One of These Does Not Belong: Creating Interesting Multiple-Choice Questions for Teaching and Testing

by MATTHEW MIKLAS

With the increase in online teaching sessions, instructors face the need to engage and challenge their students in new ways. Online quiz sites provide teachers with a cost-free means of gaining immediate feedback on their students' progress. However, students can become bored if multiple-choice quizzes do not vary and are used too often. There is a simple means of writing multiple-choice questions—which most often comprise a stem (the question) and four answer choices—to make them more engaging and challenging for learners of all levels and teaching contexts, online or off-line.

CONCEPT

You are probably familiar with the type of test question that asks something such as this:

Which one of these does not belong?

    a)   cat

    b)   box

    c)   rabbit

    d)   cow

We recognize that b) is the intended answer, as it is the only non-animal among the choices, with three distractors. The question may also be written as "Which of these is different from the others?" We can apply this approach to writing multiple-choice questions to increase our students' recognition of correct and incorrect language items. The approach can be used with questions related to grammar, syntax, or content.

The premise is simple: the *different* answer—the one that does not belong—may be different because it's the only *correct* item among the four alternatives, or it may be different because it's the only *incorrect* item among the four alternatives. Put more explicitly, if choices a), b), and c) contain no mistakes and d) contains a mistake, then d) will be the intended answer. If choices a), c), and d) all contain mistakes but choice b) contains no mistakes, then b) will be the intended answer.

What serves the students' cognitive engagement is that they don't know whether the intended answer is the correct or incorrect item, and so they

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must analyze and consider each of the four items. Their task with each quiz question thus becomes twofold: determine whether most of the alternatives are correct or incorrect, and then identify which alternative stands apart from the others. It is error identification that requires an interposed stage of analysis.

APPLICATION

Suppose your students are learning the language of describing similarities and differences. Answer choices could be written as follows:

    a)   *Grilling resemble roasting.*

    b)   *Grilling like roasting.*

    c)   *Grilling resembles roasting.*

    d)   *Grilling be like roasting.*

Only choice c) is acceptable, as all other choices contain mistakes.

Or students need to find the only incorrect choice:

    a)   *Phuket is differ from Bangkok.*

    b)   *Phuket differs from Bangkok.*

    c)   *Phuket and Bangkok are different.*

    d)   *Bangkok is different from Phuket.*

In this case, we recognize a) as the intended answer, as it is the only one that contains a mistake.

The approach can be used with an array of teaching applications:

- The presentation stage of a new linguistic item

- Formal assessment

- Informal online quiz games, such as Kahoot! and Quizizz

- Delayed error correction after marking a writing task

- A diagnostic test at the start of a lesson on a linguistic item

- The clarification stage of a lesson to check learner comprehension of the form or grammar structure just presented

- Syntactical or orthographic error recognition

- Student-created quiz questions for pair work or group work

- A simplified prelude to introducing analytic thinking

Consider using this technique to introduce students to a language item in the presentation stage of explicit teaching. Below is an example of how you can apply it when you are teaching students not to use the full infinitive with *to* after a modal verb:

Which one of these does not belong?

    a)   *We should to go.*

    b)   *They could to help.*

    c)   *I want to stay.*

    d)   *He might to call.*

By eliciting responses from the class as to which answer is different in the sense of being the only correct or only incorrect alternative—here, c) is the only correct choice—teachers can gauge students' familiarity with the grammar rule of *modal + base verb only*, or just their ability to recognize modal verbs, as a starting point for the lesson.

If teachers use this approach at the beginning and then at the end of a session explicitly teaching *modal + base verb only*, a review near the end of the lesson may look like this:

Which one of these does not belong?

    a)   *We must try.*

    b)   *They have to call.*

    c)   *I can to wait.*

    d)   *She may come.*

Here, with c) being the only incorrect sentence, students must evaluate which verbs are modal and which aren't, including the proper vs. improper inclusion of *to*, in order to arrive at the intended answer. Starting and finishing with One of These Does Not Belong adds an agreeable circular aspect to lessons.

In an immersion environment, the approach could be used with content:

Which one of these does not belong?

    a)   *Birds cannot fly.*

    b)   *Dogs are mammals.*

    c)   *Kangaroos live in Australia.*

    d)   *Tigers are carnivores.*

Here, a) is the intended answer. It is the only untrue statement.

You can also use the approach for checking spelling:

Which one of these does not belong?

    a)   *hight*

    b)   *strength*

    c)   *waight*

    d)   *rashio*

With this question, b) is the intended answer, as *strength* is the only choice spelled correctly.

BENEFITS

With most multiple-choice questions, students need only to scan to find the correct answer, which they can often do without reading all of the distractors. However, the One of These Does Not Belong technique prompts students to fully process at least three alternatives to discern a pattern—whether the distractors are mostly correct or mostly incorrect—before isolating and identifying the intended answer. Having to do so means that the students must process more language items at a higher rate of iteration compared to what they would process in having to identify only one correct answer among three or more incorrect choices.

Another benefit is that once students are acclimated to the approach, it takes no more

time for the instructor to design the questions than it would to design standard multiple-choice questions. The only additional time requirement is having the students understand the concept.

BEST PRACTICES

When introducing the concept, you may want to show examples that pose no challenge for students to recognize as correct or incorrect. In a class of pre-intermediate learners, an example may look something like this:

Which one of these does not belong?

    a)   *worked*

    b)   *played*

    c)   *speaked*

    d)   *learned*

It follows that the next step is showing the inverse of the above—three incorrect usages with one correct usage—so that students understand that they are not seeking only the choice containing a mistake. The different item, and thus the intended answer, might be a single correct choice:

    a)   *sitted*

    b)   *runned*

    c)   *taked*

    d)   *walked*

This way, students get used to the need to analyze all choices and notice which one stands out as different. Said another way, they see that the intended answer is the single choice that contains a mistake before (or after) seeing a question where the intended answer is the single choice with no mistakes.

After you reveal the intended answer, it may be useful to color-code the correct and incorrect language items. For example, you might mark correct in green text and incorrect in red text to show that the color that appears only once among the four choices is the intended answer. This can be especially helpful for more visually oriented learners. While color-coding correct and incorrect choices would be most convenient in a classroom equipped with a projector and presentation software such as PowerPoint, overhead-projector transparencies or flip charts could use color-coding as well.

If your time is limited or your students' learning acumen is high, a quick introduction may take the form of just writing your quiz questions in Kahoot! or Quizizz, as such:

Which one is different [3 wrong, 1 right / 3 right, 1 wrong]?

TIPS

- When writing the incorrect alternatives, try to use mistakes that your learners frequently make. This is especially effective in monolingual learning environments where more students can benefit from having the specific mistakes they make, based on L1 interference, negatively reinforced. Marked writing tasks are a useful reserve from which to cull incorrect alternatives/distractors.

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- If you use this approach in Kahoot!, Quizizz, or another online quiz site where there is a time limit, don't make sentences too long. Students can easily be fatigued by having to repeatedly read long sentences under pressure.

- Adding more distractors per question is likely to make the question less challenging rather than more challenging, as students may perceive the pattern of correct or incorrect without having to read all six or eight distractors. To challenge learners, write additional questions using One of These Does Not Belong rather than including more distractors.

- Using a streamlined version with only three choices—two distractors with one intended answer—is a possible intermediate step to providing four choices. Providing three choices, as a consistent format for creating One of These Does Not Belong items, is also a variation that may better serve younger, less confident, or mixed-level classes.

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