Generative AI for Teaching Latin and Greek in High School

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Abstract

While certain educators and practitioners perceive generative AI like ChatGPT as facilitators of learning and development, others harbor reservations, perceiving potential threats to the educational landscape. The school will try initially to "resist" these tools. It will forbid the use of smart devices at school and consider the use of generative AI by the students despicable. However, students will any case use it when not guarded. Moreover, despite the concerns the application of generative AI in content creation allows instructors to develop unique assessment and learning materials. This paper shows how generative Al works with Latin and Ancient Greek. Through different examples, it demonstrates that it is possible to "embrace" the use of generative AI in High School, with specific reference to Italian Liceo Classico, where Latin and Ancient Greek are thoroughly studied by high-school students.

Keywords

Generative AI in education, AI adoption in high school, AI for teaching Latin and Ancient Greek

1. Introduction

ChatGPT (Chat Generative Pre-Trained Transformer) is an AI chatbot based on Generative AI (GAI) and Large Language Models (LLMs) developed by OpenAI and launched on November 30, 2022. This chatbot allows for having human-like conversations and much more. The language model can answer questions and assist the user with tasks, such as composing emails, essays, and code. In addition, can describe art in detail, create AI art prompts, and have philosophical conversations. [3; 21.

ChatGPT is a tool created to hold a conversation with the end user. A search engine indexes web pages on the internet to help the user find the information they asked for. The free version of ChatGPT cannot search the internet for information. It uses the information it learned from training data to generate a response, which leaves room for error. (Note that other tools like Bing do integrate a search engine and generative AI-GPT4 in particular).

ChatGPT is considered a disruptive tool for teaching, learning, and supporting students [13; 18]] and numerous schools worldwide are trying to use it in their pedagogical approach, transforming their traditional teaching methods.

However, some researchers express concerns regarding the potential ethical consequences of using AI in educational environments, such as information privacy, algorithmic bias, and the possible reduction of human interaction [7; 23]. Consequently, the scholarly community is actively investigating the most efficient and responsible methods to integrate ChatGPT into education [20].

In this paper, we argue that it is possible to "embrace" generative AI tools in high school, considering the constructivist theory [6; 4; 19; 24], and not simply try to "resist" their use, adopting a cautious and conscious approach in the use of these technologies. In addition, through an initial research effort that will be further explored in subsequent studies, we illustrate how ChatGPT, as a concrete example of generative AI, can be used to help teach Latin and Ancient Greek in high school, with specific reference to Italian Liceo Classico, where Latin and Ancient Greek are thoroughly studied by students. Obviously, Al cannot replace the interaction with the teacher and with the other students, nor learning by experience.

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2. Generative AI in Education

In traditional classroom learning, teachers provide students with various sources of information that are known to be reliable. Nowadays students increasingly rely on a host of resources available on the internet. ChatGPT creates challenges regarding the quality of assessment and triggers debates about the functions of education and the way we learn. It is undeniable that the future of learning will be significantly influenced by the technological revolution [10]. Despite the rapid technological shift, many institutions were unprepared and had to adapt out of necessity. Various challenges have emerged that have adversely affected the learning process for both teachers and students. Therefore, there is no turning back and the challenges of adapting to new technology in higher education must be addressed if we are to move forward [2].

In confirmation of this, Helen Crompton, an associate professor at Old Dominion University in Norfolk, Virginia, explains that Al has a big potential to revolutionize education. In a system more concentrated on marks and less on learning, ChatGPT is giving a shake to a debate that is already late. She identifies several opportunities concerning Al in education, including evaluation; prevision; tutoring; learning management; and specific support of students with disabilities and special needs [16].

3. The constructivist theory and AI

In teaching with AI, it is important to consider constructivist theory.

Constructivism is a dominant educational philosophy that shapes modern learning by emphasizing active, autonomous knowledge construction. Rooted in the works of thinkers like Dewey, Bruner, Vygotsky, and Piaget [6; 4; 19; 24], it contrasts with traditional methods where students passively receive information. The constructivist theory of learning highlights the importance of learners actively engaging with new knowledge through exploration and investigation [15]. Educators play a crucial role by addressing these needs and facilitating the learning process. The integration of technology into constructivist learning enhances student engagement, allowing for exploration, experimentation, and active knowledge-building.

