

The purpose of this presentation is to **inspire extraordinary YOU** to deliver an **extraordinary presentation** at the Undergraduate Scholarly Showcase.

If we see people crying and making job offers on the floor, we'll know it worked.

**Megan Lamkin, PhD**  
Assistant Professor Educator &  
Program Director for Undergraduate  
Research  
Experience-based Learning & Career  
Education

**UNDERGRADUATE  
SCHOLARLY  
SHOWCASE**

Hundreds of students from across the university share their findings, revelations, inventions, and interpretations of the world we live in.

**APRIL 16, 2018**

**Schedule**

10:00	Opening Remarks
10:15	Poster Session I
11:45	Lunch
Noon	Six-Slide Stories
	Postcard Presentations
1:15	Midday Reflection
1:30	Poster Session II
3:00	Closing Remarks

**Tangeman University Center**  
10am - 3pm  
<http://tinyurl.com/scholarlyshowcase>

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**UC**  
University of  
**CINCINNATI** | EXPERIENCE-BASED LEARNING AND CAREER EDUCATION

# Step 1: Choose your presentation format

## **Six-slide Story:**

Six slides in six minutes + 2 minutes for Q&A.

**Location:** TUC 4<sup>th</sup> floor Classrooms

## **Postcard Presentation:**

Single slide with 4-minute elevator pitch + 1 question. Have ~50 “postcards” available to distribute (half- or full-sheet paper is fine)

**Location:** TUC Cinema

## **Poster: Max size 3' wide x 4' tall**

Single slide enlarged and printed on poster paper. You stand at your poster for 90 minutes while people come by to talk to you.

**Location:** TUC Great Hall & Atrium



# Step 2: Know how your presentation will be evaluated

The purpose of evaluation is to provide feedback that you can use to inform your next presentation.

As you advance academically and/or professionally, you will find that there is always a “next presentation”, i.e., an opportunity to disseminate information or otherwise communicate your work.

Please reference the project **evaluation form** so that you know what judges are looking for and have every opportunity to hit the mark.

## 2018 UNDERGRADUATE SCHOLARLY SHOWCASE PROJECT EVALUATION

PROJECT NUMBER: \_\_\_\_\_ TITLE: \_\_\_\_\_

The main outcome was (circle all that apply): New Information Technical Innovation Creative Innovation

My level of expertise in this area is: (1) novice/beginner (2) intermediate to advanced  
(3) expert (e.g., advanced degree &/or actively engaged in the field)

Comments		SUBTOTAL: _____ /20				
FIRST GLANCE	Informative title	1	2	3	4	5
	Aesthetically appealing	1	2	3	4	5
	Not too wordy	1	2	3	4	5
	Images/Figures informative	1	2	3	4	5
Comments		SUBTOTAL: _____ /20				
WITHIN 3 MINUTES	I understand the main question, problem, or need	1	2	3	4	5
	I understand why this work is important	1	2	3	4	5
	Use of scholarly literature bolsters rationale	1	2	3	4	5
	An appropriate strategy was used to answer the question/solve the problem/address the need	1	2	3	4	5
Comments		SUBTOTAL: _____ /20				
BY THE END	The quality of work achieved by the student(s) is high	1	2	3	4	5
	The implication of this work is of value to society	1	2	3	4	5
	The presenter was engaging and I enjoyed the presentation	1	2	3	4	5
Comments		SUBTOTAL: _____ /15				
GRAND TOTAL: _____ /55						

## Step 3: Organize your content

### **Include the following:**

Informative title

Big picture question

Specific project/question

Relevance/importance to the discipline or society

What you did (in general terms/1-2 statements)

What you found

What it means

What comes next

Note for post card presenters: Speak this content; use very few words on your slide

*Remember to bring 15+ copies of your résumé if you are seeking employment opportunities*

# Step 4: Develop your presentation

3-5 hours/week for 4-6 weeks, or until you are satisfied



Consider the tips on the following slides

Attend Open Feedback Sessions (*optional*):  
5-6:30 pm  
731 Steger Student Life Center

March 5  
March 7  
March 21  
March 28

Arrive by 6 to guarantee feedback



## What you will find on remaining pages:

Postcard Presenter Tips (1 page)

Six-Slide Story Presenter Tips (1 page)

Poster Presenter Tips (23 pages)

***Why 23 pages of tips for poster presenters?***

**It's time for revolution.**

No more walls of words, people.

No more paragraphs.

No more jargon, no more acronyms.

