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THE CHALLENGES FOR LINGUISTS TO DEVELOP INNOVATIVE PEDAGOGY DUE TO THE IMPACT OF ARTIFICIAL INTELLIGENCE ON JOB OPPORTUNITIES.

Oyéniran Michel CHABI
Doctorant à l'École Doctorale Pluridisciplinaire
Espaces, Cultures et Développements UAC
ORCID iD : 0009-0001-1704-6393
michel52376@gmail.com

Servais Dieu-Donné Yédia DADJO
Linguistique Anglaise Appliquée, FLASH Adjarra
Université d'Abomey-Calavi, Benin
ORCID iD : 0000-0001-9023-1598
dadservais@gmail.com
&
Abdoulaye HAKIBOU
Linguistique Anglaise Appliquée
Université de Parakou
ORCID iD : 10.4236/als.2020.84013
hakibouabdoulaye@yahoo.fr

Abstract: This study explores the challenges for linguists to develop innovative pedagogy due to the impact of artificial intelligence (AI) on the job market. It is a necessity to adapt pedagogical approaches in order to prepare students for evolving employment opportunities. Grounded in the technological pedagogical content knowledge framework and socio-constructivist learning theory, the research adopts a mixed-method approach combining quantitative and qualitative analyses. So, it aims at comparing job market outcomes for individuals trained with or without exposure to AI. Findings emphasize the need for educational system to incorporate AI and computational linguistics, equipping students with the skills to develop AI tools and access emerging job opportunities. Since, the integration of AI and computational linguistics courses in students' curricula sharpened their competence to create AI tools and to its efficient use. This also helps them have these opportunities. Their interdisciplinary expertise encourage them bridge the gap between AI developers and its users. Then, enhancing their employability. These insights yield important shifts in the process of teaching and learning methods practices which enable linguists to gain proficiency in programming languages and data science. By leveraging AI powered tools, such as chatbots and adaptive platforms, linguists can enhance language extraction and performance. Finally, the study highlights the importance of integrating AI-powered tools in language processing and calls for further research on AI development inputs to advance linguistic education.

Keywords: Artificial intelligence; professional integration; job transfer, computer linguistics.

LES DEFIS AUXQUELS LES LINGUISTES SONT CONFRONTES EN RAISON DE L'IMPACT DE L'INTELLIGENCE ARTIFICIELLE SUR LE MARCHE D'EMPLOI.

Résumé : Cette étude explore les défis auxquels sont confrontés les linguistes en raison de l'impact de l'intelligence artificielle (IA) sur le marché de l'emploi. C'est une nécessité d'adapter les approches pédagogiques dans le but de préparer les étudiants pour de nouvelles opportunités d'emploi évolués. Basée sur le cadre de connaissances technologiques et sur la théorie de l'apprentissage socioconstructiviste, cette recherche adopte une approche méthodologique mixte, combinant l'analyse quantitative et qualitative. Ainsi, elle vise à comparer les résultats du marché d'emploi des individus formés avec ou sans exposition à l'IA. Les résultats mettent l'accent sur le besoin d'intégrer l'IA et la linguistique computationnelle dans le système éducatif, en dotant les étudiants des compétences pour développer des outils d'IA et de s'insérer plus facilement sur les opportunités d'emploi émergeant. Puisque, l'intégration des cours d'IA et de linguistique computationnelle dans le programme d'étude des étudiants aiguise leur compétence à créer des outils d'IA et son utilisation efficiente. Ceci les aide également à avoir ces opportunités de travail. Leur expertise interdisciplinaire les permet de combler le vide entre les développeurs d'IA et ses utilisateurs. Renforçant ainsi leur employabilité. Ces constats ont engendré d'énormes changements dans les processus des pratiques d'enseignement et d'apprentissage qui incite les linguistes à acquérir la capacité aux langages de programmation et à la science des données. En exploitant des outils alimentés par l'IA, tels que les chatbots et les plateformes adaptatives, les linguistes peuvent améliorer l'extraction linguistique et les performances langagières. Enfin, l'étude met en évidence l'importance de l'intégration des outils basés sur l'IA dans le traitement du langage et appelle à des recherches approfondies sur les apports du développement de l'IA dans l'enseignement de la linguistique.