Tools like ChatGPT can support this approach by engaging students in dialogue and scaffolding their prior knowledge to help them construct new understanding. Its individualized feedback builds on students' experiences, guiding them towards improvement and error correction, functioning as a "More Knowledgeable Other" (MKO) [9]. Moreover, constructivist theory emphasizes authentic assessment, which evaluates students' ability to apply knowledge in real-world contexts [26]. ChatGPT enhances this by providing personalized feedback and aligning with adaptive learning principles, where knowledge builds on previous understanding [22; 11]. Thus, ChatGPT effectively facilitates constructivist learning.

4. Resist or Embrace?

One of the pioneering studies of generative AI in Education has been conducted on the first course, CS1, in the Bachelor of Computer Science [14]. In these studies, researchers interviewed 20 programming instructors on how they plan to adapt to generative AI. Two categories of long-term strategies emerged:

- Resist the use of AI coding tools
- *Embrace* AI tools by integrating them.

The starting point of this work is that these two strategies are indeed possible also in studying classics, in particular, Latin and (Ancient) Greek. We can expect, and in fact, we have witnessed this already, that the school will try initially to "resist". It will forbid the use of smart devices at school and consider the use of ChatGPT (or successors) by the students despicable. However, students will any case use it when not guarded, e.g., when doing homework, and this may have a long-term bad impact on teaching these subjects. For a comparison, consider what happened to the Math course

when automatic calculating devices became widely available in the '80. Since then, Math has lowered the importance of calculations in high school in favor of focusing on more conceptual mathematical aspects of Math [1].

Now ChatGPT is suggesting that we can indeed have a sort of calculator for humanistic subjects, including Latin and Greek, with the possibility of very accessible on-the-fly translation from/to these languages. The difference compared to a calculator is that we cannot blindly trust ChatGPT, and this is where the meaning of this tool as an "ally" comes in—a kind of tutor that helps with studying and reformulating concepts but does not completely replace the teacher.

What would it mean to "embrace" such tools? It means to study and then use them as an instrument to support and amplify the study of Latin and Greek in High School.

5. Prompting ChatGPT for Latin

To get an initial insight into the possibility of using Generative AI in the classroom for teaching Latin, we prompt ChatGPT with questions of increasing difficulties mostly typical of a curriculum of a 1st-year student of the Italian Liceo Classico. Questions are about basic Latin grammar, how to translate easy sentences, the application of rules into sentences, lexicon, rhetorical figures, how to translate a text and logical thinking, and information about an author. This analysis gives us some bases to understand how ChatGPT can be useful in the study of this subject.

1. Analyze the following sentence and translate from Italian to Latin: la bella ragazza di Roma ama il brutto ragazzo e gli dà come dono una piccola statua della dea Venere.

GPT: Here's the analysis and translation into Latin:

Analysis:

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• "la bella ragazza di Roma" (the beautiful girl from Rome)
o Subject: "la ragazza" (the girl)
o Adjective: "bella" (beautiful)
o Prepositional phrase: "di Roma" (from Rome)
• "ama" (loves)
o Verb: "ama" (loves)
• "il brutto ragazzo" (the ugly boy)
o Object: "il ragazzo" (the boy)
o Adjective: "brutto" (ugly)
• "e gli dà come dono" (and gives him as a gift)
o Conjunction: "e" (and)
o Pronoun: "gli" (to him)
o Verb: "dà" (gives)
o Prepositional phrase: "come dono" (as a gift)
• "una piccola statua della dea Venere" (a small statue of the goddess Venus)
o Object: "una statua" (a statue)
o Adjective: "piccola" (small)
o Prepositional phrase: "della dea Venere" (of the goddess Venus)
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The analysis is correct, but it is not complete, because it does not include pieces of information such as for the noun: the case (nominative, genitive, dative, accusative, vocative, ablative), the gender (male, female, neutrum), and the number (singular or plural); for the verbs: conjunction, mood, time, person, number (e. g. "amat": indicative, present, third person, singular); for complements, it does not describes always the type (e. g. "della dea": specification complement).

Translation to Latin: "Puella pulchra Romana amat puerum foedum et ei donum dat parvam statuam deae Veneris."