**Draw us in** with an informative title and aesthetic appeal.

**Keep our attention** by telling us what you set out to do and why it matters.

**Then inspire us** by sharing what you did, and what you found or created as a result of your scholarly endeavor.

*The bulk of content is aimed at poster presenters, but is relevant for all*

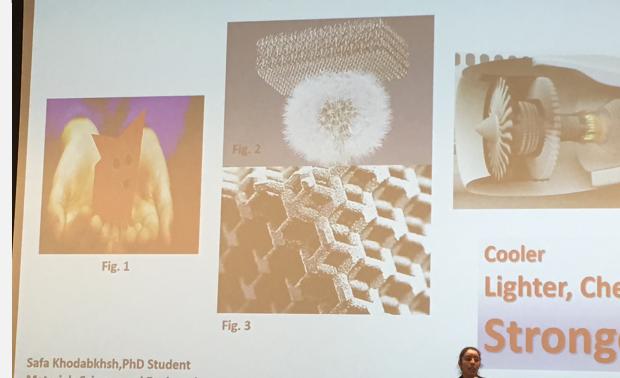
# Postcard Presentations

Single slide + 4-minute elevator pitch + 1 Question

## Use very few words on slide

Audience wants to listen, not read

Title + 5-6 words is adequate



## Use relevant, high quality images

1024x768 pixels for full-sized images; half that (512x384) for images that take up half the screen, etc.

Note: projectors are concerned with straight pixels not dpi (dots per square inch)

## Print ~30-50 postcards for guests

Include title, contact information

May print on half-sheet or full-sheets of paper

Which do you like best? I like the 3 on the right. Each has a clear focal point and weight of components is well-balanced.

# **Six-Slide Story**

**6 slides in six min.**  
**2 min. Q&A**



## **Content**

Informative • Concise

Outline of information  
Visual aid for presentation  
Springboard for discussion

## **Format**

Crisp background  
Legible font  
Relevant graphics

## **6 X 6 Rule**

6 or fewer words per line  
6 or fewer lines per slide

## **Engage the Audience**

Eye contact  
Project voice  
Refer to slides

## **Citations & Acknowledgments**

Cite in the text  
Full citation at end  
Thank people & sources of support

## OK, poster presenters: you're up.

A judge or visitor can be expected to spend ~10 minutes at your poster.

In the past, students have been trained to think of their posters as “mini-manuscripts”, but those days are done. The truth is, no one is going to read all of that, especially when there are so many cool things to see and learn in such a short time.



## Application of DNA Barcoding to the Monitoring of Bushmeat

Yang Gao, Mentor: Dr. Sergios Kolokotronis  
Sackler Institute of Comparative Genomics, American Museum of Natural History, NY



### Abstract

Present trends in the rate of wildlife harvest point to an increase in the volume of bushmeat extraction. A significant portion of the economic worth of the bushmeat and fisheries trade amounts to \$5.8m. Its illegal nature makes it hard to monitor it and to assess its impact on the health of wildlife populations. National and international legal frameworks have been put in place to monitor the wildlife trade, but they rely on accurate species identification that is difficult to obtain from morphological inspection of degraded and processed products. The use of a standardized mitochondrial DNA gene (*COX1*) is becoming routine in species identification in ecological and forensic contexts. Building on recent work from our group on the applicability of this barcoding gene as a practical metric for the detection of the species of origin of bushmeat, I tested a method based on even shorter gene fragments (350bp) across representatives from four taxonomic groups (bovids, cercopithecoid primates, alligators, and crocodiles). This method was successful with fresh tissue samples collected in the field and specimens from the AMNH Vertebrate Zoology Collections, and proved to be more challenging in the case of heavily processed products, such as leather.

### Background

The hunting of wildlife in the tropics of Asia, Africa, and Americas has historically been conducted as means of subsistence and local commercial trade. The wildlife, commonly known as bushmeat, used to be the primary source of animal protein for the locals who lived at the edge of forests where domesticated meats were not available (Fa et al. 2005). Recently, however, the rate of bushmeat harvest has increased at an alarming rate due to population growth, increased access to remote forests, more advanced hunting methods, and an increased demand of international trade (Fa et al. 2005; Albrechtson et al. 2007). The purpose of hunting and trading bushmeat has now included selling meat products, such as leather products made from crocodile skins, for profit. The increase of bushmeat hunting has resulted in the decimation of wildlife availability, and overhunting of wildlife is considered a primary reason for loss of biodiversity in many tropical regions (Fa et al. 2005). The international trade in bushmeat is estimated to be worth US \$5-15 billion per year. The value of the illegal portion of the trade is difficult to determine because of its illicit nature, but was still estimated to be US \$5-8 billion per year, which is only secondary in value to smuggling of drugs among the world's underground economies (Baker 2008).



