

First Year Undergraduates' Lay Theories About Learning



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Do Learners Know Best?



I learn best
by reading

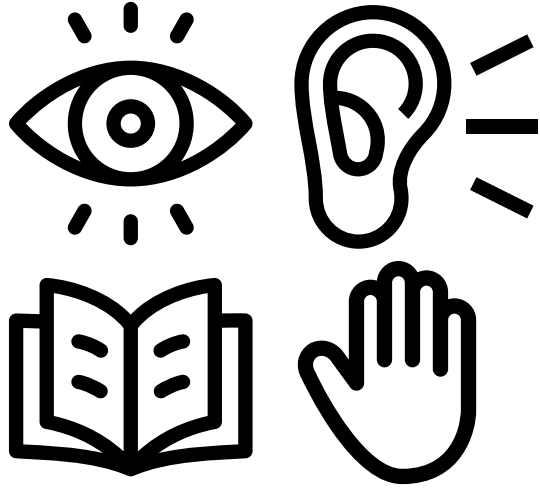


I like a mix
of text and
visuals

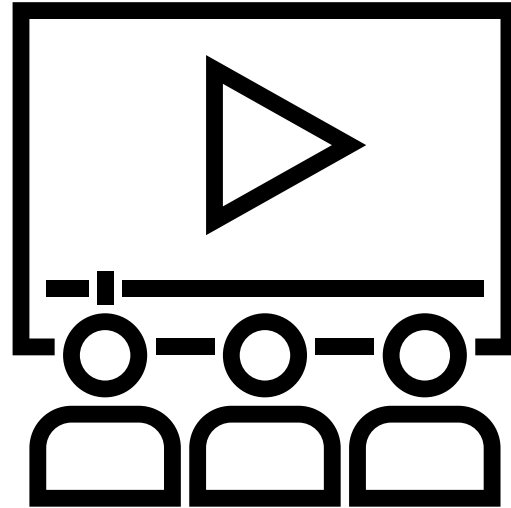


Videos help
me learn
math

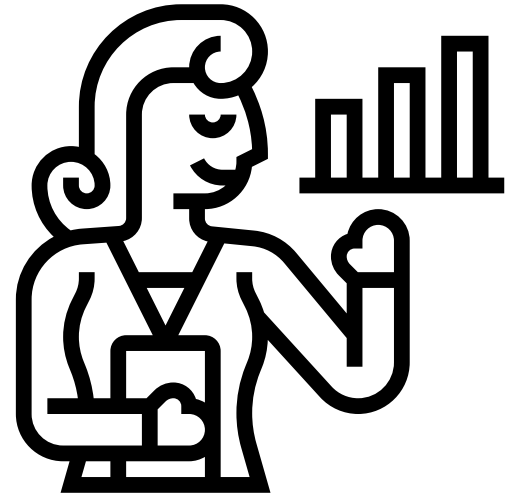
Learning Styles Myth



Popular/folk psychology




Teacher instruction
matching
student style




Empirical research
says otherwise
(Pashler et al., 2010)

Learning Styles Myth

Lay theories can still guide human motivation and behavior (Zedelius et al., 2017)



I can succeed
at reading
assignments!



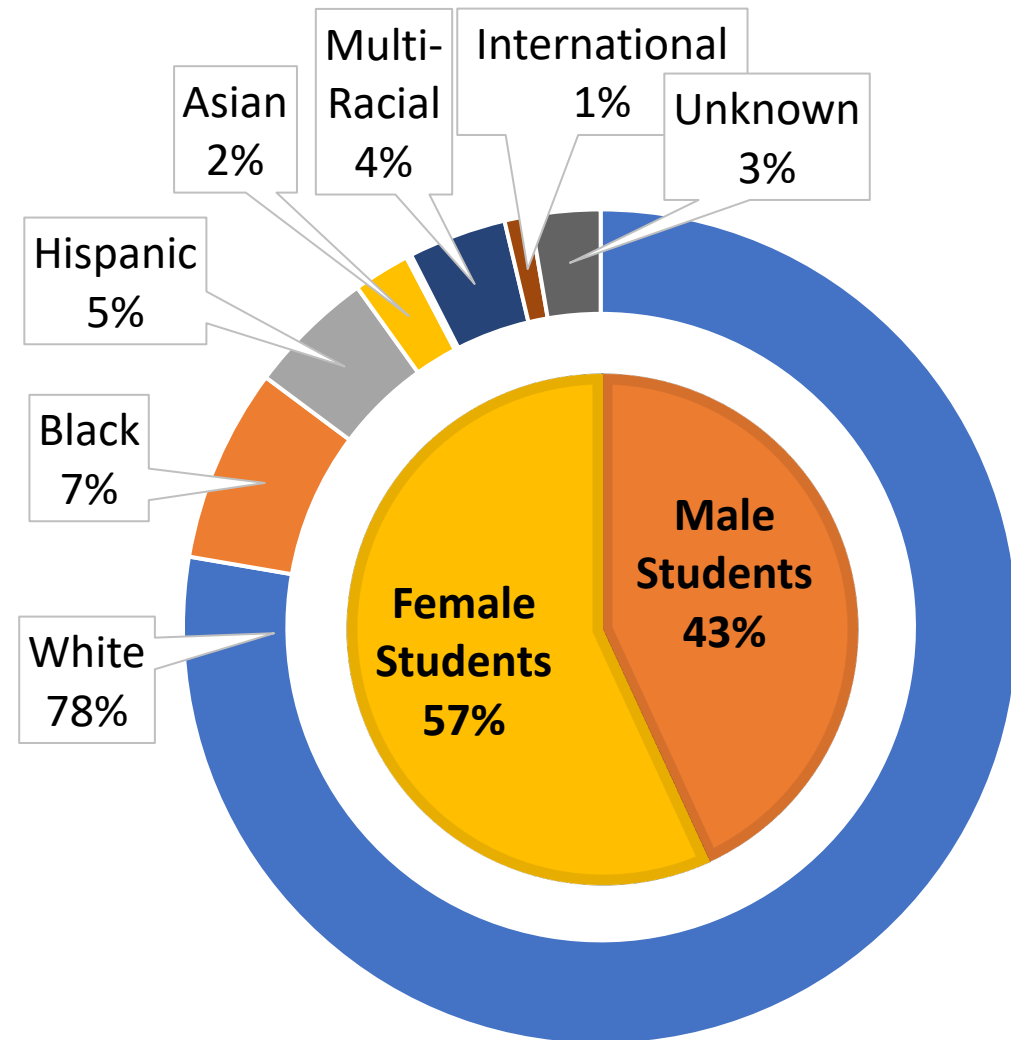
I can't succeed
at reading
assignments.