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• "Puella pulchra Romana" (the beautiful girl from Rome)
o "Puella" (girl)
o "pulchra" (beautiful)
o "Romana" (Roman, from Rome)
• "amat" (loves)
o "amat" (loves)
• "puerum foedum" (the ugly boy)
o "puerum" (boy, accusative case)
o "foedum" (ugly)
• "et ei donum dat" (and gives him as a gift)
o "et" (and)
o "ei" (to him, dative case)
o "donum" (gift, accusative case)
o "dat" (gives)
• "parvam statuam deae Veneris" (a small statue of the goddess Venus)
o "parvam" (small, accusative case)
o "statuam" (statue, accusative case)
o "deae" (of the goddess, genitive case)
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• "Venere" is the proper name for Venus, the goddess of love and beauty.

The answer is correct. Moreover, it has added a piece of information that was not requested: the description of Venus.

2. Translate the sentence Tullio cum Marcello magna amicitia erat.

GPT: Tullius had a great friendship with Marcellus.

o "Veneris" (Venus, genitive case)

The answer is correct, and it takes into consideration the rule of possessive dative.

3. Explain the rule of possessive dative in Latin.

GPT: In Latin, the rule of possessive dative is a construction where the dative case is used to indicate possession or the person to whom something belongs. It is a way to express a possessive relationship. The possessive dative is formed by combining the dative case of a noun with the noun that indicates possession.

The noun in the dative case represents the possessor, while the noun following it represents the thing possessed. For example, let's take the sentence "Tullio cum Marcello magna amicitia erat" which means "Tullius had a great friendship with Marcellus." Here, "Marcello" is in the dative case, indicating the person to whom the possession or relationship of the friendship belongs. It shows that the friendship is possessed by Marcellus. Some other examples of possessive dative in Latin include: "Patri librum do" (I

give a book to my father). Here, "patri" is in the dative case, indicating that the book is being given to the father. "Amicis consilium meum dabo" (I will give my advice to my friends). Here, "amicis" is in the dative case, indicating that the advice is being given to the friends. It's important to note that the possessive dative construction is just one way to indicate possession in Latin. Other constructions, such as the genitive case or the use of possessive pronouns, can also be used to express possession. The choice between these different constructions depends on the specific context and desired emphasis.

Note that ChatGPT gives a correct answer using as an example the sentence used in question 6 and other examples. In addition, gives information about the use of possession in Latin.

4. What is the meaning of the Latin word "fortuna"?

GPT: The Latin word "fortuna" has a broad range of meanings, and its interpretation can vary depending on the context. Here are some of the common meanings associated with the word: Fortune/Luck: "Fortuna" can refer to the concept of fortune or luck, representing the unpredictable and capricious nature of fate or chance. Fate/Destiny: It can also denote destiny or the predetermined course of events in a person's life. Success/Prosperity: "Fortuna" can represent success, prosperity, or good fortune in terms of material wealth or social status. Goddess of Fortune: In Roman mythology, "Fortuna" was also the name of the goddess of fortune and luck. It's important to note that "fortuna" carries different connotations based on its usage, and the precise meaning can be derived from the context in which it is used.

The answer is correct but not complete: fortuna is a Latin word that has a different meaning in singular from plural; the singular means: destiny, while the plural means: wealth.

5. Pater familias: what is the case of familias and what is the Latin rule?

GPT: In the phrase "Pater familias," "familias" is in the genitive case. The genitive case in Latin typically indicates possession or relationship and can be translated as "of the family" or "of the household." The Latin rule associated with the genitive case is that it is used to show possession or to indicate the relationship between two nouns, where the genitive noun modifies or describes the noun it is connected to. In the case of "Pater familias," the genitive form "familias" indicates that the noun "pater" (father) possesses or is related to the noun "familias" (family or household). Therefore, the phrase translates to "father of the family" or "head of the household".

The answer is correct but does not explain that familias is a particularity and it is an ancient genitive used in the law. Moreover, familias follows in a sentence the Latin words: mater, filius, and filia (e. g. "mater familias").

6. Translate the following Latin text in English: Proserpina est pulchra puella: in Sicilia apud Hennam violas et lilia in silva legit, fiscellas implet et cum amicis ludit. Sed deus Pluto, dominus inferorum, cernit adulescentulam: miratur formam et puellam raptat amoris causa.

