.2	86.2
	35-45 years	15	11.5	11.5	97.7
	45 and above	3	2.3	2.3	100.0
	Total	130	100.0	100.0	

Table 1 presents the age distribution of respondents in the study. Out of the total 130 respondents, the highest frequency is in the 18-25 years age group (56.9%), followed by 25-35 years (29.2%), 35-45 years (11.5%), and 45 and above (2.3%). The table provides a clear breakdown of respondent ages and cumulative percentages within each age category.

Table 2. The extent of use of Computer-aided translation tools in French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria

Item statement	N	Mean	Std. Dev.	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Students have minimal exposure to computer-aided translation tools and only use them sporadically or for specific assignments.	130	3.92	.406	.165	41.578	.422
Students utilize computer-aided translation tools as supplementary resources for assistance with translation tasks, particularly for challenging vocabulary or grammar issues.	130	3.93	.377	.142	38.177	.422
Students may rely on computer-aided translation tools as a regular part of their translation process, incorporating them into their workflow for efficiency and accuracy.	130	3.97	.213	.046	62.676	.422
Students use computer-aided translation tools based on their language proficiency, familiarity with technology, and personal preferences	130	3.93	.356	.127	42.621	.422
Computer-aided translation tools is no prevalent among students in my school and have less frequent usage	130	3.92	.386	.149	34.400	.422

Table 2 presents the extent of use of computer-aided translation tools in French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria. The table provides statistical measures such as mean, standard deviation, variance, kurtosis, and standard error for different statements regarding the students' usage of these tools. Students have minimal exposure to computer-aided translation tools and only use them sporadically or for specific assignments with a mean of 3.92, indicating that, on average, students agree to a moderate extent with this statement. The standard deviation of .406 suggests that there is some variability in responses. The mean of 3.93 for utilization of utilize computer-aided translation tools as supplementary resources for assistance with translation tasks, suggests that students, on average, moderately agree with this statement. The standard deviation of .377 indicates some variability in responses.

The mean of 3.97 suggests that students, on average, agree to a high extent that student rely on computer-aided translation tools as a regular part of their translation process. The standard deviation of .213 indicates relatively low variability in responses. Students use computer-aided translation tools based on their language proficiency, familiarity with technology, and personal preferences with a mean of 3.93 indicating that students, on average, moderately agree with this statement. The standard deviation of .356 suggests some variability in responses. The mean of 3.92 suggests that students, on average, moderately agree that computer-aided translation tools are not prevalent among students. The standard deviation of .386 indicates some variability in responses.

Table 3. The preferred Computer-aided translation tools for French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria

	N	Sum	Mean	Std. Dev.	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Google Translate is a widely used machine translation tool that offers translations between French to Igbo.	130	498	3.83	.515	.266	14.953	.422
DeepL is a popular machine translation tool known for its advanced neural network-based translations.	130	469	3.61	.742	.550	4.892	.422
SDL Trados Studio is professional translation software widely used in the translations between French to Igbo	130	439	3.38	.819	.671	1.243	.422
MateCat is cloud-based translation tool that offers collaborative features, translation between French to Igbo and glossary management	130	285	2.19	1.221	1.490	-1.641	.422
Memsource is a translation management system that provides cloud-based solutions for translation between French to Igbo	130	467	3.59	.679	.460	4.609	.422

Table 3 presents the preferred computer-aided translation tools for French to Igbo language translation among French language students in Colleges of Education in South-Eastern Nigeria. The table provides statistical measures such as sum, mean, standard deviation, variance, and kurtosis for different translation tools. With a mean of 3.83, Google Translate is the most preferred machine translation tool among students. The relatively low standard deviation of .515 indicates a moderate level of agreement among students in their preference for Google Translate. DeepL, known for its advanced neural network-based translations, has a mean of 3.61. The higher standard deviation of .742 suggests more variability in students' preferences for this tool compared to Google Translate. SDL Trados Studio, a professional translation software, has a lower mean of 3.38. The higher standard deviation of .819 indicates greater variability in students' preferences for this tool.

Mate Cat, a cloud-based translation tool with collaborative features, has a lower mean of 2.19. The high standard deviation of 1.221 suggests significant variability in students' preferences for this tool. Memsource, a translation management system, has a mean of 3.59. The standard deviation of .679 indicates moderate variability in students' preferences for this tool.

