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## Mind the Gap: Research Instruction in Online vs. Face-to-Face Courses

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# Mind the Gap

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Research Instruction in Online vs. Face-to-Face Courses

# Researchers

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# How the Project Came to Be

A sense that:

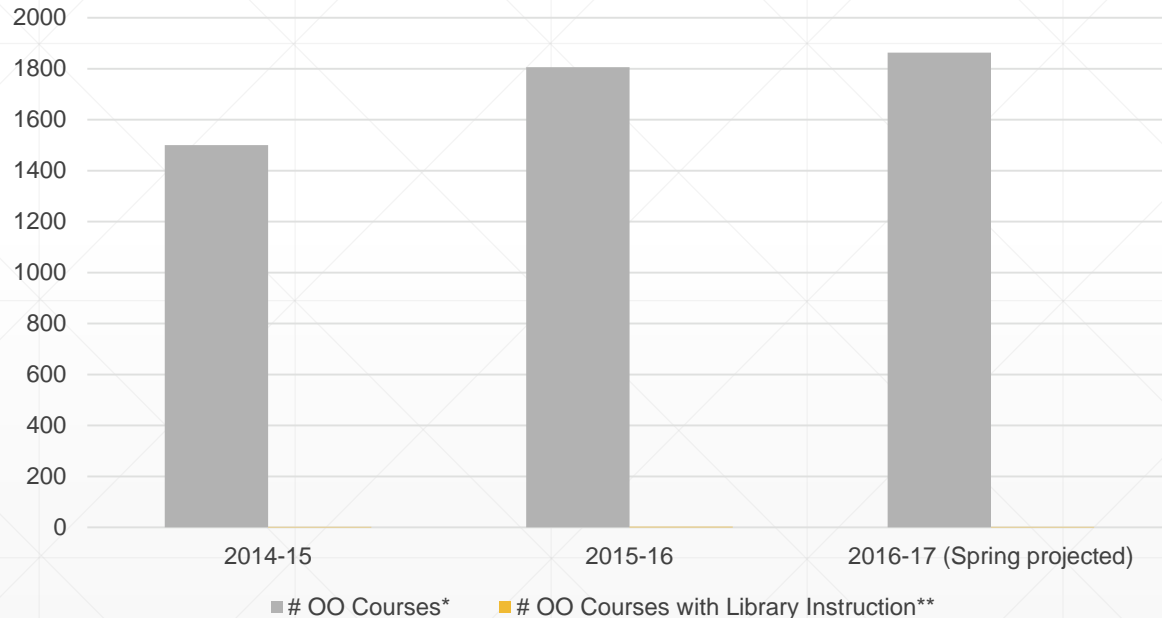
- Universities were offering more and more courses online.
- Librarians were not as directly involved in online-only (OO) courses as Face-to-Face (F2F) courses.
- OO students' research project bibliographies contained less authoritative sources than those of F2F students.

I wondered if there might be a connection.

