



Text, Lies, and Video Tutorials: Examining Format Preference and Effectiveness in Blended IL Instruction

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CHEM 101 Library Lab

- Long-standing tradition
- 2nd lab of the semester
- Core reference sources



CHEM 101 Library Lab, circa 2012



Before Class:
Flexible Learning



During Class:
Supported Practice



CHEM 101 Redesign: Blended Instruction

Chem 101: Is My Substance
Organic or Inorganic?

B1

CHEM 101:
Finding Physical Properties
in the CRC Handbook of
Chemistry & Physics

B2

CHEM 101:
Finding Thermodynamic
Properties in the CRC
Handbook of Chemistry &
Physics

B3

CHEM 101:
Finding Material Safety
Data Sheets

C1

Resulting CHEM 101 Library Tutorial



The Literature

Learning Styles

- Popular & lucrative
- Unsupported

(Pashler et al., 2008; Cuevas, 2015)

Text & Video Tutorials

- Best practices
- Strengths & weaknesses

(Nielsen, 1993; Bury & Oud, 2005; Bowles-Terry et al., 2010; Turner et al., 2015; Alexander, 2013; Mestre, 2014; Jackson 2014; Dold, 2016)

Preferences & Practices

- Frequently at odds
- Convenience

(Alexander, 2013; Connaway et al., 2011; Dold, 2016)



Approach



1. Google Analytics → track usage and behaviour





2. Questionnaire → student preference





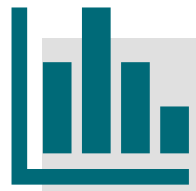
3. Observation study → effectiveness





Research Questions

1. Do students revisit the tutorial videos later in the semester?
 2. Do students use the video tutorials in class?
 3. Is there a preference for one format over the other?
 4. Which instruction mode is more effective?
- 
- 



Question 1

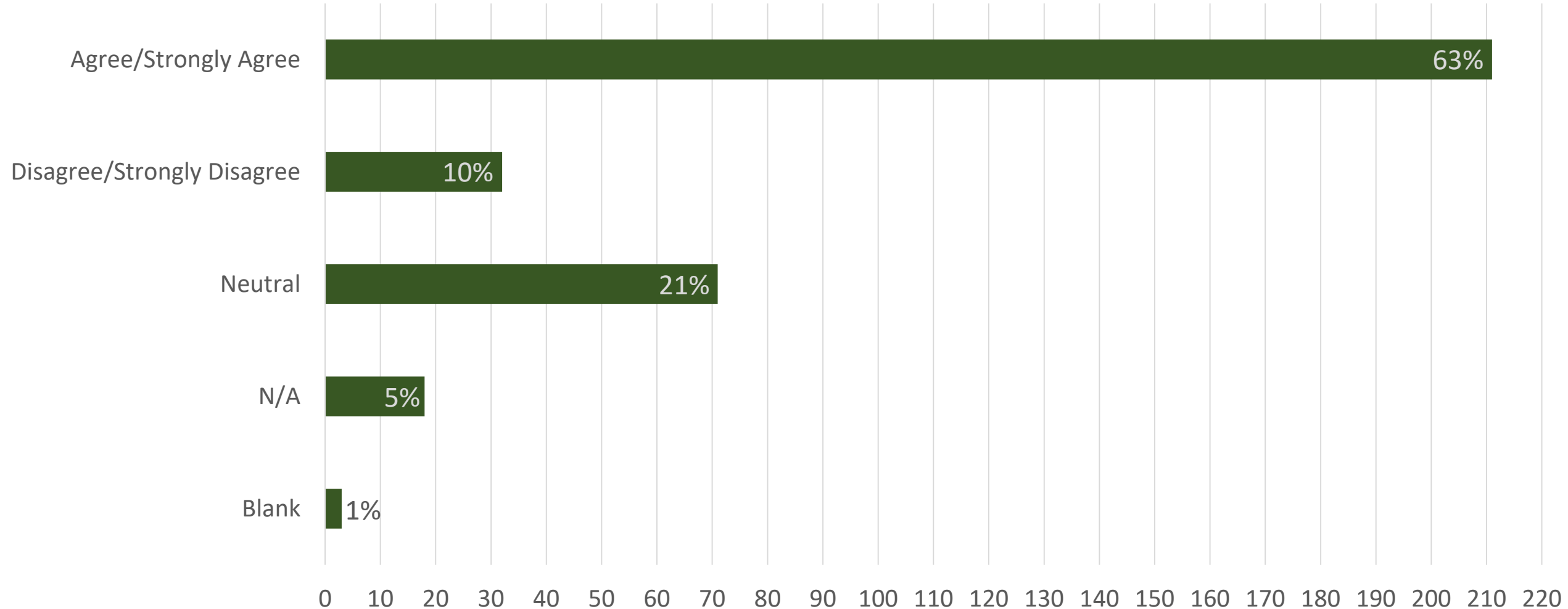
Do Students Revisit
the Tutorial Videos?



