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On Selected Aspects of Using AI in Teaching Czech as a Foreign Language[1]

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Abstract: This paper focuses on the possibilities of employing generative artificial intelligence (AI) in teaching Czech as a foreign language. Since only a limited number of studies have so far been published on the integration of AI into Czech language instruction, this text focuses primarily on international experience with incorporating AI into foreign language education. This study takes the form of a case study with the objective of determining whether, and in what ways, students may achieve better results through the use of AI than when working with traditional sources; how they employ AI when performing tasks aimed at developing lexical and grammatical competence and productive writing skills; and whether or not teachers are able to detect the use of AI in students' work. The data on which this study is based was collected within an experiment conducted amongst selected students and teachers participating in the Summer School of Slavonic Studies at the Faculty of Arts, Palacký University Olomouc.

Keywords: AI, Czech as a foreign/second language, phraseology, grammar, writing

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Introduction

Czech as a foreign/second language is a relatively young discipline that has been developing dynamically since the 1990s (Hrdlička, 2010, p. 10). Its evolution reflects not only new findings in the fields of linguodidactics and foreign language teaching methodology but also technological innovations and changes in social conditions.

The use of digital technology in teaching Czech as a foreign language was accelerated, for instance, by lockdowns during the coronavirus pandemic, when instruction was transferred to virtual environments and teachers began to make increased use of various digital resources. These include both materials provided by online portals designed to support traditional printed textbooks[2] and a range of educational applications that have become common tools for making teaching more engaging and for activating students through quizzes or various didactic games, such as Wordwall, Flippity, Vocabee, or Kahoot.

In recent years, these resources have come to include applications utilizing generative AI – primarily ChatGPT – as well as tools facilitating translation between languages, such as DeepL.

[2] The portal *stepbystep.cz* provides short Czech news items for listening and reading comprehension, didactic language games, worksheets, tests, and methodological commentaries; through this platform, teachers can also share their own activities. Similarly, the website *czechitup.eu* serves as a repository of audio and video materials corresponding to the eponymous textbooks and also includes transcripts of recordings and videos, as well as methodological support.

1. AI in Educational Practice and in Foreign Language Teaching

Defining artificial intelligence (AI) is not an easy task, as the very concept may appear rather abstract (Seufert et al., 2021, p. 13). Its definition inevitably depends on the disciplinary perspective from which it is approached. Artificial intelligence intersects not only with computer science, neuroscience, linguistics, and philosophy yet similarly with many other fields (Schmidt, 2024, p. 58).

G. Ballestrem provide a relatively clear definition:

> Artificial Intelligence (AI) refers to systems that exhibit intelligent behavior by analyzing their environment and – to a certain degree of autonomy – taking actions to achieve specific goals (Ballestrem et al., 2020, p. 1).[3]

Artificial intelligence may therefore be understood as intelligent machine behavior that seeks, in certain ways, to imitate human intelligence and learn from experience (Lamb et al., 2024, p. 7; Axmann et al., 2024, p. 20). The phrase *artificial intelligence* is often defined through the background meanings of its two components, *artificial* and *intelligence*, yet professional discourse lacks unity even here (cf. Schmidt, 2024, pp. 58–59). S. Seufert et al. (2021, p. 11) define intelligence as "a set of cognitive abilities that help humans manage everyday life and solve problems."[4] In the case of artificial intelligence, these cognitive processes and abilities are replaced[5] by machine-based ones.[6]

[3] "Künstliche Intelligenz (KI oder Artificial Intelligence, AI) bezeichnet Systeme, die intelligentes Verhalten zeigen, indem sie ihre Umgebung analysieren und – mit einem gewissen Grad an Autonomie – Maßnahmen ergreifen, um bestimmte Ziele zu erreichen." (translated by J. Kij).

[4] Intelligence, in this context, is understood to be a set of cognitive abilities that enable individuals to navigate everyday life and solve problems (Seufert et al., 2021, p. 11).

[5] In this respect, the terms *simulated* or *imitated* might be more appropriate, as noted by S. Seufert et al. (2021, p. 12) and J. Schmidt (2024, p. 59).

[6] Accordingly, "artificial" intelligence can be understood as the delegation of thinking, problem-solving, and decision-making processes to technical systems (Seufert et al., 2021, p. 11).

