Mixing in New Colors:
Using a Train-the-Trainer Model to Build an Information Literacy Program

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What We Are Covering Today

- Project background
- TTT model for BIO 155
- Implementation
- Assessment
- Evolution
- What We Learned

Train-the-trainer

- Training others to teach a given subject
- Staple in Education, Military, Healthcare , Agriculture

Underutilized tool in libraries…

Train-the-trainer

- Training others to teach a given subject
- Staple in Education, Military, Healthcare , Agriculture

Have any of you used this model before?

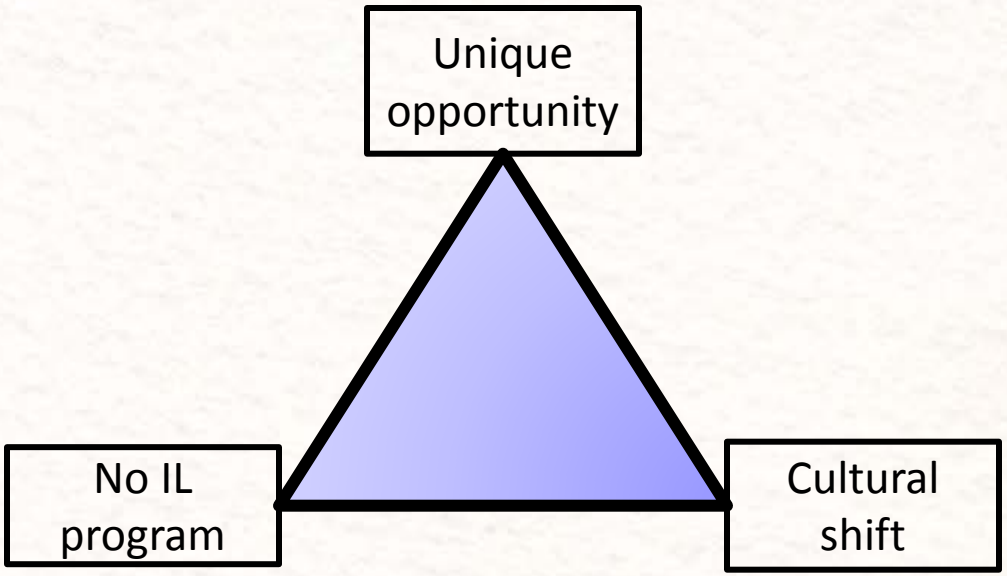
Background

Our Initial Information Literacy Team

Current Participants

Why Biology?

UNIVERSITY OF KENTUCKY
COLLEGE OF ARTS & SCIENCES
DEPARTMENT OF BIOLOGY



Why BIO 155?
(Intro Lab for Biology Majors)

- Familiarity with course structure
- Reach students *early*
- Reach *lots* of students
- Point of need
- Interactive environment