Current regulations of wildlife trade depend on accurate identifications of distinct species or taxonomic groups. Species identifications traditionally rely on morphological characteristics, which can often be impaired due to the different types of products involved. Thus, more accurate methods of species identification are needed to improve the efforts to protect wildlife biodiversity. The use of molecular tools has been more frequently utilized to facilitate bioidentification (Waugh 2007).

The molecular tool for bioidentification is being formalized by the establishment of DNA sequence databases using a standardized gene fragment (Waugh 2007). In 2003, Herbert et al have proposed to develop a database of gene fragment of the mitochondrial gene *COX1* as “barcodes” to classify the diversity of life (Herbert et al. 2003). The properties of a DNA barcode include minimal intraspecific variation among the sequences and a great interspecific variation among them. The cytochrome c oxidase subunit 1 (*COX1*) is the catalytic subunit of cytochrome c oxidase, the terminal electron acceptor in the respiratory chain, and codes for a transmembrane structure embedded in the membranes of the mitochondrial cristae (Figure 1). Because the protein structure of *COX1* requires a high level of structural and functional constraint, variation among the gene sequences is small; however, there are sufficient variations between species (Waugh 2007). The proposed DNA barcode is a 645 basepair fragment toward the 5' end of the gene sequence. The effectiveness of *COX1* as DNA barcode has been tested in birds, mammal, fish, and groups of arthropods; its efficacy in identifying endangered species collected from wildlife trades has also been demonstrated (Waugh 2007; Eaton et al. 2009).

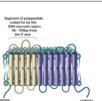


Figure 1. The predicted structure of *COX1*. The yellow portion indicates the area coded by the sequence used as the DNA barcode region (Waugh 2007).

Recent studies have also explored the potential of smaller barcodes to use on archival or heavily processed specimens that contained degraded DNA (Meunier 2008). A bioinformatics analysis was done using all *COX1* barcode sequences submitted to GenBank by 2007 to calculate the probability of having species-specific barcodes for varies size fragments. The study showed that barcodes as small as 100 bp can yield 90% success rate in species-specific identification test (Figure 2).

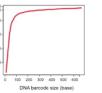


Figure 2. Graph of relationship between barcode fragment size and its success rate in species-specific identification (Meunier et al. 2008).

This project is a continuation of a study performed by Mitchell Eaton from the American Museum of Natural History to test the applicability of *COX1* barcode as a practical metric for the detection of the origin of bushmeat species, with specific emphasis on 350 bp short fragment barcodes (Eaton et al. 2009). The table below (Table 1) shows the species included in this project as well as their status given by the Convention on the International Trade of Endangered Species (CITES) and the International Union for Conservation of Nature (IUCN).

Species	Appendix I	Appendix II	IUCN Red List
Antidorcas maculata	X		Least Concern
Aligator mississippiensis		X	Least Concern
Calloctenoides annulatus	X		Least Concern
Camerun lemur	X		Least Concern
Chlorocebus aethiops		X	Least Concern
Holopelma rufum		X	Least Concern
Macacus nigrescens		X	Least Concern
Macacus sinicus		X	Least Concern
Macacus fasciatus		X	Least Concern
Macacus mulatta		X	Least Concern
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Macacus sinicus		X	Least Concern
Macacus nigrescens		X	Least Concern
Macacus fasciatus	</td		

But don't just take it from me. The [American Evaluation Association](#)

demonstrates the importance of design in generating broad interest in specialized subject matter.

I would still advocate for fewer words than what we see here (e.g., bulleted points vs paragraphs), but you get the idea.

# HOW TO DESIGN A RESEARCH POSTER

The image shows a collage of four different research posters and one presentation slide, all related to "The Role of Visual Processing Theory in Written Evaluation Communication" by Stephanie Evergreen, PhD from Western Michigan University. The posters are arranged in a grid-like fashion, with arrows pointing to specific design elements:

