

# ISRG Journal of Education, Humanities and Literature (ISRGJEHL)



## ISRG PUBLISHERS

Abbreviated Key Title: ISRG J Edu Humanit Lit

ISSN: 2584-2544 (Online)

Journal homepage: <https://isrgpublishers.com/isrgjehl/>

Volume – I Issue -II (March – April) 2024

Frequency: Bimonthly



## Interpreting/Translation in Virtual Reality: Student Engagement with New Technology - A Case Study

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| Received: 29.03.2024 | Accepted: 31.03.2024 | Published: 01.04.2024

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### Abstract

*This scientific article is based on qualitative research methodology and was developed as a result of a specific experience within the project "Interpreting/Translation in Virtual Reality: Development of Online Translation Applications and Training Students with New Technology" undertaken at the Department of German Language, Faculty of Foreign Languages, University of Tirana, Albania. The project was financially supported by the Faculty of Foreign Languages and aimed to explore the potential of virtual reality and new technologies in the field of translation and interpreting.*

*In this context, a detailed survey was conducted targeting 30 first and second-year Master's program students in Translation, aiming to evaluate their level of knowledge and use of automatic translation technology. The questionnaire included questions that probed the students' experiences, their abilities in using new translation technologies, and aspects of training and skill development for their use. This survey provided significant data for understanding how students face the challenges and opportunities presented by new technology in the translation field.*

*The methodology used included analyzing the data collected from the survey to identify trends, needs, and obstacles faced by the new generation of translators and interpreters. Through this analysis, the project aimed to offer a clear assessment of the potential that new technology offers to improve the quality of translation and interpreting services, as well as to prepare the next generation of linguists to meet the demands of a globalized world.*

*The article's objectives include:*

- 1. Assessing the impact of new technology and virtual reality on the education and training of translation students.*
- 2. Identifying the challenges and opportunities that new technology brings for translators and interpreters in their professional formation.*
- 3. Offering recommendations for the effective use of new technologies in the field of translation and interpreting.*

*The conclusions of this study indicate that the inclusion of new technology, especially virtual reality, in the training of translators and interpreters offers extraordinary opportunities for improving educational practices and preparing them for the global job market. This interdisciplinary approach helps in raising a new generation of linguists who are well-equipped to face the challenges of communication and translation in an increasingly connected world.*

**Keywords:** Virtual Reality, Online Translation, New Technologies, Translator Education, Innovation

## 1. Introduction:

Technological innovation has significantly altered the translation industry, leading to transformative changes in both the academic study and practical application of translation. For the typical user, technology might appear to be merely a tool for clicking through options and archiving information. However, it's crucial to peer beyond the user interface of these systems to understand the underlying mechanisms and identify improvements for enhanced efficiency.<sup>1</sup> The importance of machine translation in today's globalized world cannot be overstated. As businesses, academic fields, and cultural exchanges increasingly cross international borders, the demand for quick and efficient translation has never been higher. German is increasingly in use and is playing a very important role in the communication between different nations around the world. It is used in many international political, economic, social, artistic, literary meetings, etc. In this context, diplomatic and political interaction between nations is increasing, as a result even the demand for professionalism in translation has increased. International law must be translated correctly in order to adapt to the national, cultural and political aspect of the country in whose language these laws are being translated<sup>2</sup>. Machine translation serves as a critical bridge, facilitating immediate communication and understanding across language barriers. This technology, driven by advancements in artificial intelligence and computational linguistics, has evolved from simple word-for-word substitution to sophisticated algorithms capable of grasping nuances, context, and even cultural idiosyncrasies in text.

However, the significance of machine translation extends beyond mere convenience. In the realm of information accessibility, it democratizes knowledge by enabling individuals to access content in languages other than those they are fluent in. This is particularly vital in areas such as scientific research, where the rapid dissemination and comprehension of findings can accelerate innovation and global collaboration.

Moreover, machine translation plays a pivotal role in emergency response and humanitarian efforts. In crisis situations where time is of the essence and language barriers can hinder relief efforts, machine translation tools can provide life-saving information swiftly and efficiently.

Yet, the journey of machine translation towards perfection is ongoing. Challenges such as translating idiomatic expressions, handling language pairs with significant structural differences, and ensuring privacy and security in translations remain. Consequently, the development and refinement of machine translation technologies continue to be of paramount importance, requiring sustained investment in research and collaboration across disciplines.