For the purposes of this research, AI can be defined as a piece of technology that, on the basis of large amounts of data (its foundation being so-called large language models) and programmed algorithms, is capable of analyzing and evaluating a prompt (input) so as to produce a meaningful output – a process that to a certain extent imitates human cognitive operations. This technology underlies tools that generate texts, images, or videos; compare and classify information of various kinds; and are used across many fields of human activity.

R. Kretschmann (2024, p. 13) considers artificial intelligence the greatest "game-changer" of all time, while S. Seufert et al. (2021, p. 11), referring to other researchers, speak of a revolution brought about by AI. It is thus evident that taking AI into account in education and implementing it within educational processes has become virtually inevitable.[7] AI enters education from two directions: "from below," through students' everyday contact with AI technology in their daily lives; and "from above," through institutional and governmental initiatives promoting or mandating its integration into schooling (Kretschmann, 2024, pp. 8–11; see also J. Schleiss, 2023, p. 2), as is the case in the Czech Republic, for example, through the National Pedagogical Institute.[8]

Teachers' attitudes toward integrating generative AI into instruction range widely – from rejection and fear, through cautious acceptance, to enthusiasm. A study led by K. Kopecký (2023, pp. 9–16) involving more than 2 000 Czech teachers found that approximately half (45.5%) of respondents regarded AI as a useful and promising tool, whereas a slightly larger proportion (47%) believed that, in the long

[7] Similarly, D. Hartmann (2012, p. 692) emphasizes that "it is of central importance that educational institutions establish framework conditions and incentive mechanisms conducive to an innovation-friendly atmosphere," highlighting the need for institutional support for innovation. R. Kretschmann (2024, p. 8) further observes that "societal and educational-policy pressures make the implementation of AI in schools and teaching virtually inevitable."

[8] See https://www.npi.cz/aktuality/74837-doporuceni-jak-pracovat-s-umelou-inteligenci (the last access: 6. 9. 2025)

term, the use of AI would lead to a degeneration of humanity's cognitive skills. In the context of educational practice, 56% of respondents stated that AI should be part of education; however, the most frequently mentioned concerns involved ethical issues and, in particular, unfair misuse of this technology by students. About one-third of respondents reported using AI actively, primarily "for generating classroom texts (25%), for translations (20%), or for preparing tests (16.5%)."[9]

Teachers themselves should display a willingness and interest in working with AI, as it can offer them many benefits in lesson planning, material preparation, research, and ongoing professional development in their language area (Voltrová, & Salcmanová, 2025, p. 5).[10] R. Kretschmann (2024, pp. 9–10, 12–13) also highlights the potential of AI for non-instructional purposes, such as assisting school staff with excessive administrative workloads, and reflects on the broader implications of AI implementation in education.

A comparable large-scale study focused specifically on foreign language teaching – and particularly on Czech as a foreign language – has not yet been conducted. However, D. Posavec-Malok (2023, p. 74) carried out a smaller-scale study with 24 respondents examining the use of digital resources, including AI, and found that 42% of participants employed AI, specifically ChatGPT, for lesson preparation and planning. This trend has also been reflected in numerous scholarly publications devoted to AI in language teaching. Manuals and examples of good practice in the use of AI occupy a prominent position among such publications.

In the field of teaching Czech as a foreign language, D. Macháčková (2023) shared practical classroom experience and offered recommendations on how to formulate prompts to make outputs more

[9] https://www.e-bezpeci.cz/index.php/ke-stazeni/vyzkumne-zpravy/163-ceske-skoly-a-umela-inteligence-2023/file (last access: 30. 9. 2025).

[10] https://www.e-bezpeci.cz/index.php/ke-stazeni/vyzkumne-zpravy/163-ceske-skoly-a-umela-inteligence-2023/file (last access: 30. 9. 2025).

useful for lesson preparation and teaching itself.[11] She also notes that "the model has been trained on a disproportionately larger amount of English-language material. This results in differences in how the chatbot can be used in Czech language teaching – e.g., a narrower range of topics and styles, lower textual accuracy, and less consideration of cultural and idiomatic expressions and contexts" (p. 58). Similar difficulties related to language size and the amount of data available to global language models for relatively small-community languages have been pointed out in international sources as well (cf. Bao, & Li, 2023; Moorhouse, 2024).

