

## Testing Tools for Ancient Greek on Digital Platforms.

The advent of Unicode has made the production, transmission and reproduction of writings in polytonic Greek easier and more stable than at any other time in human history. It is now incumbent upon scholars and teachers to capitalize on this technology at all levels and to integrate the use of this technology into students' experience with Greek from the very start. This presentation spotlights the creation and use of assessment tools available within course management systems as they can be used in Greek classes, primarily at the Beginning levels, but potentially at other levels as well.

Because polytonic Greek is now stable across multiple platforms, it is straightforward and indeed critical for students to learn to type Greek characters and accompanying diacritical marks. Automatically graded online quizzes are an excellent means for students to get the practice they need for this skill. Setting up a short-answer quiz where the students have to transliterate letters and type out words, phrases or short sentences is simple in course management systems. Moreover, as long as one is careful about forms and glosses, the same format can generate vocabulary quizzes. I personally prefer to set up these quizzes as no-fault quizzes, that is, students can take them as many times as they want until they reach a score that satisfies them (ideally a perfect score). With paper quizzes this is unwieldy but online it is quite easy.

The examples I am showing today are screenshots from quiz questions within Moodle, simply because at LSU, Moodle is our course management system, but I am not using features that are peculiar to Moodle and indeed question banks can be exported to other systems.

Greek alphabet, lower case, letter #10 is

Answer:

Greek alphabet, lower case, letter #10 is

Answer:



The correct answer is: κ

Greek alphabet, lower case, letter #10 is

Answer:



The correct answer is: κ

These first screen shots show a typical Alphabet quiz question. This question asks students to input the lower case version of the tenth letter of the Greek alphabet, kappa. The second and third screenshots show the response students get when they input the correct or incorrect answers. Systems typically have the flexibility to allow for partial credit and additional feedback. In this particular case, a student has entered the English letter k rather than the Greek kappa, and gets to see the correct answer. I have found that the most common problem comes with letters that look basically identical in Greek and English, such as a capital mu and m. The computer grades according to the hexadecimal Unicode number, so even if the letter looks identical on the screen, it is different because they have not inputted it using the proper keyboard. I warn students about this, but amazingly enough they do not always retain everything I say, so it is helpful to add a comment for that particular error.

## Greek Alphabet Quizzes

- The quiz on **sounds and writing** asks two types of questions:
  - One type asks you to type out a word or short phrase in Greek.

For example,

Type the following ancient Greek quotation, including all punctuation and diacritical marks. Use only a single space between words. Type only the Greek, not the English translation or anything else.

γνῶθι σεαυτόν.

“Know thyself”

inscription at the oracle at Delphi

Answer:

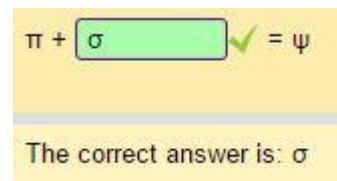
and you type the Greek into the box.

- One type asks you to transliterate a Greek word. For example, “The Greek word γένεσις is transliterated as” and you need to type “genesis”

Transliteration has underappreciated pedagogical value, because English has so many Greek derivatives. Comfort with transliteration enhances vocabulary building among other things, because it facilitates easy recognition of words with English derivatives. I find that often even advanced Greek students benefit from developing the habit of recognizing proper nouns and derivatives via transliteration. On the other hand, it is hard to find much time during class to practice this beneficial skill, so it is a great candidate for online, independent practice and grading, as it is completely mechanical. I utilize two types of typing and transliteration questions. One has students transliterate a Greek word into English, but I select words whose derivation in English is transparent, like the word “genesis” here. I also have students type short phrases or sentences. The computer grades for strict accuracy, so students have to pay attention to every breathing, accent and other diacritical marks. This promotes the close attention to detail that reading Greek requires. This level of precision is daunting for some students, and it is another reason I make the quizzes no-fault. When they are frustrated, I can simply say that they can

retake the quiz until they get the score they want. This is unwieldy with printed and hand-graded quizzes, especially during class time, but very efficient on a digital platform.

These first two quizzes, on the alphabet and on transliteration, are not only the first quizzes in first semester Greek but also the first two quizzes in my General Education course on Greek culture, which I include with the idea of promoting Greek language courses. I tell them flat out that they will have already done the first 10% or so of the first semester Greek class. Moreover, since the very appearance of the Greek alphabet is intimidating, these quizzes ideally get them past this initial block.



In Greek language courses, I am also a big believer in what I call Alphabet Algebra, that is, how vowels contract, how consonant sounds vary when features such as aspiration or a sigma are added or subtracted, and so on. These mechanics are best learned, or at least introduced, before students are also juggling morphology, syntax and vocabulary. Regular review is always necessary when these principles appear in context (contract verbs, adding sigmas to form future and aorist stems, for example). Again, the entirely mechanical nature of these exercises make them ideal for independent online practice. The example on the screen asks a student to recognize that a  $\pi$  followed by  $\sigma$  yields a  $\psi$ .