Embracing machine translation is not merely adapting to a technological trend; it is acknowledging and leveraging a tool that has become indispensable in fostering global communication, understanding, and collaboration. The ongoing advancements in

this field promise not only to enhance the efficiency and accuracy of translation but also to bridge human connections across the mosaic of world languages.<sup>3</sup>

"Interpreting/Translation in Virtual Reality: Development of Online Translation Applications and Students with New Technology" represents an innovative approach in the realm of linguistic services, merging the cutting-edge advancements in virtual reality (VR) and online translation tools with comprehensive educational strategies for both professionals and students in the field.

The core is the development and utilization of online translation applications that leverage virtual reality technology. These applications aim to simulate real-world interpreting scenarios in a virtual environment, offering users an immersive experience that closely replicates the challenges and dynamics of live translation and interpreting situations. This immersive environment not only enhances the understanding of linguistic nuances but also cultivates the users' ability to perform under the pressure of real-time decision-making, a critical skill in both interpreting and translation.

An equally important aspect of this topic is the training program designed for students. The integration of new technology into the curriculum addresses the urgent need for modernizing the educational framework to reflect the rapidly evolving demands of the translation and interpreting market. Training focuses on both the technical competencies required to operate advanced translation tools and the development of soft skills, such as cultural sensitivity and ethical considerations, which are paramount in high-quality translation and interpreting services.

The adoption of technology in training also facilitates a more interactive learning experience. It enables learners to engage with a variety of linguistic and cultural scenarios, ranging from courtroom interpretations to medical translations, in a controlled yet realistic setting. This hands-on approach significantly enhances the learning outcomes by allowing students to practice and hone their skills in a risk-free environment before they face real-world challenges.

Moreover, the development of online translation applications equipped technology opens up new pathways for remote learning and working. It democratizes access to high-quality training resources, making it possible for individuals around the world to develop their interpreting and translation skills without the constraints of geographical limitations.

"Interpreting/Translation in Virtual Reality: Development of Online Translation Applications and Students with New Technology" is a thinking project that stands at the intersection of technology, education, and linguistic services. It not only promises to elevate the quality of translation and interpreting services by incorporating the latest technological advancements but also ensures that the next generation of linguists is well-equipped to meet the demands of a globalized world. This initiative underscores the importance of embracing innovation in educational practices and the potential of virtual reality to transform traditional training methodologies in the field of translation and interpreting.

This project was made possible with the financial support of the Faculty of Foreign Languages, University of Tirana, and within the framework of the German Language Department's Project

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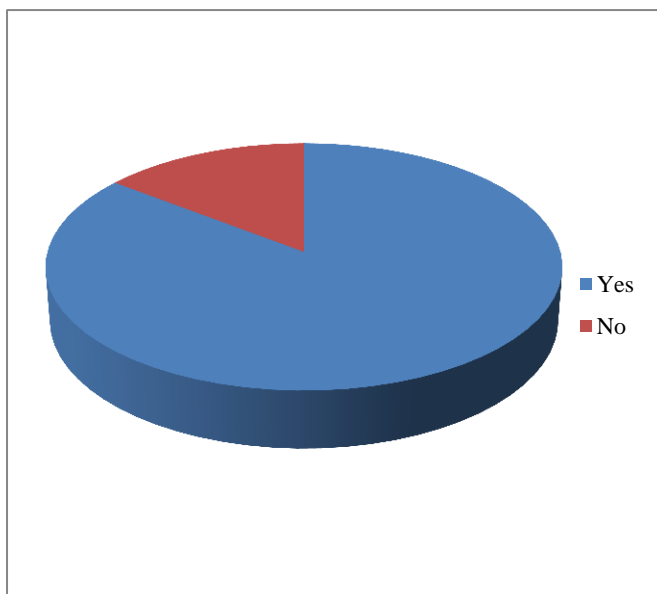
<sup>1</sup> Bowker, Lynne (2002) *Computer-aided Translation Technology: A Practical Introduction*, Ottawa: University of Ottawa Press. p.3

