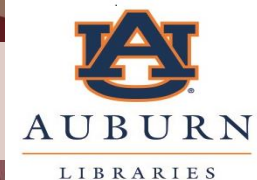




TAILORING  
BOOT CAMPS  
TO  
GRADUATE STUDENT  
NEEDS

Adelia Grabowsky  
Liza Weisbrod

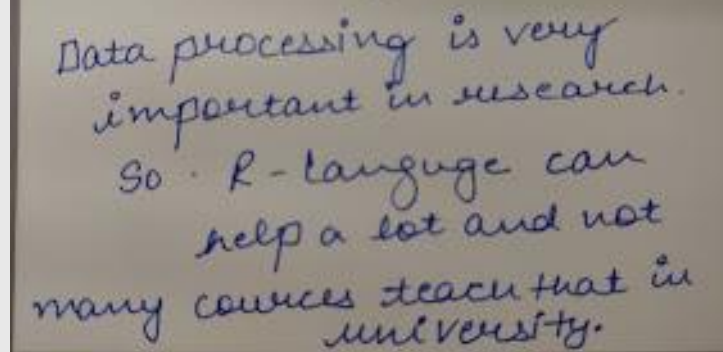


Juliet Rumble  
Tim Dodge

- Software instruction, especially statistical software
  - R, SAS, SPSS, GIS, MatLab, LaTeX
- Writing and presentation skills
  - Poster design, presentations, personal statements, lit reviews, grants, research proposals, dissertation and thesis writing
- Citation software
  - EndNote, Zotero, Mendeley
- Library skills
  - Searching, Google Scholar, using library resources
- Data management

# Graduate Student Colloquium

Suggestions



Data processing is very important in research. So R-language can help a lot and not many courses teach that in university.