Select the correct Greek word that means "show"

Select one:

- αίμα -ατος τό
- αποδίδωμι
- απόλλυμι
- αρχων -οντος ό
- αφήμι
- δείκνυμι
- δίδωμι
- έλπίς -δος ή
- ίημι
- ίστημι
- νύξ, νυκτός ή
- όνομα -ατος τό
- ού, ούκ, ούχ, μή
- παίς, παιδός ό, ή
- παραδίδωμι
- πνεύμα -ατος τό
- στόμα -ατος τό
- σώμα -ατος τό
- τίθημι
- φημί

Another type of quiz that is easy to set up and an improvement over paper quizzes is vocabulary. Unit vocabulary quizzes can be set up and left up permanently for grading, for practice and for review. This particular question comes from the second and third units, introducing verbs and nouns respectively. The vocabulary in these two units is core and basic. All the vocabulary items from the units are listed as choices. I will return to the pedagogical value of many choices in a few minutes, but for now, I will emphasize how easy it is to generate a full question bank for vocabulary quizzes. I create one question and revise it for each additional entry. This version has the student select the Greek lemma from a list.

Select the correct English definition of δείκνυμι

Select one:

- blood
- body
- child
- forgive, allow
- give
- give back
- hand over, deliver
- hope
- kill, destroy
- mouth
- name
- night
- no, not
- put, make
- ruler
- say
- show
- stand
- throw
- wind, breath, spirit

This version has the student select the English lemma from the list.

τὰ μέντοι ἐπιτήδεια ὅτῳ τις ἐπιτυχάνοι ἐλάβανεν· ἀνάγκη γὰρ ἦν. οἱ δὲ Καρδοῦχοι οὔτε καλούντων ὑπήκουον οὔτε ἄλλο φιλικὸν οὐδὲν ἐποίουν. ἐπεὶ δὲ οἱ τελευταῖοι τῶν Ἑλλήνων κατέβαινον εἰς τὰς κόμας ἀπὸ τοῦ ἄκρου ἤδη σκοταῖοι...

Parse the highlighted word.

Select one or more:

- 1st person
- 2nd person
- 3rd person
- nominative case
- genitive case
- dative case
- accusative case
- masculine
- feminine
- neuter
- singular
- plural
- present tense
- future tense
- imperfect tense
- indicative mood
- infinitive mood
- active voice
- middle voice

Another type of quiz that is easy to set up and an improvement over paper quizzes is parsing. Both major databases of Greek texts (Perseus and TLG) incorporate parsing tools, so this is now standard for readers of online texts. An online quiz can have a consistent format: asked to parse a given (or in a text, highlighted) word, the student checks off each of the appropriate pieces of parsing information. The available options should be all those for which the student is at the time responsible (with an increasing number of options as they advance through the course).

This example comes from a unit when students have just learned their first secondary tense, the imperfect. A word from the reading is highlighted and the directions simply say to parse. All the categories for which they are responsible up to this point are included in the choices, including those for nouns, even though this particular example is a verb. This is the consistent format for all the parsing questions, changing only as the number of options grows. Students need to figure out the part of speech as part of their comprehension, so I do not give any information or restrict the selection by part of speech.



τὰ μέντοι ἐπιτήδεια ὅτῳ τις ἐπιτυχάνοι ἐλάμβανεν· ἀνάγκη γὰρ ἦν. οἱ δὲ Καρδοῦχοι οὔτε καλούντων ὑπῆκουον οὔτε ἄλλο φιλικὸν οὐδὲν ἐποίουν. ἐπεὶ δὲ οἱ τελευταῖοι τῶν Ἑλλήνων κατέβαινον εἰς τὰς κώμας ἀπὸ τοῦ ἄκρου ἤδη σκοταῖοι...

Parse the highlighted word.

Select one or more:

- 1st person
- 2nd person
- 3rd person ✓
- nominative case
- genitive case
- dative case
- accusative case
- masculine
- feminine
- neuter
- singular
- plural ✗
- present tense
- future tense
- imperfect tense ✓
- indicative mood ✓
- infinitive mood
- active voice ✓
- middle voice

Your answer is partially correct.

You have correctly selected 4.

The correct answer is: 3rd person, singular, imperfect tense, indicative mood, active voice

This simple exercise has the advantages that (1) students must actively select the correct information (2) the grading can be very precise and (3) students can do a large volume of such exercises or quizzes. This screen shot shows a response where the student has gotten four of the necessary five items right. The computer automatically provides feedback and precise grading. I find that students at all levels struggle with consistency and accuracy when identifying forms.

Repetition and practice are the best remedy, and once again, the creation and grading of quizzes this way on paper would be challenging at the least and probably unrealistic in practice.