Research Questions

- 1) What are college students' beliefs about how others learn best?
- 2) How do their beliefs about others relate to their own preferences?
- 3) Do these differ by gender, discipline, or achievement?

Participants

- $N = 822$
- First-year college students (Fall 2017)



Design



Student 1: Reading

“I have always liked to read a book more than watch a movie. ... Even in school, **if I have to learn something, I would rather read about it.**”



Student 2: Video

“**I am definitely someone who learns better by watching a video.** ... I know in classes, when the professor shows a video, I remember that stuff long after the class is over.”



Prompt 1: How do others learn best?

In the space below, write a brief reflection about whether you think students can learn better by reading text or by watching a video. Why do you think this?



Prompt 2: What do you prefer?

In the space below, write a brief reflection about whether you personally prefer to read a story or watch a story. Why do you feel this way?

1,644 student responses



Coding Scheme



Prompt 1: *How do others learn best?*

1: Reading



I think that **students learn better by reading**. While reading, a student can **take notes, highlight important quotes, and re-read** the content if it is difficult.

2: Video/Watching



I think students **learn better from watching videos** because our **generation** has grown up around all the **technology** and it helps us understand things better.

3: It Depends/Both/Personal Preference



It's all about **how each individual student learns** and their learning preferences.



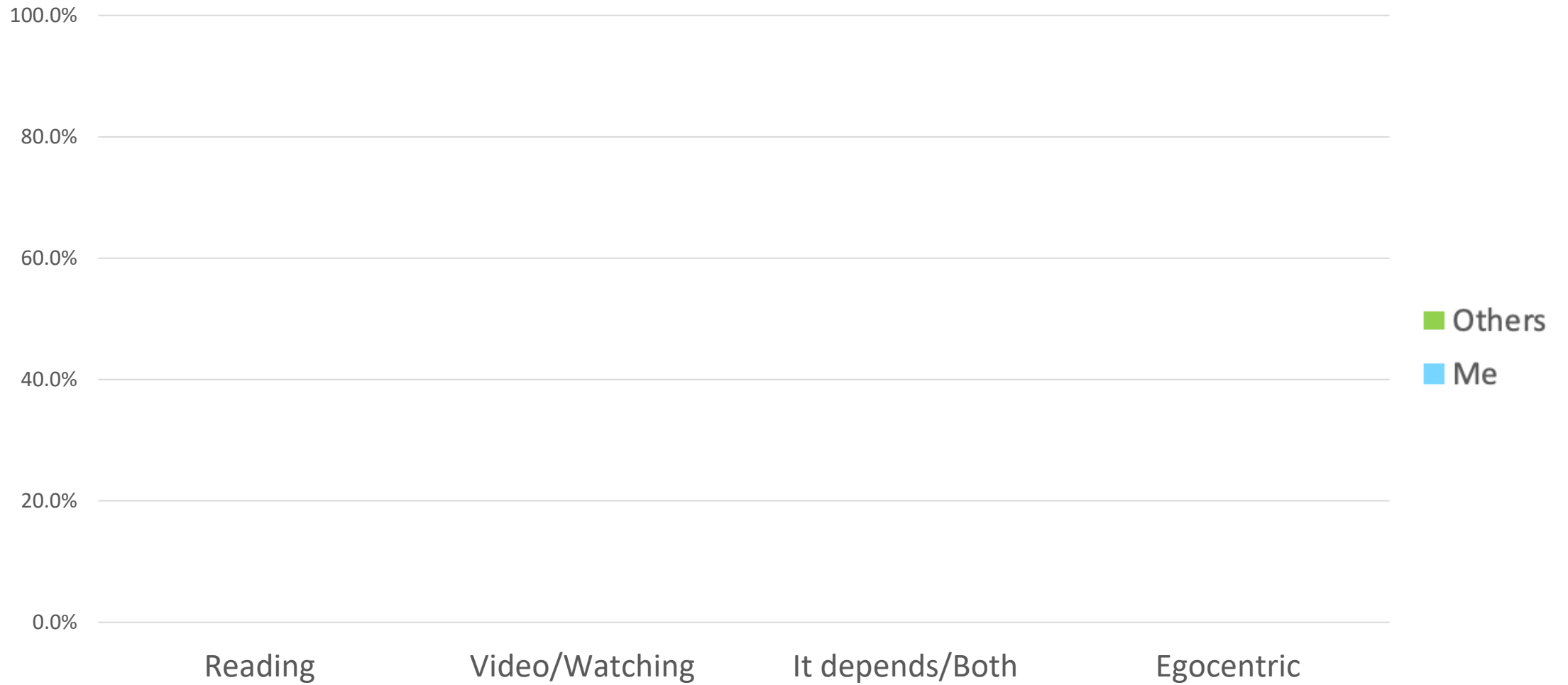
I think whether students learn better ... **depends** on the **subject matter** and the **student's interest level**.