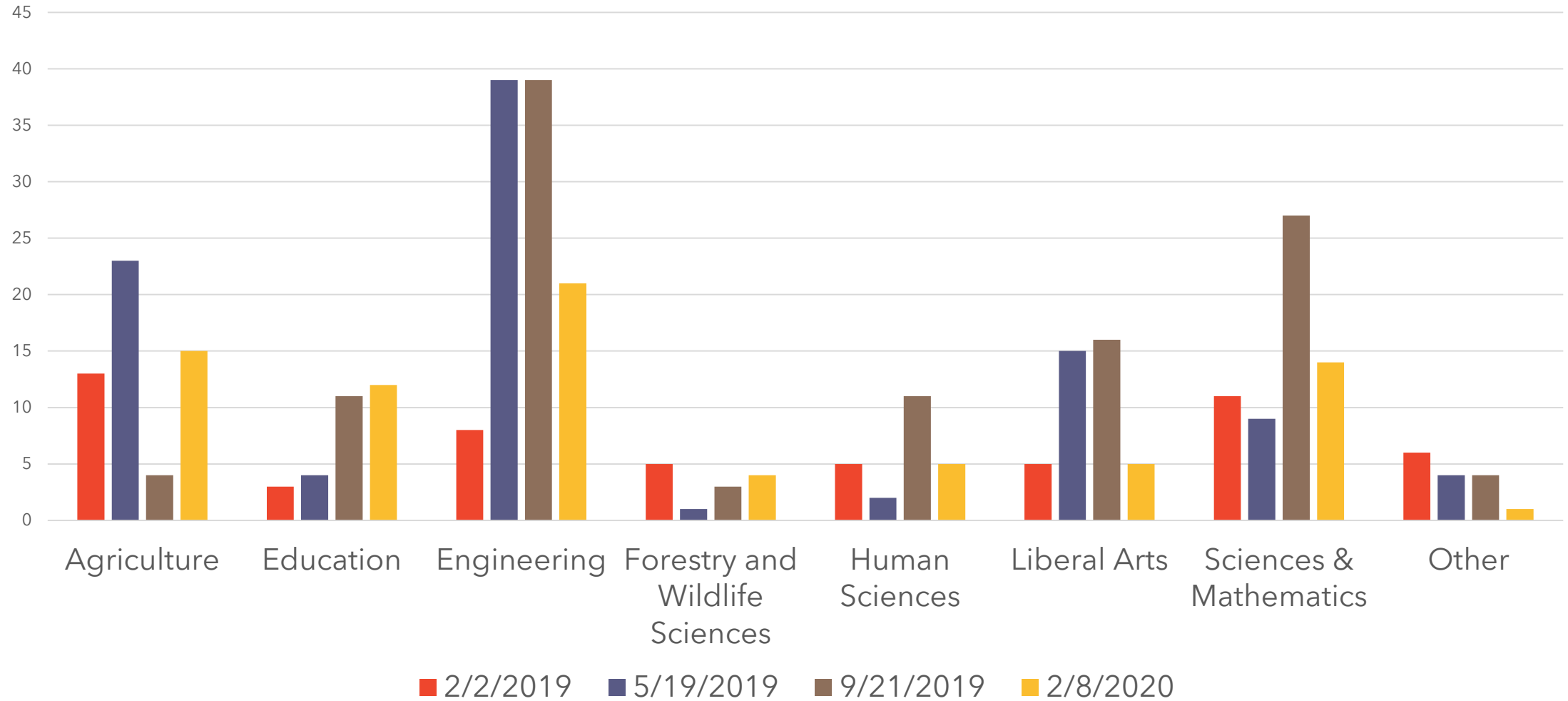


# Savvy Research Boot Camp

- First offered: February 2, 2019
- Multiple workshops in one day
- Scheduled for Saturday to ensure fewer conflicts
- Conference-style feel