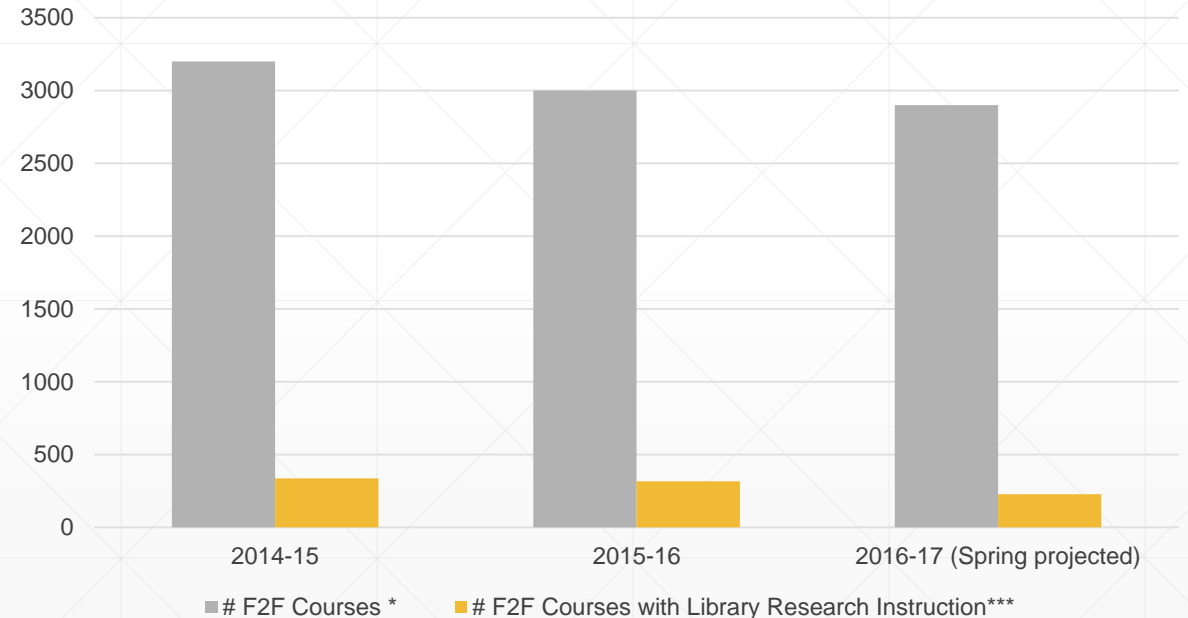
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# PSU Online-Only vs. Face-to-Face Courses

## PSU OO Courses and Library Instruction



## PSU F2F Courses and Library Instruction



\*Source: Office of the Registrar DataMASTER Report

\*\*Source: In-person interviews with PSU librarians

\*\*\*PSU Library instruction statistics

# Specifics to Explore

Are research skills being taught in OO courses?

If so, who is teaching them?

What does this instruction look like?

Does it differ in rigor, breadth or effect from the informal and formal instruction F2F students' experience?

How do we make it a more comparable experience?

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# Asking to Collaborate

Given that PSU has no admissions requirements with respect to writing or research experience...

Given that teaching faculty often express the wish that students arrived knowing how to perform research so faculty could focus on teaching discipline topics...

Given librarian's intuition that no research instruction = students using less authoritative sources...

Proposed that scaffolding research skills across the curriculum would give instructor

- less research-instruction work at end of term (crunch time).
  - more authoritative sources in student bibliographies.
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# Methods

- Scaffold different types of instruction into different terms of the same online course
    - 4 sections of ANTH 366 Archaeology of Mesoamerica
    - 4 sections of ANTH 368 Oceania Prehistory
    - ANTH 366 & 368 involve 2 reading assignments and a final research project
    - Courses are asynchronous
    - Courses via D2L
  - Compare final project citations and bibliographies
-



# Methods

## scaffolding specifics

Spring 2016	Fall 2016	Winter 2017	Spring 2017	Fall 2017	Fall 2017
Taught as usual 366 & 368	Minor scaffolding 366 & 368	Intensive scaffolding 366	Intensive scaffolding 368	Experiments in sustainable scaffolding 366	Experiments in sustainable scaffolding 368
Reading assignment 1 <b>Direct link</b> to reading	Reading assignment 1 <ul style="list-style-type: none"> <li>• <b>Citation only</b> for reading</li> <li>• <b>Find more recent article</b></li> </ul>	Reading assignment 1 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>Required to ask librarian</b> a question (email/ D2L)</li> </ul>	Reading assignment 1 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>Required to ask librarian</b> a question (email/ D2L)</li> </ul>	Reading assignment 1 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>Required group video conference (via D2L) with librarian</b></li> </ul>	Reading assignment 1 <ul style="list-style-type: none"> <li>• citation only for reading</li> <li>• Find more recent article</li> <li>• <b>DLOs &amp; graded quiz</b></li> <li>• <b>No librarian</b></li> </ul>
Reading assignment 2 <b>Direct link</b> to reading	Reading assignment 2 <ul style="list-style-type: none"> <li>• <b>Citation only</b> for reading</li> <li>• <b>Find more recent article</b></li> </ul>	Reading assignment 2 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>Required to ask librarian</b> a question (email/ D2L)</li> </ul>	Reading assignment 2 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>required to ask librarian</b> a question (email/ D2L)</li> </ul>	Reading assignment 2 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>No librarian</b></li> </ul>	Reading assignment 2 <ul style="list-style-type: none"> <li>• Citation only for reading</li> <li>• Find more recent article</li> <li>• <b>No librarian</b></li> </ul>
Final research project	<b>Preliminary bibliography</b> due before final project	Preliminary bibliography due before final project	Preliminary bibliography due before final project	Preliminary bibliography due before final project	Preliminary bibliography due before final project
No instruction session, no suggested/mandated contact with librarian	Librarian available via D2L throughout term	Librarian available by D2L or email throughout term	Librarian available by D2L or email throughout term	<b>Librarian will monitor D2L thread for each assignment and chime in</b>	<b>No librarian</b>