Mots-clés : L'intelligence artificielle ; insertion professionnelle ; reconversion professionnelle.

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Introduction

Artificial Intelligence (AI), one of the most remarkable inventions of our time is a product of Human ingenuity with the culmination of centuries of scientific and technological advancement. This creation stands as a testament to the intellectual power of humankind, capable of performing in a very little bit of time tasks that once required human reasoning, such as research, analysis, and complex data processing. Through sophisticated algorithms and advanced mathematical models, AI has become an indispensable force in modern society. Yet, a fundamental question persists: is it truly the machine that is intelligent, or the human being who stands behind it as its architect and regulator? This inquiry rekindles an enduring philosophical and existential debate concerning human identity, autonomy, and sovereignty in the age of intelligent machines.

As this era of high technology expands at an exponential pace, it profoundly reshapes the nature of work, knowledge, and social relations. Standard jobs, which were once considered as stable and secure are increasingly being threatened by Artificial Intelligence (AI) for its rapid digital transformation. This development is forcing societies to reconsider

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the way they approach education, skills development, and teaching particularly in the humanities and social sciences. Artificial Intelligence (AI) is therefore not only a technological revolution but also an intellectual and ethical challenge. It raises important questions about how people can adapt to technological change while continuing to preserve the qualities that make human creative and innovative instead of engaging human in a passive consumer.

This concern becomes even more significant in today's digital environment where algorithms highly influence people's jobs. The distinction between human judgement and machine-generated recommendations is consequently becoming less clear. Therefore, there is a growing need for a form of critical awareness that enables people not simply to use AI, but to evaluate its outputs, question its recommendations, and make responsible decisions about how it should be used. Zuboff (2019), for instance, draws attention to the emergence of "surveillance capitalism" and the inequalities that may arise when technological systems are adopted without sufficient critical reflection. From this perspective, the concern surrounding AI goes beyond its effects on employment. It also involves its influence on the way people think, learn, make decisions, and understand their own roles in an increasingly automated society. The fundamental question, is what AI will do to work, but also what its growing presence may mean for human thought and agency.

The labour market is among the areas experiencing these changes most directly AI has created new opportunities in areas such as data science, digital communication, and language technologies, but it has also reduced the demand for certain traditional occupations and transformed the skills required in many existing ones. These changes raise questions about the relevance of academic curricula, particularly in humanities and language-related disciplines, which have sometimes remained relatively distant from emerging technological developments. Linguistics is a case in this point. Although the discipline has traditionally concentrated on theoretical and descriptive approaches to language developments in AI and language technologies increasingly require linguists to engage with computational and applied dimensions of the field. Such an evolution could help linguistics respond more effectively to changing professional needs and maintain its relevance in a rapidly transforming labour market.

The challenge is to determine how linguistic education can adapt to the demands of AI-driven employment environment. As AI continues to influence recruitment, professional tasks, and the skills valued by employers, linguistic competence alone may no longer be sufficient for many graduates seeking stable employment. Linguistics students may increasingly need complementary skills in areas such as computational methods, digital technologies, data analysis, and language technology. The difficulty faced by many graduates is consequently not necessarily a lack of knowledge about language, but rather the gap between the knowledge provided by existing programmes and the technological skills increasingly expected in the workplace. This gap between academic training and professional requirements reveals the urgent need for pedagogical innovation that integrates AI literacy, digital communication, and interdisciplinary competence.

The choice of this study is motivated by both scientific and social relevance. Scientifically, it explores the intersection between Artificial Intelligence, Linguistics, and Pedagogy, an area that remains underexplored in African academia. Socially, it addresses the increasing unemployment and skill mismatch affecting graduates from social sciences and humanities, particularly in developing country such as Benin. By examining these changes, the study seeks to contribute to the renewal of linguistic education and to the

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development of pedagogical approaches that make meaningful use of AI while preparing students for a changing labour market. Drawing on the Technological Content Knowledge (TPACK) framework and socio-constructivist learning theory, the study explores ways in which linguistics can respond to technological developments through the use of AI tools and computational methods. It is based on assumption that linguists who develop digital and interdisciplinary competences are likely to adapt more effectively to changing professional environments and to take advantage of emerging employment opportunities. In this respect, the study pursues two main objectives: first, to examine the influence of Artificial Intelligence on employment patterns and professional opportunities in the humanities; second, to identify the challenges and opportunities that AI presents for the teaching and computational linguistics into higher education curricula.

