



Instructional Materials Analysis: Improving Linguistic Clarity for Our Diverse Learners



Workshop prepared by Cristina Petersen on the Multilingual Support Services (MSS) Team

Warm-up Discussion 😊

Mentimeter - please open link with your device!



▶ https://www.menti.com/alinm_wk2rvm7



Learning Goals

By the end of this workshop you will be able to..

1. Recognize linguistically accessible written English
2. Find and modify potentially challenging language
3. Implement linguistic modification in your own materials



Overview

- ▶ Understanding our teaching context
- ▶ Instructional Materials Analysis Project (I-MAP)
- ▶ Goals for material clarity
- ▶ Examples & categories of linguistic modification
- ▶ Practice identifying and modifying
- ▶ Final thoughts and review
- ▶ Questions?

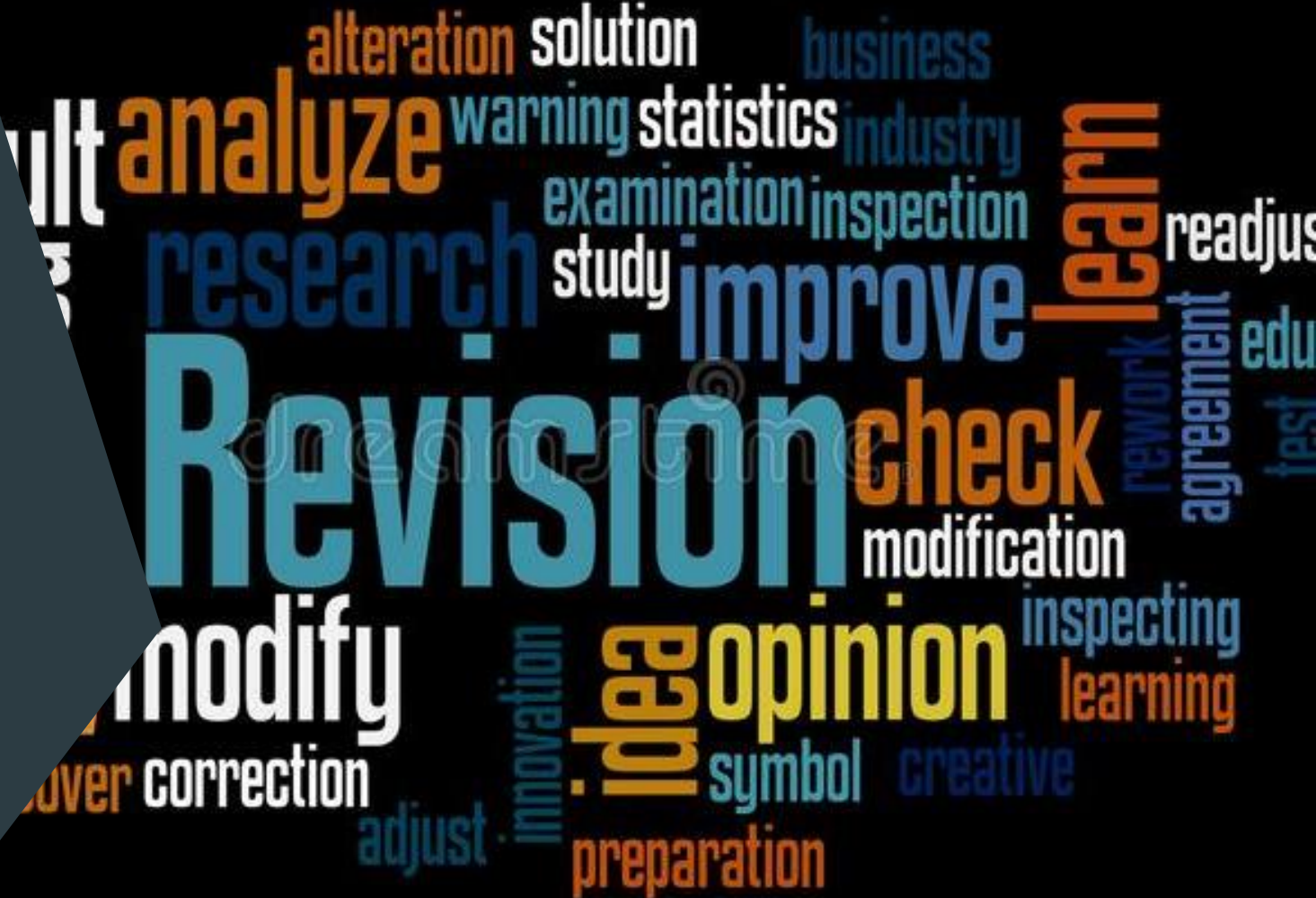
Understanding Our Teaching Context

We have culturally and linguistically diverse learners in our classrooms. We know about 7-8% at Camosun are identified as international students, BUT consider...

- ▶ True numbers of EAL students? Domestic immigrants/refugees
- ▶ Canadian educated (high school), **no accent**, but learned English at a young age and are multilingual
