

## THE FUTURE OF FOREIGN LANGUAGES IN THE ARTIFICIAL INTELLIGENCE ERA

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***Abstract:** In an era highly dominated by technology, the future of foreign languages in general and of English in particular is sometimes subject to contradictory ideas among language specialists. Beyond the relevance of advanced technological tools used in processing translation, facilitating communication or promoting cultural diversity, there is a constant concern related to the adapting of foreign languages to the social dynamics of the 21st century. Globalization and dominance of major languages, the economic and educational pressure, technological influence, cultural shifts, mass media etc., are among the factors which threaten the survival of foreign languages. In this context, the present work aims to emphasize aspects such as: the common perception on learning a foreign language, the switch from traditional to virtual learning and adapting students to a new learning environment based on artificial intelligence.*

***Keywords:** foreign language, artificial intelligence, cultural diversity, communication*

### **1. The common perception on learning a foreign language.**

Starting from the idea of communication as an essential part of human relationships, the first question to raise is to what extent we communicate effectively and what intentions we have when expressing ourselves. Do we pay enough importance to all the elements included in the speech or observe the linguistic and cultural differences lying at the basis of learning a foreign language? There is no single way to learn a foreign language, since its acquisition differs based on the heterogeneity of the class, students' commitment and cognitive potential, their ability to handle the discourse, the practical approach of sharing information and learning in community, not in isolation.

The validation of teacher-student communication involves stimulating interest by exposure, access to personal thinking and laying greater emphasis on suggestions rather than specifications. The common perception of learning a foreign language encompasses a range of views influenced by individual experiences, cultural background and societal trends. Since there is no uniformity of learning or a perfect awareness of a foreign language relevance, the groups of learners find it difficult to correlate the information processing in their native language with the new valences of a foreign language.

Language transfer is even more problematic, due to syntactic and semantic differences, mispronunciation, lack of immersion in the nuances of the target language, misinterpretation of cultural norms etc. On the other side, the development of effective communication in another language means understanding what the others say, considering their personality and their ability to provide cohesion and clarity, while decoding the messages appropriately. Therefore, by communicating, we don't transmit

information but our intentions and expectations. As Bratman says "Intentions are distinctive states of mind."<sup>1</sup>

The changes occurring in language inevitably lead to changes in the speaker's perception and intention. Lass, one of the promoters of language as an autonomous system does not believe that "language change is the result of human action except in a very distant and probably uninteresting way."<sup>2</sup> He also claims that speakers are not conscious of their role in promoting variation because "one can act out of tradition, habit, uncontrollable impulse or for no apparent reason at all."<sup>3</sup>

In opposition to Lass, Milroy states that speakers play an essential role in language change. The intervention of the speaker as well as the social environment may help to understand how changes occur in language. Leaving aside the two points of view, we consider that there is an inherent evolution of language which is more or less influenced by the human factor. The speaker can at most observe certain language-related difficulties, but cannot anticipate the transformations caused by factors like natural evolution, community dynamics, innovation, propagation etc. "There is no crucial influence on language without going through the freedom and the intelligence of the speakers."<sup>4</sup>

Going back to how students regard a foreign language, we will focus on certain widely held perceptions. Learning a foreign language has always been correlated with the globalization phenomenon. English, for example, has become the language of official institutions, marketing, commerce, business, travel etc. Its recognition as a significant career asset has also contributed to its propagating in various international settings. Within the educational setting, students aim at creating appropriate opportunities to express themselves fluently and developing the most meaningful writing content. Whether they get proficiency in grammar or vocabulary retention is not so relevant in the acquisition of any foreign language. In fact, the repetitive practice of long-term memorization of complex grammatical or lexical structures that are not found in the native language can demotivate students and affect their self-worth.

At the same time, we cannot ignore the benefits of a foreign language on students' cognitive development. Learning a new language does not only train our brain's executive functions, but it also allows for a higher level of empathy and the ability to connect with those having different linguistic backgrounds than ours. Switching between two languages (for example, transferring words from one language code to another) helps learners to develop cognitive flexibility. Bilingual students seem to outperform monolinguals in carrying out a range of cognitive tasks.

As regards the technological aids, there is a growing perception that technology has made foreign languages more accessible and convenient. The widely spread apps like Duolingo, Babbel, or Memrise have revolutionized a foreign language learning, making it more interactive and adapted to individual progress. In addition, comprehensive language courses are provided by international platforms like Coursera,

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<sup>1</sup> M. Bratman, *Two faces of intention*, Philosophical Review 93, 1984, p. 376.

<sup>2</sup> R. Lass, *Historical Linguistics and Language Change*, Cambridge: CUP, 1997, p. 337.