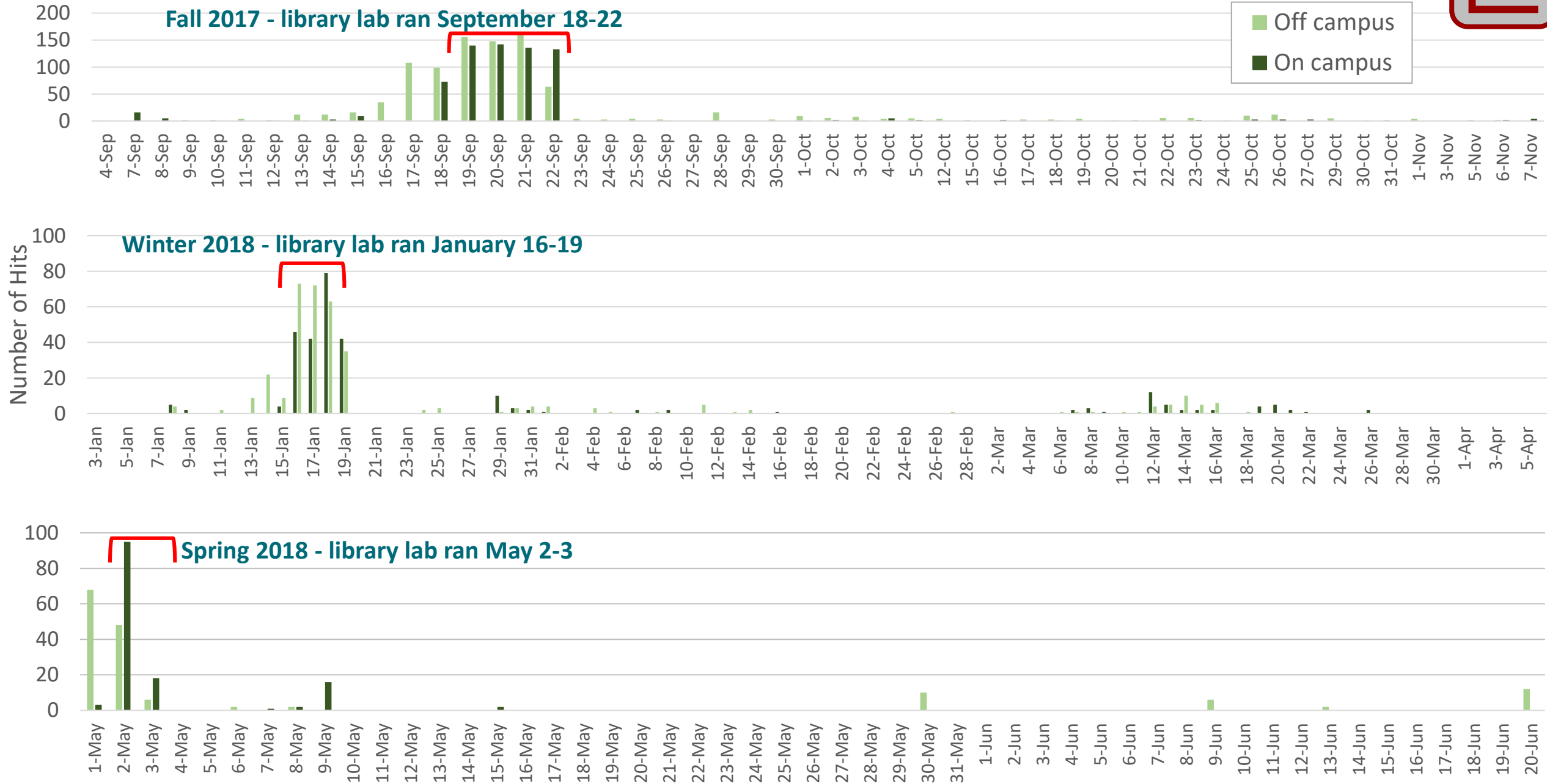
They think they will...