<sup>2</sup> Bushi, Jonida, Endri Papajorgji: "Translation in Terms of Law and Communication: Difficulties Regarding the Translation of Legal Texts from Albanian into German and Vice Versa." (2021). *Journal of Educational and Social Research*, 11(4), 55. <https://doi.org/10.36941/jesr-2021-0076>

Within the framework of the project "Interpreting/translation in virtual reality. The development of online translation applications as well as the training of staff and students with new technology," a survey was conducted targeting the students of the Master's degree programs at the Faculty of Foreign Languages, University of Tirana. The survey contained various questions related to automatic translation. The questionnaire was developed with the aim of assessing the level of knowledge and usage of automatic translation technology among Master's degree students. In addition to questions focused on their experience and skills in using these tools, the questionnaire also included questions aimed at the aspects of training and proficiency in their use. In the survey, 40 students from the translation study program participated. The results of the questionnaire showed that the majority of students have knowledge and experience in using machine translation technology. However, there is a need for improvement, especially in their training and proficiency to use these tools more effectively. The project "Interpreting/translation in virtual reality. The development of online translation applications as well as the training of staff and students with new technology" aims to improve this situation by offering specialized training and proficiency for students in the use of automatic translation technology. This will help prepare them for the future challenges of the translation field in an environment where technology plays an increasingly important role.

The results of this survey are as follows:

### 2. Do you have experience with translations from German to Albanian?

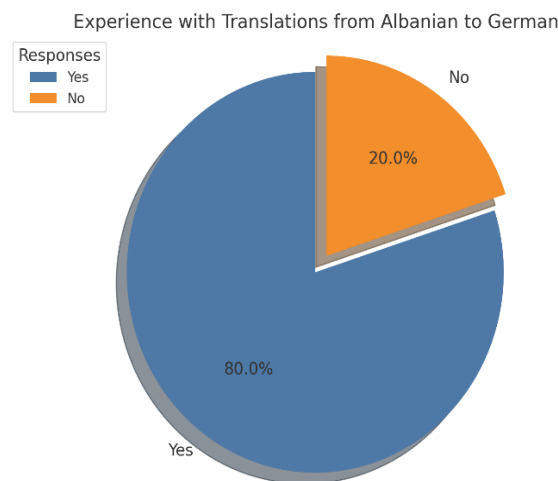


The results indicate that in response to the question of whether students have experience with translations from German to Albanian, 93.3% of the responses were affirmative, while 6.7% were negative. There are several possible explanations for this:

Study Program: In the German language department, it is common for students to study German and have various translation assignments or projects that involve translations into Albanian.

As for the 6.7% of responses indicating a lack of experience with translations from German to Albanian, we cannot have precise information on the reasons why they do not have experience with such translations. The majority of responses indicate that students have knowledge in this area.

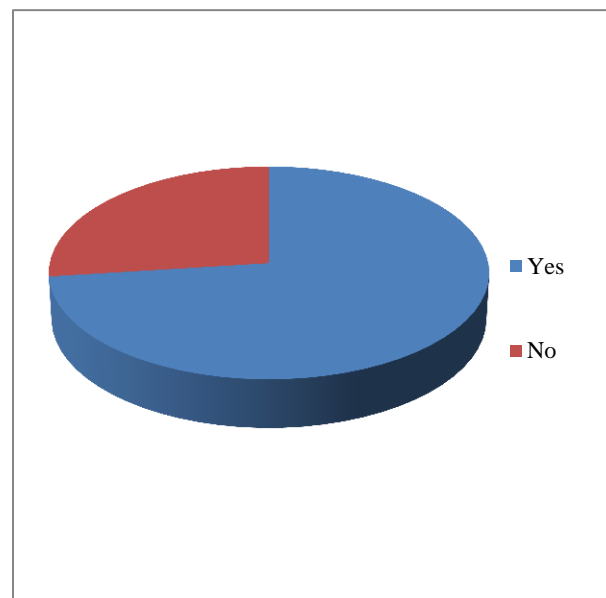
### 3. Do you have experience with translations from Albanian to German?



In response to the question of whether students have experience with translations from Albanian to German, 80% answered "yes" and 20% answered "no". The reasons for these responses could vary:

- Students have different needs for translating materials from Albanian to German. The majority of students have been able to undertake translation tasks in projects, thus gaining experience and knowledge in this field.
- A portion of the students have not needed to translate materials from Albanian to German in their daily activities.