<sup>3</sup> *Ibidem*, p. 374.

<sup>4</sup> R. Keller, *On Language Change: The invisible hand of language*, London and NY, Routledge, 1990, p. 90.

Udemy, edX etc., whose role is to link millions of learners all over the world and explore the latest trends in artificial intelligence. Access to a vast array of digital resources is equally important. These enable students to expose themselves to personalized learning experiences, tailored to their needs and learning styles.

Besides these benefits, there are certain drawbacks in acquiring a new language. Because language is somewhat complex, learning a foreign language may be regarded as demotivating and uncomfortable. The fear of making mistakes, lack of concentration, unwillingness to learn something new, difficulty in overcoming linguistic barriers etc. sometimes lie at the basis of academic failure. Overall, these perceptions reflect a complex interplay of positive and negative attitudes towards foreign languages, shaped by personal experiences and social influences.

## **2. Switching from traditional to virtual learning of a foreign language**

The post-war period brought foreign languages into the center of attention. Familiarization with someone else's language was intended to facilitate the exchange of different worldviews and share social and cultural experiences. The status of a foreign language has significantly changed, influenced by geopolitical shifts, economic reconstruction and the emergence of global powers. English, in particular, has gained prominence as an international language for business, diplomacy and science. Even the establishment of international institutions (World Bank, International Monetary Fund, European Union etc.) solidified English and made it globally influential.

The importance of multilingualism and the desire of the nations to support their native languages, with a view to strengthening national identity have also contributed to promoting linguistic diversity and global interconnectedness. In the educational system, students and teachers alike have been used to processing and delivering information in a simple traditional way, devoid of any possible difficulties caused by modern technology. Reliance on textbooks, language labs, grammar exercises, vocabulary lists, tests etc., has always been the most accessible means of learning. Traditional learning provides a clear and systematic approach to language acquisition, opportunities to develop peer interaction and the right context for cultural immersion.

Learning in a traditional way requires a rigorous analysis of the language skills that must be explored. We usually start from the text and familiarization with it through reading or listening. Reading means general understanding of the subject, semantics the words, and grammatical structures involved. Text analysis can gain depth through consistency, ease of assimilation, the ability to make connections, and the extrapolation of ideas that help to develop students' critical thinking. These aspects are related to "the cognitive orientation of the learning process, which is associated with categories such as knowledge, thinking and understanding processes, intellectual abilities that provide language skills, the solution of speech-thinking problems."<sup>5</sup>

The advent and evolution of digital technologies have somehow changed the format of learning in general, with an impact of foreign languages in particular. Transition from traditional to highly digitalized environments has enabled new instructional formats, created new forms of social connection and improved our

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<sup>5</sup> Galskova, N.D, *Intercultural learning: the problem of the goals and content of teaching foreign languages*, FLS 1, 2004, p. 4.

learning practices. However, the transitional times have led to the emergence of certain psychological effects among the learning actors. Students are visibly struggling to adapt to proliferating technologies and the social, cognitive and communicative changes that accompany them.

Despite the technological mirage which apparently seems to refine all walks of life, there is an understandable concern that the digital tools will not bring qualitatively improved learning experiences. The advances in technology have been prodigious over the years and the foreign language processing has had a lot to gain. However, we don't know to what extent students manage to implement technology in their learning practices, especially that "language learning is assisted through social interaction of learners and their interlocutors, particularly when they negotiate toward mutual comprehension of each other's message meaning."<sup>6</sup>

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It is highly important not to raise unrealistic expectations that technology will contribute to satisfying the demands of a much too standardized curriculum. Regardless of the sophisticated architecture of a computer program, the novelty and richness of human interaction, the complex and ingenious answers of students, their deep critical thinking are defining elements in shaping learning. *Homo loquens* (man who talks) shows clearly that man is unique in creating marvellous complex utterances and his faculty of speech is a function of the superior cerebral equipment that evolution has bestowed upon him.

From the perspective of foreign languages, it is not so much the digital device that matters, but the way it is adapted to the students' needs. The constant changes in the world of technology are another stumbling block in making learning more efficient. "One of the most significant problems facing computer-using teachers is that no education curriculum can prepare them for the swift and continuing changes that take place in the world of technology."<sup>7</sup>

Over-reliance on technology may lead to diminished nuanced communication, misunderstandings, incorrect language usage, superficial knowledge regarded as quick gratification over deep understanding of complex language structures and exposure to potential cybersecurity threats. In addition, cognitive overload and tangled multitasking may make difficult for learners to retain and process information. At the same time, this may also cause disparities in learning opportunities.

