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## Toward Building Science Literacy

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# Toward Increasing Science Literacy

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## Teaching Practice & the Need it Addresses

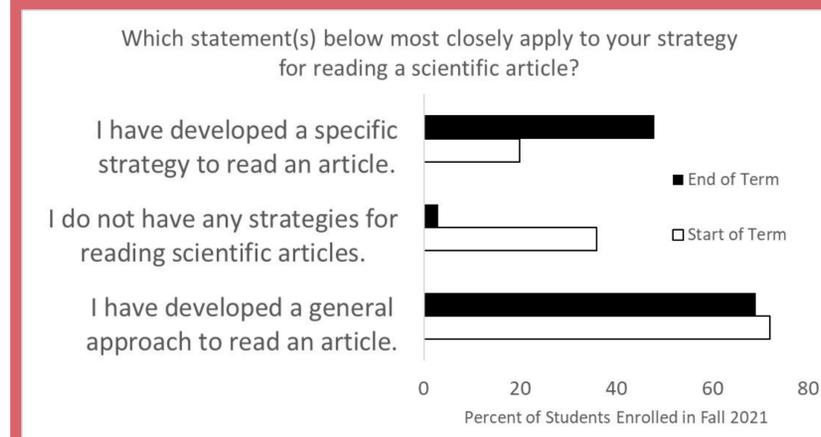
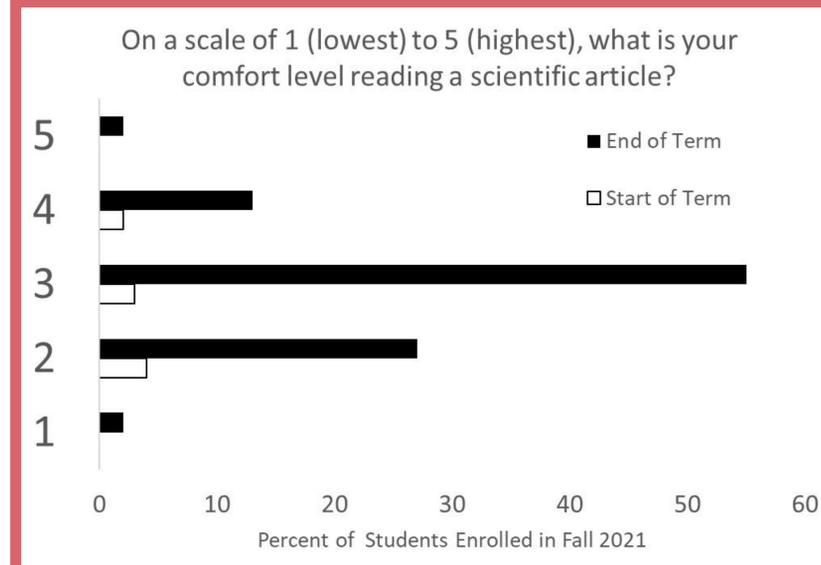
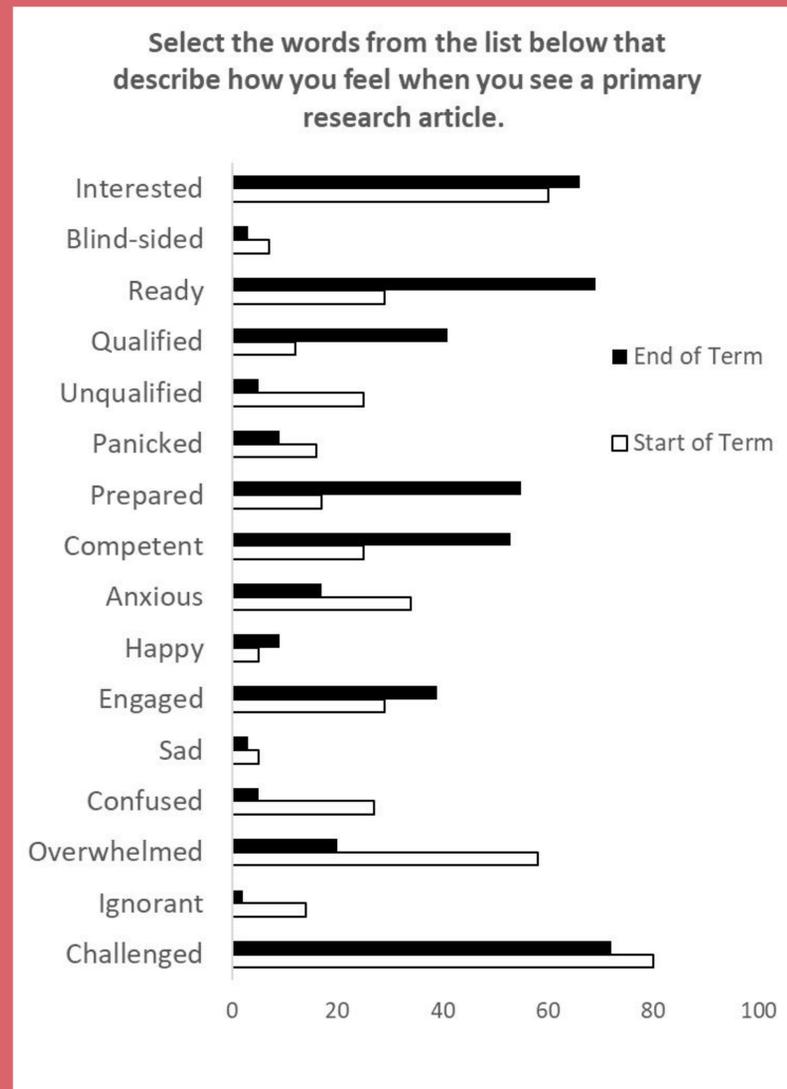
- This “Science Literacy” assignment guides students to develop and expand strategies to read science articles.
- Reading scientific literature is a critical science competency that proves difficult to “teach.”
- Students enter our classes with varying science vocabularies, and many suffer imposter syndrome when reading technical reports because they do not yet identify as capable scientists.
- This assignment is a low-stakes pathway for students to build skills to approach and analyze scientific articles thus putting the intimidation behind them.