αὐτῷ ἔργα, ἵνα ὑμεῖς θαυμάζητε. 21 ὥσπερ γὰρ ὁ πατήρ ἐγείρει τοὺς νεκροὺς καὶ ζωοποιεῖ, οὕτως καὶ ὁ υἱὸς οὓς θέλει ζωοποιεῖ. 22 οὐδὲ γὰρ ὁ πατήρ κρίνει οὐδένα, ἀλλὰ τὴν κρίσιν πᾶσαν δέδωκεν τῷ υἱῷ, 23 ἵνα πάντες τιμῶσι τὸν υἱὸν καθὼς τιμῶσι τὸν πατέρα.

In the highlighted sentence, the word οὓς \_\_\_\_

Select one:

- refers to the dead the father wants to make alive
- refers to the dead the son wants to make alive ✓
- refers to the father
- refers to the son
- refers to the dead the son wants the father to make alive

Your answer is correct.

The correct answer is: refers to the dead the son wants to make alive

A third category that is easier than perhaps expected is the reading comprehension question. I am not a big fan of mechanical translation, because too often students do not even understand what they are saying or what they read in translation, so my questions tend toward comprehension anyway. Now for the early units where we are first doing short sentences with nouns and verbs, I have a bank of questions that work straight translation, to test case usage, conjunctions, etc. Mostly, however, I prefer to test comprehension. One of my favorite types of questions is to ask students to determine to whom or what a pronoun refers. This is often valuable in itself, is unambiguous, and requires construal of context beyond just the particular word. The example here combines a pronoun question with understanding the subject of the verb in the relative clause.

ἐποίουν. ἐπεὶ δὲ οἱ τελευταῖοι τῶν Ἑλλήνων κατέβαινον εἰς τὰς κώμας ἀπὸ τοῦ ἄκρου ἤδη σκοταῖοι...

The highlighted sentence says what about what the last of the Greek forces did (check all that apply)?

Select one or more:

- They went down into the villages.
- They descended to the peak (of the mountain).
- They descended on the Greeks in the villages on the peak (of the mountain). ✘
- They came down from the peak (of the mountain).
- It was already dark.
- They descended to the villages on the peak (of the mountain).

Your answer is incorrect.

The correct answer is: They came down from the peak (of the mountain), They went down into the villages., It was already dark.

Most often I simply list options for the pronoun itself, but here is a still more complex example, where the student has to select one or more statements that are accurate to the highlighted statement. In this case, the student should select three of the six options as being part of the highlighted statement. Thus even a simple mechanical question can provide practice with a fair amount of material and assessment that is quite precise. Once again, creating and grading a large volume of such questions in paper format is far more difficult.

The format of short comprehension and parsing questions also highlights another pedagogical advantage to online quizzes: the ease of providing surplus answers. Students are conditioned, if nothing else by standardized tests, to select from 4-5 answers and encouraged to take guesses if they can reduce the number of reasonable options. In practice, students often become too comfortable in guessing any of the 4-5 answers. For training in precision, this is disastrous, but avoidable. Providing ten or more answers to a comprehension question online, or in the parsing and vocabulary questions shown earlier, for example, is not so difficult, but it discourages guessing. A large number of answers signals to a student that their odds of guessing the right answer is very low and that it is more efficient to seek out the correct answer than

screen out incorrect ones. This makes the process more active for the student. On paper, especially in large numbers, such questions become unwieldy, but online these options do not pose comparable difficulty.

Course management systems allow for a great deal of flexibility in the formatting and access to quizzes made up of these sorts of questions. As I mentioned, with quizzes on mechanics like the alphabet, I favor making the quizzes no-fault and available throughout a term. In this way, they also serve as review packages. For unit quizzes on readings, I have likewise left them available in the past, but a colleague using the system has recommended having only a two-week window, so that students cannot pile up all the quizzes at the end, to their own detriment, and this sounds prudent to me. Whereas with the mechanical quizzes, students receive their highest score, for quizzes on readings, they receive an average of all their attempts. I do this to promote preparation and so that there are diminishing returns to doing these particular quizzes over and over. I tend to split the quiz evenly between parsing questions and comprehension questions. This means that the quizzes vary somewhat every time taken and students cannot predict what items that I am likely to select. I create a question bank for all words in a passage that can be parsed and as many comprehension questions as possible. I set the quiz to pick ten questions randomly from each category.

As with any testing, every teacher can and should develop assessments that suit their pedagogical methods and are tailored to their specific classes. But I hope that I provided some ideas that encourage the use of this tool for Greek classes. As Michael's presentation shows, I value sharing materials and watching others take them to new heights, so I am happy to share what I have done to date, with the only condition being that you in turn share what you improve and create with others.

Thus these examples today are just an introduction to the possibilities, to be sure, and there are other ranges to consider. Online testing can be integrated in different ways into a traditional classroom, a flipped classroom, a hybrid course or a fully online course. Most importantly, perhaps, it makes the assessment and practice work in a class in ancient Greek congruent with the experience of students who increasingly have done coursework exclusively on digital platforms, and hence many of the language's mechanics will not seem disorientingly foreign.

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