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<sup>6</sup> Pica, R., Kanagy R., Falodun J., *Choosing and using communication tasks for second language research and instruction*, in S. S. Gass and G. Crookes (ed.): *Task-based Learning in a Second Language*. Clevedon: Multilingual Matters, 1993, p. 11.

<sup>7</sup> Hanson-Smith, E., Rilling, S., *Learning languages through technology*, University of Michigan, 2006, p. 301

Switching from traditional to technology-based learning of a foreign language should be a gradual process which includes learners' adaptability to the pace of technology, the fair correlation between human and digital interaction, understanding the limits of technology, integrating resources to correspond students' interest etc.

### 3. Definition and a short history of AI concept

The term AI (artificial intelligence) was coined in the 1950s and its earliest definition was "any task performed by a computer program or a machine that if a human carried out the same activity, we would say the human had to apply intelligence to accomplish the task." According to the Oxford Learner's Dictionary, AI "is the study and development of computer systems that can copy intelligent human behaviour."<sup>8</sup>

Most definitions suggest that except for our biological brain which operates, makes decisions, and stores information, we can also create intelligence artificially. AI is part of multiple fields like computer science, neuroscience, statistics, mathematics etc., and almost anyone can learn about it without solid knowledge in the field of computers.

The history of AI starts after the World War II, when two bright minds, mathematician Alan Turing and neurologist Grey Walter approached the subject of intelligent machines. During the Turing test, Alan wanted to find out whether there was a difference between humans and computers, as far as intelligence was concerned. Over time, scientists have tried to approach AI from various perspectives. They imagined a computer with rules that can govern human behaviour or devised certain neural networks to stimulate brain cells and learn new behaviours.

The subject of AI was not exempt from controversies in the scientific world, especially since scientists maintained the supremacy of their own ideas. However, the rapid evolution of technology brought AI in the center of attention. Human versus machine fight has become an everyday reality based on man's general fear of being replaced with a high-performant robot that responds to all commands in real time. Even if AI prevails in many research fields (Healthcare system, Banking, Military, Journalism, Industry, Entertainment, etc.,) and is one of the main goals of the modern world, human judgment is richer and more subtle, resulting from the complex interplay of reason and emotion. AI is only a language model which combines figures or words, mostly based on probability, and not a deep conscious appreciation of what those elements mean.

### 4. Adapting students to the learning environment based on AI

According to Martin and colleagues, adaptability comprises three dimensions: "cognitive, behavioural and emotional."<sup>9</sup> Cognitive adaptability is changing one's thoughts about a situation or circumstance. Behavioural adaptability involves adjusting one's actions in order to manage the change in a situation or circumstance. Emotional adaptability involves adjusting one's emotions to reduce less helpful emotions in the face of novelty, change, or uncertainty. While change is evident in our lives, our

<sup>8</sup> <https://www.oxfordlearnersdictionaries.com/definition/english/ai?q=AI>

<sup>9</sup> Martin, A.J, Nejad, H., Comar, S. and Liem, G.A.D., *Adaptability: Conceptual and empirical perspectives on responses to change, novelty and uncertainty*. Australian Journal of Guidance and Counselling, 22 (1), pp. 58-81

reaction to it is not universal. What goes beyond our control, generates a feeling of uncertainty because novelty has always had positive and negative repercussions. If past experiences are undeniable, the future is less predictable and more based on the unknown.

Given that technology is embedded in all walks of life, education as an essential pillar of society must keep pace with the technological progress of the 21<sup>st</sup> century, AI acquiring unsuspected values that exceed the human mind. There is a constant preoccupation to tailor educational content and restructure the teacher's role with a view to creating elite forms of education. Although that sounds like a utopian world, in reality, we face the 'brute force' of a computer which annihilates an educator's competences, emotions and power of decision-making. The general shift is towards the individual who is deprived of the opportunity to participate in learning and create a well-defined relationship with his education provider. Instead, the emergence of machine learning systems has given rise to a feeling of anxiety and insecurity because the learner takes for granted what the technological support provides him, to the detriment of his involvement, cooperation or independent thinking.

On the other side, we cannot anticipate whether academic performance is merely based on a fixed technical solution, or it is more related to social needs and expectations. AI techniques may contribute substantially to shaping education and producing learning gains for students. Free access to a multitude of educational platforms, teaching resources, tutorials, and integration of AI to promote a holistic understanding of various subjects yielded positive results, despite the cultural or linguistic heterogeneity of the student groups. Education as a whole must ensure a blended teaching and learning methods beyond the 'supremacy' of traditional style or excessive reliance on technology.

Adapting students to a diverse learning environment is a gradual intricate process, at the end of which, the recipient of learning benefits from a major professional and personal gain. Traditional and AI-based methods are not mutually exclusive. They should intermingle to ensure quality, create a flexible and dynamic learning framework and meet the requirements of modern society.