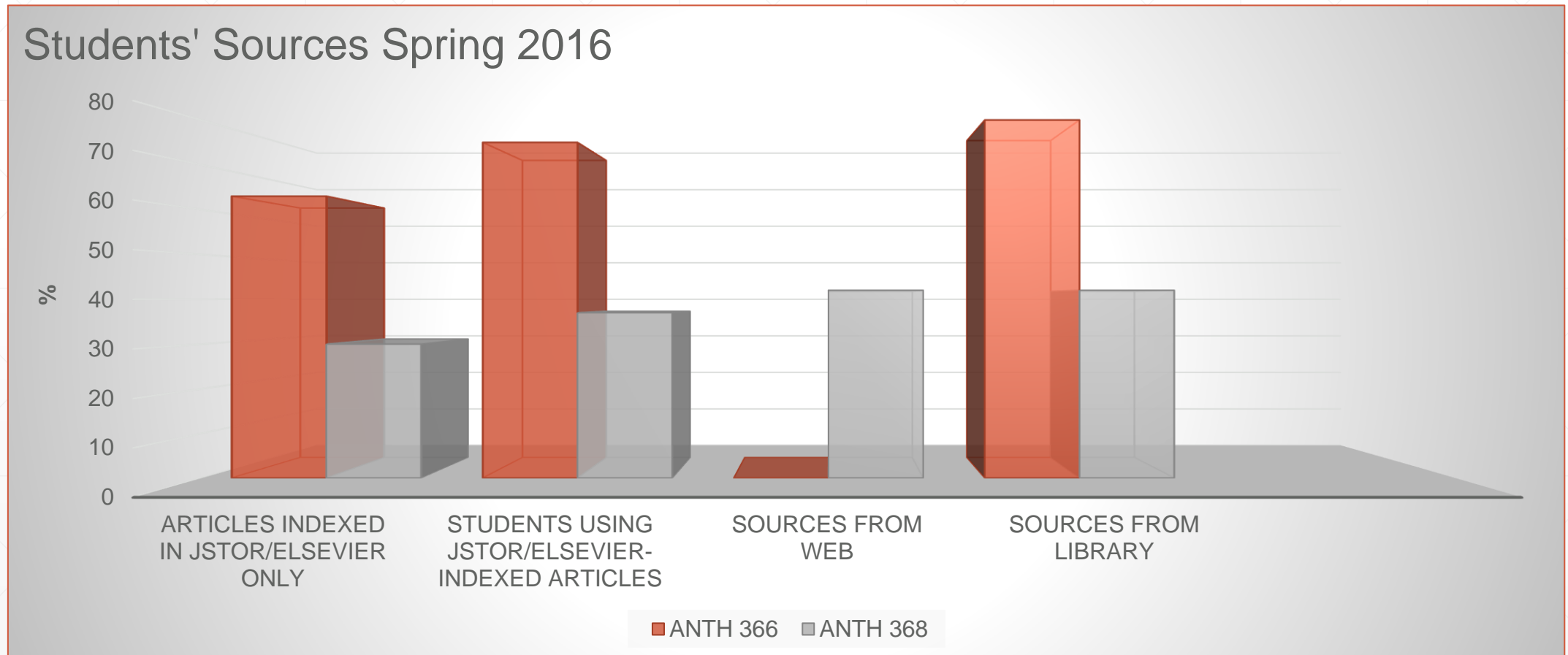
# Methods

## analysis

- Have begun coding to see what kinds of categories and connections emerge (Grounded Theory)
- Searched for each source to see if available at PSU Library or free on web
- If at Library, noted in which databases indexed
- Omitted required readings from totals