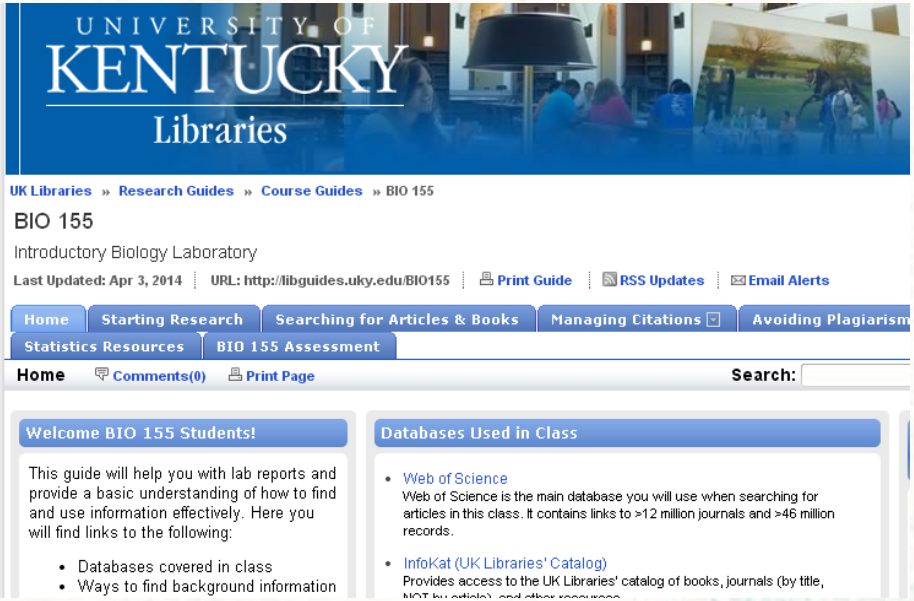
Interactive Environment: Lab 1

Interactive Environment: Lab 2

Our Goals

- Students will view librarians as resources
- Make students aware of subject-specific resources
- Build search skills

WEB OF SCIENCE™



How do we create a sustainable program?

Train-the-trainer Model

Faculty Buy-in: General

- Pick the right course
- Establish individual relationships
  - *What do your students need to know to succeed in this course and beyond?*
- Align with course goals

Faculty Buy-in: Train-the-Trainer

- Important because it takes away from
  - Class time
  - TA training time
- What helped
  - Came in with clear set of objectives
  - Showed we understood needs of the class
- Compromise/Collaborate
  - Adapted set of research tools

BIO 155 Students Reached

Semester	Number of Sections	Students per Section	Total Sessions	Approximate Total per Week
Spring 2013	17	20-30	34	500
Fall 2013	22	25-30	44	630
Spring 2014	17	25-30	34	500

Session One: 1 hour 15 minutes
Session Two: 45 minutes

*All first class sessions held in one week
*All second class sessions held in a different week

Personnel

- BIO 155 Course Coordinator
- BIO 155 Teaching Assistants
- Library personnel
- SLIS Graduate Students

*This is just one possibility

Train-the-Trainer Model

Introduce the content

Model 1st section

Assist 2nd session

Advantages

- Students are familiar with TA
- TA will continue to be a resource for the students
- TAs learn too

Observations

- Each TA has their own individual teaching style and comfort level with new material
- Train-the-Trainer model is a great way to get feedback from TAs
- **Flexibility is key to teaching in a laboratory**

Implementation

Course Guide (libguides.uky.edu/BIO155)

BIO 155

Introductory Biology Laboratory

Welcome BIO 155 Students!

This guide will help you with lab reports and provide a basic understanding of how to find and use information effectively. Here you will find links to the following:

- Databases covered in class
- Ways to find background information
- Research tips
- Appropriate citation format for your lab reports
- Plagiarism policies and tutorials

Please feel free to contact me or any other personnel at the Agricultural Information Center or Young Library if you have any questions. Good luck this semester!

Ask-a-Librarian

Not finding what you want? Call, email, chat with or visit a UK Reference Librarian who will be glad to help you.

Ask a Librarian

Databases Used in Class

- Web of Science
  Web of Science is the main database you will use when searching for articles in this class. It contains links to >12 million journals and >46 million records.
- InfoKat (UK Libraries' Catalog)
  Provides access to the UK Libraries' catalog of books, journals (by title, NOT by article), and other resources.
- PsycINFO (EBSCOhost)
  Use this database to find the article on territoriality in field crickets by Alexander that you will need for class.

Other Science Resources

- BIOSIS Previews and Biological Abstracts/RRM
- Google Scholar (UK)
- PubMed (University of Kentucky)

Essential Links

- Agricultural Information Center
- UK Libraries
- Department of Biology

Director of Branch Libraries, Agriculture Liaison, Biology Liaison

Valerie Perry

Contact Info
Agricultural Information Center
N-24 Agricultural Science Center North
Campus 0091
(859) 257-2758
(859) 323-4719 (fax)

Subject Specialties: life sciences, agriculture, biology, IACUC, animal welfare/alternatives
Send Email

Links:
Website / Blog
Profile & Guides

Active Learning

- Follow along on computers
- Brainstorm
- Live search demonstrations
- In-class exercises
  - Formative assessment
  - Made students turn something in for a grade

In-Class Brainstorming

How does climate change affect bird behavior?

