Use of AI systems in Foreign Language Teaching in Higher Education - A Discussion Paper

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Content

Introduction

Language Centres in higher education are currently faced with the tasks of analysing the potential of generative AI systems in the context of teaching and learning foreign languages, as well as training students and teachers in the reflective use of these tools. However, this also involves being sensitised to the limitations of generative AI systems. In this paper, the AKS would like to answer questions that language teachers in higher education currently ask themselves, and in this way provide suggestions for the use of AI systems in language teaching in a responsible and learning-orientated way. This paper was developed as part of the AKS Working Group *Foreign Language Teaching in the age of AI* and will be updated regularly.

The "term AI system" is used here to cover a great variety of applications that are based on generative artificial intelligence technology. These AI systems range from mainly text-generating AI systems such as *OpenAI's ChatGPT*, *Microsoft's Copilot*, or *Neuroflash* to AI systems for literature research such as *Perplexity* and *Consensus*. They include AI systems for translating and correcting texts, such as *GoogleTranslate*, *DeepL Translator*, *DeepL Write*, *LanguageTool*, and *Grammarly* and AI systems that have already been adapted to teaching situations (in the German context), e.g. *fobizz* and *fiete.ai*.

1 What changes can be recognised in the learning processes of language learners, and what changes in the needs/requirements of students do we expect?

A basic prerequisite for dealing with the topic of "AI in language teaching" is to look at the learning behaviour of our students. Changes can already be observed, particularly with regard to the way they obtain information. We notice that language learners often use text-generating AI systems (especially *ChatGPT*) as a general research tool. As a result, they are confronted with an ever-increasing flood of output, which makes it more difficult to verify information. This can lead to a sense of insecurity and mental overload, especially at lower levels.

The use of AI systems is increasingly addressed in courses at schools and in higher education, and some training is being offered. Nonetheless, we should still assume that students only have a superficial knowledge of AI and have not yet learnt to use AI systems purposefully, nor to critically reflect on the results. At the same time, many students have no reservations about using AI systems. We have observed that they use AI-based tools in an unspecific way, so they may use *DeepL* as a substitute for an online dictionary, even though context is indispensable for translation tools to translate accurately.

It is therefore part of our responsibility to address the potential and the limitations of the tools in relation to language acquisition in our courses, thus contributing to the development of "AI literacy". Of course, we should be aware of how AI will change the contexts in which our students will use their language skills in their later professional lives, and take these changes into account when formulating tasks and designing examinations (see also 3.4).

The performance of many AI systems, and their rapid development, raises the question of whether the acquisition of language skills will still be necessary at all in the future (see 4). We assume that the

intrinsic motivation to acquire new skills and the need for self-sufficiency will continue to exist in the future. However, in addition to teaching language skills, our task will be to manage the expectations of those learners who assume that the use of AI will significantly accelerate language acquisition. Here, we need to initiate or evaluate studies in the psychology of learning to assess the benefits of different scenarios for the use of AI systems.

2 What legal requirements must be observed when using AI systems (e.g. input of texts into an AI system, use of the output, labelling)?

If AI systems are to be used in teaching at higher education institutions, various legal regulations and issues must be taken into account.

With regard to the data used to train an AI system, the question arises as to what extent the use of copyrighted texts and images accessible on the internet was and is legally permissible. In principle, text and data mining can be carried out in the EU for the purpose of analysis, but without permanent storage of said data. Frequent successes in re-generating training texts raise the question of the extent to which a trained AI system could constitute storage of this training data. This phenomenon is particularly relevant for users when looking at the output level (see below).

With regard to individual input (i.e. prompting), users must also observe the legal framework. Information entered via prompts could be viewed and also used to train the AI systems. Thus, to avoid violating personal and data protection rights, no personal data should be entered. Users should also bear in mind that entering (e.g. copy-pasting) texts into an AI system is equivalent to copying, and may violate copyright laws. Therefore, only your own or public domain texts should be entered into a prompt. Likewise, copyright for a learner's text is their own, and users should also not submit learners' texts for assessment.

Copyright is also relevant for the output of an AI system. Generally speaking, only a "natural" person can claim copyright, so an AI system cannot. This means that the output generated by an AI system is in the public domain, as many AI providers stipulate in their "terms of use". Other providers assign the rights and responsibility for the output to the users, with German law requiring a certain degree of independent creation in order to claim authorship. For AI output, this would probably require a complex prompting process and/or a fundamental revision afterwards. For users in a higher education context, this means that materials/texts/tasks created with the help of an AI system can in principle be used in courses and may also be reproduced.