In line with these objectives, the study addresses two main research questions: - How is Artificial Intelligence reshaping employment opportunities and professional integration for graduates in linguistics? And, what pedagogical approaches can be adapted to prepare linguistics students for the demands of an increasingly AI-driven labour market? The study is guided by the following hypotheses: - The increasing use of Artificial Intelligence is changing employment patterns in linguistics and related humanities fields, creating new opportunities while reducing the relevance of some traditional professional roles. – The integration of AI tools, computational methods, and technology-oriented pedagogical practices into linguistics education can improve employment opportunities.

Ultimately, the study argues that the future relevance of linguistics will depend on its ability to combine its humanistic foundations with emerging technologies. Rather than viewing AI simply as a replacement for human expertise, linguists can approach it as a tool that complements their knowledge and extends what they are able to do. Such an approach can position linguistics at the intersection of human communication and technological innovation while ensuring that efficiency is balanced with critical thinking, ethical responsibility, and respect for human values. However, these benefits are not distributed equally across countries and regions. Development, education, and employment, on the other, limited access to these technologies and the shortage of relevant skills may increase existing inequalities and contribute to unemployment and skills mismatch. This situation makes it increasingly important for African countries to develop a workforce that is prepared to work alongside emerging technologies. Beyond technical competence such preparation should also encourage critical thinking, creativity, collaboration, and responsible use of technology.

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1. Methodology

The study is carried out through a mixed method research design. This method combines both quantitative and qualitative approaches. The specificity of these approaches lies in the complexity of the research problem, which requires not only the statistical measurement of AI's impact on employment outcomes but also to provide a relevant pedagogy for linguists so as to train students who can secure their employability in the future. In fact, the quantitative component focuses on a comparative analysis of employability outcomes between graduates exposed to AI-related courses and those without such exposure. Then, the qualitative component emphasizes on the interpretation of interviews focus on graduates and educators. The content analysis aims to capture the lived experiences of linguists and educators in adapting their teaching in order to meet the challenges due to the evolving job

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market. This triangulation ensures a solid methodological procedure designed so as to strengthen the findings of our research.

The target population comprises some selected graduates in linguistics, social sciences, and educators from University of Parakou (U.P) and University of Abomey-Calavi (U.A.C) in Benin. This sampling represents data collected from hundred (100) graduates from each University and ten (10) linguists and educators also from each University. Therefore, two hundred and twenty (220) participants is selected for the data analysis. The diversity of participants ensures a perspective account of the opportunities and challenges AI poses in the job market. We use multiple tools to collect reliable data: questionnaires are addressed for graduates through Google form: these questionnaires are designed to measure their employability status; interviews are guided toward educators and linguists reinforced with questionnaires via Google form: these interviews and questionnaires aim at evaluating the impact of AI on their pedagogy and the outcomes graduates semi-structured to allow flexibility in probing experiences, challenges, and pedagogical innovations; document analysis: curricula, course outlines, and institutional policy documents were examined to assess the degree of AI integration; observation checklists: classroom observations were conducted to verify the actual use of AI-powered pedagogical tools such as chatbots, adaptive learning platforms, and corpus-based applications implement in universities.

2. Result

The findings from the survey questionnaires and interviews are presented in the following tables. Specially, the sample consisted of 100 graduate participants per university, while 10 professors per university were also included.