4: Egocentric

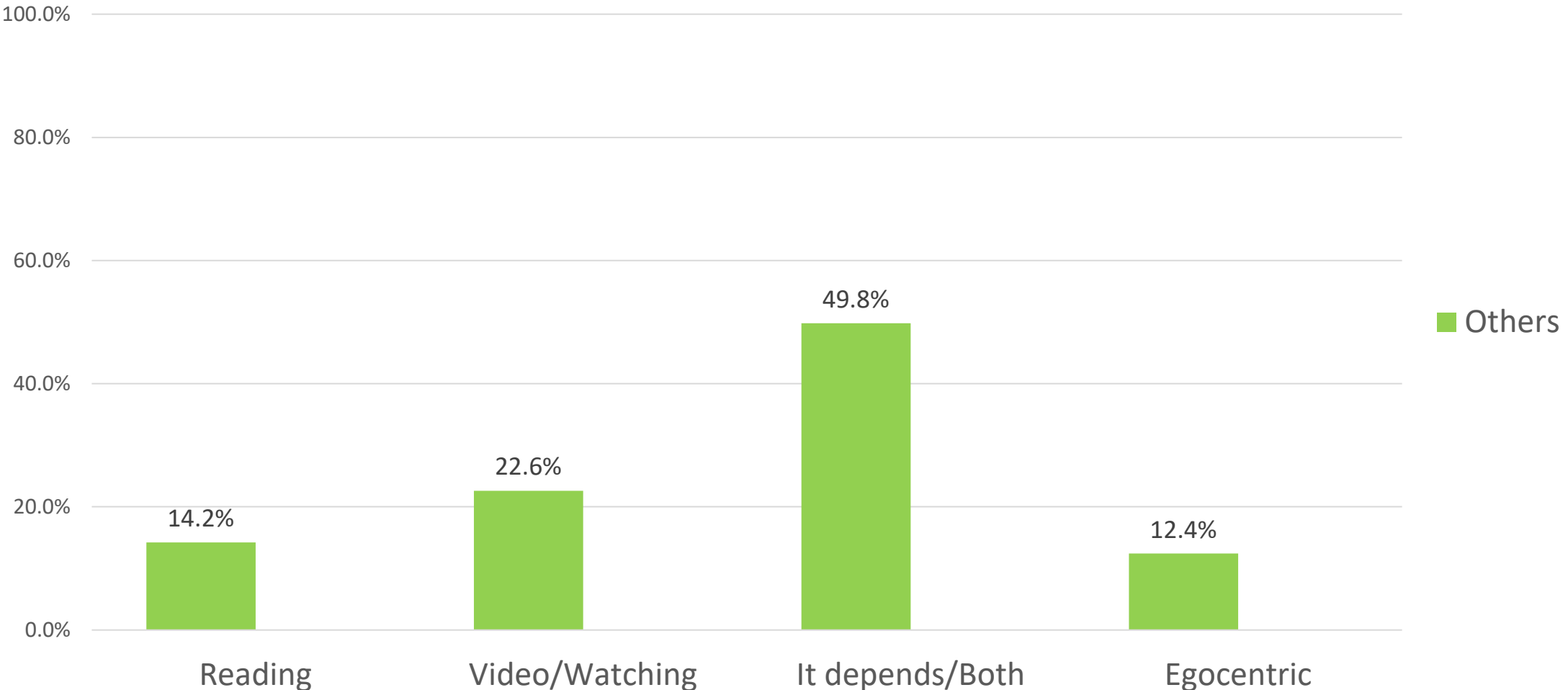


I like watching videos more. I agree with the second student because **I zone out** some things while reading.

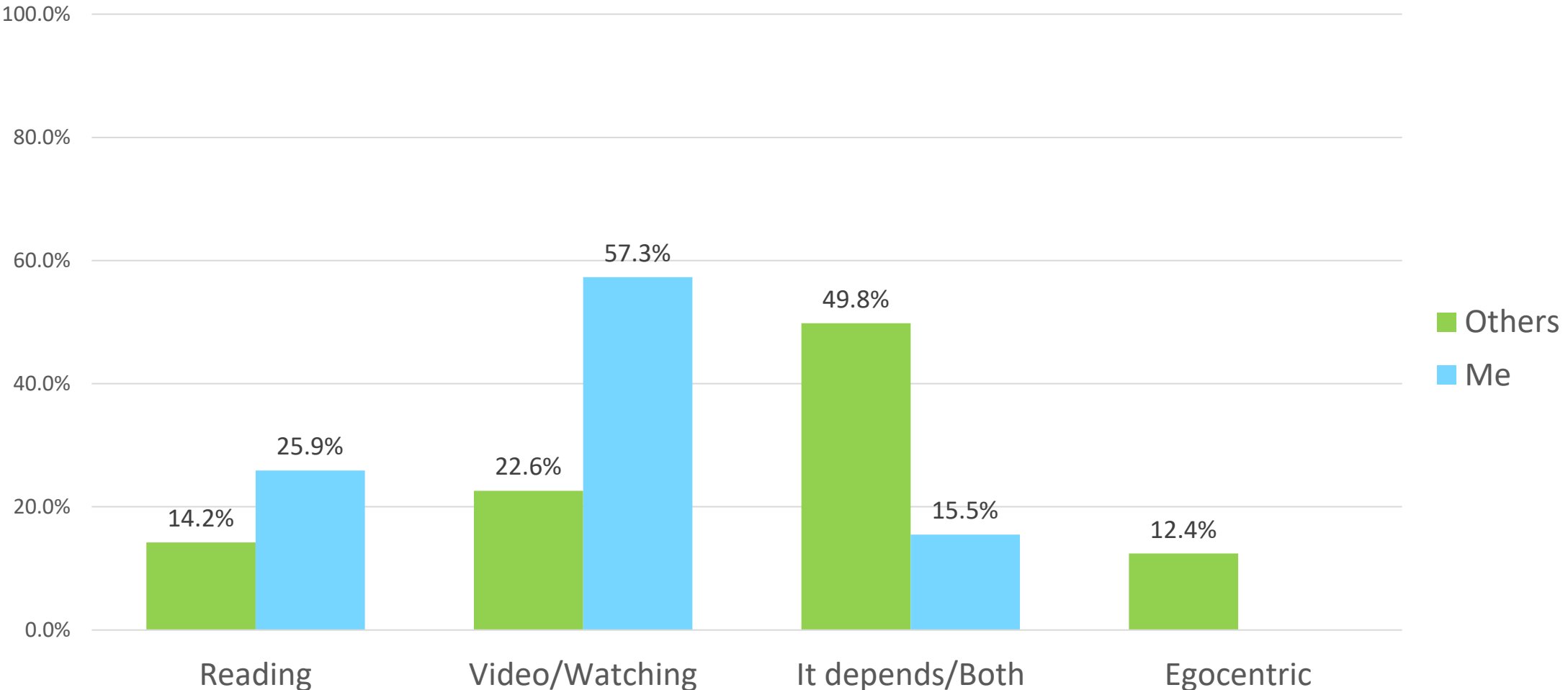
Full Sample ($n = 822$)



Full Sample: How do others learn best?