# Demographics

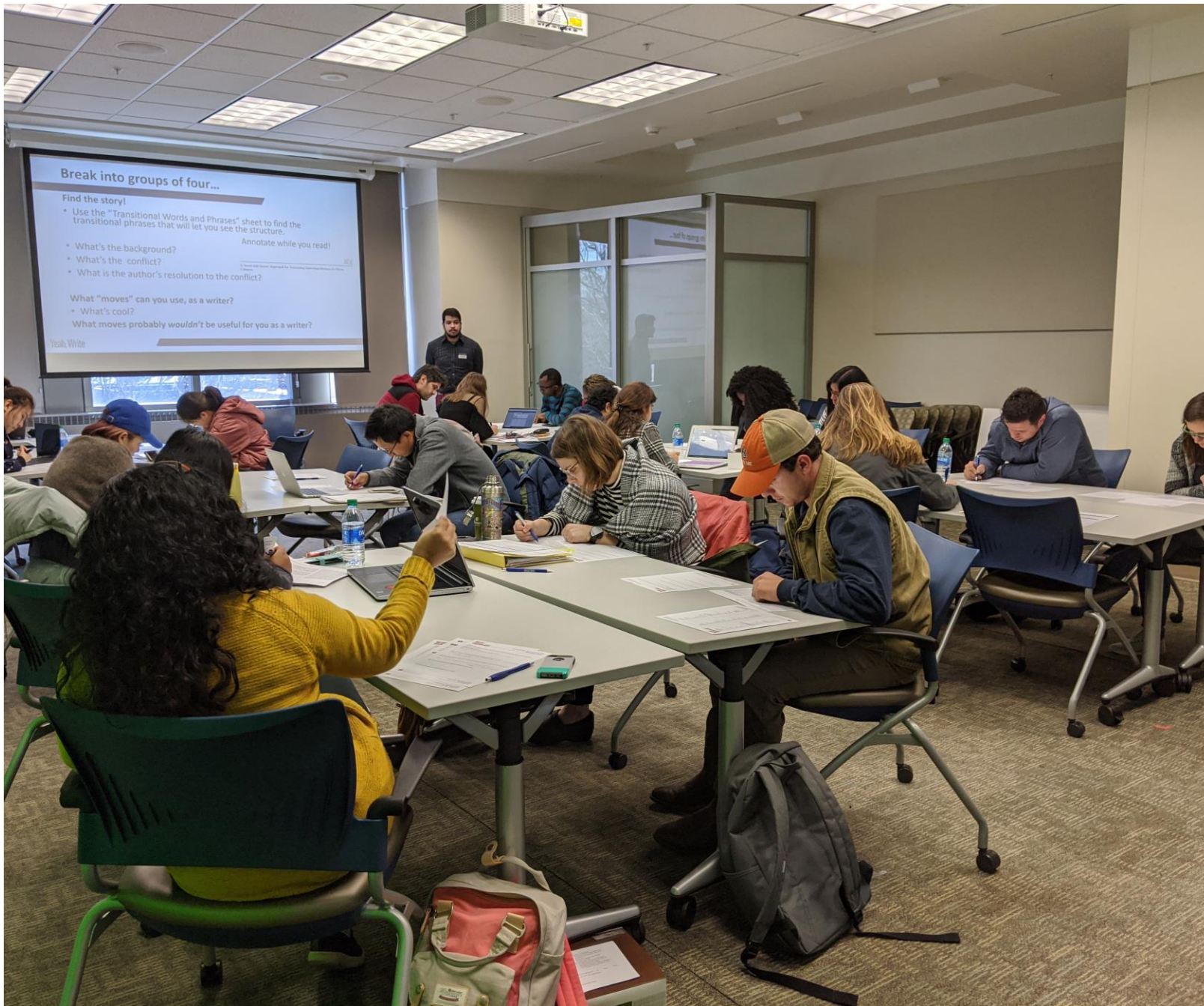
## Attendance by College



# Feedback Forms

- 9 questions (both closed and open-ended)
  - additional question added to 2/8/2020 version
- Participants could complete a paper or electronic version
- Responses to open-ended questions were coded and analyzed to identify themes





To what extent do you feel you learned from the Savvy Researcher Boot Camp workshops?

0 ←————→ 6

mean range

2/2/2019 4.97 1 to 6

5/18/2019 4.53 1 to 6

9/21/2019 5.04 2 to 6

2/8/2020 4.95 1 to 6

# WHAT WAS THE MOST USEFUL PART OF BOOT CAMP?



2/2/2019

more accurate descriptions  
 more time for certain workshops  
**More specific/advanced/subject info**  
 more authentic/hands-one/practical  
 more resources  
 schedule  
 More camps/workshops

5/18/2019

more time for certain workshops  
**More camps/workshops**  
 more authentic/hands-one/practical  
**More specific/advanced/subject info**  
 more organized practical instruction  
 coffee lunch  
 online options longer camp  
 specialized writing help

## How can we improve Boot Camp?

9/21/2019

more interaction  
 schedule  
 More specific/advanced/subject info  
**More camps/workshops**  
 more accurate descriptions  
 more time for certain workshops  
 time with librarians  
 more authentic/hands-one/practical

2/8/2020

**lunch speaker**  
**more accurate descriptions**  
 more advertising  
**More specific/advanced/subject info**  
 more time for certain workshops  
**More camps/workshops**



| Overall Theme  | #    | Subthemes          | #  |
|----------------|------|--------------------|----|
| <b>Writing</b> | N=39 |                    |    |
|                |      | Thesis/papers      | 13 |
|                |      | Literature Reviews | 7  |
|                |      | Publishing         | 5  |
|                |      | Dissertation Help  | 4  |
|                |      | Citation workshop  | 2  |
|                |      | Zotero             | 2  |
|                |      | Proposals          | 2  |
|                |      | Technical          | 2  |
|                |      | Plagiarism         | 1  |
|                |      | Grammar            | 1  |

**What other workshop topics should be offered?**

| Overall Theme   | #    | Subthemes        | #  |
|-----------------|------|------------------|----|
| <b>Software</b> | N=31 |                  |    |
|                 |      | R                | 12 |
|                 |      | SAS              | 5  |
|                 |      | Excel            | 3  |
|                 |      | Statistics       | 2  |
|                 |      | Meta Analysis    | 2  |
|                 |      | GIS              | 1  |
|                 |      | CitHub           | 1  |
|                 |      | MatLab           | 1  |
|                 |      | SigmaPlot        | 1  |
|                 |      | Technology Tools | 1  |
|                 |      | Supercomputer    | 1  |
|                 |      | Computer skills  | 1  |

**What other workshop topics should be offered?**

| Overall Theme   | #    | Subthemes                                | # |
|-----------------|------|--|---|
| <b>Research</b> | N=26 |  |   |
|                 |      | How to read a scholarly/research article | 6 |
|                 |      | Experimental analysis/design             | 5 |
|                 |      | Data organization/management             | 5 |
|                 |      | Searching                                | 3 |
|                 |      | Cloud/online storage                     | 3 |
|                 |      | Time/project management                  | 2 |
|                 |      | Google scholar                           | 1 |
|                 |      | Balance                                  | 1 |

| Overall Theme     | #    | Subthemes                   | # |
|-------------------|------|-----------------------------|---|
| <b>Presenting</b> | N=13 |                             |   |
|                   |      | Presentation help           | 6 |
|                   |      | Posters                     | 3 |
|                   |      | Adobe (including Photoshop) | 3 |
|                   |      | Video editing               | 1 |
| <b>Funding</b>    | N=4  |                             |   |
|                   |      | Grant writing               | 3 |
|                   |      | Funding for non-science     | 1 |