Users of any AI system should keep in mind the issues mentioned above. While in principle AI output does not constitute plagiarism, it is quite possible that parts of an AI output may use re-generated text, ideas, or trains of thought from the training texts, but do not mark it as such. This means use or publication without verification (and without attribution) would be equivalent to plagiarism. This is especially relevant when texts are intended for publication.

As a rule, lecturers cannot require their students to use AI systems in a course if the AI system requires individual registration. This restriction does not apply if the AI systems used are accessible via the institution's own (learning) platforms. Higher education institutions are increasingly setting up such

access points. This provides data traffic regulated by contract, so that copyright and data protection issues are mitigated in such a way that AI systems can also be used to correct or reformat student texts and parts of copyright-protected texts can be entered into prompts for editing.

Nevertheless, any use of AI systems should be openly declared, so that there is no pretence of authorship or an atmosphere of mistrust. To this end, it is advisable to establish rules for the use of AI systems and their labelling, and for teachers to openly address the use of AI systems and label them in their own materials.

3 What adjustments to the curriculum (in terms of learning content, didactic design of teaching/learning processes and testing/examination) are recommended against this backdrop?

3.1 How can language teachers and learners be trained to use AI systems advantageously, and at the same time be sensitised to the limitations and risks (e.g. de-skilling)?

Neither language teachers nor language learners should dismiss AI and its potential applications. The use of *large language models* (LLMs) will fundamentally change existing teaching and learning processes. However, not every use of AI can be regarded as beneficial and conducive to learning, and the question of added value for language teaching should always have priority.

Teachers must have at least a similar understanding as their learners of the potential uses of AI systems in language teaching and learning. Ongoing training to build AI skills and deepen existing digital literacies is therefore a must. Ideally, such training programmes should be provided and continuously evaluated by the institution's management and didactics departments, as well as the professional associations and the AKS. Teachers need to be empowered to select suitable AI systems for specific target groups. This will depend on the language level taught, the skills to be taught, the desired learning objectives, and other framework conditions. Teachers should also analyse the advantages and disadvantages together with their learners, and, as a result, make their own more targeted decisions about the use of AI systems.

Learners can also be trained to make better use of AI systems by encouraging them to reflect critically on the output in language lessons and making them aware of its limitations. This could, for example, take the form of comparative tasks, which, among others, expose side effects such as "fabrications". Learners should also develop a sense of how far they can judge the appropriateness of AI-generated output at their level of proficiency.

At higher CEFR levels, AI systems are also likely to be used to support text production. It is the teacher's responsibility to critically examine the entire writing process, and to provide learners with criteria for analysing and assessing the quality of AI-generated texts, as well as strategies for revision. In addition to the selection of suitable AI systems, skilful AI prompting and labelling of AI-generated text passages should also be taught and trained. The digital skills taught here are also important outside the language classroom.

In sum, all stakeholders need support in order to become more confident in using AI systems. This requires, among other things, an awareness, of the desired (language) competencies (i.e. A1 knows less than C1), an understanding of the range of functions of AI systems (*ChatGPT* is not a search engine, and *DeepL* is not a dictionary), and the ability to critically examine text content created in collaboration between learners and AI systems.

In the medium term, all stakeholders should develop an awareness of which (language learning) skills are enhanced by using AI, and which are neglected at the same time, because knowledge units may not be stored in long-term memory. To this end, studies in the psychology of learning should also be initiated or analysed.

3.2 Where do we see the greatest added value in AI systems for language teaching and learning in higher education?

Even though AI systems are undoubtedly revolutionising foreign language teaching, it is important to look at the development from different perspectives. While they clearly make work easier for teachers, the added value for language learners is less clear, as it depends primarily on their learning objectives.

The greatest added value for lecturers is the time saved in lesson planning and creating new teaching materials, which should not be underestimated. Here, of course, legal regulations on use and copyright, as described above in section 2, must be observed. Researching and familiarising oneself with new and sometimes very specific AI systems can be time-consuming and labour-intensive, but it pays off by providing some initial good ideas for teaching units and drafts for vocabulary lists, lists of technical terms, tasks for the active use of newly learned vocabulary, example sentences, reading comprehension tasks, working texts with different levels of difficulty, etc. As with any AI product, it goes without saying that these drafts must be checked and revised before they are used in language lessons in order to ensure the quality of the lessons and the materials used. For the same reason, it is imperative that the course structure and objectives remain in the hands of the teacher, who must always be aware of their responsibility towards the learner. In addition, teachers can integrate AI systems into their lessons and use them in a targeted way to provide learners with additional self-study exercises for to deepen and apply what they have learned in class. They might also create self-tests that give learners individualised feedback and provide teachers with an overview of individual learners' progress.

