Analogy as Pedagogy

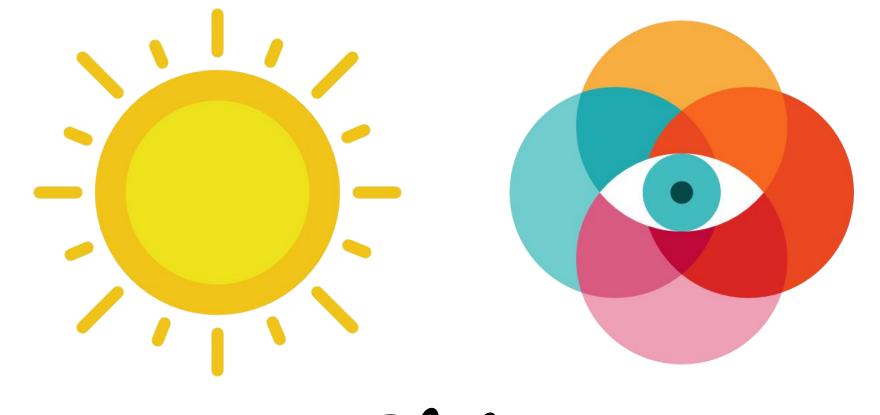
Using What Students Already Know In Library Instruction



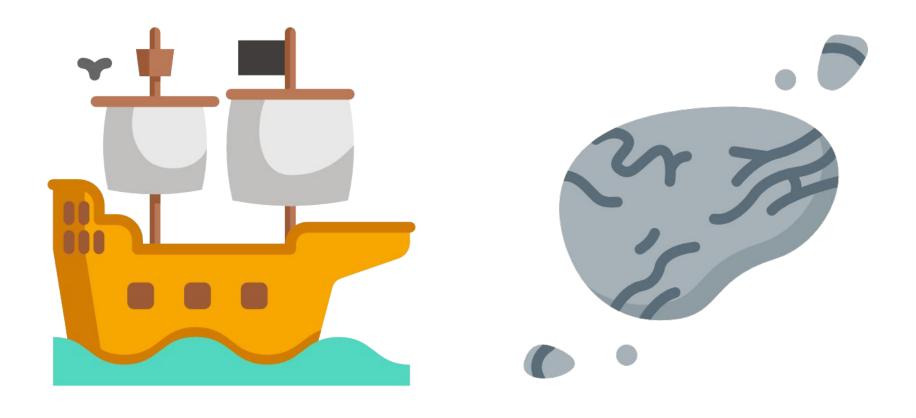
First-Year
Instruction &
Humanities Librarian
mmurphy@uncg.edu



Uses of Analogies



Plato

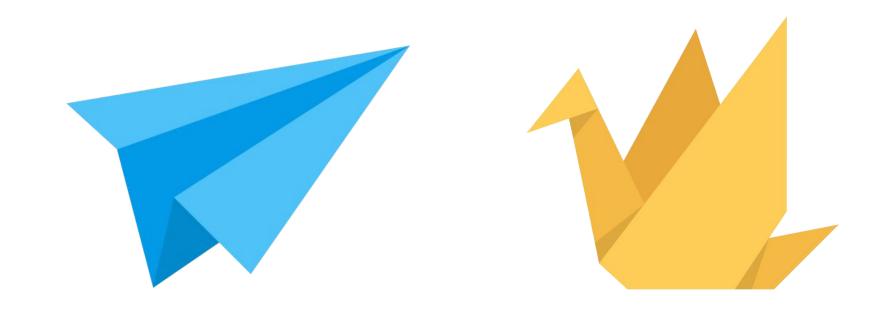


Galileo





Steve Jobs



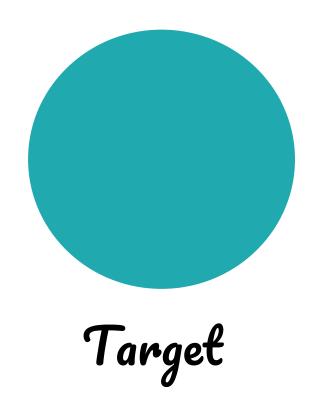
Maggie Murphy

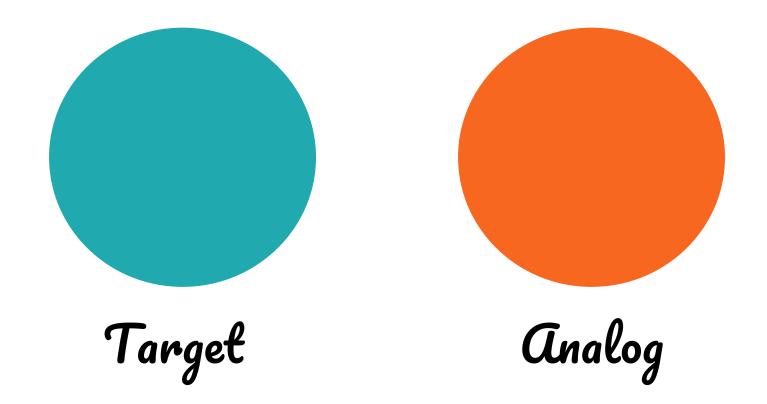
What is an alogy?