- ▶ Students are NOT all linguistically equal, including native English speakers and EAL students
- ▶ Minimum language standards for entrance vary for EAL students

How do we address this diversity and create culturally and linguistically accessible classrooms and materials?

The Instructional
Materials Analysis
Project (I-MAP)



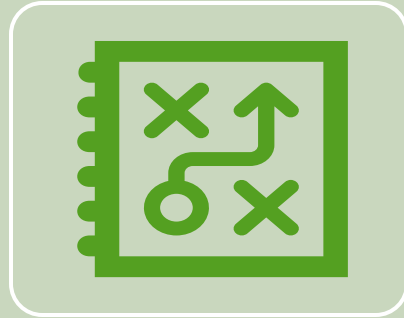
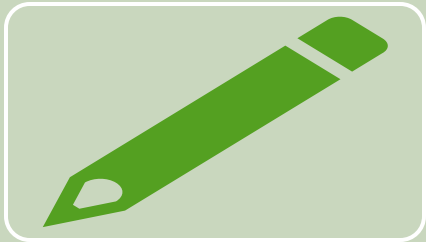
Why I-MAP?

- ▶ Based on MSS pilot research
- ▶ Build equity in assessment, testing content knowledge vs. language
- ▶ Collect data and find trends
- ▶ Apply knowledge from research in collaborative efforts 😊



I-MAP Report on the MSS Website

You can [download](#) the I-MAP report from the pilot and see examples of work. 105 items were coded by April 2023 (see page 7 of report for table):



Specific Language Features

Punctuation
17%

Spelling 5%

Sentence Structure

Passive voice
6%

Semantic

Wordiness 27%

Clarity 16%

Word Choice
13%

Repetition 9%

Redundancy 5%

Non-linguistic

Question
scoring 7%

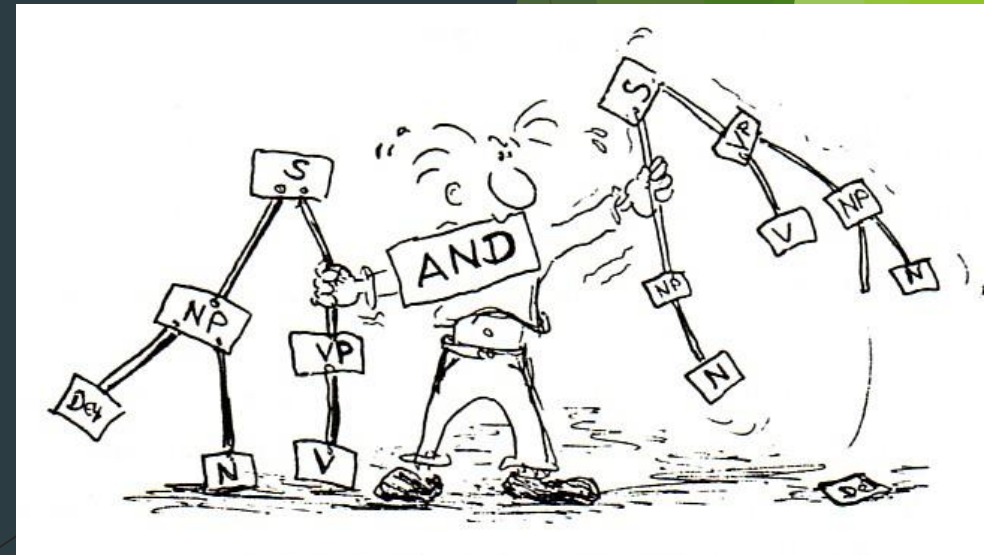
Format 6%

Pedagogy 4%

Goals for Material Clarity

Abedi (2016) states “The more we can linguistically modify items to make them easier to understand, the greater the chances of adequately gauging an ELL’s content knowledge” (p. 359).