How does climate change affect bird behavior?

Start this poll to accept responses

"warming, bird behavior, climate change, migration patterns, bird flight patterns, bird nesting, global warming"
3 months ago

"birds, global warming, migration"
3 months ago

"climate change birds behavior"
3 months ago

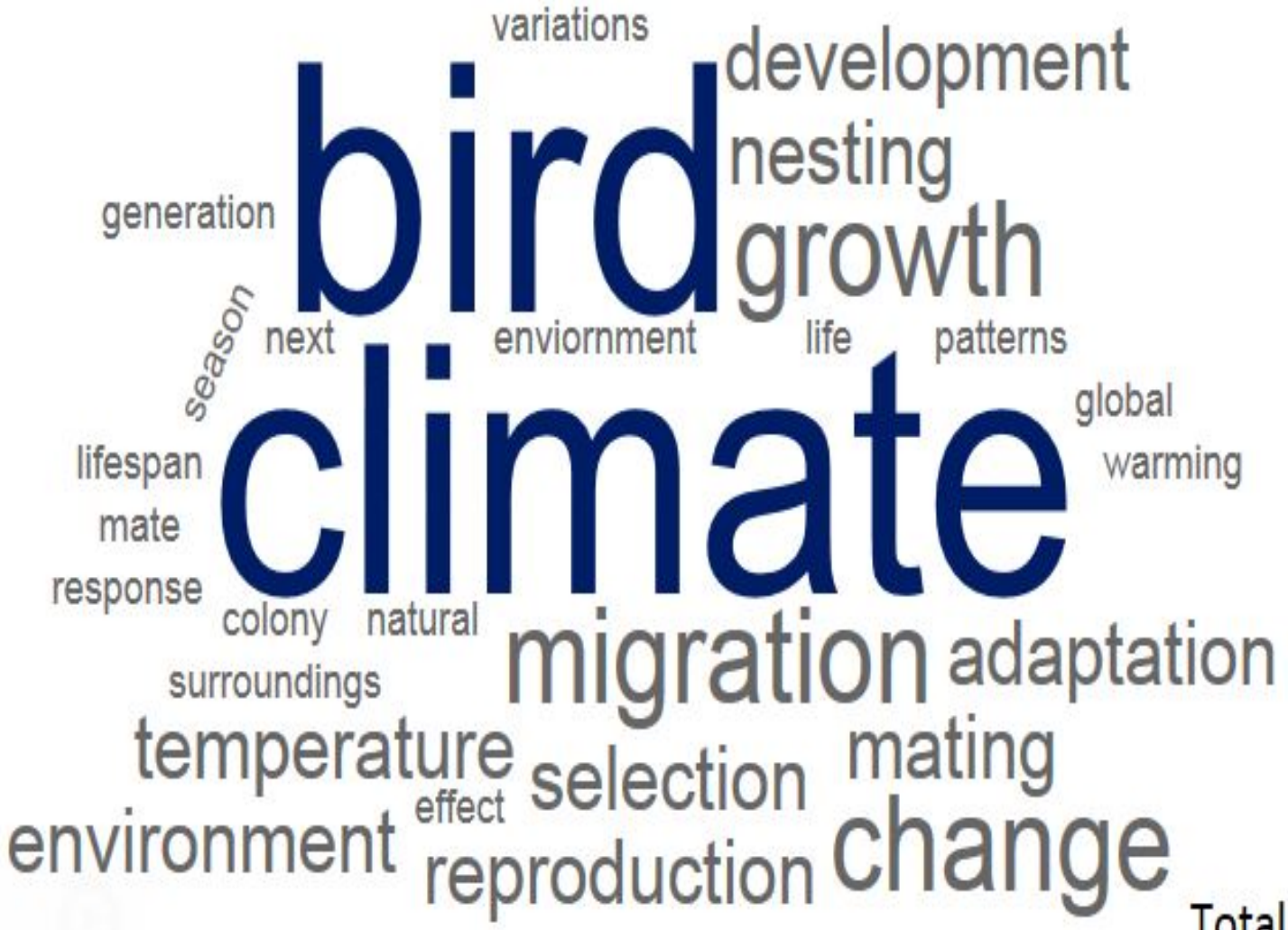
"bird, behavior, activity, climate, seasons, weather, global warming"
3 months ago