Graduates	UAC		UP	
	AI exposure	AI non exposure	AI exposure	AI non exposure
Employment security	89%	25%	67%	32%
Computer/AI Impact job market	95%	98%	100%	100%
Computer should be integrated in the program	98%	99%	99%	99%
Program is adapted with job market	86%	18%	88%	20%

Table 1: questionnaire of graduates and interviews

The data obtained from graduates of the University of Abomey-Calavi (UAC) and the University of Parakou (UP) reveal a significant divergence in perception between respondents exposed to Artificial Intelligence and those without such exposure. Concerning employment security, 89% of AI-exposed graduates at UAC and 67% at UP expressed confidence in their job stability, compared to only 25% and 32% respectively among their non-exposed counterparts. This substantial gap indicates that exposure to AI-oriented instruction enhances graduates' sense of professional preparedness and adaptability to the evolving digital economy. While both exposed and non-exposed groups about 95% to 100% unanimously acknowledge the transformative impact of AI on the job market, the conviction that computers and AI should be integrated into academic curricula is nearly universal because of their percentage (98-99%) across all groups.

However, the sharp contrast in perceptions regarding the adequacy of academic programs with job market demands reveals the influence of AI on graduates' perception of

curriculum relevance. This suggests that AI exposure not only improves digital competencies but also reshapes learners' self-efficacy, employability and readiness for the modern labour market. In a cross-institutional comparison, UAC graduates display slightly higher confidence levels, possibility due to earlier integration of AI components and digital literacy initiatives. Overall, the findings demonstrate a clear and positive correlation between AI exposure and employability assurance, confirming the pedagogical necessity of embedding the AI literacy, computational linguistics, and digital training into higher education programs to align linguistic and non-linguistic disciplines with the future realities.

Educators/linguists	UAC	UP
Program include computational linguistics	20%	13%
AI impact their courses	92%	98%
Computer/AI should be integrated into the program	84%	72%
Program adaptation	91%	89%
AI is a threat	75%	79%

Table 2: questionnaire of educators/linguists

The data presented in table 2 shows that educators at both universities recognize the pervasive influence of artificial intelligence on language teaching, yet formal curricular inclusion, of computational linguistics remains minimal. This reveals a large perception practice gap. While, a strong majority support integrating AI into programs (78%) and acknowledge the need for a program adaptation. Though, they perceive AI as a threat. Educators from UAC show slightly higher readiness than UP across several items, suggesting institutional differences in exposure or capacity. These findings point out an urgent need for targeted faculty development, infrastructure investment and phased curriculum reform that includes ethical instruction to transform awareness into pedagogical practice. Overall, the findings highlight a strong awareness of AI's influence among respondents but also expose a striking gap between awareness and actual curricular implementation. In fact, at first the first glance, the results show that only 20% of respondents from UAC and 13% from UP reported that their programs include computational linguistics remains a marginal component of language programs in both institutions.

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3. Discussion

Artificial Intelligence (AI), far for being a merely machine is an intelligent collaborator that can help human being in his/her daily activities. It is becoming a tool that transforms human life due to its high capacity of reasoning and solving problems like human or even more than a human can do in a little bit of time. Eloundou et al (2024) suggest that AI is not simply replacing workers but transforming tasks, redefining how jobs are performed and the skills they require. In other words, AI is reshaping work rather than erasing it. While it automates repetitive and mechanical tasks, it simultaneously creates opportunities for analytical, and human-centred roles. However, these benefits are not distributed equally across countries and regions. Developing countries, particularly those in Africa, face a complex situation. On the one hand, digital technologies offer new possibilities for economic development, education, and employment, on the other, limited access to these technologies and the shortage of relevant skills may increase existing inequalities and contribute to unemployment and skills mismatch. This situation makes it increasingly important for African countries to develop a workforce that is prepared to work alongside emerging

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technologies. Beyond technical competence, such preparation should also encourage critical thinking, creativity, collaboration, and responsible use of technology.

However, Bender and Koller (2021) caution that these machines often lack understanding. They reproduce language patterns without the human depth of meaning, emotion, cultural context. In multilingual societies like Africa, where language carries identity and history, this limitation becomes even more pronounced. For African linguists, this represents both a challenge lies in competing with machines that seem faster. But, the opportunity perhaps the greater one lies in teaching the machine to understand African languages and contexts. Through community-driven initiatives like Masakhane, African researchers are reclaiming agency in language technology by creating datasets, translation benchmarks, and open resources that centre African linguistic realities. In this sense, AI is not the end of linguistic professions, but a call to reinvent them, to train linguists who can bridge the gap between human expression and machine computation.