## **5. The future of foreign languages in the AI era – challenges and threats**

Since the beginning of time, there has been a need for a multilingual society in which people of all ethnic backgrounds have established good relations for collective survival. "Linguistically, interdependence stresses the give-and-take of real communication. Foreign language is a vital connection in the interdependent relations of the next century, since true interaction can occur only when each community experiences the language lifestyle of the other, where no group achieves dominance by imposing its language structure on the other."<sup>10</sup>

The desideratum of a global world dominated by a good acquisition of foreign languages has prevailed over time, especially in terms of using English. The Economist journal described English as "impregably established as the world standard language: an intrinsic part of the global communications revolution."<sup>11</sup>

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<sup>10</sup> June, K., Phillips, *The language connection: from the classroom to the world*. ACTFL, Education Series, vol. 9, 1979, p. 2.

<sup>11</sup> *The Economist*, 21<sup>st</sup> December, 1996, p. 39.

English is the first language of capitalism, commerce, international business, technology, film industry, music etc., and its popularity has spread beyond any limit. Despite its presence in almost all aspects of our lives, there are evident economic, social, geographical, and demographic factors that will contribute to the erosion of English and the emergence of other languages. The educational setting in some countries does not bring English to the fore due to the speakers' strong desire to keep their own linguistic identity and not be contaminated by English influences. For example, in official contexts in France, it is illegal to use an English word, where a French word already exists. "Neither identity nor language use is a fixed notion. Both are dynamic depending upon time and place."<sup>12</sup> Based on this quotation, we can add that when language learners speak, they do not only address to their interlocutors, but they are constantly shaping and reshaping a sense of who they are and how they relate to the social world.

Since English is at the leading edge of technology, scientific development, new thinking in economics, new literatures or entertainment genres have given rise to new lexical patterns and various ways of speaking and writing. Enthusiasm for learning English is still unrestrained among communities, but we don't know whether the current standards of its usage can be maintained in the long term. As David Crystal suggests "there has never been a language so widely spread or spoken by so many people as English. There are therefore no precedents to help us see what happens to a language when it achieves genuine world status."<sup>13</sup>

The future of the English language can be affected from several perspectives including linguistic innovations (a new type of pronunciation), new patterns of language usage, the young generation's requirements for appropriate language styles, new cultural practices, geographical mobility etc. The role of technology is dominant in the spread or extinction of a language. To forecast how technology will have an impact on English is unreliable, because technology takes time to develop, be implemented and then have transformative effects. However, English has been widely spread by the Internet. Almost anything online is imbued with English terminology. There are numerous software products designed for natural language manipulation: speech recognition, collecting and processing data, tools for detailed phonetic analysis, concordance creators, automatic translation etc. Most of these advanced tools are operating in English.

Despite the expansion of AI that has brought multiple benefits, particularly in the context of language diversity, its dominance may become a potential threat to the future of foreign languages.

Here are some aspects which may disfavour the evolution of foreign languages:

- a) over-reliance on English, Mandarin and Spanish in language processing systems may be responsible for reducing visibility and use of other languages.
- b) prioritizing major languages in translation services may marginalize and discourage smaller languages in international contexts.

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<sup>12</sup> Norton, B., *Social identity, investment, and language learning*. TESOL Quarterly, 29 (11), 1995, pp. 9-31.

<sup>13</sup> Crystal, D., *English as a Global Language*, Cambridge: Cambridge University Press, 1997, p. 139.

- c) communities speaking less common languages may not benefit from advanced AI technologies, further widening the digital divide.
- d) the quality of language processing may be lowered in minority languages.
- e) the ethical implications of language loss due to AI are profound, raising questions about the responsibility to tech company in safeguarding linguistic diversity.

To mitigate these challenges is important to promote multilingual AI development, to allocate resources for the digitization and creation of AI tools for minority languages. AI needs to be used as a tool for preserving and promoting cultural identity rather than contributing to the disappearance of foreign languages.

## 6. Conclusions

Foreign languages play an essential role in developing education and social communities in significant ways. They help both students and community members to foster empathy, tolerance and global awareness, while supporting mutual understanding and cooperation. Bilingual or multilingual students enhance their cognitive abilities, memory and creativity, they perform better academically and are highly valued in international business, diplomacy, translation services, tourism etc. Foreign languages also facilitate access to a broader range of academic resources, online materials, research papers etc.

Finally, utilizing technology and online platforms can make foreign languages learning more accessible and engaging through interactive lessons, language applications and virtual exchange programs. By recognizing and harnessing the role of foreign languages, the educational systems and communities can promote a more inclusive, diverse and interconnected world.

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