# Tentative Results—no scaffolding

- Many final project sources came from same databases as required readings (366: required readings in JSTOR only, 368: mixed Elsevier and web)



Spring 2016

- Parallel by student, too
  - 75% ANTH 366 students used JSTOR-indexed sources
  - 37% ANTH 368 students used Elsevier-indexed sources
- As with required readings, no websites in ANTH 366 bibs, but 42% in ANTH 368 bibs
  - suggests students model their search scope
- As with required readings, 80% library sources in ANTH 366 bibs, but 50% in ANTH 368 bibs
  - suggests students model their search scope
- Required readings were linked. Results suggest
  - even limited context (link) does some teaching
  - students abstract search scope from context
- What would happen if required readings were given as PDFs?

## Tentative Results

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no scaffolding

Spring 2016, cont.

- Print sources
  - ANTH 366— 20% citations
  - ANTH 368— 42% citations
- Sources not held by PSU Library
  - ANTH 366— 0% citations
  - ANTH 368 — 21% citations
- Length of bibliography
  - ANTH 366— average = 2.5 sources
  - ANTH 368— average = 3.1 sources
  - 60% students cited only 1 source
  - 1 student cited just the required reading

## Tentative Results

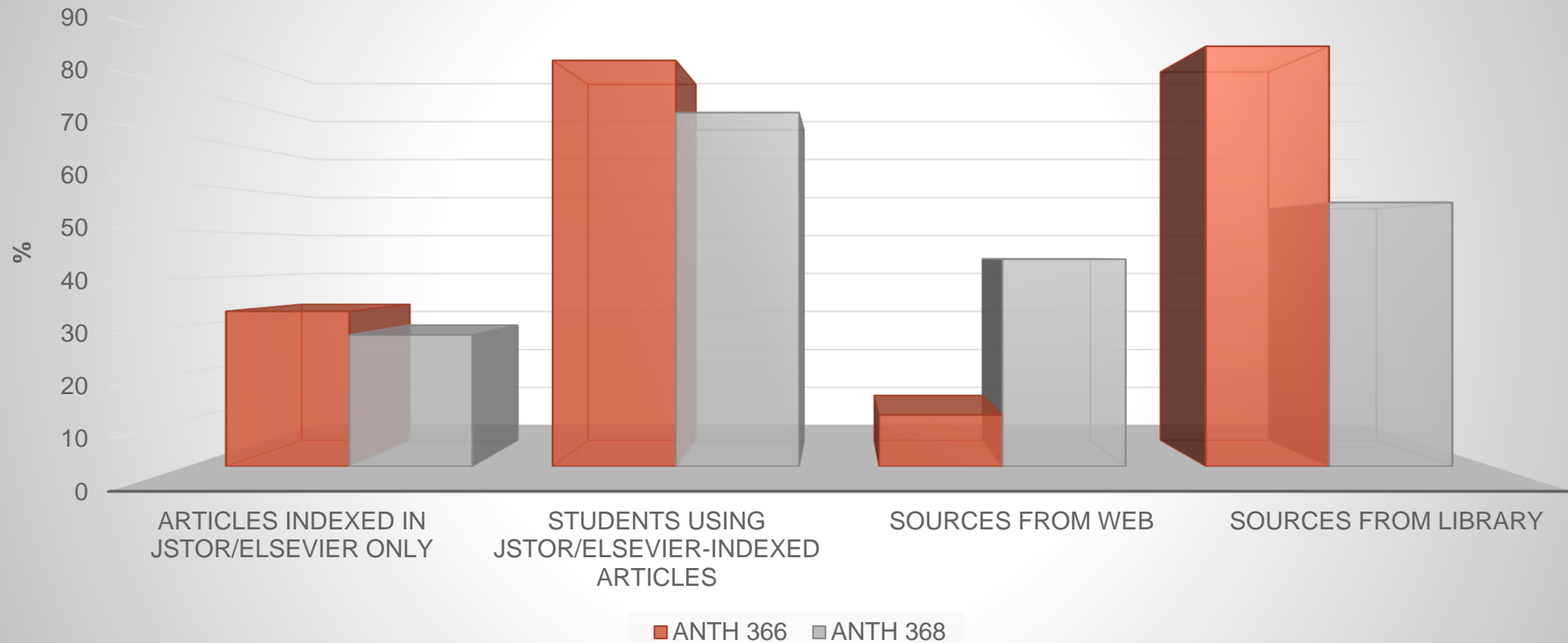
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no scaffolding