From the report of UNESCO (2023), scholars defended that education stands at the crossroads of this technological revolution. And, AI can offer remarkable learning opportunities from adaptive tutoring systems to automated feedback that supports student growth. Yet, technology alone cannot replace pedagogy. Machines can provide answers, but not understanding, they can guide, but not mentor. As a matter of fact, a linguistics classroom where students use AI to analyse corpora, generate translations, or simulate conversations can become a living laboratory for both human and artificial intelligence, provided that educators themselves are equipped to mediate this process. This shows the important of using our critical thinking, creativity and collaborative learning as suggested by Vygotsky (1978) and Rabelais (1532). In fact, Rabelais affirms that: “A well-made head is better than a well-filled one” to promote an education based on critical thinking and creativity whereas Vygotsky (1978) emphasizes on a knowledge constructed through interaction and collaboration.

Their analysis indicates that a good education should combine technology and knowledge through active learning pedagogy. That is why a growing empirical literature treats generative AI and large language models as task-reconfiguring technologies rather than simple substitutes for whole occupations. Eloundou et al. (2024) use an occupation-task rubric and expert model assessments to estimate that: “large language models can affect a meaningful share of worker task-producing sizable productivity improvements for many text-intensive jobs while leaving other tasks unaffected or augmented”. Several studies indicate that the effects of AI on employment vary considerably across occupations. These effects depend, among other things, on the tasks involved in a particular occupation, how quickly organisations adopt new technologies, and the institutional condition that influence their implementation. In the field of education, Mishra & Koehler (2006) provided an important framework for understanding how technology can be incorporated into teaching. More recent studies have extended this framework to context of artificial intelligence by introducing the concept of AI- Technology (AI-TPACK). This research highlights the importance of teachers’ understanding of AI and their ability to use it when designing learning activities and integrating AI-based tools into classroom practice. In this perspectives, effective AI integration depends not simply on access to technology, but also on teachers’ ability to use it appropriately in relation to pedagogical objectives and subject content.

In fact, the rapid rises of artificial intelligence represents more than a technological evolution, it signals a profound socio-cultural transformation that challenges the boundaries between human intellect and machine cognition. In her influential work, *The Age of*

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Surveillance Capitalism, Zuboff (2019) argues that digital technologies have ushered in a new economic order where human experience itself becomes a raw material for data extraction and behavioural prediction. According to Zuboff, this development turns human behaviour and language into forms of economic value, making AI both a means of empowerment and a source of control. This tension is particularly relevant to African higher education, where universities and linguistics programmes are increasingly using AI-based platforms for teaching, learning, and research. However, the adoption of these technologies does not always go hand in hand with sufficient critical reflection on how they influence knowledge, learning, and academic practices. Zuboff's (2019) concerns can be related to Rabelais' educational ideas in Gargantua and Pantagruel (1532), particularly his emphasis on developing a "well-made head" rather than simply having a "well-filled" one. Both perspectives, although developed in very different historical contexts, point to the importance of developing learners who can think critically rather than simply accumulate or consume information.

The findings of this study make one thing very clear: exposure to Artificial Intelligence (AI) in academic programs has a strong and positive impact on how students see their own employability, their learning experience, and their professional readiness. Students who had access to AI-based learning developed more confident in their abilities and were more satisfied with what they learned, compared to those who did not. This observation echoes Portocarreo Ramos et al. (2025), who found that AI literacy helps graduates develop the flexibility, creativity, and critical thinking needed to succeed in today's fast-changing job market. Likewise, Robinson (2025) notes that when universities include AI in their teaching, students leave school not just with knowledge, but with practical, marketable skills.

In other words, AI seems to make learning more real. It allows students to engage actively with what they study, apply concepts in digital contexts, and see how classroom knowledge connects to the world of work. Ferreira-Meyers (2024) similarly points to the value of practical learning, suggesting that AI can encourage students to learn through experience rather than rely mainly on memorization. This perspective recalls Rabelais' (1532) emphasis on developing the capacity to think and understand rather than simply filling the mind with information. Maphalala & Ajani (2025) make a related point, noting that AI-supported learning can give students greater independence and encourage them to take a more active role in developing their knowledge. This is particularly relevant to linguistics students, whose learning increasingly involves both language knowledge and digital technologies.