**What other workshop topics should be offered?**

**Overall Theme**

**#**

**Subthemes**

**#**

**Basics N=3**

Research for beginners 1

Research for returners 1

Intro to librarians 1

**Networking N=2**

Networking 1

Networking for introverts 1

**Miscellaneous N=3**

How to find a job 1

Teaching help 1

Mental health resources 1



# Focus Groups

- To gather more in-depth information
- Used a semi-structured interview protocol with 6 open-ended prompts
- Conversations were recorded, transcribed, coded and analyzed to develop themes from responses
- 3 groups with a total of 5 participants
  - 3 women, 2 men
  - 3 from College of Education, 2 from College of Engineering
  - 3 doctoral students, 2 master's students



ALL  
STUDENTS

## Research Skills

**"I thought that this was just my own problem,** so, you know, I didn't realize that it is a challenge that almost all the students, most of the students [have]."  
(11/1/2019, lines 253-262)

"I honestly thought **because I came from a different culture and, you know, I'm also older than most of the students and** I thought most of the students had learned these skills in high school, or as undergraduates, and **I came from a very different background, it was just my problem, really.**" (11/1/2019, lines 296-301)

"A lot of graduate students finish their coursework, but then ... when they come to their research, to writing it, that's where the big bump ... comes in, and they really cannot take it over that hurdle ... **Students do not have the skills to do the research** ... They do not have those skills, undergraduates, they do not totally, completely learn that when they come into the graduate program and they're not really prepared for that." (11/1/19, lines 280-284, & 287-291)



Communicating  
Their Research

**"To own it, to find my voice.** I call it finding my voice and owning the knowledge. The more I can talk capably and intelligently and independently about the topic." (9/27/2019, lines 417-419)

"For me, **writing is painful.**" (11/5/19, line 85)

"It's always good to show some of your data in a, like **a graphic thing instead of putting some meaningless numbers** .... I'm not very experienced in this way. You know, you write the paper, but **you couldn't copy the paper into the presentation.**" (11/5/19, lines 320-323)

## Time Management and Organization

“When I have my resources, **how do I organize them** ... If I have these rules and resources, how do I cite, how do I manage them?”  
(11/1/19, lines 397-398 & 401-403)

“I think the most challenging for ... the graduate students is to know **exactly what [they] have to do first, second, organize their ideas, to start their research.**” (11/1/19, lines 91-94)



"If you don't have a consultant sometime with a **high experience in research**, he's so nice, he tries to help me all the time, but sometimes it's because he don't have skills with more high level." (11/1/19, lines 346-350)

"You don't have the academic support for the graduate students here, **but for the undergraduates.**" (11/1/19, lines 1060-1062)

## Research Support

"I needed more help with the research and the undergraduate consultants **were not able to help me because they had no clue.**" (11/1/19, lines 592-594)

## A Solitary Journey

“Only I realized that ... with graduate students, it’s a lot of problems because **it’s like a very solitary journey** of doing your research, really, and writing it, and finding your resources.” (11/1/19, lines 293-296)

“Yeah, you know, unfortunately in graduate school, **you’re working alone, always**. The only time you’re coming out of your shell is for your thesis, your proposal, so it’s like another atmosphere, another life....” (11/5/19, lines 307-309)

## Intimidation Factor

“Coming to the library is like going to the gym, where you have all this equipment. And it’s so overwhelming and intimidating that **you do not know how to use it and you’re embarrassed to ask**. Most of the students are embarrassed to ask, really.” (11/1/19, lines 312-318)



# OLDER STUDENTS

2 older students, both doctoral, both from College of Education

## Technology

"I think I'm just a very non-traditional student ... because I **came back after some 30 years** to finish up and continue my education and **my biggest challenge was the technology** really, because when I did my master's ... I would take books off of the library shelf, use them, and then put them back and there was no Internet ... so for me that was **my biggest challenge, was how to use the library.**" (11/1/19, lines 142-151)