GPT: Proserpina is a beautiful girl: in Sicily, near Henna, she picks violets and lilies in the forest, fills her baskets, and plays with her friends. But Pluto, the lord of the underworld, catches sight of the young girl: he admires her beauty and kidnaps her out of love.

The translation is correct, though literal. It does not translate the word 'deus,' but the overall meaning is not compromised.

7. Translate and identify the author: "Nos autem omnia adversa cum venientia metu augentes, tum maerore praesentia rerum naturam quam errorem nostrum damnare malumus. Sed et huius culpae et ceterorum vitiorum peccatorumque nostrorum omnis a philosophia petenda correctio est. Cuius in sinum cum a primis temporibus aetatis nostra

voluntas studiumque nos compulisset, his gravissimis casibus in eundem portum, ex quo eramus egressi, magna iactati tempestate confugimus. O vitae philosophia dux, o virtutis indagatrix expultrixque vitiorum! quid non modo nos, sed omnino vita hominum sine te esse potuisset?"

GPT: But we, when adverse things both present and impending, increasing our fear, prefer to condemn the nature of things rather than our own error. But correction for this fault of ours and for the other vices and sins of ours must be sought from philosophy. When our will and zeal had compelled us into the lap of philosophy from the earliest times of our life, in these most serious crises we have sought refuge in the same harbor from which we had set forth, tossed by a great storm. O philosophy, guide of life, investigator and expeller of vices! What could not only we, but indeed all of humanity, have been able to be without you?

Unfortunately, the author of this text is not specified. It appears to be a philosophical reflection or a passage expressing admiration for philosophy and its role in guiding and correcting human life.

The translation is correct, but ChatGPT does not recognize that the author of this text is Cicero in the work: "Tusculanae disputationes", though it understands the general meaning of these sentences.

8. Analyze and comment on the previous text.

GPT: The previously provided text is a philosophical reflection written in Latin. It explores the relationship between adverse events in life and our reactions to them, highlighting the importance of philosophy in understanding the nature of things and correcting our mistakes. The author acknowledges that, in the face of adversity, it is common to increase fear both for those already present and for those that are approaching. However, instead of blaming our own errors, the author states that we prefer to condemn the very nature of things. This might suggest a human tendency to seek an external scapegoat rather than face our personal failures. The author believes that the remedy for this fault, as well as for the vices and sins committed, should be sought in philosophy. Philosophy is described as a safe refuge in times of crisis, a harbor to return to after being shaken by a storm. It is attributed the role of guiding life and investigating virtue, and it is also capable of expelling vices.

The author concludes by expressing the concept that without philosophy, not only the author themselves but also the entire life of human beings could not have been what it is. This underscores the importance and positive influence attributed to philosophy in shaping human life and its meaning.

In summary, the text expresses an appreciation for the role of philosophy in facing adversity, correcting one's mistakes, and guiding a virtuous life. It recognizes the human tendency to seek external blame rather than take personal responsibility and emphasizes that only through philosophy can true understanding and correction of one's failures be found.

The analysis is correct and complete.

9. Explain in the latin grammar what structure is "cum...compulisset" in the following sentence: Cuius in sinum cum a primis temporibus aetatis nostra voluntas studiumque nos compulisset, his gravissimis casibus in eundem portum, ex quo eramus egressi, magna iactati tempestate confugimus.

The structure "cum...compulisset" in the given sentence is a subordinate clause introduced by the conjunction "cum." In Latin, "cum" can have multiple meanings, and in this context, it indicates a causal or temporal relationship, meaning "when" or "since."The verb "compulisset" is in the third-person singular

pluperfect subjunctive form of the verb "compellere" (to compel) and agrees with the noun "voluntas" (will) in number and person. The pluperfect subjunctive is used to express an action that occurred prior to another past action or event. The phrase "cum a primis temporibus aetatis nostra voluntas studiumque nos compulisset" can be translated as "when our will and eagerness for learning had compelled us from the earliest times of our life." It describes the cause or circumstance that led to the subsequent action described in the main clause. Overall, the structure "cum...compulisset" introduces a subordinate clause expressing a causal or temporal relationship, indicating that the speaker's will and eagerness had compelled them in the past, setting the stage for the events that followed.

The answer is correct.