I see myself revisiting the tutorial content later in the semester to refresh my memory of the resources



...but most of them don't



Behaviour Flow for Tutorial Videos



Before and During CHEM 101 Library Lab (Jan 3-19)



132 non-bounce sessions from 117 users

34% of sessions are users watching all 4 videos in order

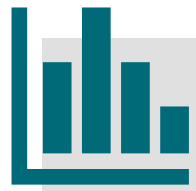
After the CHEM 101 Library Lab (Jan 20-Apr 6)



26 non-bounce sessions from 24 users

38% of sessions are users watching just one video

If students do revisit the tutorials, they usually access only one

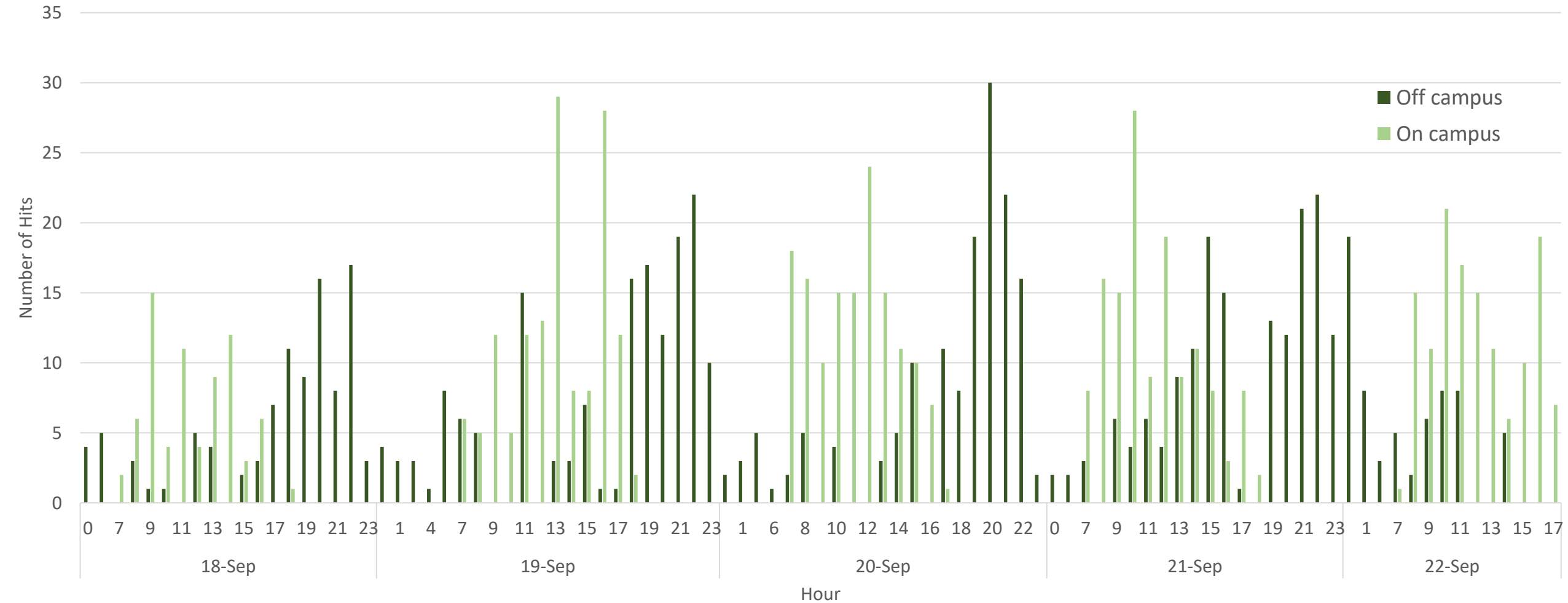


Question 2

Do Students Use the
Video Tutorials in
Class?