"Really, at that time, **all I knew about computers was how to write an email** and copy and paste and that's all I knew of how to use a computer and it was really, **really a huge learning curve** to master all of that, it really is. You know, in the browser, the databases, all of those things, **even the terminology was so unfamiliar.**" (11/1/19, lines 166-171)

"I mentioned in one of our sessions, I don't get the login thing, the passwords and logins. I don't know how many passwords. I can't find the same thing twice. I know **I've got a folder somewhere that has hundreds of articles that I have no idea where it went.**" (9/27/19, lines 604-608)

## Strategies

“And so **certain kinds of strategies that were less complicated in a less digital environment have become more challenging** because of the digital environment.” (9/27/19, lines 236-238)

“[T]here’s **no equivalent to the note card strategy.**” (9/27/2019, lines 247-248)

“I always print the margins larger and then I can make my comments or build my connections to the other things that are on my mind. **I don’t have a digital way of doing that.** So it’s all by hand and then I’ve got to go digital.” (9/27/19, lines 330-333)

## Experience

**"I'm a different kind of student than undergrad** and they're very geared to the undergraduate population. My age, my experience, my understanding of learning and even just **the understanding I've gained from just living it.**" (9/27/2019, lines 499-503)

"And I tell you it's often **you get that look from people like why don't you get it, are you just kind of stupid.** And I'm like no, I'm not. I just, I think differently ... you get past a certain age ... **you develop a sense of inadequacy or shame.** So even ... getting support ... from a reference librarian ... I don't want to tell them my whole story, but I need people to understand. **I have a different context.**" (9/27/2019, lines 537-547)



# INTERNATIONAL STUDENTS

4 international students from Brazil, Iran, Nigeria, & Pakistan

2 doctoral & 2 master's, 2 from College of Engineering & 2 from College of Education



## Language

"I have a problem with my skills to communicate, **because I'm learning English and sometime I don't feel comfortable with the language.**"  
(11/1/2019, lines 1226-1231)

## Grammar

**"I personally would like to know more about the softwares for grammar specifically. After a while, I learned about Grammarly .... I'm not alone. We have many graduate student, many international students who struggling with English ... introducing some grammar ... software."** (11/5/2019, lines 151-158)

## Differences in libraries

"I learned ... the university library resources have already been paid for. I can access journals for free.... **[I]n my undergrad, I couldn't access journals, good journals.** I couldn't get any papers for my senior report." (11/5/2019, lines 86-88)

## Differences in support services

"[B]ecause I study in another country, my undergraduate, but everything that I learn here is new for me. **Everything that I learn about the academic is new.**" (11/1/2019, lines 971-975)

## Support is wonderful

“And I really want everybody to enjoy these moments here in learning and use the support because **the support is wonderful. I don’t have this support in my country.**” (11/1/2019, lines 1220-1223)

“I say, Mama, **the library is open 24 hours. It's incredible** for us.” (11/1/2019, lines 1253-1254)

**“I need help, and someone will help me.”**  
(11/1/2019, lines 1242)

## But there are problems

“Yeah, I think ... library, uh, it’s big, and, uh, lots of different resources. **And it’s kind of intimidating.** Plenty of resources.” (11/5/2019, lines 469-470)

“There **seems to be that gap** between the students not knowing what is expected of them or **who to turn to ask questions, especially when it comes to the research.**” (11/1/2019, lines 259-262)

## What does it mean?

"This semester, I say ... I will go to see what that is, what's happening, **but it's not clear for me**, not clear for me that it's helping, you know ... I think you have to **communicate more clear** for the students, **especially the international students.**" (11/1/2019, lines 1093-1095 & 1097-1098)

"I stay here all the time, and I read, ah, the Writing Center, and I **ask, what does it mean?** I ask it by myself, but when I study ESL programs, I had one day one appointment here and he explained about the resources." (11/1/2019, lines 1077-1081)

"**Asking this colleague, asking that colleague.** So yeah—the short answer is asking my colleagues and **sometimes just searching online.**" (11/5/2019, lines 75-76)

## I didn't know

**"I stay here one year**, but they are some information that you send for me now that **I never hear about.**" (11/1/2019, lines 1134-1136)