6. Prompting ChatGPT for Greek

To get an initial insight into the possibility of using Generative AI in the classroom for teaching ancient Greek, we prompt ChatGPT with some questions of increasing difficulties typical of a curriculum of a 1st-year student of the Italian Liceo Classico. Questions are about basic Greek grammar, how to translate easy sentences, the application of rules into sentences, lexicon, how to translate a text and logical thinking, and information about an author. These questions can give us a general idea of how ChatGPT can be useful in the study of this subject.

1. Do you know ancient Greek?

GPT: Yes, as an AI language model, I have been trained on a wide range of texts, including ancient Greek literature and historical documents. I can understand and generate text in ancient Greek to some extent. However, please keep in mind that my training data includes a vast amount of information up until September 2021, so I might not be aware of recent developments or discoveries in the field of ancient Greek studies. How can I assist you with ancient Greek?

This answer shows that ChatGPT may be of help when working with ancient Greek.

2. Explain when a word in Ancient Greek can be defined as oxytone, paroxytone, and proparoxytone, and give an example for each.

GPT: In Ancient Greek, the classification of a word as **oxytone**, **paroxytone**, or **proparoxytone** depends on the position of the accent in relation to the end of the word. Let's look at these three categories in detail with examples:

1. Oxytone (ὀξύτονος)

A word is defined as **oxytone** when the accent falls on the last syllable.

• Example: $\theta \epsilon \delta \varsigma$ (the $\delta s = g \delta d$ ". Here the accent falls on the last syllable, " $\delta \varsigma = g \delta d$ ".

2. Paroxytone (παροξύτονος)

A word is **paroxytone** when the accent falls on the second-to-last syllable.

• Example: $\delta \tilde{\omega} \rho o v$ (dôron) = "gift." The accent falls on the second-to-last syllable, " $\delta \tilde{\omega}$."

3. Proparoxytone (προπαροξύτονος)

A word is *proparoxytone* when the accent falls on the third-to-last syllable.

Example: ἄνθρωπος (ánthropos) = "man." The accent falls on the third-to-last syllable, "ἄν."

These categories are important in the meter and prosody of Ancient Greek, and they help in understanding the behavior of words in various contexts, such as poetry and declension.

The second answer is wrong, because $\delta\tilde{\omega}$ pov is a properispomenon word (properispomenon means that the circumflex accent falls on the second-to-last syllable, on a long vowel. So, this example shows that ChatGPT can make mistakes, and this error might raise doubts in a student, who, for this reason, could decide to ask ChatGPT another verification question as the following:

3. But is **δῶρον** paroxytone or properispomenon?

GPT: **δ $\tilde{\omega}$ ρον** (dôron) is **properispomenon** (προπερισπώμενον), not **paroxytone**.

A word is defined as **properispomenon** when it has a circumflex accent ($\tilde{\ }$) on the second-to-last syllable. This accent indicates that the vowel in the second-to-last syllable is long and that the accent extends over the syllable with a modulation in tone.

So:

- **Properispomenon**: circumflex accent on the second-to-last syllable (as in ** $\delta\tilde{\omega}\rho ov$ **).
- **Paroxytone **: acute accent on the second-to-last syllable (as in ** λ ó γ o ς ** **lógos **, "word").

Thus, ** $\delta \tilde{\omega} \rho o v^{**}$ is a **properispomenon** word, not a **paroxytone**.** $\delta \tilde{\omega} \rho o v^{**}$ (dôron) è **properispomenon** (προπερισπώμενον), non **parossitona**.

GPT corrects its mistake, but it does not explain the accent rules. So, it is possible to ask GPT for a better explanation.

4. If a word is properispomenon in the ancient greek, what are its characteristics?

In Ancient Greek, a **properispomenon** (προπερισπώμενον) word has the following specific characteristics:

- 1. *Circumflex Accent on the Penultimate Syllable*: The word has a *circumflex accent* (∽), which always appears on the *penultimate* (second-to-last) syllable.
- 2. **Long Vowel or Diphthong in the Penultimate Syllable**: The syllable with the circumflex must contain a **long vowel** (e.g., η , ω) or a **diphthong** (e.g., $\varepsilon \iota$, ov). The circumflex cannot appear on a short vowel.
- 3. **Final Syllable Must Be Short**: For a word to have a circumflex on the penultimate syllable, the final syllable must be **short**. This is a necessary condition for the properispomenon accentuation pattern.