Tutorial Usage Over the Fall 2017 Semester



Class section
times:

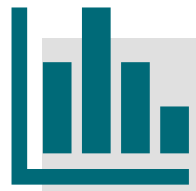
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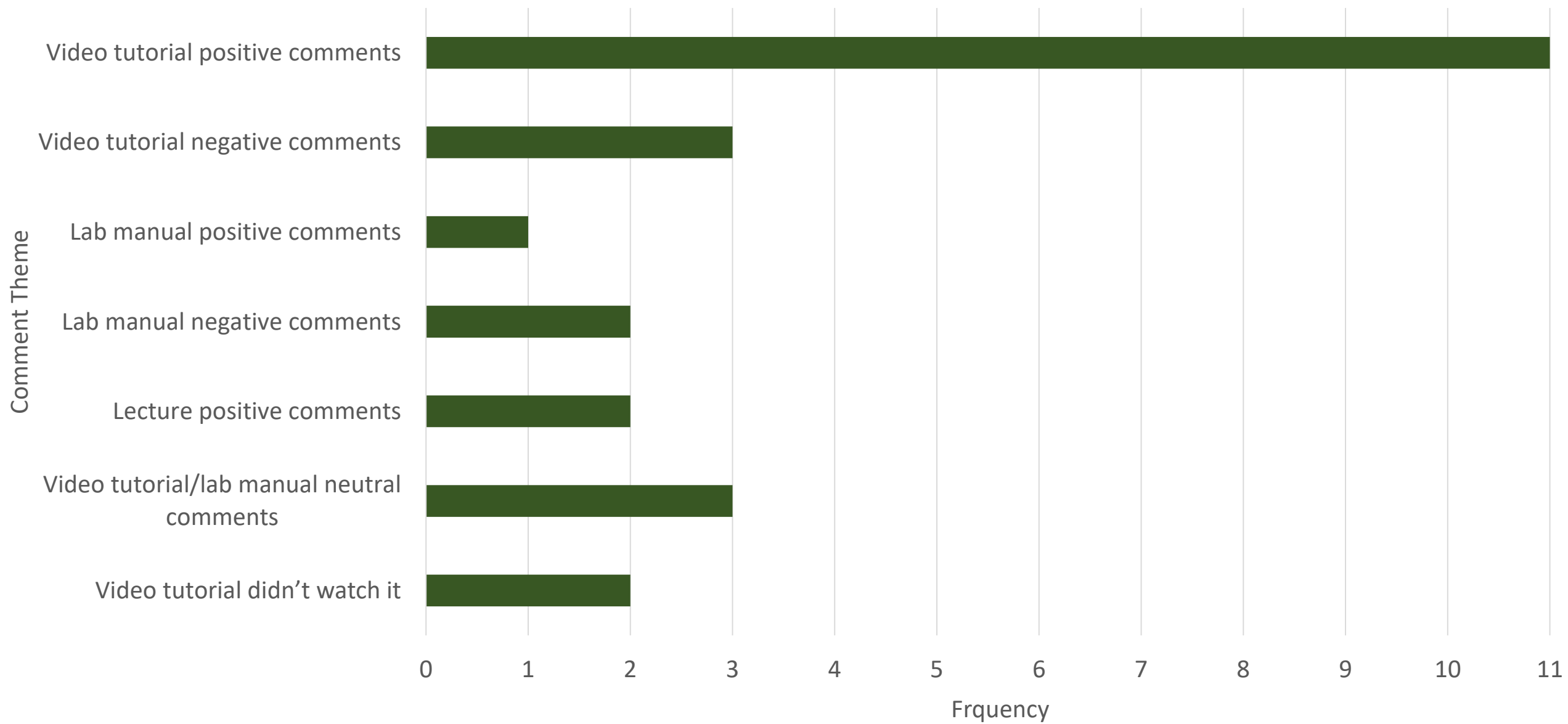


Question 3

Is There a Preference
for One Format Over
the Other?