Akinsemolu & Onyeaka (2025), for example, show how AI can support language learning through personalized feedback, interactive activities, and opportunities to engage with realistic communicative situations. These observations are consistent with the findings of the present study. Participants indicated that using AI tools could help linguistics students develop their language skills while also increasing their confidence and preparing them to function more effectively in a technology-oriented environment. The strong support expressed by the participants for integrating AI and computer training into university programs also reflects their awareness of changes taking place in the labour market. Their responses suggest that students no longer see theoretical knowledge as sufficient preparation for employment. Rather, they increasingly recognize the need to combine disciplinary knowledge with digital skills that can be applied in professional contexts.

This finding strengthens the argument for revisiting university curricula and giving students opportunities to develop technological competences alongside their academic

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training. This insight aligns with scholars who point out that AI-supported learning helps students become more autonomous, reflective, and prepared for lifelong learning-qualities that are essential in today's global economy. Still, this transition is not without its challenges as many educators struggle with limited infrastructure, ethical questions, and insufficient training in AI use. Some of these same concerns were raised by participants in this study, particularly those who felt that their institutions lacked the necessary tools and support to implement AI effectively.

Yet, as Ferreira-Meyers (2024) and Robinson (2025) argue, these obstacles can be overcome with thoughtful planning, teacher training, and investment in digital resources. Altogether, this discussion points to an important conclusion that AI is not just a new technology but a new way of thinking about education. It challenges both teachers and learners to adapt, innovate, and reimagine the learning experience. The evidence from this study and from recent scholars shows that when properly integrated, AI has the power to make education more relevant, more inclusive, and more connected to real-world opportunities. In the African concept especially, embracing AI in linguistics and beyond is not just desirable, it is a need and essential for preparing a generation of graduates who can thrive in an increasingly digital and interconnected world. This can enhance students to adapt their realities to the new trend of technology.

Table 2 highlights that educators support the integration of digital literacy but feel unprepared because of their threat of the influence of artificial intelligence as stated by some teachers during the 6th seminar of Kara in Togo on October 15, 2025, "AI is transforming our life, we have to use it wisely and integrate it in our customs". This aligns with findings from Algeria, where "Participants recognized AI's potential but also identified extrinsic barriers such as technical complexity inadequate training, limited resources". This gap is also reflected in recent studies. Although many people involved in education have become increasingly aware of the possibilities offered by AI, putting these technologies into regular teaching practice remains difficult. Limited infrastructure, ethical concerns, and insufficient knowledge or training continue to prevent many institutions and teachers from making effective use of AI in the classroom.

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So, educators' ambivalence can be perceived from the result of this findings in which UAC had 84% and UP 72% among those who claimed that computer and AI should be integrated into the program. This is reflected in the high percentage who view AI as a threat. On the side of positive outcomes, multiple authors note how AI, when properly integrated, can enhance language education. Another study, "Integrating Artificial Intelligence in EFL classrooms: A study on lecturers" (Altamimi, 2025), examined ChatGPT's use in EFL instruction. It found that students benefited in writing and speaking tasks, particularly when instructors guided tool use, set boundaries, and aligned AI use with learning outcomes. These findings support the view that "program adaptation" is essential, not simply adding new content, but rethinking pedagogy, assessment, and teacher-student interaction.

Considering the data collected, UAC seems slightly more advanced, possibly because of the differential capacity or policy environment, a factor discussed in such literature. These findings suggest that AI should not be viewed simply as a technology that replaces traditional jobs. Rather, it is changing the nature of work and creating roles that require a combination of linguistic, technological, and analytical skills. This has important implications for universities, particularly in developing contexts, where curricula need to respond more closely to change in the labour market. They also reveal a gap between students' theoretical preparation and the practical skills increasingly required in AI-related professional settings.

Although linguistics students acquire a solid understanding of linguistic concepts, limited exposure to AI tools and computational methods may reduce their competitiveness in the digital labour market.