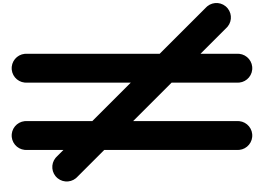


Full Sample: What do you prefer?



What does this mean?

Students' perceptions of how others
learn best

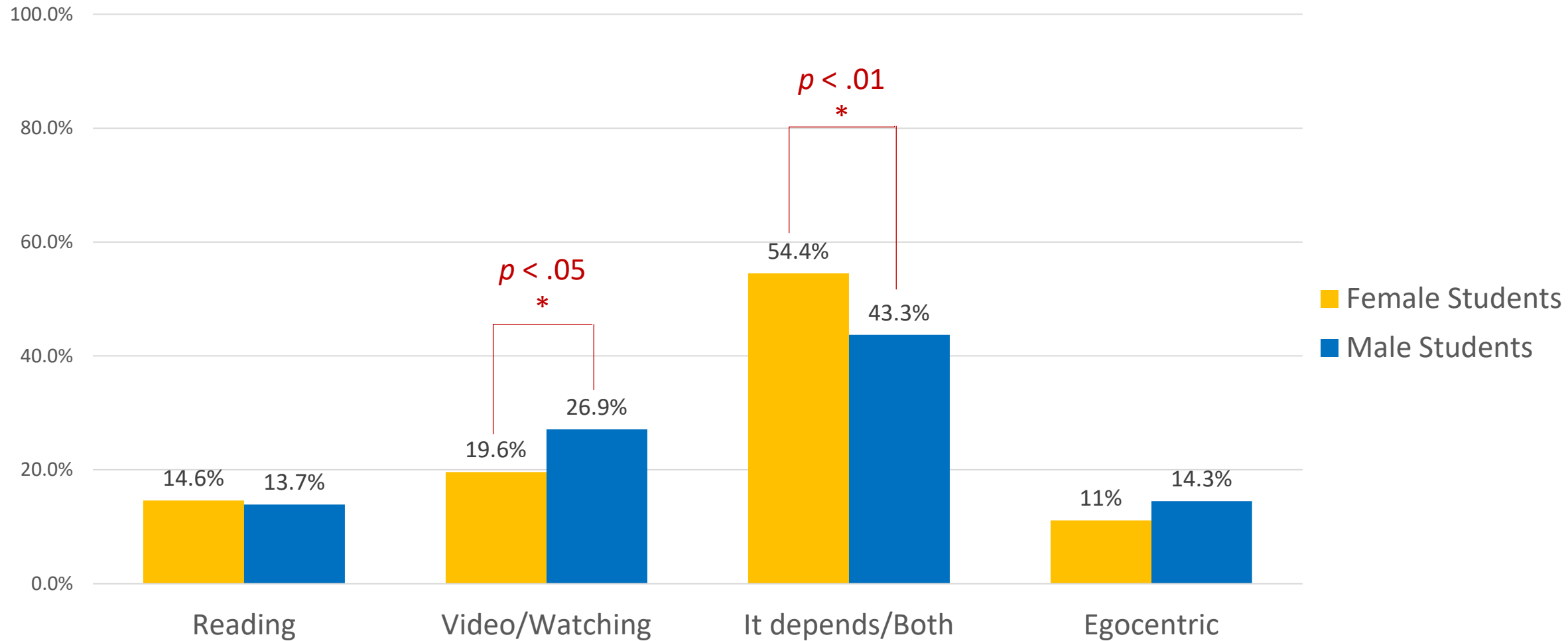


How students personally prefer
to take in information

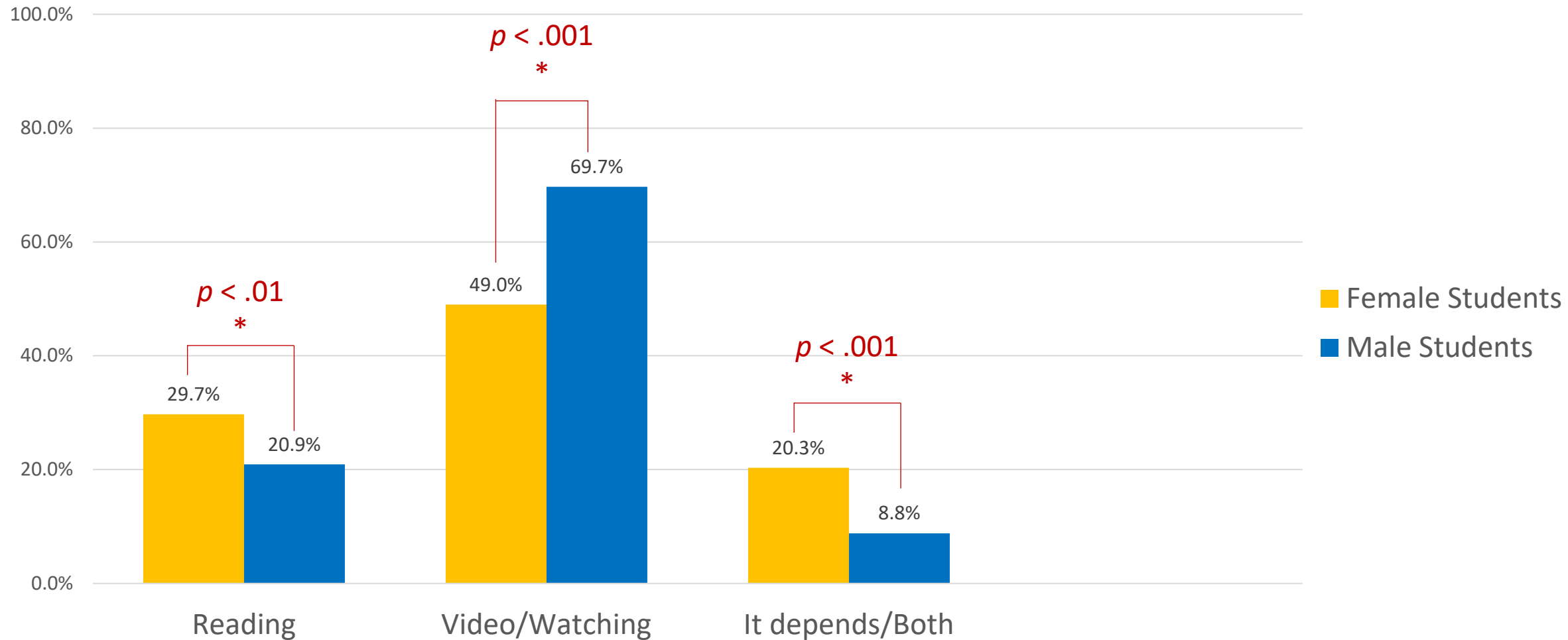
Gender



Gender: How do others learn best?