The privileged status of English as a global language is linked not only to the broader data bases available to AI models but also to the vast number of learners and teachers involved in English language education. The English-speaking environment thus offers a much wider range of professional literature both on methodology and on AI implementation in language instruction. Studies focusing on English as a foreign language[12] are naturally dominant, for example, H. Crompton et al. (2024) and J. S. Barrot (2023). However, similar trends can be observed in the didactics of other languages, such as in German (Hartmann, 2021; Voltrová, & Salcmanová, 2025; Axmann et al.,[13] 2024).

Regardless of quantity, the content of these studies shows similar tendencies: sharing resources, offering tips on AI integration, and evaluating specific procedures. What they share – both the abundant foreign sources and the limited Czech ones – is that research on AI in foreign language instruction tends to focus primarily on teachers' pers-

[11] It is recommended, for instance, to assign the chatbot a specific role, define the expected output and target audience, specify the text type, and determine the appropriate language register.

[12] Regarding the variability in the perception of English as a second/foreign language, H. Crompton et al. note that in international academic discourse the terms *English as a Second Language (ESL)*, *English for Speakers of Other Languages (ESOL)*, and *English as a Foreign Language (EFL)* are used interchangeably.

[13] The work is a collection of AI-based tools suitable for language teaching.

pectives, as it is teachers who plan instructions and, through AI-supported activities, effectively teach students how to work with such tools.

However, learners themselves similarly interact with AI and gain their own experience in its use. This aspect has received considerably less attention, even though AI offers students many opportunities to develop creativity and independent learning. AI can adapt to individual learners' needs and support them in the areas they most need to strengthen, both in self-study and in classroom environments (Voltrová, & Salcmanová, 2025).

With respect to learners' engagement with AI, literature often points to the limits of its educational application, highlighting concerns about potential (or actual) misuse, ethical dilemmas, and academic integrity.[14] Van Dis et al. (2023, pp. 224–226) explicitly note that students may complete some tasks with minimal effort.

2. Communicative Competence and Language Activities in a Foreign Language

In the process of language acquisition, a future user of the target language must acquire a range of communicative skills and master the performance of various language activities. Teaching practice and the syllabi it relies on are typically based on the *Common European Framework of Reference for Languages* (CEFR, 2001)[15] and its updated version, the *Common European Framework of Reference for Languages – Companion Volume* (2020)[16], which define the following areas of competence and skills.

[14] A search query "how do students cheat using AI in language learning" in Google Scholar yielded approximately 17,000 results.

[15] The full title is *Common European Framework of Reference for Languages – How We Learn Languages, How We Teach Them, and How We Assess Them*; here abbreviated as CEFR.

[16] *Common European Framework of Reference for Languages: Learning, Teaching, Assessment – Companion Volume with New Descriptors*; here abbreviated as CEFR CV.

Communicative competence is understood composed of linguistic, sociolinguistic, and pragmatic competences. The most extensive among them is linguistic competence, which is internally subdivided according to linguistic structures into the following components.

Lexical competence is regarded as primary, based on the assumption that without sufficient vocabulary, the speaker has nothing to which grammar can be applied, nor can other skills be developed. This view has been supported, for instance, by Wilkins (1972, pp. 110–112), who argues that "without grammar very little can be conveyed, but without vocabulary nothing can be conveyed." A speaker acquires the vocabulary of the target language gradually, progressing from a basic repertoire to a broad one that includes colloquial, expressive, and idiomatic means of expression. CEFR CV (2020, p. 132)[17] also specifies the types of lexical items to be acquired: both auto semantic and synsemantic words, as well as multiword expressions, including fixed collocations and idiomatic phrases.

In addition to the *extent* (or range) of vocabulary, CEFR also models a separate parameter – *control of vocabulary*, which refers to the ability to select appropriate lexical items according to the context and communicative situation.

Grammatical accuracy develops with reference to the inventory of grammatical means mastered by the learner, to the number and seriousness of errors committed, and to the degree of control over the grammatical system of the target language. CEFR CV (2020) does not prescribe knowledge of grammatical structures; since the inventory of grammatical means enabling the use of a language varies according to linguistic type, specific grammatical phenomena are related to CEFR levels only in national adaptations. Phonological skill has been modeled as a complex of several parameters, including general mastery of the sound system of the target language, correct articulation, and the use of prosodic features. Orthographic skill refers to the ability to copy

[17] For more details, see CEFR (2001, p. 113). Descriptions of reference levels A1 to B2 are available on the Ministry of Education, Youth and Sports website.

or transcribe text correctly and to produce written text independently in accordance with the orthographic norms of the target language. Sociolinguistic and pragmatic skills address the social aspects of language use.