"birds, climate, weather, changes, behavior, actions, climate change, migration, global warming"
3 months ago

"reproduction, feeding, food sources, environment, weather, migrating, appearance change, evolution"
3 months ago

Keywords: how does climate change affect bird behavior?

You may respond at **PollEv.com** when the presenter pushes this poll



Total Results: 40

Brainstorm and develop a list of keywords

How does climate change affect bird behavior?

Climate, environment, bird behavior, migration, flight, nutrition, reproduction

Climate change
Bird behavior
feeding habits
bird habits
bird growth and development

bird
environment
behavior
climate

climate and bird and behavior

Migration
North
After Birth

Migration
Reproduction
Survival
Birds and climate
Bird feeding
Brain function in birds
Birds going south
Seasons affect birds

birds
habitat
behaviors
migration
regions

Enviroment
migration
fly in groups
seasons
effects
cold
warm
participation

bird
climate
behavior
migration
feeding habits
weather
reproduction
movement
flight patterns
life cycle
nesting

climate change
birds
behavior
migration
environment changes

climate change
bird behavior
weather
migration

climate change
migration
bird
behavior
flight patterns
temperature

Climate change
bird behavior
migration
flight patterns
reproduction
habitat

bird
environment
climate
migration patters
time of reproduction
diet

climate change
bird behavior
migration
weather
feeding habits
reproduction

season change

Climate Change
Bird Behavior
Reproduction Effects
Migration Patterns
Food Sources