- Top Left:** A vertical graphic titled "POTENT PRESENTATIONS" under the "AMERICAN EVALUATION ASSOCIATION". It features a section titled "TOP TIPS TO ROCK YOUR POSTER:" with various design tips like "Graphic elements should dominate" and "ADD PHOTOS AND A COLOR SCHEME THAT RELATEDS TO THE SUBJECT".
- Top Middle:** A poster with a dark red header and a white body. It includes sections for "Background & Problem Statement", "Methodology & Design", "Findings", and "Conclusion". A yellow arrow points to the "Findings" section with the text "VISUALIZE DATA, CHUNK TEXT, AND CALL OUT KEY POINTS".
- Top Right:** Another poster with a dark red header and a white body. It includes sections for "Background & Methods", "Findings", and "Conclusions". A yellow arrow points to the "Findings" section with the text "VISUALIZE DATA, CHUNK TEXT, AND CALL OUT KEY POINTS".
- Bottom Left:** A poster with a green header and a white body. It includes sections for "Background & Design", "Analysis Procedure", and "Conclusion". A yellow arrow points to the "Analysis Procedure" section with the text "ADD PHOTOS AND A COLOR SCHEME THAT RELATEDS TO THE SUBJECT".
- Bottom Right:** A poster with a blue header and a white body. It includes sections for "Background & Problem Statement", "Findings", and "Conclusion". A yellow arrow points to the "Findings" section with the text "USE STRONG CONTRASTS TO ENSURE READERS EYE ON KEY POINTS".
- Bottom Center:** A presentation slide titled "The Role of Visual Processing Theory in Written Evaluation Communication" by "Stephanie Evergreen, PhD, Western Michigan University". It features a large image of a person holding a poster and includes sections for "Background & Problem Statement", "Findings", and "Conclusion".

**GO HERE:** [p2leva.org](http://p2leva.org)

**TWEET:** #p2leva12

Chris Metzner [chrismetzner@gmail.com](mailto:chrismetzner@gmail.com) [www.ChrisMetzner.com](http://www.ChrisMetzner.com)

Stephanie Evergreen [stephanie@eval.org](mailto:stephanie@eval.org) [sbj.leva.org](http://sbj.leva.org)

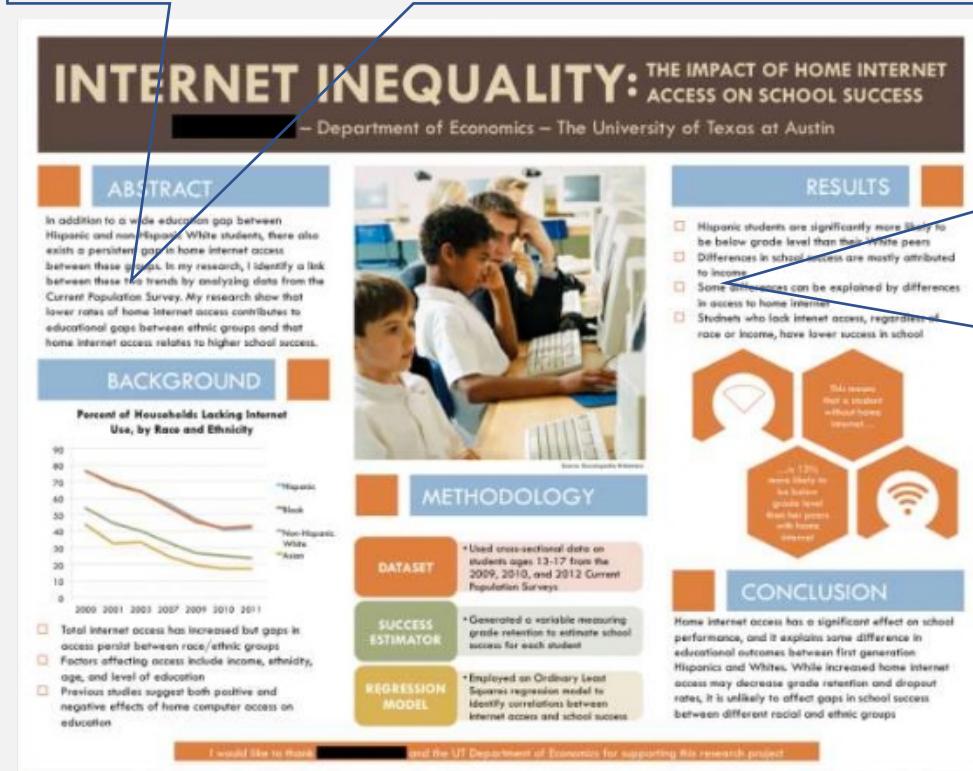
## The **trend** in poster design is **moving away** from:

Landscape orientation  
Giant posters (4' X 3' or larger)  
Long column lay-out  
2-color palette  
Words tell the story  
Paragraphs

## ...And is **moving toward**:

Portrait orientation  
Small posters (2' X 3' or 1' X 2')  
Lay-outs that break up columns  
3-color palette  
Bullet points  
Pictures & figures tell the story

Rather than including an abstract, think of your whole poster as the abstract. Use top left to tell us the big picture question/problem & why it matters.