The definition of language activities in CEFR is based on the concept of *language modes*: skill scales have been modeled for reception, production, and interaction (each in spoken and written forms) as well as for mediation, which by its nature may be multimodal, involving both spoken and written language simultaneously.

Viewed through the lens of AI use in developing these skills in language education, scholarly sources most frequently mention vocabulary acquisition, grammar learning, and productive writing.

F. Karataş et al. (2024, p. 19343) explicitly state, based on the results of their research, that "ChatGPT positively influences students' learning experience, particularly in writing, grammar, and vocabulary; due to its versatility and accessibility, it increases motivation and enhances engagement in various educational activities." Similarly, H. Crompton et al. (2024, pp. 2516–2517) observe that "AI systems have contributed to improving and expanding vocabulary, especially in cases where specialized or highly precise expression is required."

3. Objectives and Design of the Experiment

Given the aspects of AI use in language instruction described above and the structure of expected skills in the target language, the following priorities and objectives have been established for this research.

This case study was primarily oriented toward students: how they use AI in completing tasks related to learning Czech as a foreign language and how they work with outputs obtained from AI. Since Czech is not a globally widespread language, the study also aimed to observe the quality of the information students acquire through AI in assigned tasks. Finally, it sought to analyze how teachers evaluated the outputs submitted by students and whether they were able to distinguish AI-generated work from that created independently by learners.

To achieve these aims, a research design was developed involving two groups of students of Czech as a foreign language participating in the *Summer School of Slavonic Studies* at the Faculty of Arts, Palacký University Olomouc. The groups were intentionally selected to differ significantly in proficiency level – B1 and C2[18] – in order to observe whether learners at different levels of the target language proficiency employ different strategies when formulating prompts[19] and whether the use of AI at various stages of Czech acquisition produces the same or different benefits.

The groups were heterogeneous in terms of nationality and mother tongue, yet largely homogeneous in their ability to use English as a mediating language or as a language of communication with AI. The B1-level group consisted of eight students, and the C2-level group included ten participants. In both groups, students were divided into subgroups – those who used AI in completing the assigned tasks and those who served as a control group, working with traditional sources of information. The division was made by an independent researcher so that the teachers evaluating the students' work could do so objectively.

The teachers were allowed to incorporate the assigned tasks into their lessons according to their own discretion during an agreed-upon period. Afterwards, they submitted the students' results and their eva-

[18] AI can be used by language learners of any proficiency level. As R. Kretschmann (2024, p. 13) notes: "The universal availability of AI for different language levels (soon, in all languages) also ensures access for lower educational and language levels to text-generating AI systems. AI can even help further develop the native language proficiency, including through voice-based interfaces". ("Die universelle Verfügbarkeit von KI für unterschiedliche Sprachniveaus in (sicherlich bald) allen Sprachen sichert eben auch den Zugang niedriger Bildungs- und Sprachniveaus zu textgenerierenden KI-Systemen. KI kann sogar helfen, das Sprachniveau der Muttersprache weiter zu entwickeln, u.a. auch durch lautsprachliche Interfaces"; translated by J. Kij.).

[19] A *prompt* is defined as a challenge, question, command, or task formulated by the user when interacting with a generative language model (Voltrová, & Salcmanová, 2025, p. 5).

luations to the researchers. At the same time, the students who had used AI provided records of their task performance, including details about which AI tools they had used, how they formulated their prompts, and how they processed outputs generated by AI applications.

Students were free to choose the AI tool with which they would work. Almost all respondents used the publicly accessible version of ChatGPT 3.5; only one respondent selected DeepSeek-V3. Accordingly, in the following text, the general term *AI* will be used, with specific references to individual applications where relevant.

In alignment with the structure of communicative proficiency outlined in CEFR (see above), research tasks were designed to develop vocabulary, grammatical accuracy, and productive writing skills. The tasks reflected the possibilities appropriate to each proficiency level and corresponded to the current course content in both groups. In the area of vocabulary, students were asked to determine the meaning of a given idiom (two idioms for the C2 group) and to explain how it can be used in communication. The research question deliberately targeted expressions with figurative meanings, whereby translation or meaning retrieval is more complex than for isolated words, and whereby meaning cannot be inferred from the sum of component words. Mastery, understanding, and appropriate use of such expressions belong – according to CEFR (2018, pp. 61, 83, 133) – to higher proficiency levels, though they may occur at lower levels when relevant to communicative needs and when they carry significant pragmatic value (e.g., for politeness or socialization strategies). Their translation, or transfer between languages, is traditionally considered problematic due to discrepancies in cross-linguistic equivalence, often caused by cultural differences (Levý, 2012, pp. 25–48). In the area of grammar, the research tasks focused on features that are generally considered to be difficult in Czech as a foreign language because they lack parallels in many other language systems and because of their internal complexity. Productive writing was included as a test task because it is the

most common area in which students use AI when learning a foreign language or completing language-related assignments.[20]