Gender: What do you prefer?



What does this mean?

Male students

- Videos

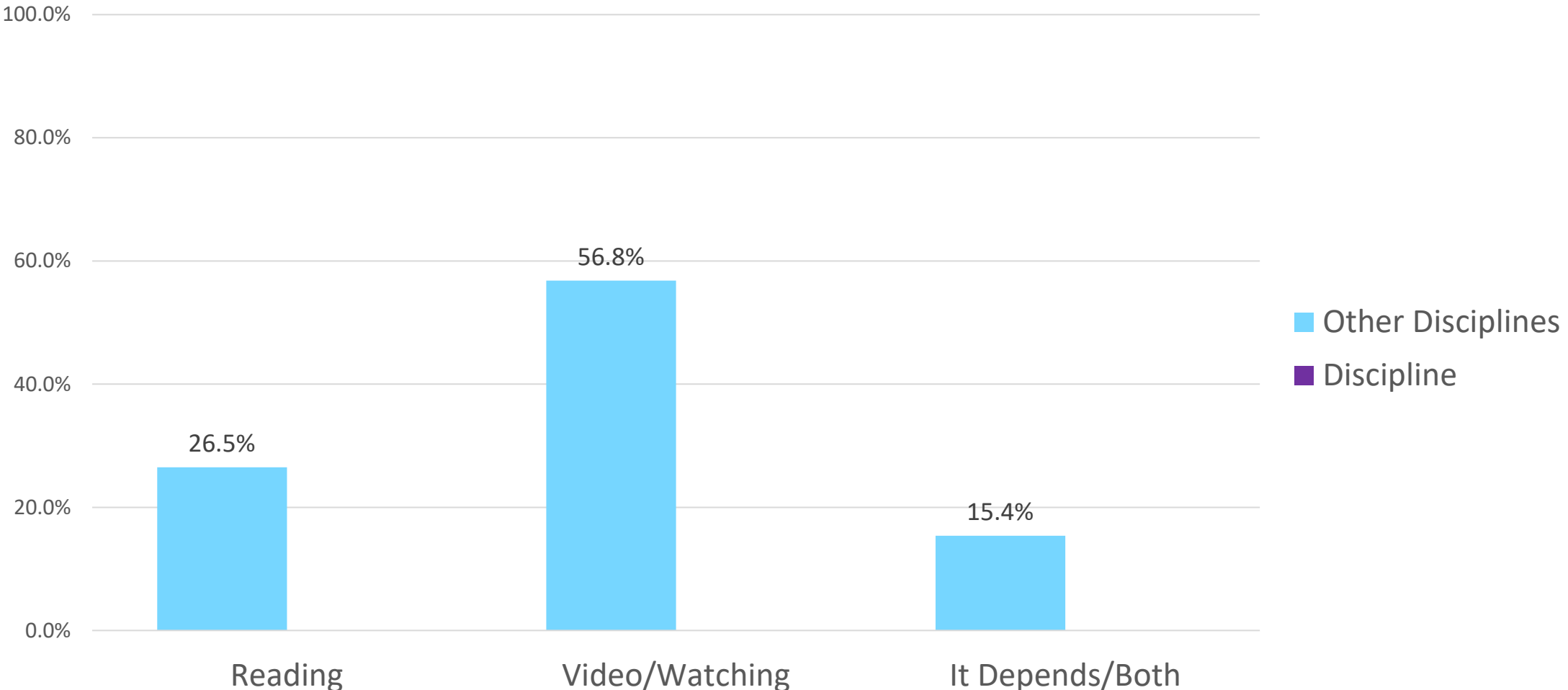


Female students

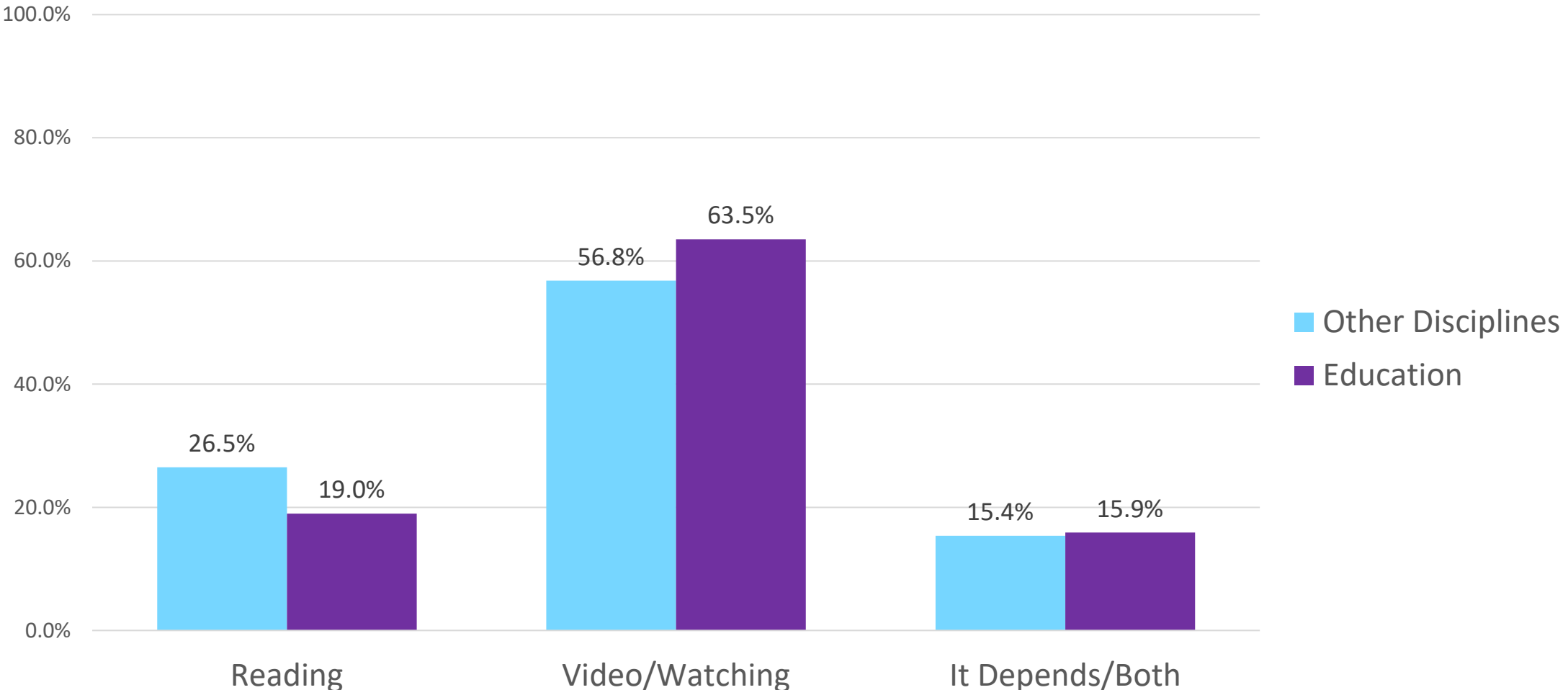