For learners, the question of added value needs to be considered in a more nuanced way. The answer depends on the learner's aims and purposes for learning the language, as well as their previous language learning experience. Is it for oral or written use? For basic communication? For professional or personal purposes? Is the focus on formal or informal language? For active participation in research activities, or for reading of scientific papers? Additionally, for languages compulsory within a curriculum, learners have to meet certain course requirements whose grades count towards their overall academic performance. This leads to a situation in which AI systems may simply be used to achieve the best possible grade with the least possible effort. Still, this should not detract from the fact that there are many good, sophisticated AI systems available for the various purposes mentioned above. These offer, after an initial period of research and familiarisation, significant benefits when used correctly, as they are able to take into account individual learning levels, learning speeds and

learning goals, and constantly adapt during the learning process to enable the greatest possible progress. Thanks to mobile use, AI systems have a further advantage - they are available and accessible for learners anytime, anywhere. And they can be used by learners in many areas of language learning, e.g. for individual vocabulary work, pronunciation training, listening comprehension practice, etc. At the moment, AI systems are not reliable as comprehensive language tutors in all areas of language learning (e.g. for grammar explanations and exercises). However, the integration of gamification in AI systems can make learning a foreign language more entertaining and motivating, which can encourage learners to invest more time in learning the target language.

3.3 How can an awareness of the relevance of a sustainability perspective on AI systems be created?

Awareness of the seventeen Sustainable Development Goals of the United Nations (UN) still varies between teachers and students in higher education. Thus, it is likely that neither students nor teachers are fully informed about the positive and negative impacts of AI systems with regard to sustainable development. Language courses in higher education can give students the opportunity to explore the link between the two realities. A distinction should be made between two perspectives: AI systems for sustainability (i.e. What does the AI system do for sustainable development?) and sustainability of AI systems (i.e. How sustainable is the AI system?).

AI systems have a mixed record in the ecological field. For example, they enable the development of new climate prediction models, and they can help significantly reduce energy consumption in large infrastructures. On the other hand, the training of AI systems takes place in data centres which require enormous and ever-increasing amounts of energy. Furthermore, their development requires the extraction of raw materials in mines that rarely comply with global standards in health, environmental or labour standards.

The use of AI systems must also be considered from an economic perspective. In the context of higher education operations, for example, the use of AI systems can lead to desirable savings in resources in the form of energy and personnel costs. At the same time, commercial providers pursue their own economic interests and may contribute to an unequal distribution of wealth at national and international levels. The pattern is repeated at the learners' level in the foreign language classroom. More efficient use of AI systems is likely accompanied by additional costs (e.g. through the purchase of additional functions, etc.), thus reinforcing social inequalities.

The record of AI systems on a societal level is also ambivalent. In recent years, AI systems have been used to spread fake news and conspiracy theories, to promote an escalation of hatred via social media networks, and to prevent democratic elections. Of course, in the right hands, AI systems still have the potential to contribute to more peaceful national and international politics by reducing discrimination and promoting a diversity of perspectives, for example through translation tools.

Still, it has been shown repeatedly that AI systems have a discriminatory effect, as their algorithms are based on data and recognised patterns that are reflections of discrimination in society. Biases are systematically reproduced, particularly in relation to ethnic origin and nationality, gender and gender identity, physical and mental abilities, religion and ideology, sexual orientation and social background.

Teachers and learners must be sensitised to these aspects and trained to always read and process AI-generated texts critically with regard to potential bias. In the context of language courses, a reflection can be initiated on ethical measures for non-discriminatory AI systems or at least for using them in non-discriminatory ways.

3.4 What consequences should the availability of AI systems have for the design and implementation of examinations?

Teachers at Language Centres, too, increasingly discuss the consequences of redesigning examination formats in view of rapid technological developments in German higher education institutions and the resulting changes in academic misconduct. This is the focus of a discussion paper published by the *Standing Scientific Commission on Educational Policy* (German: *Ständige Wissenschaftliche Kommission der Kultusministerkonferenz,* or *SWK*) in January 2024 on behalf of the *Standing Conference of the Ministers of Education and Cultural Affairs of the Länder* (German: *Kultusministerkonferenz*, or *KMK*), in which it is declared to be a central topic for the entire German education sector. Technological development opens up significant opportunities for innovation, but requires well thought-out planning and continuous (self-) critical and ethical reflection. The SWK therefore recommends not only integrating the use of large language models (LLMs) into the teaching process, but also their specific use in examination formats. Here, AI systems would primarily serve as a support tool, while the final responsibility for assessment always lies with the teacher. It is important to further develop both traditional examination formats without aids and innovative, AI-supported approaches. (cf. SWK 2024:4). The decision for an examination format must, of course, depend on the respective learning objectives and take into account the spatial conditions (room equipment) and technical possibilities (e.g. internal access to AI systems; access restrictions on devices in the examination room).