- ▶ Linguistically modified items are **not** a modification of the content or knowledge required to function in the target content course.
- ▶ It is **not** a “dumbing down” of ideas or information, but rather a:
 - **restructuring of the syntax**
 - **rephrasing of the vocabulary, and or**
 - **elimination of distracting or unnecessary linguistic elements**




Research

According to Bird & Welford (1995), simplified forms of questions resulted in "significant improvements in the performance of second language students" (p. 396).

Original

- **Lipids** are **different** than other macromolecules. What are the key **differences**? Name two types of **lipids**.

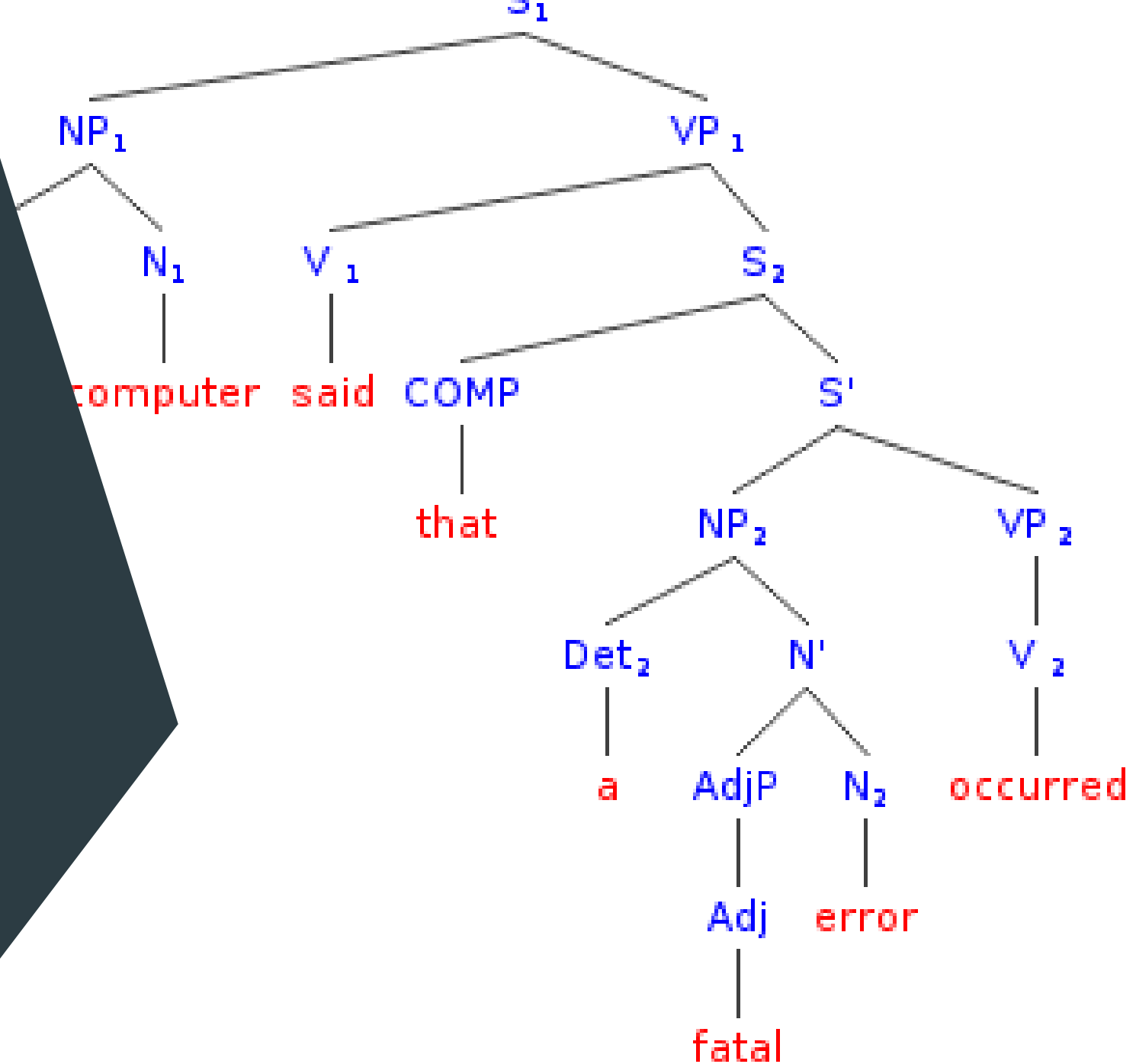
Eliminate
redundancy



MSS Revision

- Name two types of **lipids** and how they are **different** from other macromolecules.

Examples of Linguistic Modification



11 Categories of Linguistic Modification

- Young et al (2014)

- ▶ Young et al (2014) looked at Improving Content Assessment for English Language Learners: Studies of the Linguistic Modification of Test Items (in math & science).
- ▶ These 11 items also share features of the items modified in Bird & Welford's (1995) study.

What do these linguistic modifications look like? Let's see!

1. Remove Empty Context: In cases where a context has been tacked on to a task, remove the context and set the task directly.

Original

Imagine you are a clinical psychologist working in a **hospital setting**. **A patient named Sarah comes to you** with symptoms of anxiety. She has recently experienced a breakup and is **struggling to cope**. In this context, describe the key therapeutic techniques you would use to help Sarah overcome her anxiety and navigate through the challenges of the breakup.

Revised

Describe the key therapeutic techniques a psychologist might use to help an individual overcome anxiety and navigate through the challenges of a breakup.

Streamline. Focus on the core of the inquiry—identifying and describing therapeutic techniques for addressing anxiety related to a breakup.