### 4. Do you have knowledge about machine translation?



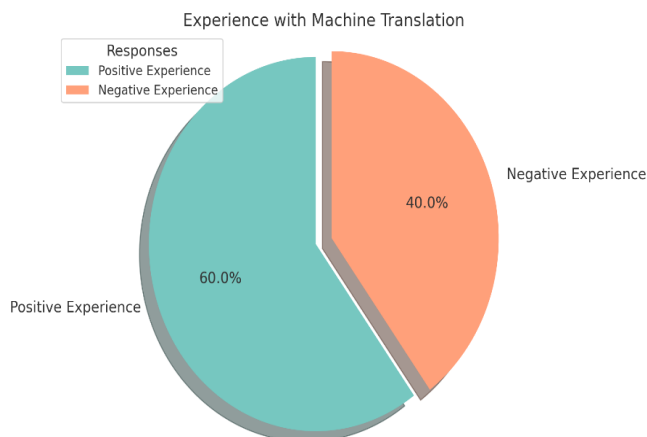
In response to the question about knowledge of machine translation, 73.3% of the students answered "yes," while 26.7% answered "no." This result can be explained by several factors:

- Students familiar with using machine translation technologies and applications are more likely to have experience with this tool.
- Students who have used machine translations for academic, professional, or everyday purposes are more likely to be acquainted with this technology.



- On the other hand, some students may not have needed to use machine translations or are not familiar with them due to personal preferences.
- Some might not trust the quality of machine translations, preferring to do the translations themselves instead of using these tools.

### 5. Do you have experience with machine translation?



In response to the question of whether students have experience with machine translation, 60% of them answered positively, while 40% responded negatively. This division can be explained by various factors:

- Students who are familiar with and actively use technology, including machine translation applications, are more likely to have experience with this tool.
- Some students are in the translation department, where the use of machine translations is indeed included, while others are in different fields of study, such as communication, for example, and therefore have not sought to use this tool.
- The use of machine translations depends on the individual needs and personal preferences of each student. If students need frequent translations or prefer to do them themselves, they might have more experience using this technology.
- Some students may have more confidence in the quality of machine translations, while others may be more skeptical about their accuracy and completeness.

### 6. Which types of machine translation do you know besides Google Translate?

None/Other/None/Trados/Deepl/Pons/Just google

The responses from the students indicate that some of them are familiar with other types of machine translation besides Google Translate, while some do not know any others. Some of these well-known alternatives might be Trados, Deepl, and Pons. The use of these other sources of machine translation may depend on the individual's needs and personal preferences for their quality and service. It might be added that Google Translate is also used because it allows students to work directly with Albanian, whereas other machine translation platforms do not enable this.

### 7. What are the positive aspects of (automatic) virtual translation?

- Saves time.
- We gain time.

- There's less need to keep many notes (because the words given once are saved by the translation platform).
- You can continue from where you left off.
- We find information more quickly.
- Helps in moments when you need to translate something quickly.
- Aids in understanding the contexts of words.
- It's fast.
- Translation can be done more quickly.
- For me, it's very positive, as it helps you out of the moment's situation, but I emphasize that from German to English it is more accurate.

The students' responses highlight several positive aspects of using virtual automatic translation:

1. **Time-saving:** Students mention that virtual automatic translation helps them save time. There's no need to write down or keep corresponding notes since the translation platform saves the given words once. This reduces their concern about information retention.
2. **Speed:** Speed is a significant advantage of using automatic translation. Students can find information more quickly, and this tool helps in situations where they need to translate something immediately.
3. **Assistance in understanding word contexts:** Students note that automatic translation aids in understanding the contexts of words. This tool can provide accurate translations that facilitate the understanding of texts in a foreign language.
4. **Fast and precise translation:** Another positive aspect mentioned is the speed and accuracy of automatic translation. Some students appreciate that this tool is faster compared to traditional translation methods and that it is quite precise, especially for certain language combinations like from German to English.

In summary, the responses indicate that students view virtual automatic translation as a valuable tool for saving time, quickly finding information, and understanding the context of words. Another response appreciates the accuracy of this tool, especially in certain language combinations.