4.1 Discussion of results

The data presented in the table reflects the responses of students in colleges of education in South-Eastern Nigeria regarding their usage of computer-aided translation tools. The results indicate a moderate level of agreement among the students, suggesting

that these tools are utilized to varying degrees as supplementary resources or as a regular part of their translation process. There are several reasons that can contribute to the observed results. First and foremost, language proficiency plays a crucial role (Ajani & Odoh, 2021). Students with a higher level of language proficiency may rely less on computer-aided translation tools, as they possess a deeper understanding of the source and target languages, allowing them to rely more on their own knowledge and skills. Technological familiarity also plays a significant role in the students' utilization of computer-aided translation tools (Ghory & Ghafory, 2021). Students who are more familiar and comfortable with using technology are more likely to incorporate these tools into their translation workflow. Conversely, students who have limited exposure to or experience with such tools may be less inclined to rely on them. In a related study, Zheng and Zhu (2020) noted that lack of awareness, limited access to technology, inadequate training, absence of institutional support, and preference for traditional translation methods contribute to minimal exposure to computer-aided translation tools.

Additionally, personal preferences and individual learning styles influence the students' choices regarding the usage of computer-aided translation tools. Some students may find these tools helpful and efficient in enhancing their translation process, while others may prefer traditional methods or feel that these tools are not necessary for their specific translation tasks. This finding according to Karpińska (2017) is attributed to the improved efficiency, accuracy, time-saving, ease of use, familiarity with technology, and recognition of the benefits of automation computer-aided translation tools. It is worth noting that the moderate level of agreement suggests that there is a diversity of perspectives among the students. This could be attributed to a combination of the factors mentioned above, as well as other individual factors such as prior training, cultural influences, and personal beliefs about the role of technology in translation.

The data presented in the table sheds light on students' preferences for different computer-aided translation tools in the context of French to Igbo language translation. The results show that among the listed options, Google Translate is the most preferred tool, followed by DeepL, SDL Trados Studio, Memsource, and MateCat. The varying means and standard deviations indicate both differences in the level of agreement and variability in preferences among the students. Several reasons can explain these results. Firstly, user-friendliness plays a significant role in students' preferences for computer-aided translation tools. Google Translate, known for its intuitive interface and simplicity, may attract students who prioritize ease of use and quick translations. Its accessibility and familiarity could contribute to its popularity among the students. In a related study, Liang and Ma (2021) observed that students use computer-aided translation tools based on their language proficiency to enhance their translation accuracy and overcome linguistic challenges. While Google Translate may not always provide the most accurate translations, its extensive database and continuous improvement make it a reliable choice for basic translation needs. DeepL, on the other hand, is known for its superior translation accuracy, which may explain its position as the second most preferred tool. Students who prioritize accuracy and precision in their translations may lean towards DeepL.

The specific features and functionalities offered by each tool also contribute to students' preferences. SDL Trados Studio, for instance, is widely used in professional translation environments and provides advanced features like translation memory and terminology management. Students who anticipate pursuing careers in translation or who prioritize professional-grade tools may be more inclined towards SDL Trados Studio. Additionally, students' prior exposure and experience with these tools could shape their preferences. Google Translate, being a widely known and accessible tool, is likely to be

familiar to many students even before they enter college. This familiarity and previous usage may lead to a higher preference for Google Translate. In a related study, Al-Mahasees (2020) reported that the preference for Google Translate among the students indicates that it is the most favored computer-aided translation tool for French to Igbo language translation. Although this preference according to Van-Lieshout and Cardoso (2022) could be attributed to factors such as its wide availability, ease of use, familiarity, and perceived reliability in providing quick translations. However, it is important to note that individual preferences may vary based on personal experiences and specific translation needs. It is important to note that the context of French to Igbo language translation could also influence students' preferences. Each tool may have varying levels of support and accuracy for this specific language pair, which could sway students' choices. Factors like the availability of pre-trained models, the inclusion of specialized dictionaries or terminology resources, and the ability to handle the nuances and complexities of the Igbo language could all impact students' preferences.

IV. Conclusion

In conclusion, this study investigated the effectiveness of computer-aided translation tools in French to Igbo language translation among French language students in South-Eastern Nigeria. The findings of the study indicate that French language students in South-Eastern Nigeria have varying levels of exposure to computer-aided translation tools. While some students have minimal exposure and use these tools sporadically, others incorporate them regularly into their translation processes for improved efficiency and accuracy. The study also reveals that different tools are preferred by students, with Google Translate emerging as the most widely used and DeepL, SDL Trados Studio, MateCat, and Memsource also receiving consideration.

It is recommended that educators and institutions provide appropriate training and guidance to students on the effective use of computer-aided translation tools. Additionally, further research can explore the potential of integrating these tools into language curricula and assessing their impact on translation quality and language learning outcomes. Overall, this study contributes to the understanding of the utilization and effectiveness of computer-aided translation tools in French to Igbo language translation, providing insights that can inform educational practices and enhance the translation process for French language students in South-Eastern Nigeria.

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