- It depends
- Reading

Do male students and female students hold different theories of learning?

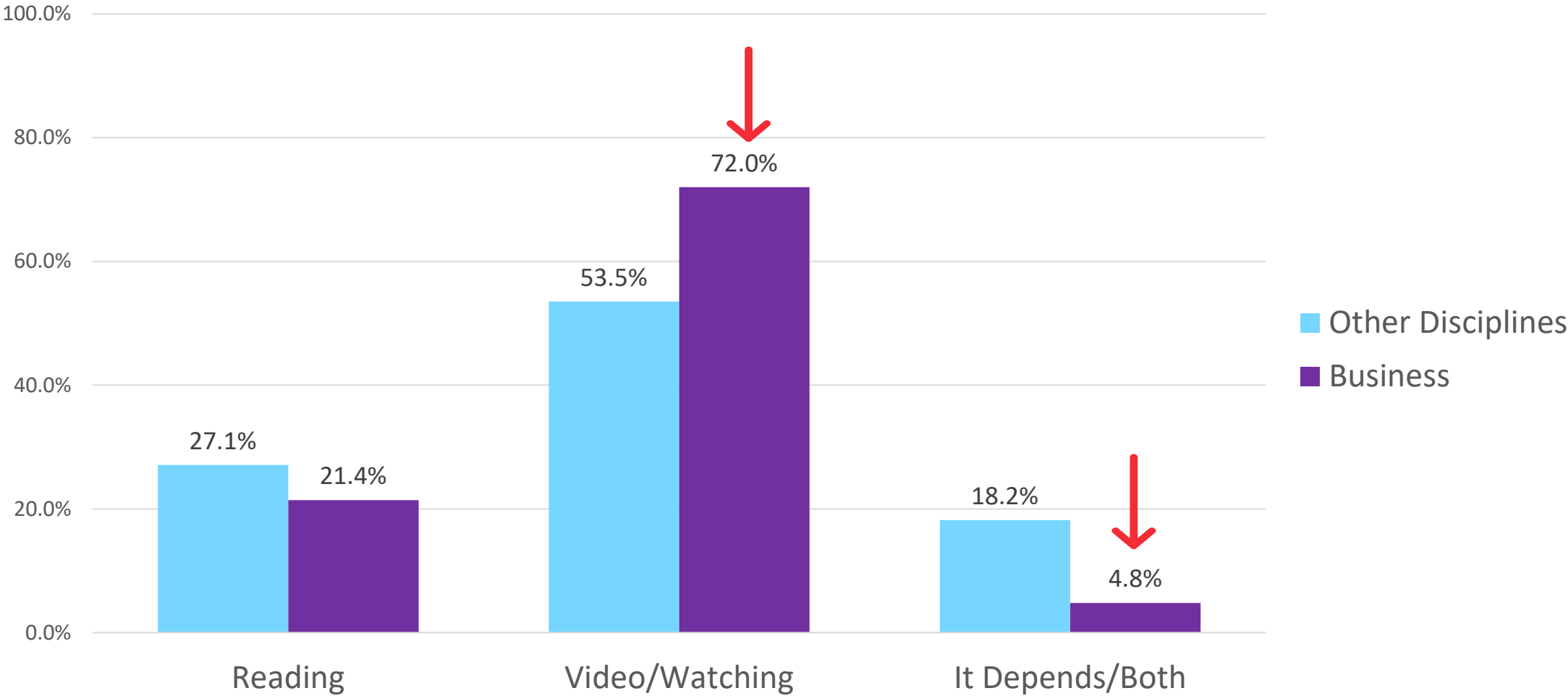
Discipline: What do you prefer?