In “human-machine interaction”, the human being must assume a central, leading role by determining both the ethical principles and the direction of communication and by retaining final decision-making authority.

One of the most common requests has been standardisation of rules and transparency. To ensure a consistent and fair assessment of performance, it would be ideal to have an “AI policy” or something similar to frame the use of AI systems in higher education. This would take into account the different needs of different subjects and, if possible, suggest different options or scenarios. As examination formats are becoming increasingly process-oriented rather than product-oriented, declarations of autonomy to ensure authenticity in AI-integrated examinations are needed, as is greater transparency of learning objectives. The portfolio examination format, for example, allows the combination of different competences in examination components, thus enabling a holistic assessment of language skills.

Another point is the broadening of the assessment criteria. In addition to language skills, competencies such as creativity, critical reflection and interdisciplinary collaboration should be given greater weight in future assessments. Above all, this will help to prepare graduates in good time for a working world characterised by AI systems, in which (professional) language performance is assessed in the context of its practical application.

Not least, quality assurance and comparability must continue to be guaranteed. Examinations using AI systems should do this under controlled conditions to ensure a comparable assessment of the performance of all students. This presupposes an intensive training in the use of the tools and the ability to critically reflect on the results. Open-book examinations in combination with AI systems offer innovative possibilities here. However, any use of AI in the context of examinations ultimately requires quality assurance by the examiners.

In short, by continuously adapting examination formats, Language Centres can ensure that technological developments not only improve the learning process, but also contribute to a deeper and more reflective acquisition of higher-level (future) skills. Ethical and practical considerations continue to play a central role in ensuring fairness, transparency and accuracy.

4 Why should we still attend a language course at a Language Centre today (from an academic and personal perspective)?

Language learning in a Language Centre in a higher education institution is a holistic learning experience that goes beyond the mere teaching of knowledge, vocabulary, structures, etc. It can be usefully complemented, but not replaced, by AI systems.

Unlike learning with AI systems, language teaching in higher education takes place in a structured learning environment with a commitment to regular attendance, and is characterised by pedagogical and didactic criteria and features. This includes the teaching of skills aimed at training linguistically and interculturally competent leaners who can communicate and act linguistically appropriately and efficiently in academic, professional and personal contexts.

Teachers play a key role in imparting these skills. Based on their qualifications, they identify the needs of their learners, then proactively and purposefully guide the teaching and learning process - whether face-to-face or online - moderate it, create an atmosphere conducive to learning, and manage class interactions with a variety of methods and interactive arrangements. In addition, teachers can use individual feedback (and/or language counselling) to indicate learning paths or strategies, support critical reflection and the organisation of a learner's self-learning process. The use of AI systems in language learning can and should also be addressed in the language course, so students do not bypass learning processes, but support them through skilful and judicious use.

An additional value of learning a language in higher education language courses is the personal exchange and the interactive, cooperative and social learning. As (language) learning always takes place in a social environment, interaction in the classroom is particularly important. Providing regular meeting places, language courses offer a wealth of opportunities for social interactions through language to participants from different (academic) language, cultural and professional backgrounds. This includes, for example, the opportunity to experience and apply skills such as mediation, spontaneous and appropriate communication through action and reaction, as well as learning to interpret non-verbal communication and body language. By interacting with each other (especially in the phases of raising awareness, activating prior knowledge, and reflection), learners benefit on a (academic) linguistic level, as well as on a professional and cultural level. Simultaneously, key

competencies such as communicative skills, teamwork and empathy are fostered, which are also relevant in personal and professional contexts. Consequently, social interaction, motivation from the group and mutual support, especially in challenging situations such as before exams, facilitate the learning process at the affective level.

Last but not least, learning a language invariably involves dealing with socio-cultural issues. In a language course, participants learn to change their perspective, to recognise differences and similarities between various lived realities and points-of-view, and to reflect critically on them. They learn to interact openly, respectfully, without prejudice and to communicate successfully across cultures.