Increase impact: make your results your focal point; put methods off to the side.

Despite current trends, landscape-oriented posters with the 3-column layout can be as effective as portrait-oriented posters (*organization & use of images/figures are key*).

# WHAT MAKES AN INFOGRAPHIC **BAD**

...& HOW TO MAKE IT BETTER

With the high demand for infographics, the same bad practices often pop up. But there is a way to make infographics better. Here are a few do's and don'ts to help you accentuate that amazing content and better understand what makes a great infographic work so well...

## COLOR



### COLOR PALETTE



rainbow palette



3-color palette

### BACKGROUND



bright colors



neutral colors

### TYPE



colors too similar



contrasting colors, dark & light

### SAMPLE



Many bright colors can strain the eyes and cause confusion when comprehending data



a contrast between the background and the content can make the content pop and easy to read

### RESOURCES FOR COLOR PALETTES

Adobe Kuler • Color Scheme Designer • colourlo.co.de

## Tips from Designers

## TYPOGRAPHY



### SELECTION

#### DIFFERENT PROPORTIONS *and stylized fonts*

too decorative type for body copy  
and not legible

the body copy is too small, is hard to read, and strenuous on the viewer's eyes

#### SIMILAR PROPORTIONS *simpler styles*

simple and clear type for paragraph text

### SIZE

clean and legible font size

### SAMPLES

#### THE ARRAY OF *different font styles*

can make the graphic too busy and hard to read

#### SIMILAR STYLED FONTS *with appropriate sizes*

can make the graphic organized and easy to read and to follow

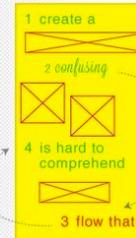
### RESOURCES FOR COMBINING FONTS

Ask H&FJ • Smashing Magazine  
TypeConnection (A Typographic Dating Game)

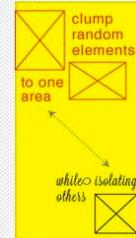
## LAYOUT



### ORDER & HIERARCHY



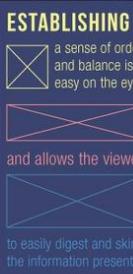
### BALANCE



### WHITE SPACE



### SAMPLE



# Alternative layout option

Here is a template developed and generously shared by Dr. Claudia Rebola, Graduate Director at the School of Design in DAAP at UC.

Ok, not a template like you just fill in the boxes, but you recreate it rather easily.

After you have your slide set up for poster-size (see last page), simply insert boxes and align them like you see here.

## TENTATIVE STATEMENT OF YOUR INTEREST AREA OR THESIS TITLE

Explanation of your general interest or thesis topic. State clearly the problem area (why is it a problem, what is your unique point of view). You can use this space to pose questions such as:

**What designers should be doing research for?**

**What tools do master of design need to prepare for leadership?**

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You can use this space to place a series of images, or use the entire space for a single image, or combination of words and images and/or even diagrams to best

support the above. If projects or parts of the thesis completed, use this space to show the work.

You should also indicate the interconnection of disciplines that builds your interest or thesis work.

**health**

**design**

**business**

## IMPACTS

Describe the relevance, significance and impact of your interest/thesis work (who benefits? What change may produce?)

## YOUR NAME/EMAIL

Brief bio about you

COMMITTEE MEMBERS (IF THESIS) OR FACULTY YOU WOULD LIKE TO INFORM YOUR WORK

Dr. Claudia Rebola  
Industrial Design  
Advisor

## NEXT STEPS

- Describe action next steps for your interest or thesis work in the form of bullet points
- Next steps
- Next steps
- Next steps

I don't have an example of a poster using that template exactly, but this looks like a modification of that version.

In my opinion, this poster could be improved by providing bullet points in the methods and figuring out a better way to visualize the results .

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## User's Expectation on the Feedback of Flexible Interaction

Daejoen, Republic of Korea

### Flexible Interaction

Flexible interaction technology is a bright technology that is expected to change user experiences (UX) in future human-computer interaction (HCI) due to its unique characteristic of flexibility and tangibility. Recent studies have mainly investigated new input methods for flexible interactions. In this study, however, we tried to figure out what feedbacks users would expect from a flexible interaction system. Our study is to investigate the total of eight basic flexible interactions through literature review and to investigate the feedback method that users want for eight interactions.