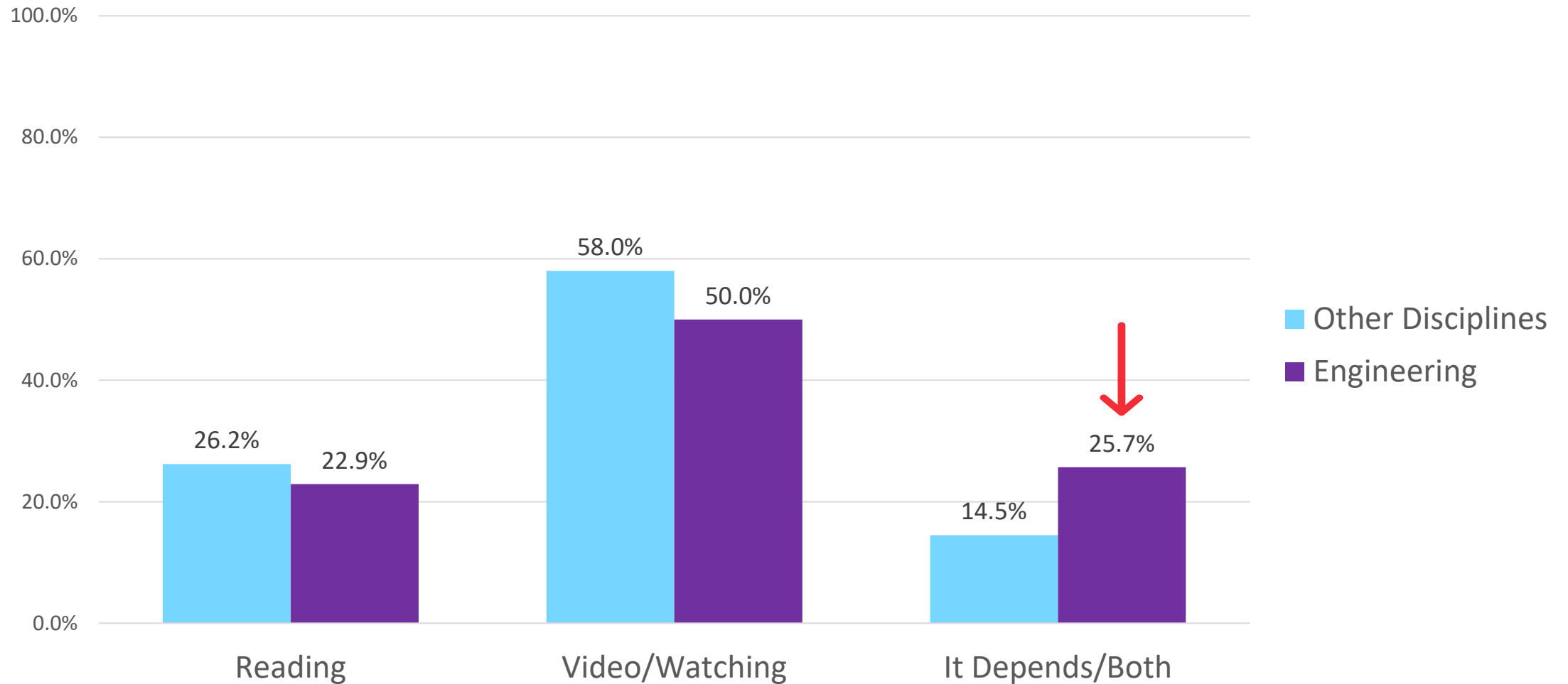
Education ($n = 63$): What do you prefer?



Business ($n = 168$): What do you prefer?

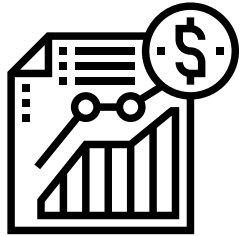


Engineering ($n = 70$): What do you prefer?



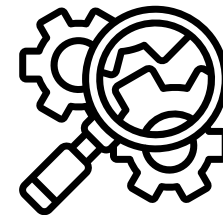
Does it have to do with career?

Do business professions benefit from visual factors?



- 64% Male

Are engineers more contextual?