"An analogy is a comparison of the similarities of two concepts." (Glynn, 2008, pp. 114-115)

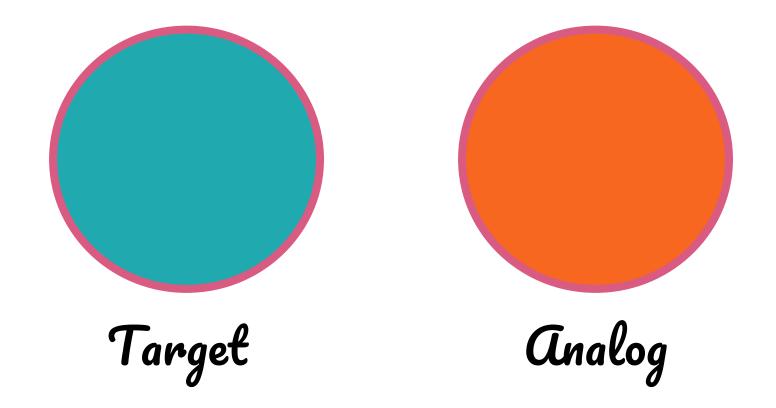
"The familiar concept is called the analog and the unfamiliar one is the target."

(Glynn, 2008, pp. 114-115)



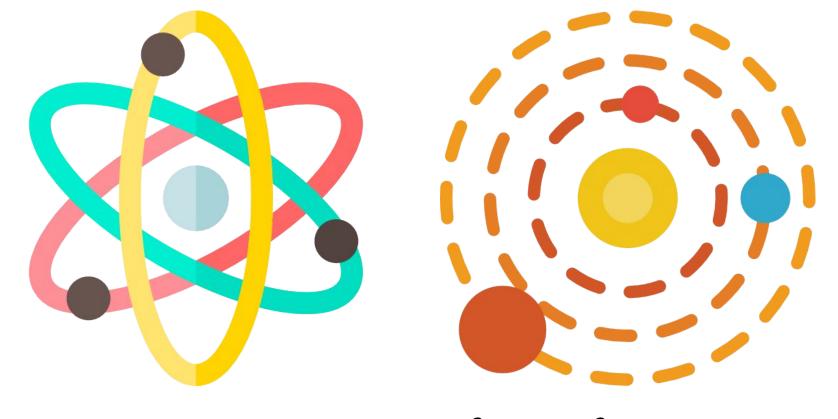


"If the analog and target share similar features, an analogy can be drawn between them." (Glynn, 2008, pp. 114-115)



"Analogical reasoning can occur between conceptual domains and within a conceptual domain." (Glynn, 2008, pp. 114-115)

Teaching with Analogies



Science Instruction

What Is the Higgs?



Drawings by Nigel Holmes

Science Instruction



Step 3:

Modeling Mental Tasks
"Present a clear metaphor
or analogy that makes
clear the kind of thinking
required to overcome the
bottleneck."

Decoding the Disciplines

Analogies in Library Instruction



The library catalog is like the collection of music files in your iTunes music library: It's the stuff you own. We own our books, so we keep information about them in a different place than info about our articles.

The databases are like your playlists on Spotify or Apple music: We subscribe to these platforms for access to content. We don't own our articles; we stream them. To find articles, we have to search in these databases.

Analogies I Use

You know when you search for a movie on Netflix and it tells you the movie is only available as a DVD? Like, if you want to watch it, you need to sign up for the DVD plan and wait for them to mail it to you? The full-text limiter helps you avoid that.

In a database, clicking "full text" limits your search results to just the stuff you can read right now, in the specific database you're using. It's like excluding results that are DVD-only movies on Netflix if you only want to see what you can stream right now.

Analogies I Use

Have you ever texted someone and autocorrect missed something you misspelled when you expected it to work? Or it corrects a word to a completely different word? Database citation tools are kind of like autocorrect.

The citation algorithm knows what a citation is supposed to look like, but when it takes information about an article from the database and tries to put it in the correct order for a citation, it sometimes formats the info in weird, incorrect ways.

Analogies I Use

Pick current and relevant analogs.