Student Feedback - Comments





Team **Video**

“The videos were a **very useful tool** in understanding the experiment rather than just simply reading through the manual.”

“If I watched the tutorial I would've seen **exactly what to do**. I prefer to see than to read”

“The videos are **way better** than the lab book”

“It was pretty easy to follow along. I feel **comfortable with the knowledge gained** from the tutorial videos”

Positive Feedback

Team **Written**



“The lab manual was **quick and precise**”

Team **Both!**

“Instruction and tutorial videos were **equally convenient**”

“**Nothing really** I read/ watched both sets of instructions and the extra information was very useful”

“I think the videos helped to get an **overall understanding** on what the lab was focused on and how to carry out the activity the lab manual was mainly **there as a reference** to the activity”





Dislike **Video**

“The lab tutorial was **very confusing** to follow.
It was difficult to hear/ did not have enough
time to work alongside the demonstration”

Dislike **Written**



“The lab manual is **less concise**”

Negative Feedback

“I find the tutorial videos **tedious and not very helpful**. Only watched the first one”

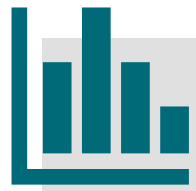
Impossible to Please

“**I didn't watch** the tutorial **or read** the lab manual”

...And some liked the in-class review **lecture**

“I **appreciated the verbal explanations** to clear up any
questions about the videos”