**"[T]he take home from the workshop was library databases. I didn't know it existed."**  
(11/5/2019, lines 216-217)

"I had a lot of problem to find ... how can I cite my paper? ...[H]ow can I borrow the book from library? ... [I]n the past, I had a very difficulty to find a way to .... How to go and get the interloan from the library.... **I didn't even know that there is something existed** that I can go and ask library to bring book from other libraries. And of course the softwares for citations.... I don't know even if you had any workshops three years ago for these EndNote or Zotero.... **I didn't know anything about the resources in Auburn University.**" (11/5/2019, lines 53-60)

**"Engineering Librarian?** ... I heard about him on the Boot Camp day." (11/5/2019, lines 442-447)

## Solutions

“[W]hen they start the semester, I don’t know, **organize a workshop for the graduate students to explain about the resources.**” (11/1/2019, lines 993-998)

“I really **like the PowerPoint because has the pictures.**” (11/1/2019, line 1140)

“**[I]f you talk with the students when they arrive** ... I suppose that students will use it more here.” (11/1/2019, lines 1162-1165)



# TAKEAWAYS



- Deep penetration of digital technologies into all aspects of research lifecycle
  - Implications for scope of support services
- Communication skills are highly valued by graduate students
  - Intellectual fluency – finding your voice
  - Writing skills
  - Creating effective multimedia presentations
- Point of need services are key for grad students' compressed timelines
- Challenges associated with addressing student requests for “advanced” assistance:
  - Information needs of grad students are highly specific and individualized
  - BUT grad students appear to favor advanced workshops over individual research consultations



# BOOT CAMP IMPLEMENTATION STRATEGIES

# Workshop Design

- Solicit graduate student input about their research needs
- Link workshop content to stages of the research lifecycle
- Clearly communicate workshop format and learning outcomes
  - Hands-on practice? Discussion? Lightning session?
- Offer a mix of theory- and tool-based sessions
- Keep it fresh! Try out new offerings