2. Refine Context: Make a context more explicit or restate the item in a more accessible context.

Your students have just returned from field studies in the rain forest.

Original

Observe the diversity of plant and animal species in the area and **discuss** the ecological interactions among **them**.

Revised

Document the diversity of plant and animal species you encountered and **explain** the ecological interactions among **AT LEAST 4** unique organisms, including **symbiotic relationships, competition, and predator-prey dynamics**.

Specific aspects to focus on will help students in narrowing their response.

3. Simplify Vocabulary: Identify challenging words not related to the content being assessed and replace them with more accessible words.

Example 1:

Original

What prominent figure led the charge in the Battle of Gettysburg during the American Civil War?

- a. General Robert E. Lee
- b. General Ulysses S. Grant
- c. General Stonewall Jackson
- d. General George Meade

Revised

Who played a key role in the Battle of Gettysburg during the American Civil War?

- a. General Robert E. Lee
- b. General Ulysses S. Grant
- c. General Stonewall Jackson
- d. General George Meade

Be mindful of abstract words or words with more than one meaning. Avoid idioms.

3. Simplify Vocabulary: Identify challenging words not related to the content being assessed and replace them with more accessible words.

Example 2:

Original

Which one of the following contains **mobile** ions?

- a. solid sodium chloride
- b. **molten** sulphur
- c. a solution of ethanol in water
- d. a solution of zinc nitrate in water

Revision

The ions are free to **move** in:

- a. solid sodium chloride
- b. **melted** sulphur
- c. a solution of ethanol in water
- d. a solution of zinc nitrate in water

4. Unpack: Present complex ideas in a series of simple steps, following logical and/or chronological order as closely as possible.

Use formatting to help! Bullets, numbered lists are incredibly helpful and undervalued.