4. Implementation of the Experiment and Its Results

4.1. Tasks in Phraseology

Students at level B1 were assigned the task of finding the meaning of the idiom *vařit z vody* ("to cook from water"). Using AI, the respondents obtained adequate information and correctly explained the phrase as "to speak or write about something one lacks sufficient information about." However, terminological inconsistency appeared where respondents included metalinguistic commentary in their answers: those who worked with AI alternated between the terms *idiom*, *phraseological unit*, and *phrase*, which is debatable within Czech linguistic terminology.[21]

Three students misinterpreted the idiom – one of them used AI and defined the phrase incorrectly as *delat něco s velmi málo peňezi*.[22] Based on the scope, content accuracy, appropriate linguistic structures, and overall stylistic quality, it was relatively easy to distinguish AI-generated answers from those composed independently, given the lear-

[20] D. Hartmann (2021, p. 686) notes that "AI-based writing assistants can help at various stages of the writing process, for example in correcting grammatical errors in a written text or providing recommendations for further learning" ("KI-basierte Schreibassistenten können bei verschiedenen Schritten im Schreibprozess helfen, zum Beispiel bei der Korrektur grammatikalischer Fehler in einem geschriebenen Text oder mit Empfehlungen für den weiteren Lernprozess." And also: "They can be employed in learning scenarios by providing writing prompts or ideas. Such prompts can be conducive to learning and motivating" ("[Sie] können in Lernszenarien eingesetzt werden, indem sie Schreibimpulse bzw. Schreibideen liefern. Solche Schreibstimuli können lernförderlich und motivierend sein." – Hartmann, 2021, p. 688; translated by J. Kij).

[21] F. Čermák (2017) distinguishes these terms as follows: "From the perspective of formal features […] one speaks of a phrase, whereas semantic analysis, based on relevant semantic features, justifies the use of the term idiom."

[22] Respondents' answers are presented in their original form, including all defects.

ners' proficiency level. The only exception was the misinterpreted answer mentioned above, which resembled the output of the control group. The teacher evaluating the assignment assumed that the answer was written independently and did not suspect AI involvement.

The C2 group was asked to explain the meaning and contexts of use of the idioms *být mimo mísu* ("to be off the mark") and *házet hrách na zeď* ("to throw peas against the wall," i.e., to do something futile). The selection of these idioms was motivated by their temporal stratification: *být mimo mísu* is a relatively new expression not yet recorded in normative dictionaries, so finding its proper meaning requires critical evaluation of various sources and interpretation of data. In contrast, *házet hrách na zeď* (or *na stěnu*) is well documented in traditional dictionaries and easily accessible.

Incorrect interpretations of the newer idiom were found in the case of one respondent from each group. However, the nature of the errors differed: the control group respondent provided a completely erroneous explanation, while the AI user grasped the basic meaning correctly but added an inaccurate supplementary synonym (*střílet od boku* – "to shoot from the hip"), which does not share the same semantics. The quality of answers in both groups was comparable, though AI users' responses were generally more detailed and clearly structured – reflecting ChatGPT's conversational design, which tends to provide elaborations and clarifications in a proactive manner.

4.2. Tasks in Grammar

In the grammar task, B1 respondents were asked about the verbal aspect, specifically to define the category, explain at least three differences between perfective and imperfective verbs, and provide three examples for each type. This topic was chosen because aspect is a distinctive and challenging grammatical feature of Czech, often absent in learners' mother tongues. According to M. Hrdlička (2010, pp. 97–98),[23]

[23] For practical recommendations on teaching aspects of Czech as a foreign language, see M. Hrdlička (2010, pp. 101–102, 110–116). This includes, for

many learners struggle to understand the grammatical category of aspect. It was assumed that participants had already encountered this topic in earlier studies, since, for example, *Česky krok za krokem* (Holá, 2017) introduces aspect at level A2 and revisits it at higher levels in greater detail (cf. Holá, 2017, pp. 97–104; Hradilová et al., 2021, p. 8).