Example: $\delta \tilde{\omega} \rho o v$ (dôron) = "gift"

- ο The penultimate syllable $\delta \tilde{\omega}$ has a long vowel (ω) and carries the circumflex.
- The final syllable **pov** is short, which allows the penultimate syllable to have the circumflex.

Summary of Characteristics: Circumflex accent on the second-to-last syllable; Long vowel or diphthong in the second-to-last syllable; The final syllable must be short.

These characteristics help differentiate properispomena words from other accentual categories in Ancient Greek, such as paroxytone and oxytone words.

The answer is correct, and it gives a clear idea of some accent rules of Ancient Greek.

5. Analyze (indicate declension, gender, number, and case) and translate the following expressions in Ancient Greek: τάς νίκας, ταῖς λύπαις.

GPT: Here's the analysis of the three Ancient Greek expressions and their translation:

1. τάς νίκας

• **Declension**: First declension; **Gender**: Feminine; **Number**: Plural; **Case**: Accusative

Translation: "The victories"

- **νίκη** (níkē) = "victory"
- $\tau \dot{\alpha} s$ is the feminine plural accusative definite article.

2. ταῖς λύπαις

Declension: First declension; Gender: Feminine; Number: Plural; Case: Dative

Translation: "To the sufferings" or "To the sorrows"

- $\lambda \dot{v} \pi \eta (l \dot{y} p \bar{e}) = "suffering", "sorrow"$
- ταῖς is the feminine plural dative definite article.

In summary: $-\tau \dot{\alpha} g v i \kappa \alpha g =$ "the victories"; $\tau \dot{\eta} v \phi \omega v \dot{\eta} v =$ "the voice"; $\tau \alpha i g \lambda \dot{v} \pi \alpha i g =$ "to the sufferings/sorrows"

The answer is correct and complete.

6. Translate the following text to English: Εἰς μελισσουργοῦ τις εἰσελθών, ἐκείνου ἀπόντος, τό τε μέλι καὶ τὰ κηρία ὑφείλετο. Ὁ δὲ ἐπανελθών, ἐπειδὴ ἐθεάσατο ἐρήμους τὰς κυψέλας, εἰστήκει ταύτας διερευνῶν. Αἱ δὲ μέλισσαι ἐπανελθοῦσαι ἀπὸ τῆς νομῆς, ὡς κατέλαβον αὐτόν, παίουσαι τοῖς κέντροις, τὰ πάνδεινα διετίθεσαν. Κὰκεῖνος ἔφη πρὸς αὐτάς· ¾ κάκιστα ζῷα, ὑμεῖς τὸν μὲν κλέψαντα ὑμῶν τὰ κηρία ἀθῷον ἀφήκατε, ἐμὲ δὲ τὸν ἑπιμελούμενον ὑμῶν δεινῶς τύπτετε. Οὕτως ἔνιοι τῶν ἀνθρώπων δι' ἄγνοιαν τοὺς ἐχθροὺς μὴ φυλαττόμενοι, τοὺς φίλους ὡς ἐπιβούλους ἀπωθοῦνταί.

GPT: A beekeeper entered his beehives, but when he left, he left behind the honey and the wax. Upon returning and seeing the empty hives, he stood investigating them. The bees, returning from their field, attacked him, striking him with their stingers and inflicting great pain. And he said to them, 'Oh, wicked creatures, you left the innocent thief who took your wax, but you fiercely attack me, who cares for you. Thus, some people, out of ignorance, fail to guard against their enemies and mistakenly reject their friends as adversaries.

The translations present some mistakes. In particular: " $\tau\iota\varsigma=$ "a certain person" is the subject and it is not "a beekeeper", because $\mu\epsilon\lambda\iota\sigma\sigma\sigma\nu\rho\gamma\sigma\nu$ is genitive); entered "the house of a beekeeper" (it is not "his beehives"); the conjunction "but" is not in the text; took away (not, "left behind") the honey and the wax. Upon returning, (there is not the conjunction "and"), since he saw (not "seeing") the beehives empty, he stood investigating them. But ($\delta\epsilon\nu$) the bees returned back (not "returning") from ("their" is not present) the field, since caught (not "attacked") him, striking him with their stingers (there is not "and"), inflicted great pain. And he said to them: "Oh, wicked creatures, you left the thief who took your wax unpunished (not "innocent") but you fiercely attack me, who cares for you. Thus, some people, out of ignorance, failing (not "fail") to guard against their enemies, (there is no "end") mistakenly reject their friends as adversaries. So, the translation is not completely correct.