Weather change
environment differences
bird behavior
climate
migration

Climate
bird
behavior
nest making
reproduction
migration
feeding

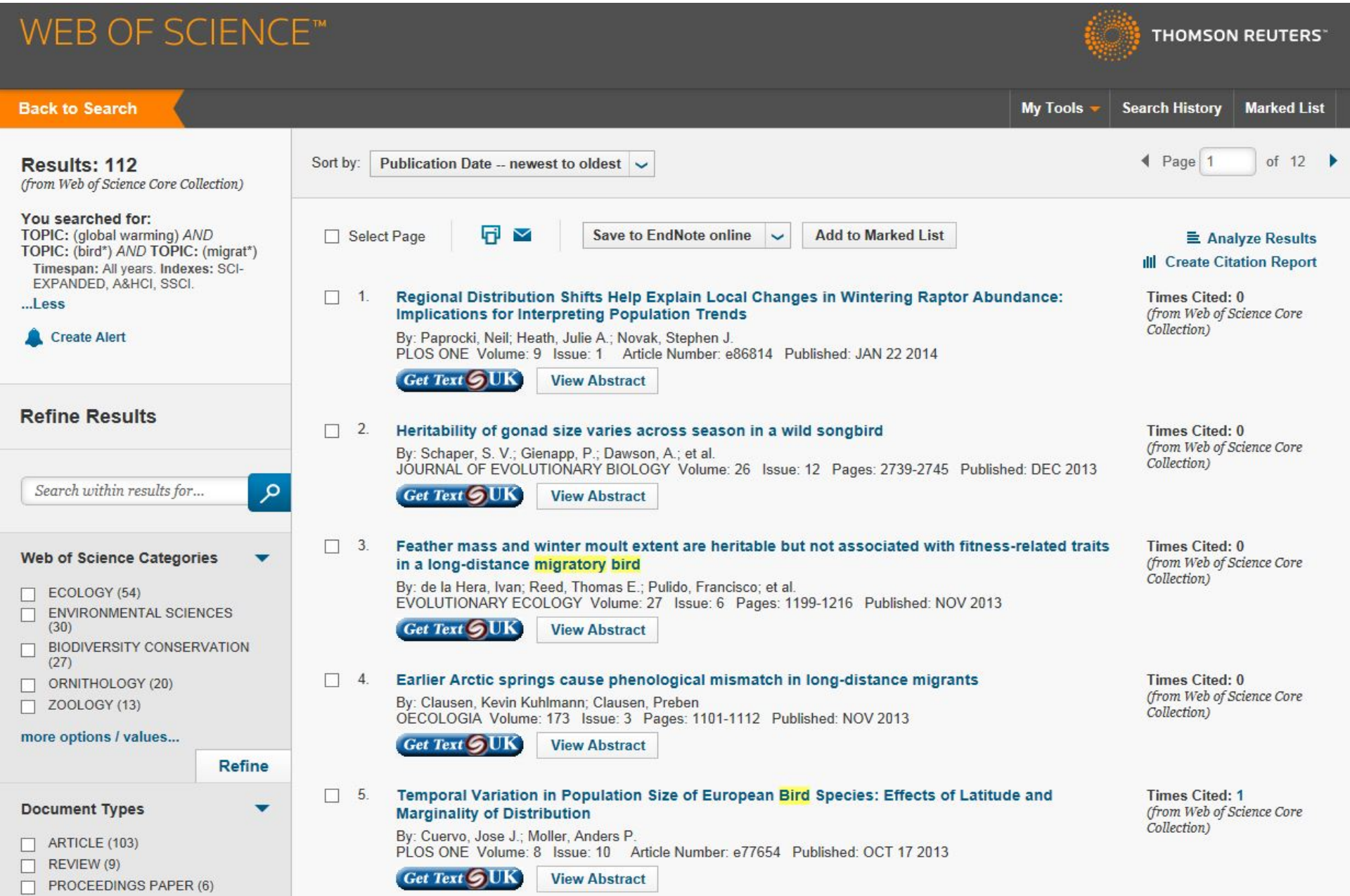
bird
climate change
reproduction

climate
change
bird
behavior
flight patterns
migration
reproduction

climate
birds
migration patterns
animal behavior
weather
avian behavior

climate change
effect on bird behavior
bird flight pattern
migration changes in birds
changes in bird reproductive behaviors
changes in bird feeding behaviors

Live Search Demonstrations



In-class Exercise

Searching in Web of Science

Imagine you want to review scientific literature in order to better understand the **residency effects on aggression in the house cricket**. In this exercise, you will use Web of Science to search for articles on this topic.

Part 1: Starting your search

Brainstorm for **at least 5** keywords or phrases related to the topic described above. If you need some inspiration, try one of the websites listed under Background Information on the Starting Research page of the BIO 155 Course Guide (libguides.uky.edu/BIO155) – these are *not* primary sources or peer-reviewed articles, but they can help you generate ideas. Your textbook is also a good place to look.

From the list above, which three words or phrases do you think best describe your topic?

Student Feedback

“I learned how to use web of science and how to broaden and narrow my search”

“I learned how to effectively use keywords when looking for relevant articles”

“I learned that Web of Sciences exists, and can definitely see it helping in the future when I need a scientific, peer-reviewed, accredited source”

Assessment

UK Information Literacy Learning Outcomes

1. Students will be able to define an information need in order to construct an effective research strategy.
2. *Students will be able to construct an effective research strategy in order to identify a variety of relevant information sources.*
3. Students will be able to identify and select relevant information sources in order to analyze and interpret the information.
4. Students will be able to analyze and interpret information in order to evaluate, synthesize, and draw conclusions.

http://libguides.uky.edu/infolit

Student Artifact – Google Docs Survey

Think about your cricket lab and the Alexander article you read for class. Your literature search question for today is:

What are the causes of cricket fighting?