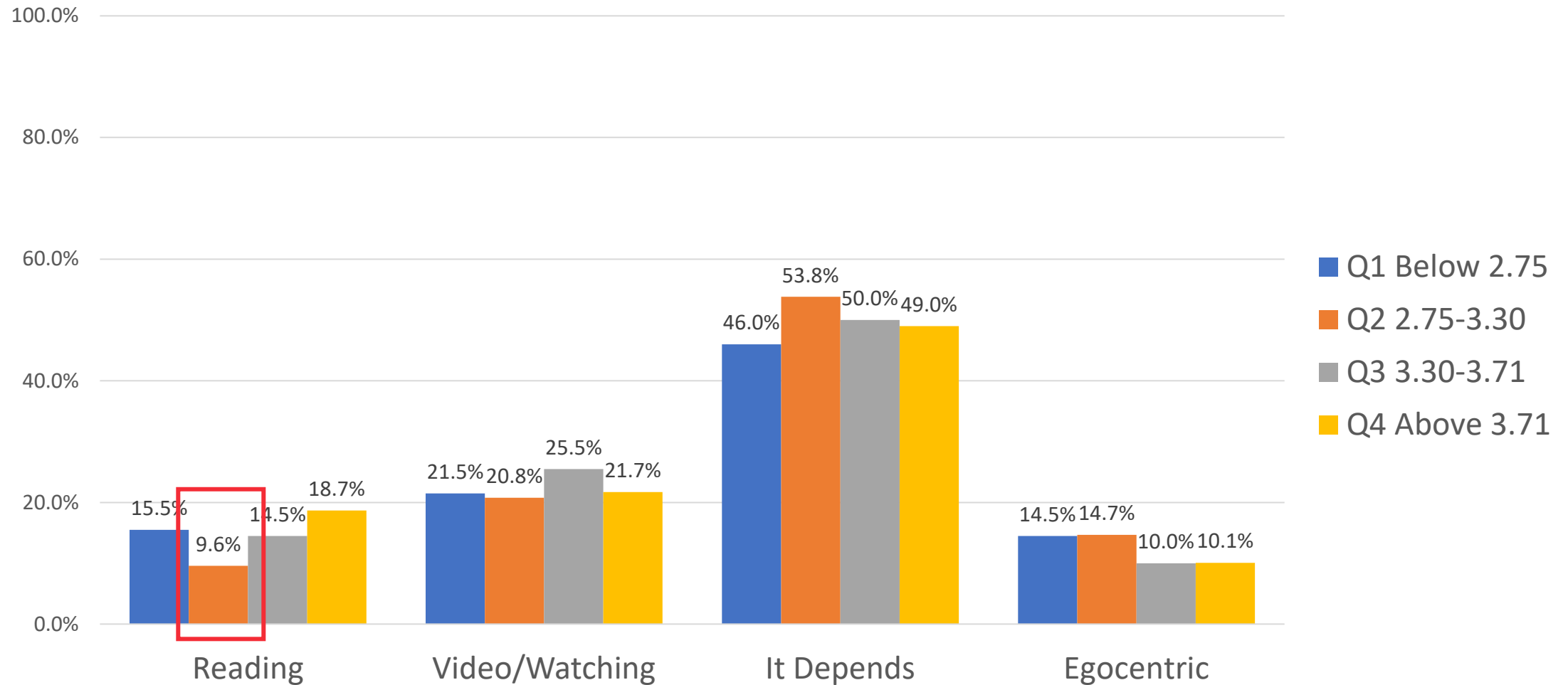


- 80% Male

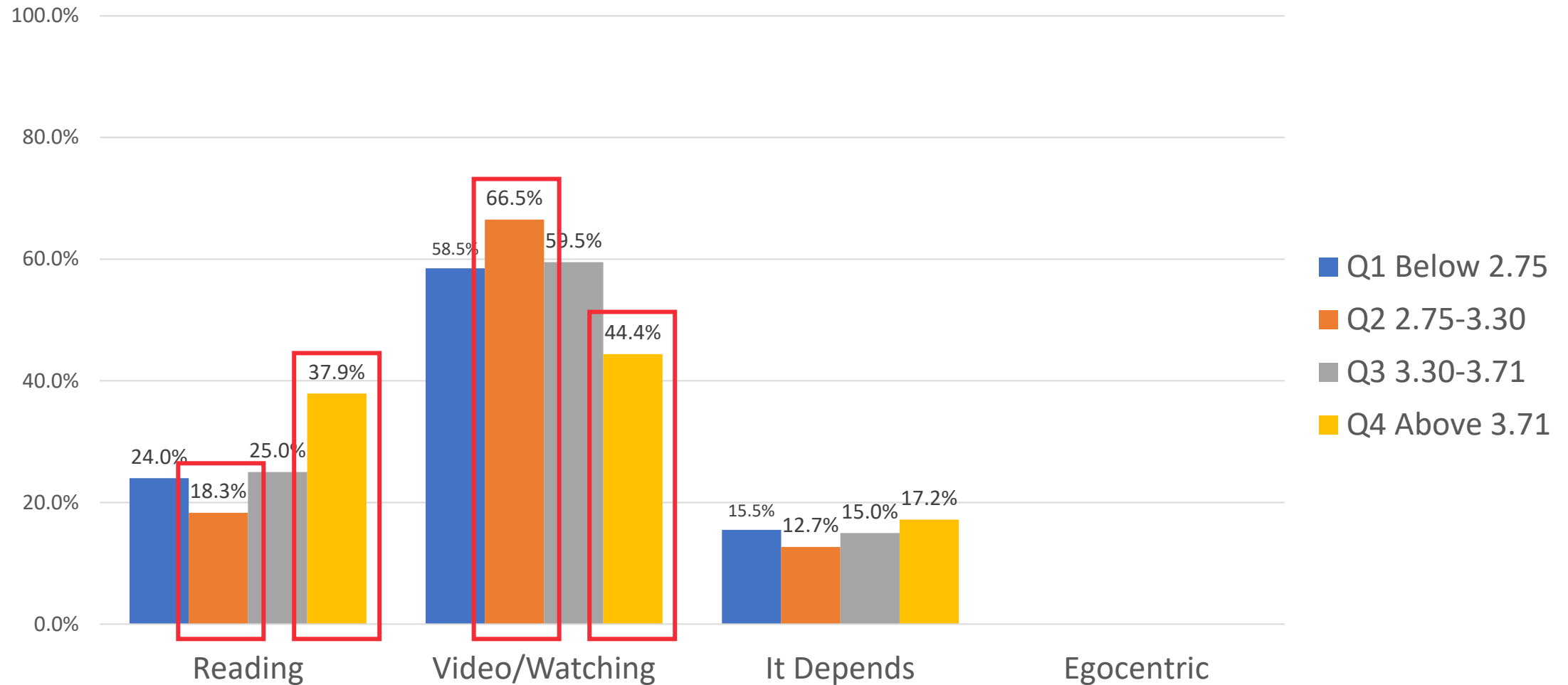
GPA



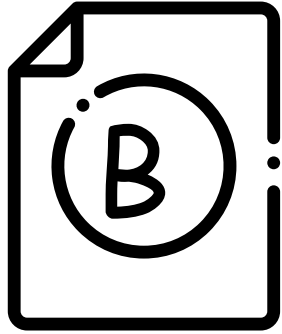
GPA: How do others learn best?



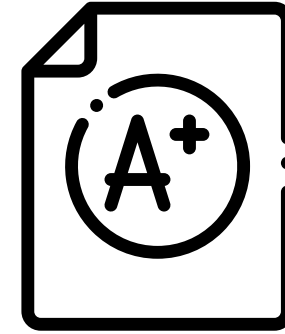
GPA: What do you prefer?



What does this mean?



B-average students prefer reading less and videos more than any other group



High A-average students prefer reading more and videos less than any other group



Conclusions

- 1) Most students believe others learn best by a combination of modalities or depending on the context.
- 2) More students personally prefer videos over reading or a combination of modalities.
- 3) Students' responses differed by gender, discipline, and GPA.

Implications

Lay theories guide students'
preferences and behaviors

Implications

-  “Teachers should find out **how each student learns best** and integrate that into their teaching methods.”
-  “Everybody learns in a different way, and **to be successful in college** you really need to figure out what way that is, and while it is not necessary I think **professors who cater to multiple learning styles** deserve a lot of praise.”

*Limitations
& Future
Directions*

Our second prompt wasn't specifically about learning.

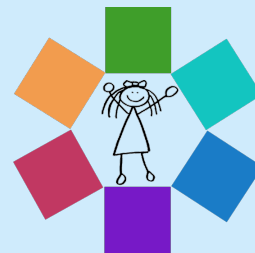
Our sample was overwhelmingly White and used institutional labels.

Future research should examine why “it depends.”

**THANK
YOU**



College of
Education



P20 Motivation &
Learning Lab

Contact us:

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