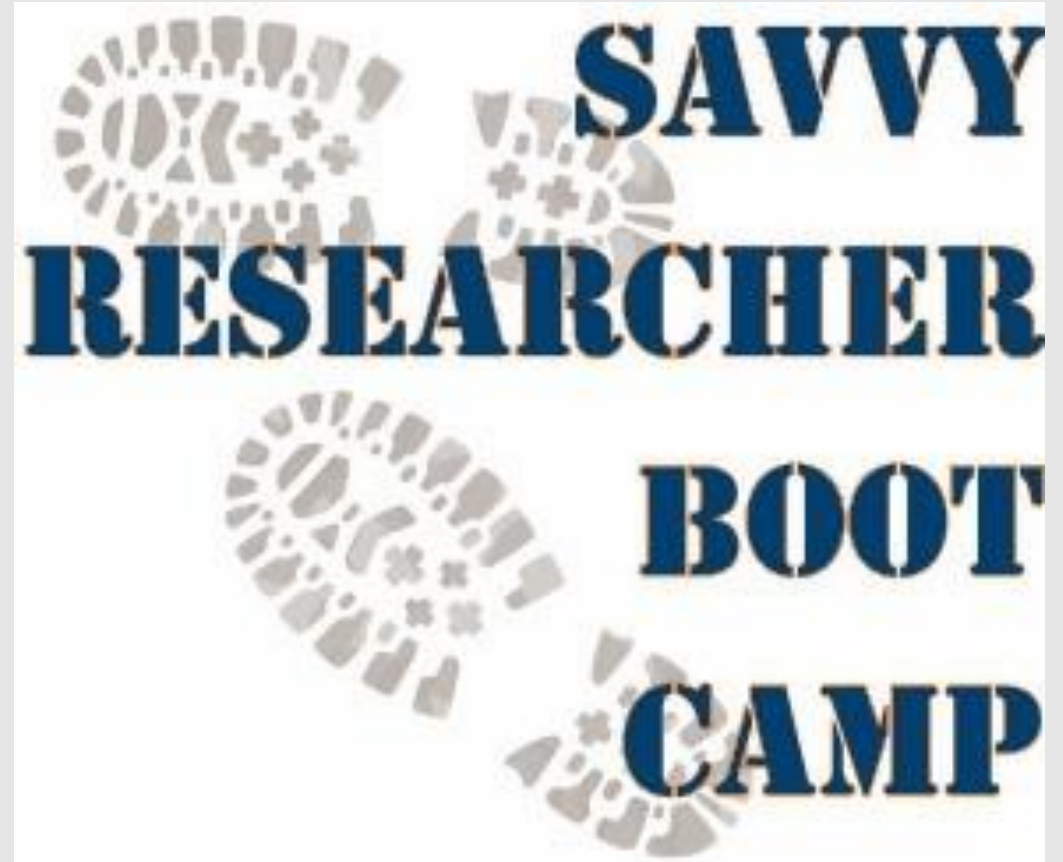
# Campus Partners

- Support can come in many forms:
  - Expertise
  - Cost share
  - Promotion
- And from many sources:
  - Graduate School
  - Writing Center
  - Teaching & Learning Center
  - Office of Institutional Research
  - Grant Proposal Support Office
  - Campus faculty & staff with relevant expertise



# Promotion

- Direct push marketing
  - Email listservs, grad student newsletter
- Enlist assistance from graduate students' academic circle
  - Graduate program officers rule!
- Direct, in-person outreach
  - Graduate orientations, colloquia, etc.
  - Graduate student council
  - Graduate student advisory groups
- Create press kit
  - Branding, news releases, social media



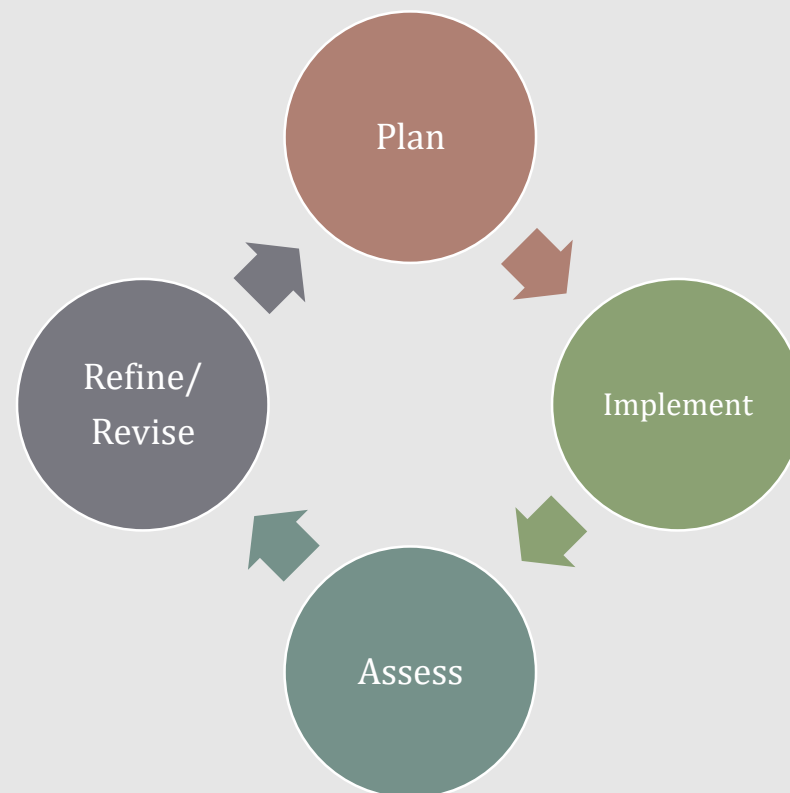
# Logistics

- Boot Camp registration:
  - Email reminders, waitlisting, reporting features
  - AU uses LibCal
  - Overbook by about 25% for most sessions
- Facilities needs:
  - Wayfinding signage
  - Lab/classroom software & tech support
- Share stats & demographic data with administration & partners
- Mini-conference format:
  - Lunch, snacks, library swag, etc.



# Assessment

- Brief survey
  - Post-Boot Camp email reminder
- Print & online (Qualtrics) versions offered
- Limited number of open-ended questions
  - How can we improve? Workshop suggestions?
- Original questions retained for consistency & longitudinal analysis
- Data collected has prompted new questions
  - MA or PhD student? International?





# Questions?

## Please contact us:

Adelia Grabowsky  
[abg0011@auburn.edu](mailto:abg0011@auburn.edu)

Juliet Rumble  
[rumblijt@auburn.edu](mailto:rumblijt@auburn.edu)

Liza Weisbrod  
[weisbel@auburn.edu](mailto:weisbel@auburn.edu)

Tim Dodge  
[dodgeti@auburn.edu](mailto:dodgeti@auburn.edu)