Original

You are going to prepare for an in-class debate. Your research should prepare you to argue your side and the counter-argument. You should cite your sources. You will be on a team of four and will compete against another team of four. We will watch some examples in class to prepare,

Revised

1. Begin by researching the assigned topic to understand both your side and the counter-argument thoroughly.
2. Cite your sources accurately, ensuring the credibility of your information.
3. Collaborate with your team of four to share insights and coordinate your arguments effectively.
4. Anticipate the opposing team's points and formulate strong counterarguments.
5. Familiarize yourself with debate examples in class to enhance your understanding and preparation.
6. Participate in the in-class debate, presenting your arguments and responding to the opposing team's points.

5. Make Item Stem Concise: Reduce wordiness and ensure that the stem of the item sets the task as clearly as possible.

Original

We use many different **devices** to extend our senses. One of these devices is the stethoscope **which may be used** by a doctor or a garage mechanic.

Which sense does the stethoscope **extend**?

- a. hearing
- b. sight
- c. smell
- d. a solution of zinc nitrate in water

Revision

A stethoscope helps a doctor to:

- a. Hear
- b. See
- c. Smell
- d. Touch

device - ambiguous noun
which may be used - hedging
extend - ambiguous verb

6. Make Options Concise: Reduce wordiness in options (remove or relocate information)

Original

During a routine assessment, a patient with diabetes reports feeling dizzy and lightheaded. What immediate **action** should the nurse take?

- a. The nurse should perform a thorough check of vital signs to ascertain any abnormalities or deviations from the baseline.
- b. In response to the patient's report of dizziness and lightheadedness, the nurse should inquire about the patient's recent dietary habits to gather pertinent information that may assist in determining potential causes.**
- c. The nurse should provide the patient with a sugary snack, aiming to quickly raise blood sugar levels and alleviate the dizziness and lightheadedness.
- d. In order to swiftly address the reported symptoms, the nurse should provide the patient with a sugary snack, aiming to quickly raise blood sugar levels and alleviate the dizziness and lightheadedness.

Revised

- b. Inquire about the patient's recent dietary habits.

Verb focused options reflect question (seeking action)

7. Reduce If Clause: Convert complex sentences with an *if-clause* and a *result-clause* to two simple sentences.

Example 1:

Original

If a defendant in a Canadian criminal trial wishes to testify, what fundamental right allows them to do so, and what caution is typically given by the judge to the jury?

Revised

A defendant in a Canadian criminal trial wishes to testify.

1. What is this fundamental right referred to as? (called)
2. What caution does the judge typically give to the jury regarding the defendant's testimony?

Practice
paraphrasing!

7. Reduce If Clause: Convert complex sentences with an *if-clause* and a *result-clause* to two simple sentences.

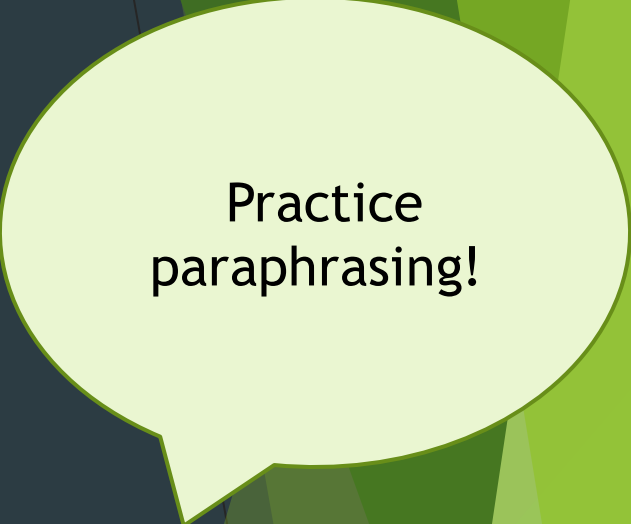
Example 2:

Original

If a chemical reaction is exothermic, what does this indicate about the energy exchange, and how does it relate to the surroundings?

Revised

1. What does it mean if a chemical reaction is exothermic?
2. How does the released energy in an exothermic reaction relate to the surroundings?



Practice
paraphrasing!

8. Simplify Verb Forms: Change passive voice to active voice, and change past, future, or conditional tense to present tense.

Original

A sealed tin containing air **was heated**. Which one of the following **would increase**?