**Study Method**

Because this study targets flexible displays and devices that have not yet been developed and used, we have used design workshops as our research method to find out what users want to know about feedback. The purpose of our design workshop is to: 1) learn how users design feedback on flexible interactions, 2) identify the causes of such designs, and 3) identify design patterns of feedbacks through a comparison of result from design workshop. To achieve this goal, we recruited six participants with experience in interface and feedback design. The average age was 23 years (20-27 years, SD = 2.46); Four of them were males and two were females. All participants were Korean. In the first session of the design workshop, participants were asked to design feedback on the eight given interactions in their own way. During this session, participants designed visual, auditory, and haptic feedbacks on eight flexible interactions. To help with their feedback design, we provided A4 papers, OHP films, pens, post-its, and markers. We provided the participants with a design workshop for a total of 48 minutes, 6 minutes for each interaction. In the second phase of the design workshop, we conducted the group interview. During this group interview session, all participants shared their feedback design ideas and discussed why they design in that way.

**Experiment Result**

	A1	A2	A3	A4	A5	A6	A7	A8
P1 Visual	Observeable Center	Observeable Center	Highlight End Part	Flip over Clockwise	Highlight End Part	Bending Right while Action	Bending Right while Action	Bending Left while Action
P1 Sound	Getting High Tone	Getting Low Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Continuous Vibration	Continuous Vibration	Big Vibrating at Task Occur
P1 Haptic	Continuous Vibration while Action							
P2 Visual	Observeable Center	Observeable Center	Highlight End Part	Flip over Clockwise	Highlight End Part	Continuous Vibration	Continuous Vibration	Big Vibrating at Task Occur
P2 Sound	Getting High Tone	Getting Low Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Continuous Vibration	Continuous Vibration	Big Vibrating at Task Occur
P2 Haptic	Continuous Vibration while Action							
P3 Visual	Observeable Side	Observeable Side	Highlight Side	Observeable Hand Part	Observeable Hand Part	Observeable from Hand Part	Observeable from Hand Part	Observeable from Left Side
P3 Sound	Getting High Tone	Getting High Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Continuous Vibration	Continuous Vibration	Big Vibrating at Task Occur
P3 Haptic	Continuous Vibration while Action							
P4 Visual	Observeable Side	Observeable Center	Highlight End Part	Flip over Clockwise	Highlight End Part	Small Vibrating	Continuous Vibration	Getting High Tone
P4 Sound	Getting High Tone	Getting High Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Small Vibrating	Continuous Vibration	Sound of Shaking Paper
P4 Haptic	Continuous Vibration while Action							
P5 Visual	Observeable Side	Observeable Center	Observeable Hand Part	Observeable Hand Part	Observeable Hand Part	Observeable from Hand Part	Observeable from Hand Part	Observeable from Left Side
P5 Sound	Getting High Tone	Getting High Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Continuous Vibration	Continuous Vibration	Big Vibrating at Task Occur
P5 Haptic	Continuous Vibration while Action							
P6 Visual	Observeable Side	Observeable Center	Highlight End Part	Flip over Clockwise	Highlight End Part	Small Vibrating	Continuous Vibration	Getting High Tone
P6 Sound	Getting High Tone	Getting High Tone	Sound of Shaking Paper	Sound of Shaking Paper	Sound of Shaking Paper	Small Vibrating	Continuous Vibration	Sound of Shaking Paper
P6 Haptic	Continuous Vibration while Action							

**Insight**

**Visual Feedback**

- Users prefer to make starting point of action as a starting point of visual feedback.  
(ex. case of participants 1, 4, 5)
- Users prefer to make task part as a starting point of visual feedback.  
(ex. case of participant 2)

**Sound Feedback**

- Users expect flexible system reacts to their degree and angle of action during they interact with them.
- Users expect to hear a natural sound as a sound feedback.  
(ex. sound of breath / sound of shaking paper)

**Haptic Feedback**

- Users expect continuous haptic feedback to be provided while they are working on the system.  
(ex. case of action 1, 2, 3, 6)
- Users expect to be able to see the moment through haptic feedback, which is stronger than normal, the moment a task actually happens.  
(ex. case of action 4, 8)

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**Organization**  
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Industrial Design, KAIST  
Industrial Design, KAIST

iasdr 2017 University of CINCINNATI D|A|A|P



Next up

Examples with commentary

One of my favorites.

Boxed sections cause foreground to pop

The picture of birds (focal point) draws me in & tells me it's about birds. The title tells me there could be cool things to learn about birds.

The layout guides my eye perfectly from one section to the next in a pleasing way.