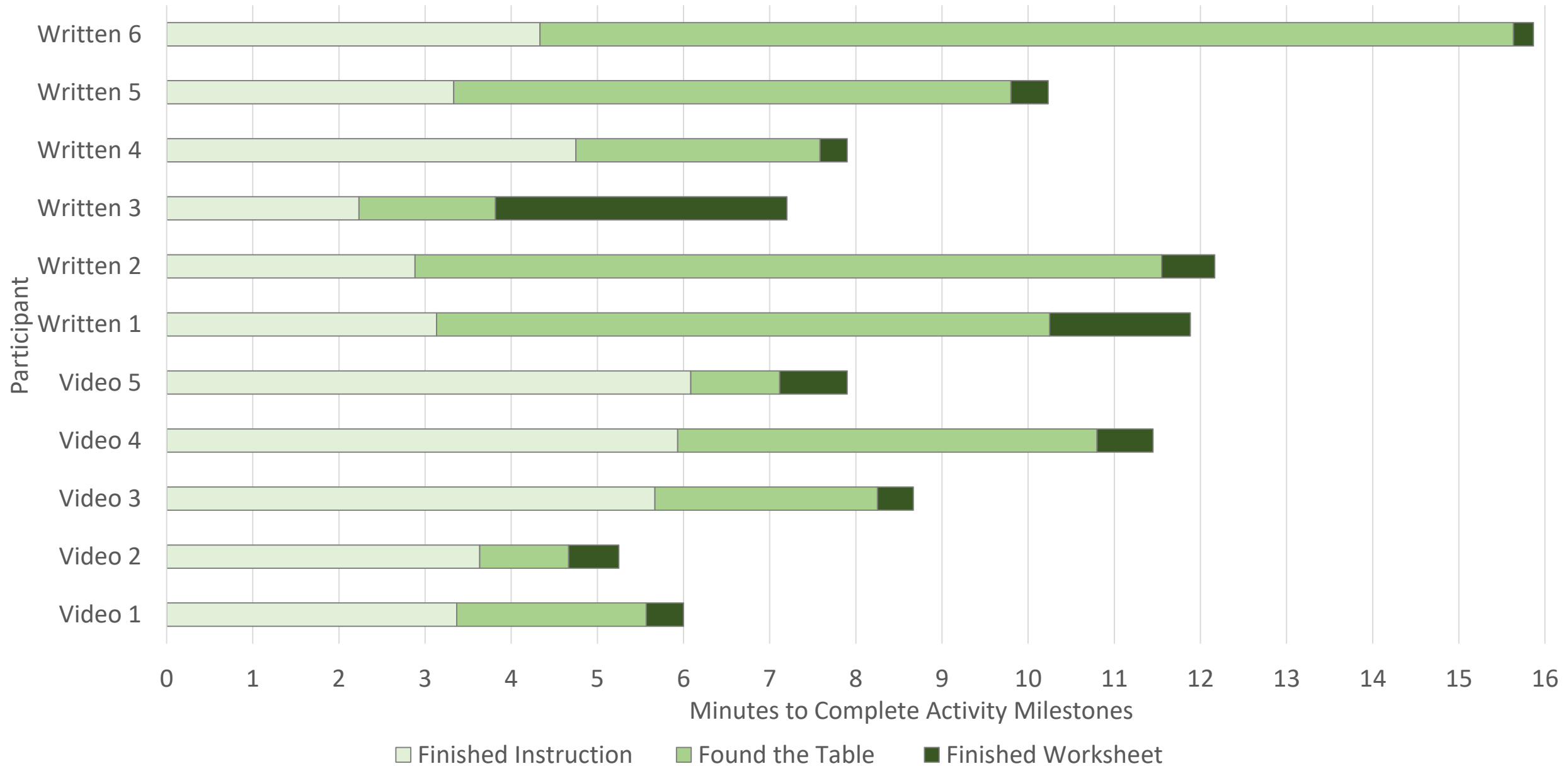


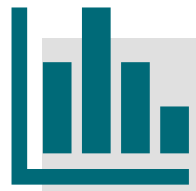
Question 4

Written or Video, which
is More Effective?



Time to Complete Task Milestones with Written vs. Video Instructions





Conclusions

The video tutorials are...

- used as a tool for learning but not for review.
- used in class but to a lesser degree than the print.
- well-liked but some appreciate the text.
- effective at conveying information and may lead to faster results.



Next Steps

- Further evaluation of student learning
- Update video tutorial and written content
- Citation video



Thoughts, Questions, and/or Suggestions





References



Image Credits

Slide 2 - Typewriter studies class [Photograph]. (1942). UNT Libraries Special Collections. Retrieved from digital.library.unt.edu/ark:/67531/metadc227223/

Slide 3 - Chemistry retro poster vector. (n.d.). Retrieved from Vecteezy.com

Literature

Alexander, K. P. (2013). The usability of print and online video instructions. *Technical Communication Quarterly*, 22(3), 237–259. <http://doi.org/10.1080/10572252.2013.775628>

Bowles-Terry, M., Hensley, M. K. M., & Hinchliffe, L. J. L. (2010). Best practices for online video tutorials in academic libraries: A study of student preferences and understanding. *Communications in Information Literacy*, 4(1), 17–28. Retrieved from <http://www.comminfolit.org>

Bury, S., & Oud, J. (2005). Usability testing of an online information literacy tutorial. *Reference Services Review*, 33(1), 54–65. <http://doi.org/10.1108/00907320510581388>

Connaway, L. S., Dickey, T. J., & Radford, M. L. (2011). “If it is too inconvenient I’m not going after it.” Convenience as a critical factor in information-seeking behaviors. *Library and Information Science Research*, 33(3), 179–190. <http://doi.org/10.1016/j.lisr.2010.12.002>

Cuevas, J. (2015). Is learning styles-based instruction effective? a comprehensive analysis of recent research on learning styles. *Theory and Research in Education*, 13(3), 308–333. <http://doi.org/10.1177/1477878515606621>

Dold, C. J. (2016). Rethinking mobile learning in light of current theories and studies. *Journal of Academic Librarianship*, 42(6), 679–686. <http://doi.org/10.1016/j.acalib.2016.08.004>

Jackson, S. A. (2014). Student reflections on multimodal course content delivery Student reflections on multimodal course content delivery. *Reference Services Review*, 42(3), 467–483. <http://doi.org/10.1108/RSR-05-2014-0011>

Mestre, L. S. (2012). Student preference for tutorial design: a usability study. *Reference Services Review*, 40, 258–276. <http://doi.org/10.1108/00907321211228318>

Nielsen, J. (1993). Usability engineering. Boston: Academic Press.

Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105–119. <http://doi.org/10.1111/j.1539-6053.2009.01038.x>

Turner, B., Fuchs, C., & Todman, A. (2015). Static vs. dynamic tutorials: applying usability principles to evaluate online point-of-need instruction. *Information Technology and Libraries*, 34(4), 30. <http://doi.org/10.6017/ital.v34i4.5831>