The students' responses varied in accuracy and level of detail. Outputs from AI users were flawless in definition and contained appropriate examples; the only recurring issue was that most provided only one explicit difference between perfective and imperfective verbs – the completion of the action. The control group also generally mentioned only this distinction, phrasing it as "aspect expresses completion," while another answer referred to differences in forming the future tense. The control group's output contained further deficiencies: missing examples or incorrect forms such as *šel a došel* ("went and arrived") or *budu zaplatit – budu delat* ("I will pay – I will do"), presented without explanation. One respondent even commented, "I did not learn about aspect," though they used the terms *perfective* and *imperfective*. Teachers noted that control group responses were simplistic, often contained syntactic incongruities, and lacked diacritics. This deficiency also appeared in one AI user's text – likely a result of manual rewriting – yet otherwise, AI users' work demonstrated significantly higher linguistic quality.

When evaluating the task, one AI user's output was mistakenly judged by the teacher as self-produced, while one control group member's work was assumed to have been generated by AI. The latter conclusion was based primarily on the presence or absence of diacritics. Several hypotheses can be modeled to explain why the AI user's response contained so many diacritic errors: a) the student accidentally omitted some marks when copying the AI output; b) the student rephrased the AI's answer independently, naturally introducing errors; c) the student deliberately modified the AI-generated text to align it

example, repeated actions with imperfective verbs or the inability of perfective verbs to form present-tense forms.

with their real proficiency level; d) the AI tool (in this case, DeepSeek-V3) itself omitted diacritics in some places.[24] Given that the same student also produced other formal errors (incorrect word forms, missing words in sentences, and spelling issues), it is most plausible that they used the AI's output as a basis for their own production, whereas other AI users copied answers mechanically. One control group respondent produced an output significantly higher in quality than the rest, both in content and in form; the only deviation was the use of the genitive of negation ([*perfective verbs*] *have no present tense*), which, while unconventional, did not affect comprehension.

In the C2 group, the grammar task focused on sentence structure and word order, areas often problematic even for advanced learners, as L. Uhlířová (1987, p. 82) had previously observed. The challenge lies partly in the fact that materials on Czech syntax are typically oriented toward sentence classification and the relationships among constituents rather than on practical guidance for producing naturally structured Czech sentences. Textbooks of Czech for foreigners do address syntax and word order, yet usually in a limited and fragmented way, focusing ad hoc on specific phenomena (see Hradilová, 2024, pp. 168–171).

Given the proficiency of this group, students were expected to articulate, in a logically structured way, the basic principles governing Czech word order – particularly those relevant for sentence production and revision. Specifically, they were to describe the general principle of *functional sentence perspective* (theme – rheme structure), explaining that the *theme* usually includes the subject, while the *rheme*

[24] Such cases could be further addressed in teaching. Hartmann (2021, p. 689) notes, in the context of AI-based writing prompt tools, that these may exhibit "linguistic or content errors […]. These can be repurposed for didactic purposes, as learners evaluate and, if necessary, correct the generated text, thereby practicing text revision" ("sprachliche oder inhaltliche Fehler […]. Dies kann wiederum auch zu einem didaktischen Zweck genutzt werden, indem die Lernenden den generierten Text beurteilen und gegebenenfalls korrigieren und somit die Überarbeitung eines geschriebenen Textes üben"; translated by J. Kij).

constitutes the communicative nucleus. Czech, as an SVO language, tends to place new or important information towards the end of the sentence. Students were also expected to mention the *second position rule* (placement of clitics), the (non-)expression of pronominal subjects, and the semantic and prosodic aspects of marked word orders.

As with the idiom task, AI users' answers were distinctly – and admittedly better – structured than those of the control group, a result of the way AI organizes information in bullet-point format. AI-based answers were often more accurate – for example, they described Czech word order as *variable*, while control group members referred to it as *free*, a less precise term given the constraints of the second position rule. AI users also more frequently explained the principle of functional sentence perspective and its application in sentence construction. Their outputs contained a broader range of examples than those of the control group. Only one questionable case occurred: an AI user confused the terms *direct and indirect cases* with *direct and indirect objects*, whereby the optimal phrasing would have been *objects in direct and indirect cases*. In the control group, irrelevant or off-topic answers were more common – e.g., comments about word order in negative or interrogative sentences – suggesting that these respondents attempted to fill space despite lacking sufficient relevant information.