Use this question to complete the survey below.

What are the major concepts or ideas of the literature search question above?*

Please list at least 5 additional related keywords that could be used to locate information on your literature search question. *
These keywords could be synonyms or related concepts.

Create search combinations of keywords that could be entered into a library database, such as Web of Science.*
Consider using search techniques such as ANDs, ORs, and wildcards (truncation) to improve your combinations.

Scoring Rubric

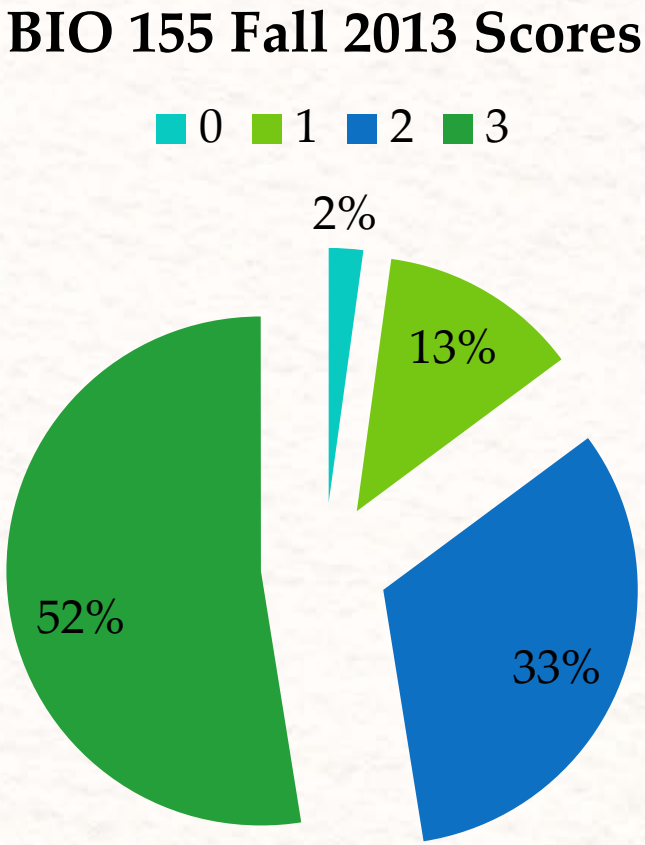
Learning Outcome 2.1: Constructs Effective Research Strategy /Constructs Search Terms and Phrases

2 Constructs effective research strategy	0 Emerging	1 Developing	2 Proficient	3 Distinguished
2.1 Constructs search terms and phrases	Uses everyday language to describe key concepts.	Uses everyday language to describe key concepts. Lists synonyms to expand key concepts.	Uses everyday language and synonyms to describe key concepts. Translates everyday language and synonyms into appropriate subject terms for key concepts.	Uses everyday language and synonyms to describe key concepts. Translates everyday language and synonyms into appropriate subject terms for key concepts. Combines key concepts to formulate a search strategy.