# Tentative Results—minor scaffolding

- Minor scaffolding yielded similar, somewhat higher results with respect to JSTOR, Elsevier, and web indexing/availability

Students' Sources Fall 2016



# Tentative Results

no scaffolding and minor scaffolding



Fall 2016

- Similar numbers for print sources and sources not held by the PSU Library
  
- Citing of library sources up
  - ANTH 366— 10%
  - ANTH 368— 14%
  - Citation vs. link for required reading?
  
- Differences lie primarily in length of bibliography
  - ANTH 366— average = 4.3 sources (60% longer)
  - ANTH 368— average = 5.1 sources (61% longer)
  - 0 students cited only 1 source (60% decrease)
  - 0 students cited just the required reading

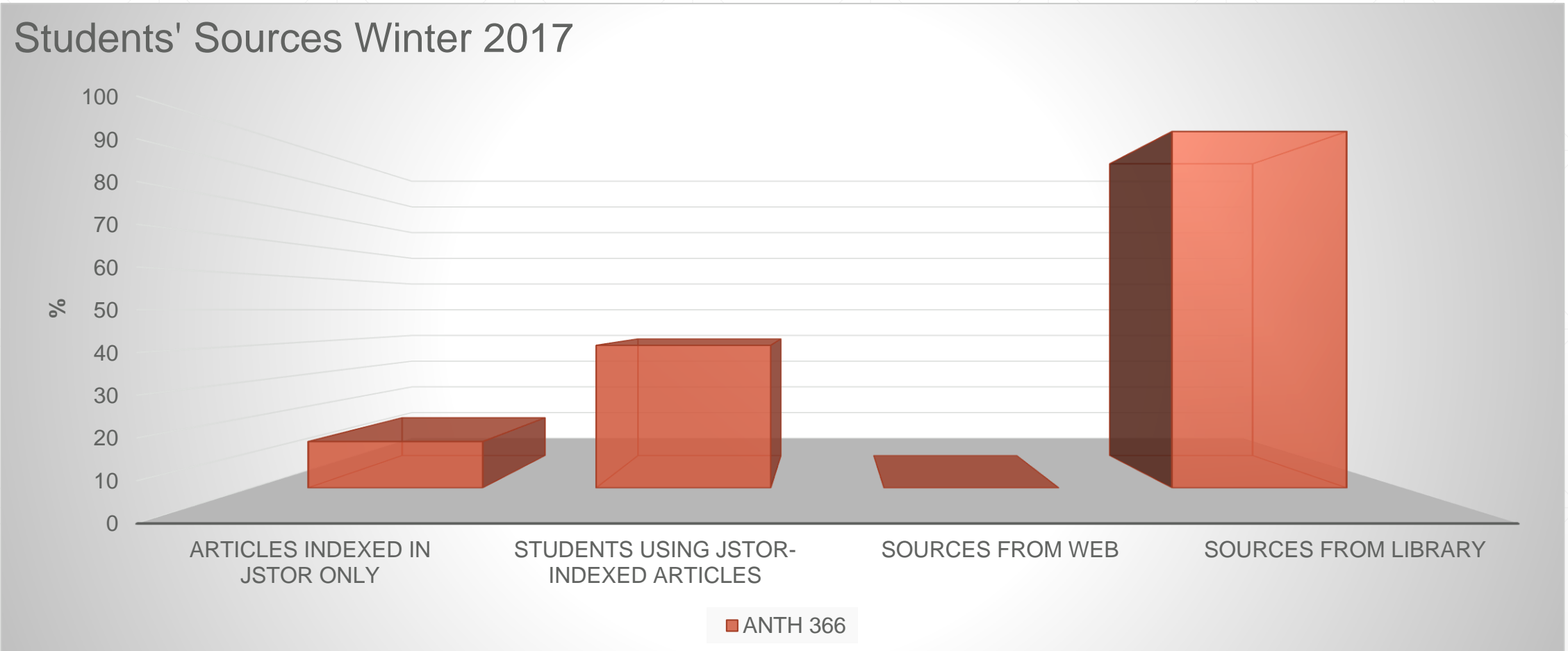
## Tentative Results

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minor scaffolding



# Tentative Results—intense scaffolding (preliminary bibliographies)



Winter 2017

- Bibliography sources indexing ≠ required readings indexing
  - Both No Scaffolding & Minor Scaffolding
    - 20% ANTH 366
    - 20% ANTH 368
  - Intense Scaffolding
    - 30% ANTH 366
    - TBD ANTH 368
  
- Taught broader search scope
  - Students' sources from broader range of databases
  - Students potentially more comfortable using library
    - 100% library sources
    - 100% available at PSU Library
  
- Preliminary bibliographies average 3.6 sources

Tentative Results

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intense scaffolding

Winter 2017, cont.

- Instructor's experience was very different
  - Significantly fewer how-to-research questions
  - Better sources on preliminary bibliography
- Librarian's experience was very different
  - Many more questions
  - Many similar questions
  - Not sustainable
- Students' research was very different
  - Process
  - Product

Tentative Results

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intense scaffolding

# Tentative Overall Findings

goal: explore online-only students' research process

anticipated results: a series of refined questions

In OO courses, sustained, constructive information literacy instruction works.