Clean figures... bullet points

Acknowledgments in logo-form to reduce words... lots of good things happening here.

Tip: showcase results more strongly by placing them (vs methods) in the focal point zone

# PERSONALITY, SEX DIFFERENCES, AND MATE CHOICE IN THE EUROPEAN SERIN

Ana V. Leitão\* & Paulo G. Mota

\*CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade de Coimbra, Departamento Ciências da Vida, Laboratório de Ecológia, Coimbra, Portugal

## INTRODUCTION

- Animals can demonstrate individual behavioural traits that are consistent over time and in different contexts, also known as personality traits (Réale et al. *Philosophical Transactions B* 2010).
- Personality has increasingly been the focus of ecological studies to understand the evolution and maintenance of these and its consequences.
- While several hypothesis have been considered, sexual selection has been scarcely studied although it is possible that it may play an important role in the origin and maintenance of personality differences (Schuett et al. *Bio Reviews* 2010).

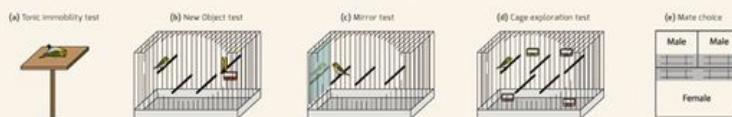


## OBJECTIVES

- Study consistent interindividual differences in behaviour in the serin (*Serinus serinus*).
- Understand how sexes differ in their behavioural traits.
- Understand how different behavioural contexts are related and differ between sexes.
- Explore a possible role of personality traits in female mate choice.

## METHODS

- Wild serins (30 males and 17 females) were captured, and maintained in an indoor aviary until the end of the experiments.
- Individuals were subjected to four behavioural tests to assess fear (a), neophobia (b), sociability (c), and exploration (d), and tested for repeatable individual differences in two rounds.
- Mate choice tests were performed in an aviary (e) with a random female and a unique combination of two males with similar colouration.



## RESULTS

### REPEATABILITY

Males and females differ in their consistency

Trait	Repeatability	
Fear	All	R=0.303 P=0.007
	Males	R=0.280 P=0.012
	Females	R=0.303 P=0.002
Neophobia	All	R=0.500 P=0.002
	Males	R=0.502 P=0.025
	Females	R=0.498 P=0.026
Sociability	All	R=0.269 P=0.006
	Males	R=0.267 P=0.017
	Females	R=0.258 P=0.019
Exploration	All	R=0.248 P=0.017
	Males	R=0.263 P=0.018
	Females	R=0.238 P=0.019

Table 1. Repetability of the different personality traits in males and females. Sample size: Total: 47; Males: 30; Females: 17

### RELATIONSHIP ACROSS BEHAVIORAL TRAITS

Females and Males differ in their behavioural syndrome



Figure 1. Sex differences observed in the repeatability of the 4 personality traits. Here we present the only significant difference for sociability.

### SEX DIFFERENCES

Males are more sociable than females ( $t = 2.017$ ,  $P = 0.050$ )

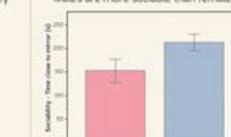


Figure 1. Sex differences observed in the repeatability of the 4 personality traits. Here we present the only significant difference for sociability.

Female number of visits to males was related to their own personality trait (sociability):  $X^2 = 10.455$ ,  $p < 0.001$

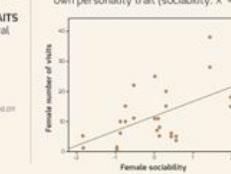


Figure 2. Relationship between female number of visits to males in the mate choice test and female sociability. The correlation analysis was performed on the female visits using the PCF of female personality as covariates. PC2 was significant and represents female sociability.

## CONCLUSIONS

- Individuals showed repeatability in the four behavioural tests.
- Males and females differed in their consistency and behavioural responses across the different tests.
- Behavioural traits were correlated, indicative of a possible behavioural syndrome, but differed between females and males: More neophobic males were also more sociable, and females that were more sociable were less fearful and marginally less explorative.
- In mate choice tests, female personality was related with its own behavioural performance.
- Our results stress the importance of looking for sex differences in personality, and for considering the influence of personality in mate choice context.

This one draws me in, but I'm not sure where to look after the bowl of soup (focal point).

Sections need subtitles and should be easier to read (less text, larger print).

3-column lay-out works for me: enlarged center column + focal-point photo + use of negative space between columns generates a pleasing layout.