4.3. Tasks in writing

Productive writing is a language skill frequently discussed in connection with AI use, primarily due to concerns over misuse. Cotton (2023, p. 230) identifies potential risks of employing AI in education, including violations of academic integrity and plagiarism, as well as unequal access and fairness if some students possess AI tools while others do not. At the same time, numerous studies highlight the potential benefits of AI integration in writing – across all stages of the writing process. CEFR (2001, p. 65) presents these as *production strategies*, while other scholars describe them as *stages or phases*. K. Šebesta (2005, p. 101), drawing on classical rhetoric, distinguishes between the collection of material, the structuring phase, and the phase of writ-

ten realization. A. Seow (2002, p. 313) emphasizes that these steps do not necessarily occur linearly but rather cyclically, responding to emerging difficulties during composition.

Productive writing always begins with an assignment, followed by *planning* as the first stage of production. This phase involves collecting and selecting information that will form the content basis of the written text. During planning, students develop not only writing skills but also broader skills related to information processing. Learners may plan individually or collaboratively. S. Levine and S. Beck et al. (2024, p. 446) highlight the *social dimension* of writing instruction, noting that AI tools can simulate collaborative writing – particularly in the planning stage, when learners construct the content outline and collect supporting arguments. Traditionally recommended activities have included brainstorming or clustering, whereby learners collaboratively generate words related to a topic, organize them, and create *clusters* – conceptually similar to mind maps. Another method emphasized for idea generation is the use of guiding questions (who/what, where, when, how, which, etc.).[25] Such techniques can be effectively transferred to student – AI interaction. Learners can also use AI in later stages – structuring their texts or crafting linguistic formulations. It is particularly in these later phases that AI can assist by suggesting appropriate phrasing and by providing revisions of students' own writing.

The B1 group was tasked with writing a postcard to a friend from Olomouc. The postcard format was intentionally chosen to elicit a text of manageable length based on students' real-life experiences in the city and at the *Summer School*.[26] The AI users' texts exhibited significantly fewer morphological errors, richer vocabulary, and better textual cohesion. The control group's texts were generally shorter, often lacked diacritics, and contained occasional morphological errors (incongruent forms or incorrect prepositional cases[27]). Thus, differences in formal quality became immediately apparent. One respondent deviated from the expected format by omitting both salutation and closing.[28] The remaining students completed the task creatively, conveying personal experience while adhering to genre conventions.

The C2 group wrote an essay entitled *Interpersonal Relationships in the Age of Communication Technologies* (350–400 words). In terms of content, there were no substantial differences between AI and non-AI texts: all adhered to the topic, demonstrated logical argumentation, and showed some degree of originality. However, at the formal level, it was almost immediately evident which essays had been produced with AI support. Even highly proficient non-native speakers make characteristic errors – especially in word order and diacritic usage – that allow experienced teachers to identify authentic learner production (see Hradilová, 2018, pp. 120–131).

5. Students' Strategies for Using AI

As part of the research, we also gathered information from respondents in the C2-level group regarding the strategies they employed when interacting with AI. The prompts used in the first task were largely uniform and straightforward, consisting mainly of requests to explain the meanings of the assigned idioms. The observed differences lay primarily in prompt complexity: some students attempted to formulate comprehensive prompts encompassing multiple aspects of the assignment, whereas others conducted a step-by-step conversation with the chatbot, beginning with general questions and then refining them toward specific attributes of use – such as when the idiom is

[25] In the Anglophone context, this method is often referred to as *wh-questions*, i.e., who, why, what, where, when, and how.

[26] No length requirement was set in terms of word count; the format was determined by the postcard format or prior experience with the type of communicative task.

[27] Examples include: "Budu nakupovat suvenýry pro ti", or „Studuju tady v LŠSS pro měsíc."

[28] One respondent wrote only a single complex sentence: „Teď jsem v Olomouci a často prší jako období déšťů v Japonsku".

used, whether it belongs to standard Czech, or whether its use depends on age or regional context. Although none of the respondents were native English speakers, two reported that they preferred communicating with AI in English, initially posing their questions in English and only subsequently verifying the obtained information in Czech. A similar situation occurred with questions about Czech word order and sentence structure; in one case, a student even posed the initial query in their mother tongue (Slovak).