## How Others Can Adopt This Practice

- Choose 4-7 articles you want students to read over the semester. They can be a combination of primary research, popular magazines, news stories, blogs, etc.
- Determine 1 or 2 features of each article where students should focus.
- Create Canvas Discussion boards using templates in “How to Implement Effective Discussions,” hosted by the UNLV Office of Online Education.
- Grade based on completion of requirements or meaningful responses

# Improvement in Perceived Science Literacy

## Assessed from Start and End of Term Surveys



## Sample Assignment

Students will download and read the article [The Case for Not Masking Away Mobile DNA](#) by Keith Slotkin ([Slotkin RK. Mobile DNA \(2018\) 9:15](#) ↓ ). Each student reply will include all the following:

1. (1 point) **Identify** the type of publication (peer-reviewed journal, an editorial, blog, popular science magazine, etc).
2. (3 points) **Identify and explain** one important concept that connects to and expands on a concept we are learning in BIOL 304.
3. (3 points) **Identify** a passage of the article that you struggled to understand and explain how you worked through it to extract the main point.
  - This is the major learning activity of this assignment- to overcome the intimidation factor of the "sciency" terms we see in the article. Especially when many unfamiliar terms are presented in one passage, the gut reaction can be to skip it or just give up. Learning only comes after struggle and application.
4. (3 points) **Identify** a portion of the passage that you felt you could pretty much skip, but still glean the overall message of the article. **Explain** why you skipped it or just skimmed it.
  - This is another important skill to learn when reading articles. You **don't** have to read everything to get the point! This way reading literature does not have to take hours and hours.
5. (5 points) **Reflect and comment** on at least 1 group member's post. (Note a different deadline for this post). **Your reply should explain what you learned from your peer.** This could be a better understand of a term or concept OR a way to approach the article that can improve your own reading strategy.

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## Resources & Where to Find Them

- Instructors can move many types of assignments into Discussions, including student-to-student discussions or student analysis of an article, video, audio clip, or art piece.
- The Office of Online Education provides instructional documents with examples of different types of deployable assignments.
- The Office also provide templates that ensure the instructor provides students the purpose, expectations, grading scheme, and instructions on how to complete the assignment.
- These templates made building this Science Literacy assignment very efficient.

## Acknowledgements

- UNLV Office of Online Education
- Brittany Paloma Fiedler, UNLV Teaching and Learning Librarian

## References

- Hambacker *et al.* (2018) From Serial Monologues to Deep Dialogue: Designing Online Discussions to Facilitate Student learning in Teacher Education Courses. *Action in Teacher Education* , 40(3), pp 239-252.