Scoring Sheet Example

What is your year in school?	What are the major concepts or ideas of the research question above?	Please list at least 5 additional related keywords that could be used to locate information on your research question.	Create search combinations of keywords that could be entered into a library database, such as Web of Science.	Score
Junior (60 - 89 hours)	The major concept was to determine why crickets fight. The idea was to experimentally create a scenario where the crickets might be expected to fight.	attack brawl wrangle assault exchange blows	Crickets and fighting Fighting or attacking Crickets and attacking	0
Freshman (1-29 hours)	For crickets that fight there can be multiple reasons for fighting. It can be for dominance in a territory, or for the competition for a mate.	Cricket House cricket Territory Female Fighting	Fighting and crickets Territory or female	1
Freshman (1-29 hours)	Cricket aggression is being addressed directly by this question, but the larger topics being addressed here are aggression in animals in general, interactions between member of the same species (and sex) in animals, and the effects of territoriality on behavior.	Aggression, Territoriality, Competition, Insects, Intruders	(Aggress* OR Territor* OR Compet* OR Intrude*) AND Insect*	2
Freshman (1-29 hours)	The major concepts or ideas of the research question above include the causes or "instigators" for crickets, aggressive behavior, and cricket fighting behavior. Furthermore, the research question is attempting to investigate what triggers - if any - make crickets demonstrate aggressive behavior.	Reasons Triggers Aggression Behavior Field Cricket Male	Field Cricket AND behavior Field Cricket AND aggress* Aggressive behavior in crickets Male OR triggers AND cricket Fight* AND behavior of crickets	3
Freshman (1-29	In the research question above, the major concept is determining why crickets fight. This is a broad question so it can be directed in numerous ways in order to find an answer. According to the Alexander article, aggressive behavior in male crickets is a behavioral strategy and when the male crickets fought, there was a clear winner. Considering these aspects from the Alexander article and research question	1. Aggressive Behavior 2. Male Crickets 3. Female Crickets 4. Fighting Techniques 5. Motivating Factors/Triggers 6. Dominance 7. Behavioral Strategies	Causes (Cause*) AND Cricket Fighting Crickets AND Aggressive Behavior (Behav*) Fighting Behavior AND Female Crickets Fighting Behavior AND Male Crickets Fighting Tactics OR Fighting Techniques AND Crickets Motivating Factors AND Crickets AND Fighting (Fight*) Crickets AND Fighting (Fight*) AND Strategies (Strateg*) AND Behavior	

Scoring Results



0 – Emerging

1 – Developing

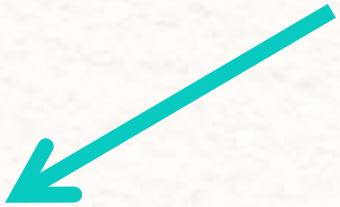
2 – Proficient

3 - Distinguished

EVOLUTION

Train-the-Trainer: Round Two

Skip the in class modeling step



Active Learning for TAs

Assist in both sections

Advantages of 2nd Method

- TA help cover more courses/sections with limited personnel
- TAs reflect on information literacy in their own work
- TAs become library advocates and better users
- TAs more engaged from beginning

Other Changes

- Simplified all materials for ease of use by TAs
- Requested inclusion in syllabus
- Removed PubMed from session content
- Gathered feedback from TAs through survey

What We Learned

What We Learned

- Reach lots of students
  - 1,650 students over 3 semesters!
- Reduce library personnel workload
- Scheduling challenges
  - Covered 34-44 sessions in two weeks each semester
- Consistency is important
- Be open to compromise!

What We Learned

- Lab environment +
- Great way for LIS students to gain experience
- Effective way to broaden our audience
- Overall positive experience

What we learned: TTT

- Effective train-the-trainer method
- Backup time investment
- TAs reflect more deeply on info lit in their own work

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Recruit new advocates!

Adaptations

- Other librarians
  - *even non-instruction librarians
- Backup TAs
- No backup
- Lab settings

Future directions

- Pre-assessment of undergrads
- Pre- and post-assessment of TAs
- Share model with other UK librarians
  - Mentioned in SACS report
  - Expand to Auburn University

"Paint the Future," Andrew Judd

How have you or might you apply the train-the-trainer model? Please share with us!

Send a text to 37607 and type 395186 and your response
OR
Submit 395186 and your response to **pollev.com**

Feel free to contact us for more information:

- Patricia Hartman patricia.hartman@auburn.edu
- Valerie Perry vperry@uky.edu
- Renae Newhouse renae.newhouse@uky.edu