This concern is consistent with Bender & Koller's (2020) discussion of the relationship between linguistic knowledge and computational applications. The interviews with employers further support these findings. Employers placed considerable value on graduates who could combine linguistic expertise with skills in programming, data analysis, and other related areas. This interdisciplinary dimension is also reflected in Choudhury's (2021) argument that the development and use of AI require more than technical expertise. Linguistic and cultural knowledge is equally important for producing systems that can function appropriately in different communicative and social contexts. Linguistics graduates can therefore contribute to the development and automated translation tools. From an educational perspective, these findings point to the need for programmes that connect linguistic theory with practical experience in AI and computational methods.

Systemic Functional Linguistics (SFL), for example, provides a robust theoretical lens for analyzing language use in real-world contexts. However, without integration with AI and computational linguistics, its application risks being confined to academic spaces. A combined approach can enrich both theory and practice, offering students the opportunity to engage in problem-solving activities that are relevant to contemporary labor market needs. Equity and access are also important concerns in the adoption of AI in higher education. The findings suggest that graduates from urban institutions, where AI-related courses are available may have better employment prospects than those from rural or less-resourced universities. Such differences could widen existing educational and economic inequalities if access to AI training and digital resources remains uneven. Selwyn (2019) similarly points out that the educational benefits of digital technologies depend largely on who has access to them under what conditions. For this reason, the integration of AI into higher education should take into account not only its potential benefits but also the disparities in infrastructure, training, and access that may prevent some students from benefiting equally. Therefore, linguistics pedagogy must not only innovate but also ensure equitable access to AI-related training for all students, regardless of socioeconomic background.

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Conclusion

Artificial Intelligence (AI) dangerously competes with Human being on the field of job market. Thus, the professions of today and tomorrow must be reinvented through the integration of computational technologies, not to replace human effort, but to enhance efficiency and creativity while preserving the human essence that underlies every innovation, guiding its use with ethical awareness and critical reflection. As Rabelais (1934) profoundly asserted, "Science without conscience is but the ruin of the soul". This timeless wisdom reminds us that machines are not ends in themselves; they are instruments designed to assist human beings in maximizing productivity, understanding, and innovation. The future work, therefore depends on how wisely humanity navigates the delicate balance between technological power and moral responsibility. Artificial Intelligence, when used with discernment, has the potential to amplify human capabilities rather than diminish them.

Yet, without ethical oversight, it risks dehumanizing labor and knowledge, reducing them to meaning or empathy. Hence, an ethical, human-centered approach to AI must be cultivated in all spheres of education, research and professional practice. Equally significant is the growing need for interdisciplinarity of all subject taught in our schools, the fusion of

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humanistic insight and mathematical divide between the sciences and the humanities can no longer be sustained in an era where digital fluency and cultural literacy are mutually reinforcing. Literary Scholars and linguists must learn to apply computational methods, not necessarily to become programmers, but to use scientific outcomes as analytical tools. Conversely. Scientists and technologists must cultivate ethical sensitivity and linguistic clarity to ensure that their innovations serve humanity rather than control it.

The time has come to demystify science and technology, making them accessible to all learners regardless of their disciplinary background. Therefore, there is a need for changes in both teaching practices and university curricula if students are to be adequately prepared for the changing demands of the digital age. Education should help learners develop technological and analytical skills while also strengthening their ability to communicate, understand others, and make responsible decisions. In this regard, integrating technology into education should not be limited to teaching students how to use digital tools. It should also encourage critical thinking, ethical awareness, and a responsible understanding of the social consequences of technological no development. Such an approach can enable universities to produce graduates who are not only knowledgeable and technologically competent but also able to contribute positively to a fair, inclusive, and increasingly digital society.

However, the impact of artificial intelligence (AI) on the job market and education necessitates a proactive response from linguists and educators. That is why this study underscores the importance of integrating AI into pedagogical frameworks to equip students with relevant skills. And, to focus the process of teaching-learning on more practice than theory knowledge because theory is merely sterile without practice even if it sheds light on practice. This necessitates a curricular reform so as to integrate computational linguistics, programming and AI literacy into language teaching. Therefore, future research should explore longitudinal impacts of AI-driven pedagogy and its broader implications for the job market.

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