7. In this sentence: "Εἰς μελισσουργοῦ τις εἰσελθών, ἐκείνου ἀπόντος, τό τε μέλι καὶ τὰ κηρία ὑφείλετο", explain what is grammatically ἀπόντος.

GPT: In the sentence "Εἰς μελισσουργοῦ τις εἰσελθών, ἐκείνου ἀπόντος, τό τε μέλι καὶ τὰ κηρία ὑφείλετο," the word "ἀπόντος" is a genitive masculine singular participle of the verb "ἀπέρχομαι" (apérchomai), which means "to go away" or "to depart." Grammatically, the word "ἀπόντος" agrees with the noun "ἐκείνου" (ekéinou), which is in the genitive case. In this context, it indicates possession or association. Therefore, "ἐκείνου ἀπόντος" can be translated as "his departure" or "when he departed. "The phrase as a whole, "ἐκείνου ἀπόντος" modifies the previous action and sets the stage for what follows in the sentence. It suggests that the event described with the participle "ἐκείνου" occurred while or after the person mentioned had departed.

In general, the answer is correct, but the genitive does not have a meaning of possession or association. It translates the absolute genitive, a structure that determines in this case a temporal proposition.

8. Could you guess who is the author of this text?

GPT: The passage you provided is a fable, and it is attributed to the ancient Greek storyteller Aesop. Aesop was a renowned fabulist who is known for his collection of fables, which were short moral stories often featuring anthropomorphic animals. The fables were used to convey moral lessons or teachings. The specific fable you shared tells the story of a beekeeper who is attacked by his own bees after they mistakenly identify him as a threat. The beekeeper chastises the bees for attacking him, emphasizing the lesson that sometimes people fail to recognize their true friends and instead treat them as enemies due to ignorance. Aesop's fables have been widely translated and retold throughout history, and this particular fable is commonly known as "The Beekeeper and the Bees."

This answer is correct, and it shows that ChatGPT has knowledge about Aesop and the fable, although its answer could be more precise.

9. Do you know other ways used by Aesop to finish or to start his fables, different from: "Οὕτως ἔνιοι τῶν ἀνθρώπων δι' ἄγνοιαν τοὺς ἐχθροὺς μὴ φυλαττόμενοι, τοὺς φίλους ὡς ἐπιβούλους ἀπωθοῦνταί"?

GPT: Yes, Aesop used various phrases or moral conclusions to end his fables, depending on the specific story and the moral lesson being conveyed. Here are a few examples of different endings or moral conclusions found in Aesop's fables:

"Moral of the story..."

"The moral is..."

"Thus, the wise person learns..."

"And so we see that..."

"The lesson of this fable is..."

These are just a few examples, and the exact phrasing used by Aesop may vary across different translations and adaptations of his fables. However, the common thread in all of his fables is the inclusion of a moral or lesson at the end to convey a deeper meaning to the readers or listeners.

The answer is correct.

7. Discussion and Conclusion

ChatGPT is a conversational AI. From constructivist education, we have learned how important interaction and dialogue are for learning. Through conversation with this tool, reasoning and, therefore, learning are stimulated. It is not about replacing traditional lessons, such as lectures, but rather integrating and supporting them.

The integration of ChatGPT and other large language models (LLMs)in the educational field could offer a unique opportunity to enhance student learning in various ways, but it must be used with care under the supervision of educators. On the one hand, ChatGPT can assist students in generating ideas for their assessments, research, analysis, and writing tasks, potentially improving their learning experiences. On the other hand, the risk of academic misconduct, bias, falsified information, and inadequate assessment design can impede the development of crucial graduate skills and promote superficial learning. Therefore, teachers and students must be cautious when using this technology in their school activities so that it is ethical, reliable, and effective in its use. To achieve this, higher education institutions must prioritize educating students on the responsible and ethical use of ChatGPT and other generative AI tools. Educators must guide students toward a mindful use of this technology, encouraging them to critically evaluate the information obtained and to develop independent thinking skills; they must highlight the danger of hallucinations and biases, and offer students resources and methods for fact-checking; they must emphasize the importance of carefully reviewing AI-generated content. By doing so, ChatGPT can become a useful tool that enhances students' learning experiences [20].