## **Questions:**

- Is this instruction happening?
- When it is, is it librarians who are doing it?
- If not, what are the implications?

Students model search scope based on context.

## **Questions:**

- What does this modelling involve?
  - How does modelling change when instructors provide students PDFs vs. links vs. citations?
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# Tentative Overall Findings

goal: explore online-only students' research process

anticipated results: a series of refined questions

OO courses present same-old and new challenges:

Similar to F2F:

- Instructor-mandated participation increases student participation.
- Participation improves results.
- Parameters of librarian involvement are often determined by instructor.

Asynchronous necessitates different means of providing sustainable instruction.

## **Questions**

- What is more and less effective among the sustainable options?
-

# Tentative Overall Findings

goal: explore online-only students' research process

anticipated results: a series of refined questions

## Questions, cont.

- What constitutes “instruction?”
  - Instruction in F2F happens informally for students encountering the bricks and mortar library. How do OO students encounter the library? Do they?
  - How does this OO informal instruction compare to the experience of F2F students in terms of rigor, breadth, and effect?
  - How effective are digital learning objects compared to F2F library research instruction?
  - If the avatar of a librarian is 1,000 little pieces, how should we assemble them?
-

# Next Steps

- Spring Term 2017: ANTH 368—Intense Scaffolding
  - Fall Term 2017: Experiments in Sustainable Scaffolding
    - ANTH 366—Embedded Light
      - Small group instruction via D2L
      - Librarian involved in students' D2L assignment discussion thread
    - ANTH 368—DLOs Only
      - Required video tutorials
      - Tutorials point to LibGuides
      - Tutorials point to [Ask a Librarian](#) page for support
      - Quiz on tutorials (graded)
-

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Questions?



Thank you!

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