Completely different strategies were observed in the productive writing task. Only one respondent asked ChatGPT to generate the entire text – the prompt included the essay topic, required length, and a specification that the text should take the form of an academic essay. Three respondents followed the stages of the writing process as described earlier: they first asked for a proposed structure, then in subsequent prompts requested elaboration of particular sections, examples, or arguments pro et contra. During the editing and revision stage, their prompts shifted toward generating correct word forms and sentence structures, suggesting appropriate formulations for academic writing, and, finally, requesting grammatical and stylistic proofreading of the text. A completely different approach was taken by one participant, who instructed ChatGPT to generate the entire essay but first provided two of their own earlier texts in order for chatbot to imitate their writing style. The resulting text was subsequently revised by the student both in content and form. The outcome was a piece that, although containing minor deviations from the target-language norm, appeared entirely natural – resembling authentic productive writing by an advanced non-native speaker of Czech.

6. Flawless vs. Authentic: How Teachers Recognize AI Use

Discussions about potential misuse of AI by students – who might replace their own effort with automated AI output – are inevitably accompanied by debates on how such behavior can be detected. As part of our research, we conducted structured interviews with teachers fo-

cusing on their evaluation of student work and their ability to estimate which assignments had been created with AI assistance.

It was found that the use of AI tools undoubtedly represents a quick and efficient way for students to complete assigned tasks – and, depending on the manner of use, a potential learning aid – but not necessarily a guarantee of favorable teacher evaluation when AI-generated outputs are presented as students' own work. The participating teachers, drawing on their assessment of the quality of submitted outputs and their knowledge of individual students' linguistic abilities and personal characteristics, correctly identified AI-assisted work in 90% of cases in the C2 group[29] and in 75% of cases in the B1 group.[30] The main criterion for recognizing AI-produced texts was striking linguistic accuracy, which conflicted with teachers' expectations and their experience with typical learner errors made by non-native users of Czech. Even for highly advanced students (C2 level), one can expect, with a high degree of probability, occasional errors in word order or diacritic placement – even in cases whereby morphological and lexical accuracy is otherwise excellent. Texts written by non-native speakers that completely lack such features almost immediately indicate that they were generated by AI, by another automated tool, or edited by a native speaker. Therefore, it is essential to guide students toward *purposeful* use of AI – as a means of supporting linguistic or other skills – whilst ensuring that they do not simply adopt AI-generated products and present them as their own.

Conclusions

International experience, particularly from English as a foreign language instruction, shows that AI can be used at various stages of

[29] An exception was an essay generated by AI based on the writer's other texts, which resembled natural student production without revealing obvious AI authorship under normal assessment.

[30] In evaluation, teacher considered AI-assisted texts with linguistic defects as the student's own production, whereas texts from the control group that were formally more successful were sometimes perceived as AI-generated.

language teaching and learning, serving multiple pedagogical aims. Within this case study, we observed how students used AI when completing tasks designed to develop their lexical and grammatical competences and productive writing skills.

Although previous research suggests that AI-generated information in or about less widely spoken languages may be inaccurate, the students in our experiment consistently obtained content-appropriate and linguistically adequate information. This indicates that generative AI can provide reliable and pedagogically relevant results even for languages – such as Czech – that lack global reach.

The study revealed that students adopted different strategies in using AI, varying in the degree of their own engagement: on one end, some sought to obtain ready-made outputs with minimal effort, while others aimed to cooperate with AI through successive questioning and independent synthesis of responses. Regardless of the strategy, students who used AI generally produced higher-quality and more coherent outputs than those in the control group. However, the linguistic precision of AI-generated texts – disproportionate to students' actual proficiency – and the absence of typical learner errors were perceived by teachers as clear indicators that the work had not been written independently.

AI in education should not be viewed as a competition between teachers and students, where each side seeks strategies either to conceal or detect its use. Instead, AI should be intentionally integrated into instruction in a way that promotes genuine language acquisition rather than substituting student effort, which remains an essential component of the learning process. Teachers should guide students toward thoughtful AI use – as a learning instrument rather than as a shortcut to ready-made solutions.

The goal of implementing AI in language teaching should thus be conscious, transparent, and teacher-guided use, which minimizes misuse while motivating learners to grow within the learning process. It is necessary to introduce learning activities that combine AI use with students' own creative work. Equally crucial is ensuring equal

access to AI tools so that the benefits AI brings to language education are not available only to some learners, thus becoming a dividing factor, but instead serve as a means of supporting their shared progress.

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