### 8. In which situations can machine translation be used?

- Pragmatic texts.
- Necessary situations.
- It helps if you are in a foreign country and need to communicate.
- In special cases when there's something difficult to adapt in translation.
- Various, such as for written translation and also to facilitate understanding with someone who uses a different language from ours.
- For a word that we cannot understand.
- More often used in non-literary texts.

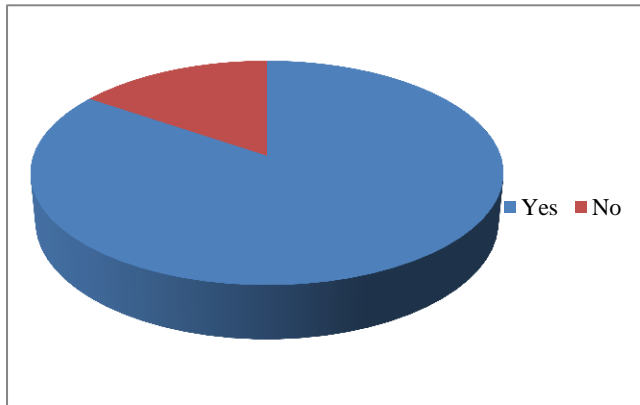
The students' responses regarding the situations in which machine translation can be used provide a diverse overview of the potential uses of this tool:

1. **Pragmatic Texts:** Students mention that machine translation is useful for pragmatic texts, which may include instructions, practical information, or direct communication. This tool can help translate these texts without wasting time.

2. **Necessary Situations:** Users indicate that machine translation is useful in necessary situations when one needs to understand or communicate with someone who speaks a different language.
3. **Communication in a Foreign Country:** Using machine translation is practical for communicating with people in foreign countries when the local language is unknown. This tool can assist in understanding messages and communicating in these situations.
4. **Difficult Situations to Adapt:** Some students indicate that machine translation is helpful in special situations when texts are difficult to adapt with conventional translations. This tool can help understand the information in these cases.
5. **Broad Use:** Some students note that machine translation is used in a wide range of situations, including written translations as well as facilitating understanding with someone who speaks a different language.
6. **Understanding Unknown Words:** Students mention that machine translation is useful for understanding words that cannot be easily understood in their source language.
7. **Non-literary Texts:** Students indicate that the use of machine translation is more common for non-literary texts, where quick translation is more essential than high precision.

These responses show that machine translation is used in many different situations and can be beneficial in various communication contexts and understanding foreign texts.

**9. Do you think that technological tools achieve the perfection that a professional translator does during a translation?**

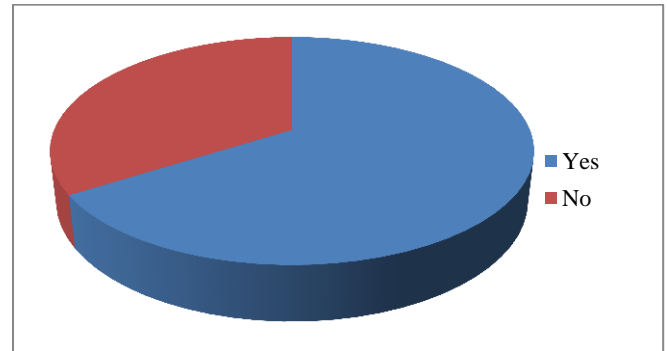


The students' responses to the question of whether technological tools can achieve the level of perfection attained by professional translators show a high percentage of skeptics, with 93.3% saying "no," while only 6.7% say "yes." The reasons for these responses might include:

- Many students may believe that technological tools cannot capture the level of perfection of a professional translator, as translating complex texts filled with language nuances and context is a difficult challenge for technology.
- Professional translators possess deep knowledge of the culture and social context of both the source and target languages. This knowledge aids in translating texts in a way that they are as close to perfection as possible and understandable to the target audience.

- Technology may be useful for simple and routine translations, but often does not meet the specific and perfect challenges that a professional translator can.
- In some cases, users may have experienced older translation technology and are not familiar with the latest advancements in this field. Therefore, the majority of students believe that technological tools cannot reach the level of perfection of professional translators, and these reasons also justify this skepticism towards technology in the field of translation.