- a. weight
- b. mass
- c. pressure
- d. number of particles

Revision

A closed tin containing air **is heated**. Which one of the following **increases**?

- a. weight
- b. mass
- c. pressure
- d. number of particles

Having verb tense consistency also helps your readers.

Removing passive would also be ok!
E.g. You heat a closed tin containing air....

9. Reduce Wordiness: Eliminate extraneous words or otherwise simplify and hone language used.

Original

Explain one **concept/idea/piece of information** from the course that has **stuck with** you. Explain the **concept/idea/piece of information** with enough detail that I know you understand the **concept** and explain why it **resonated** with you.

Revised

Explain one concept/idea/piece of information from the course that has resonated with you. Describe with specific details to indicate your understanding and why it is important.

Remember idioms and abstract nouns tend to be more challenging.

Wordiness and repetition are very similar. Check for recurring ideas (subtle paraphrases) and REDUCE.

Other actions identified by Young et al (2014):

- ▶ 10. **Add Emphasis to Key Words:** Use underlining or **bolding** to draw students' attention to word(s) that highlight the task being set.
- ▶ 11. **Graphic Representation:** Revise or simplify the artwork or graphics associated with an item. This includes eliminating a graphic that does not help students understand the task.

Visual cues and formatting can aid in comprehension.

YOUR TURN!

Practice Identifying
and Modifying



Practice Identifying and Modifying

Which of the following statements would be most difficult for most EAL learners to understand? Why?

- ▶ The college will not put up with negative thinking.
- ▶ The college will not tolerate negative thinking.
- ▶ The college will not accept negative thinking.

Practice Identifying and Modifying

- ▶ Which word in the following sentence would MOST likely impede an EAL learner's comprehension of this information?

“The discharge from the wound had the consistency of custard.”

- ▶ discharge
- ▶ consistency
- ▶ custard

Practice Identifying and Modifying

- ▶ Which feedback example(s) do you think would be the least problematic for multilingual students? Why?
- ▶ I think you should consider refining your thesis statement.
- ▶ Your thesis statement needs revision. The controlling idea is not developed.
- ▶ You might want to revise your thesis.

Direct & explicit feedback will be less ambiguous but consider your audience. Politeness vs directness.

Answer

Practice Identifying and Modifying

Original

- ▶ In each of the following questions, you will select any answers that apply to the questions. There may be more than one correct answer that applies. Select ALL the correct answers and be sure NOT to select any answers that do not apply. The total for each question is calculated as correct selections minus incorrect selections.

Revision

- ▶ Select the correct answers below. Any incorrect answers (not relevant to the question) will be deducted from the total for each question.

Practice Identifying and Modifying

Original

- ▶ You have discovered **fossil** bones from the right lower limb of a possible **Australopithecine**. What anatomical traits would you assess to determine if your **fossil** is an **Australopithecine**, how would you expect **them** to look if the specimen was an **Australopithecine** and how do these traits aid **Australopithecine** locomotion?

Revision

- ▶ You have discovered **fossil** bones from the right lower limb of a possible **Australopithecine**. You need to confirm the species. What anatomical traits will you assess? How do you expect the physical features to affect the locomotion?

Final thoughts and review...

We can apply linguistic modification to both written instructional materials (exams, assignments, D2L descriptions, projects...) and our day to day speaking style.

1. **Less is more.** Keep instructions brief. Avoid wordiness and repetition.
2. **Formatting** is your friend.
3. Focus on **action words** - verbs! Avoid more abstract and or non-specific words.
4. Avoid culturally loaded vocabulary and idioms, *unless you want to teach it or it's part of the content!* Use **accessible, higher frequency vocabulary**.
5. **Be inclusive** in your use of language, but be patient with yourself, your students, and your colleagues. **Language shift takes time** and is deeply embedded in your age, culture, and beliefs.

Wrap-up Sharing 😊

Mentimeter - please open (or reopen) link with your device!



▶ <https://www.menti.com/alnmwk2rvm7>



Thank you!

Would you like a consultation on
teaching multilingual students?
Or do you have materials for
review?

Contact your MSS! We are here
to help!

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