

What is the capital of France?

This text is a reflection on the art of grading. Starting from a very clear question with a very clear answer, we present and compare many potential answers.

Even if grading is more and more being delegated to AI, we should of course decide for ourselves what we aim for.

Before starting grading answers, let's address *the blank answer*. If the correct answer is worth one point, should we give a quarter point for a blank answer to discourage random guessing? A reward for blank answers (or, in a less friendly version, minus points for wrong answers) is currently implemented, at least in certain mathematical competitions. This makes most sense for multiple-choice questions. With a bit of game theory, the reward for non-answering could be one quarter point or slightly higher in case there are four answers. In any case, punishing wrong answers exceedingly forces pupils to answer only if they are perfectly sure, which may discourage shy pupils.

Let's also address empty but not blank answers:

- 1) *Sorry, I did learn it and I should know it but at the moment I do not recall it.*
- 2) *No idea.*
- 3) *Why learning this by heart as I can always look it up?*

We may adore Pupil 1) who is very respectful, however the answer could be a bluff. In any case, we could address why the learning efforts do not lead to the desired outcome. Pupil 2) may be an honest person and not necessarily a rebel. Indeed, "I have no idea" does not necessarily mean "I have no idea and I couldn't care less". Pupil 3) is challenging the system, and critics always contain useful information. So, directly to Pupil 3) or potentially to the whole class, one should advertise the importance of background knowledge and culture. This is not easy, because for example one can enjoy Paris without knowing that it is the capital of France.

How would you compare and grade the following correct answers?

- 1) *Paris*
- 2) *The capital of France is Paris.*
- 3) *Paris (since 987).*
- 4) *Currently Paris, and in the past also Versaille, Vichy, Bordeaux.*

1) and 2) are the monosyllabic answer versus a grammatically pleasant answer: you have to grade them the same, unless you warned the pupils that you expected complete sentences.

Answer 3) is slightly incorrect (there have been exceptional periods in history) but you would not remove points for additional information that are substantially correct.

Finally, 4) looks like the complete answer, however the question was only about the current capital. Moreover, 1) could also have been written by a pupil who knew everything but stuck to the question asked.

In fact, we can praise pupils for additional information without giving bonus points, with encouraging comments (or smiley stickers). However, if the additional information were huge essays, one should also warn pupils to make good use of the exam time.

What about the answer *Par__s* where the middle of the word is not readable? Beyond cases of reasonable adjustments, writing for others requires that the writing is readable. In any case, we cannot infer that the pupil knew the correct spelling so we cannot give full points.

Here a matter of language inclusion: what about the answer *Παρίσι*? The correct answer is the correct information expressed in the language of instruction. However, in certain situations, it is appropriate to remove only a negligible amount of points for correct answers given in the mother tongue of a non-native speaker.

How would you compare and grade the following incorrect answers?

- 1) *Parris*.
- 2) *Paris or Lyon*.
- 3) *Paris or Tokyo*.
- 4) *Paris or Rennes or Bordeaux*.
- 5) *Bordeaux or Paris or Rennes*.
- 6) *Berlin*.

A spelling error as in 1) could be very important or less important, you be the judge. And it may also relate to the language inclusion mentioned above.

Answers 2) and 3) limit the innumerable possible answers to only two options, one being correct. You could favor 2) over 3) because Lyon, a big French city, is a plausible answer. If you graded 2) favourably, you may also show some support for 4) and 5). You could decide to consider up to three French cities or up to two cities worldwide as a very good partial answer. Of course, if you mentioned Paris 100 times in class, you could grade with zero points the answers with several options.

The non-alphabetical ordering of 4) could suggest that Paris is the pupil's first choice. However, Pupil 5) could also have had Paris as their first choice but opted for alphabetical ordering, so I would grade 4) and 5) the same. More ambiguous would be: "Most likely Paris, but maybe Rennes or Bordeaux." I would not be overly generous with non-committing answers.

Answer 6) is, assuming we are in Germany, "the abyss". Namely, the pupil displays missing knowledge also in more basic topics than those asked.

Here, two wrong answers with an argumentation:

- 1) *Considering that the moon is made of cheese, the capital of France is Paris.*
- 2) *Considering that the moon is made of cheese, the capital of France is Fromage.*

Since 1) contains the correct answer, one could ignore the unrequested additional explanation. Moreover, you may be not allowed to grade astronomy in a geography test. Answer 2) is a metaphor for a correct reasoning stemming from an incorrect assumption: if the exam is meant to be strict, you can be strict, while if you are looking everywhere for points to favor the pupils, you can grade 2) rather gently.

Finally, what about interpreting the question wrongly? If someone knew the correct answer but read the question at light speed, it's a lesson learned for reading exam questions with care. Imagine however that a pupil answers

The question is wrong because France is a unisex given name, so it has no capital.

This answer has a point (see Wikipedia). However, you can rely on common sense and context, despite the possible double meanings of the word France. As a general rule, if

someone thinks (during an exam) that one question is wrong, they should notify you immediately so that you can clarify potential misunderstandings. If there are, alas, more meaningful interpretations, you must grade them all with full points.

Well, good luck with grading, navigating grey zones and bending rules to serve principles. Since grading depends on the context, you know best what it makes sense for your own exams. Nevertheless, you can show your exam (and the grading scheme) in advance to trusted peers and ask for feedback.

Acting in favor of the pupils when in doubt is a nice attitude, as is defending your grounds against those exploiting the natural imperfections of the grading system. Fairness is something we must strive for in all circumstances.

Disclaimer: AI has been used for language checks and for historical information (which are only used to formulate plausible answers, with no guarantee of exactness).