**10. Have you gained knowledge of virtual (automatic) translation during your studies?**

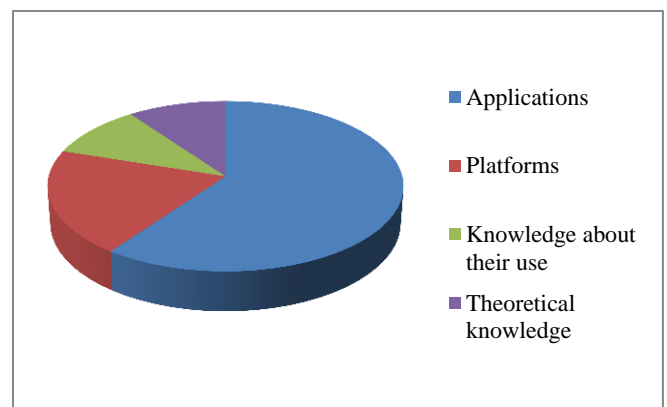


The students' responses to the question of whether they have gained knowledge about the use of automatic (virtual) translation during their studies show a clear division, with 66.7% saying "yes" and 33.3% saying "no." The reasons for these responses could include:

- A significant percentage of students may have participated in training that introduced them to the use of automatic translation as part of their studies.
- Students who are more familiar with technology and automatic translation applications are more likely to have acquired such knowledge through personal experiences.
- Students interested in improving their translation skills might have explored and learned about the use of automatic translation technology independently.

These reasons explain the division in responses regarding students' knowledge of using automatic translation and indicate that the use of technology can vary depending on individuals' experiences and interests.

**11. What would you like to learn about automatic (virtual) translation?**



The students' responses to the question of what they would like to learn more about in terms of automatic translation indicate a

primary interest in learning about platforms and applications for automatic translation. This interest is understandable given the practical importance of these tools and the need to be familiar with specific tools used in this field. The reasons for these responses might include:

1. **Practical Need:** Students may have a practical need to use automatic translation platforms and applications for their academic projects or daily tasks. Therefore, they are interested in learning more about them to achieve better performance.
2. **Applied Knowledge:** For some students, knowing how to practically use these platforms and applications is important. They want to understand how to use these tools in practice to improve their translation skills.
3. **Theoretical Knowledge:** Some students might be interested in learning more about the theoretical aspects of automatic translation, such as the algorithms and techniques used in their development.

These reasons show that students seek applicable and practical knowledge about automatic translation platforms and applications, which will help them in their daily work and in enhancing their translation skills.

## Conclusions

The findings derived from the questionnaires offer a detailed and nuanced understanding of the specific needs and challenges faced by Master's degree students in the field of Translation. Recognizing these needs, the project group has pinpointed several key areas for improvement and development. In response, targeted training sessions are being designed to enhance students' proficiency in navigating and utilizing digital platforms for interpretation and translation purposes.

The forthcoming training sessions will focus extensively on acquainting students with the realm of virtual automatic translation and the effective utilization of diverse virtual translation platforms. Among the resources and tools that will be covered in these trainings are:

- Computer-Assisted Interpretation (CAI) Tools
- ORCIT (Online Resources for Conference Interpreter Training) website resources
- A plethora of Interpreter Training Resources
- Access to the National Network for Interpreting (NNI)
- Use of video corpora for training purposes
- Specialized interpreter training software and tools such as Black Box
- Training sessions within virtual environments like IVY
- Comprehensive training on the use of videoconferencing tools and platforms, including ZOOM and Google Hangout
- An introduction to various e-learning platforms and Course Management Systems, such as Moodle, tailored for the needs of interpreting and translation students

These meticulously designed training programs are aimed at equipping students with the necessary skills and knowledge to effectively leverage technology in the fields of interpreting and translation. The curriculum will delve into critical issues such as the translation of specialized texts—including technical, legal, scientific, and literary materials—and the strategic application of automatic translation features. Through this comprehensive

training, students will gain valuable insights and practical experience with the tools and platforms prevalent in the industry, thereby preparing them for the dynamic challenges and opportunities within the global market for translation and interpretation services.

This initiative not only reflects the project group's commitment to addressing the evolving needs of translation students but also underscores the importance of integrating technological advancements into the educational curriculum. By fostering a deeper understanding and hands-on experience with cutting-edge translation and interpretation technologies, the training aims to empower students to navigate the complexities of the modern professional landscape with confidence and expertise.

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