As can be seen from the interactions reported above, generative AI has the potential to become an integral part of the educational process [25]. ChatGPT can be a useful tool and support in the learning process for classical disciplines such as Latin and Greek [21] understood not only from a linguistic but also a cultural perspective. ChatGPT performs well on a number of Latin-language texts because it has been exposed to more Latin than any of us are ever likely to read or even encounter in any meaningful way in our lifetime [5].

However, it is important to emphasize that the use of ChatGPT cannot replace the interaction with the teacher and with the other students, as well as learning by experience. For example, in translating a passage from Latin or Greek (and vice versa), the text it produces is not always accurate and precise, can make errors, and may not understand the context of the text to be translated. Therefore, it is essential for both teachers and students to understand and master Generative AI systems. In particular, teachers can be supported by these systems in their roles regarding planning, delivery, content production, and assessment processes. In other words, they are tools for enhancing and rethinking teaching: it is not simply required to retrieve information but to reason. Therefore, teaching is not only improved but also undergoes a true transformation based on the fact that students' learning modalities have evolved. Sometimes ChatGPT provides superficial or approximate answers, and it may be necessary to rephrase the question or focus more on the fundamental aspect of the query. In fact, by asking the question differently, ChatGPT adjusts its response, even apologizing for not providing the right answer immediately. Therefore, knowing how to use this technology effectively, including how to provide the correct prompt and how to double-check answers, constitutes an important skill.

In a sense, ChatGPT can be seen as a "study companion" [27], but not the "top student" with whom one can interact and who can provide almost always correct information. It requires verification, perhaps by consulting other study sources such as books, the internet, or class notes. It can be defined as a tool that integrates a lesson and has the characteristic of never getting tired and being able to repeat a concept infinitely and in different ways.

A student can compare their own notes taken during the lesson with what is produced by ChatGPT, to verify if what they have learned is indeed correct and that he is not missing something important. Furthermore, ChatGPT can provide examples on demand regarding the possible application of a specific grammar rule to further deepen the student's understanding of it.

Therefore "embracing" generative AI, such as ChatGPT, can provide ways to reinforce knowledge and give valuable teaching support in the classroom [17], for example:

- It can be used to automatically translate Latin and Greek on the spot, thus giving access to literature as written in the original language and not mediated by "official" translations. Then comparing with a good well-thought translation is also very useful.
- It is not possible to simply cut & paste, but the student must be good at prompt & collate. The student needs to gain skills to shape, intelligently, the prompts that deliver the best results, and to collect and combine (collate) intelligently the results obtained.

- It can be used to teach how to correct a translation, a skill that currently is not specifically developed in school, but which indeed provides a very good way to better understand the language and the culture of the ancients.
- It can provide personalized support to students by adapting the content and pace of learning according to their individual needs and comprehension levels. It can be used to create personalized learning paths for students, enabling the customization of individual student learning, and creating more targeted educational content.
- It can make learning more engaging and fun by creating (serious) games and competitive challenges among students with the use of these tools to facilitate the work [8].

In summary, the integration of ChatGPT and other large language models in education represents a significant opportunity to enrich the learning process. While these tools can stimulate creativity and facilitate understanding in classical disciplines such as Latin and Greek, it is crucial for educators and students to carefully address the associated risks, such as translation accuracy and the potential superficiality of responses. Therefore, educating on the responsible and critical use of these technologies must become a priority in educational institutions.

For ChatGPT to serve as a valuable support for learning, promoting human interaction and experiential learning is essential, recognizing that, while Al can act as a tutor, it cannot replace direct teaching and dialogue between students and educators. The adoption of teaching strategies that effectively incorporate Al will contribute to shaping students who are not only competent in their field of study but also capable of critical thinking and navigating an increasingly technology-influenced world.

Ultimately, embracing generative AI like ChatGPT can transform education, creating personalized and more engaging learning pathways. However, it requires a collective commitment to ensure that its use is ethical, informed, and reflective. Only then can we truly harness the potential of AI to enrich the educational experience and prepare students to face future challenges [20].

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