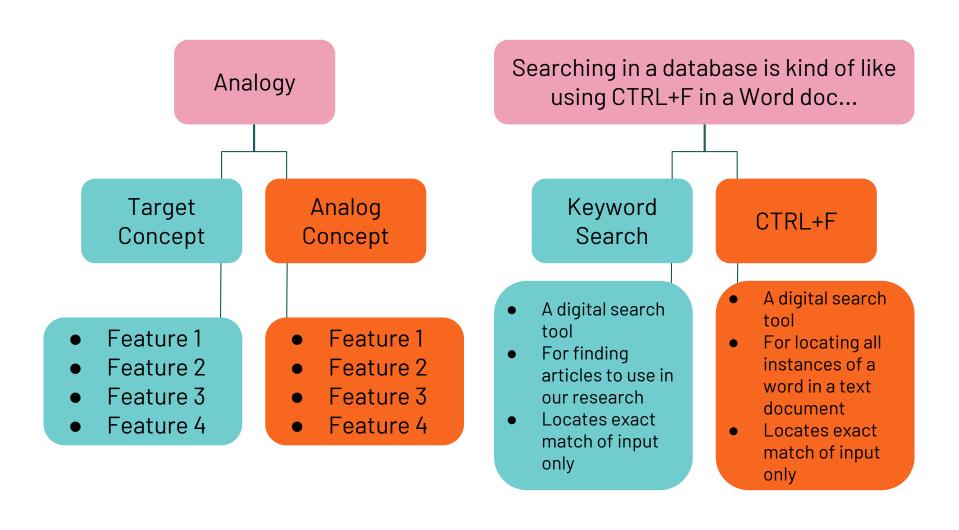
Get students to explain the analog.

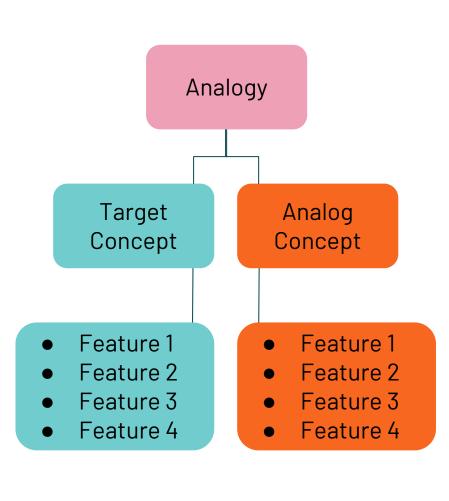
Resist the urge to improv. Ditch bad analogies!

Using Analogies to Teach

Creating Analogies

"A systematic comparison... between the features of the analog and the target is called a mapping." (Glynn, 2008, pp. 114-115)





If you also had a Netflix subscription, you wouldn't give up streaming *Grey's Anatomy* just because you couldn't watch it on Hulu...

Databases

- Articles
- You have access to more than one database
- Competitors have similar content but different holdings
- Search in more than one to find relevant research

TV/movies

Streaming

Platforms

- You have access to more than one platform
- Competitors have similar content but different holdings
- Search more than one to find a specific show



Analogy Brainstorming

- What are you trying to explain? (This is your "target.")
- Why is this concept or process "a stumbling block" for students?
- 3.

Break down this concept into bullet points of major features or tasks (think physical and metacognitive!)

What familiar concept has similar features or tasks? (This is your "analog.") Your analogy might combine more than one analog to address all of the target features! Draw lines between the target and analog features that map to each other.

- Target:

- Analog:
- Analog:

Write out your analogy in narrative form. Explain the analogy. What is the relationship between the target and analog? Compare and contrast!

Imagine that... You know how ...

Does anyone do/use/have... It's kind of like the may...

Get this worksheet! go.uncg.edu/ analogyaspedagogy

References

Glynn, S. M. (1994). Teaching science with analogies: A strategy for teachers and textbook authors. *Reading*

Research Report No. 15. Athens, GA: National Reading Research Center. Retrieved from https://files.eric.ed.gov/fulltext/ED373306.pdf

Glynn, S. M. (2008). Making science concepts meaningful to students: teaching with analogies. In S. Mikelskis-Seifert, U. Ringelband, & M. Brückmann (Eds.)., Four decades of research in science education: From curriculum development to quality improvement (pp. 113-125). New York, NY: Waxman. Retrieved from

http://blogs.oregonstate.edu/smedcohort/files/2010/01/Glynn2008MakingScienceConceptsMeaningful.pdf

Holmes, N. (2013). What is the Higgs? Retrieved from

https://archive.nytimes.com/www.nytimes.com/interactive/2013/10/08/science/the-higgs-boson.html#/?g=true&higgs1_slide=12

Plato. (1892). The republic (B. Jowett, Trans.). Auckland, NZ: Floating Press.

Pollack, J. (2014). Shortcut: How analogies reveal connections, spark innovation, and sell our greatest ideas. New York, NY: Gotham Books.