The layout consists of four main sections:

- Top Left:** A black and white photograph of two men in white coats standing in front of a shop window. The shop window displays a sign that reads "ONDE RABO S'ZICHT". Below the image is a block of placeholder text.
- Top Right:** A dark header with white text:
  - "Would You Like Unions with Your Crustcumbs?"
  - "Offal Eating in James Joyce's *Ulysses*"
  - "Dr. Richard Best"
- Middle Left:** A large, dark, high-contrast portrait of James Joyce wearing a hat and glasses.
- Middle Right:** A photograph of a bowl of soup with meat and vegetables, placed on a table with other dishes.
- Bottom Left:** A black and white portrait of a woman wearing a hat.
- Bottom Right:** A small block of placeholder text.

Samples from a poster presentation in DAAP at UC:

Clean, easy to read sections with stunning graphics.

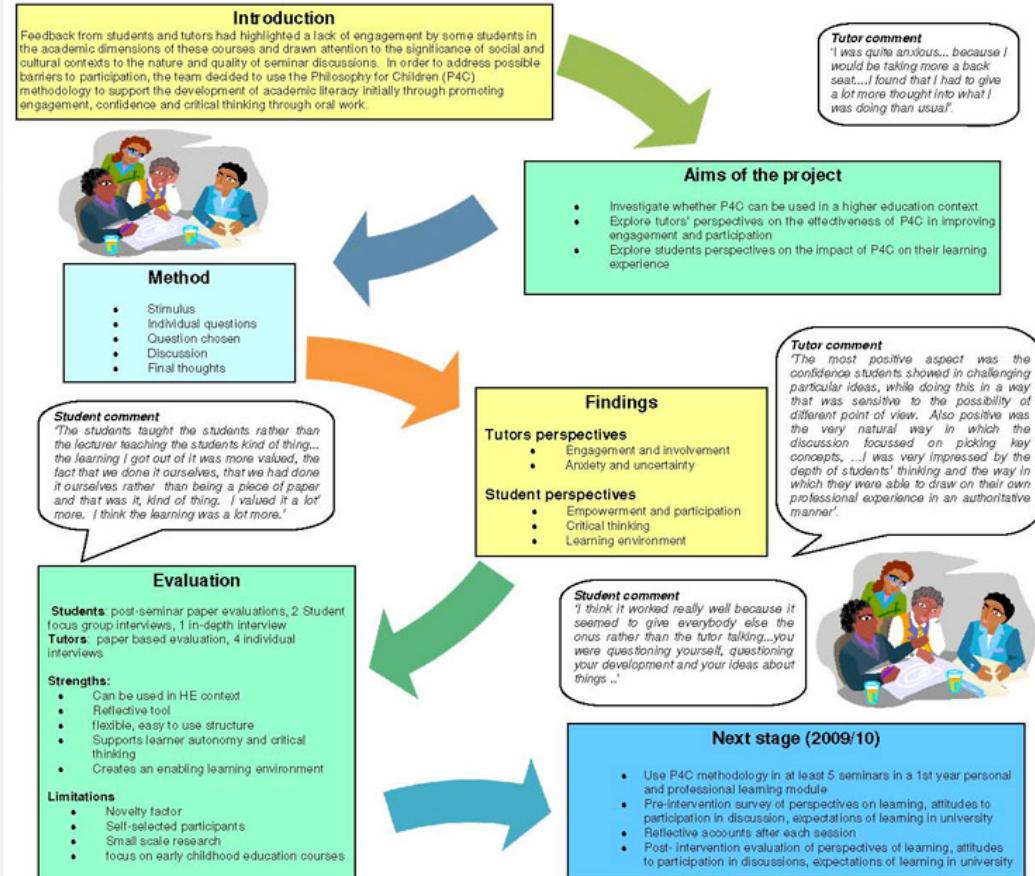




## 'Now I feel like I am at University...' Using a community of enquiry approach to promote engagement in seminars

This poster describes a project which supported students in taking responsibility for the learning process through encouraging them to pose and interrogate their own questions during seminar discussions. The work spanned a variety of undergraduate courses related to Early Childhood and Education, including professional courses for trainee teachers and early years professionals. Using a community of enquiry approach, tutors worked alongside students to support them in pursuing enquiry and critical thinking. The project evaluation has suggested that participants are becoming increasingly confident in generating their own questions, influencing and shaping discussions and reflecting upon the development of their own thinking. Moreover, tutors have begun to question and adapt their teaching styles in order to more effectively promote student-led dialogue. This work will be used to prompt consideration of the value of oral work in developing academic literacy.

### Abstract

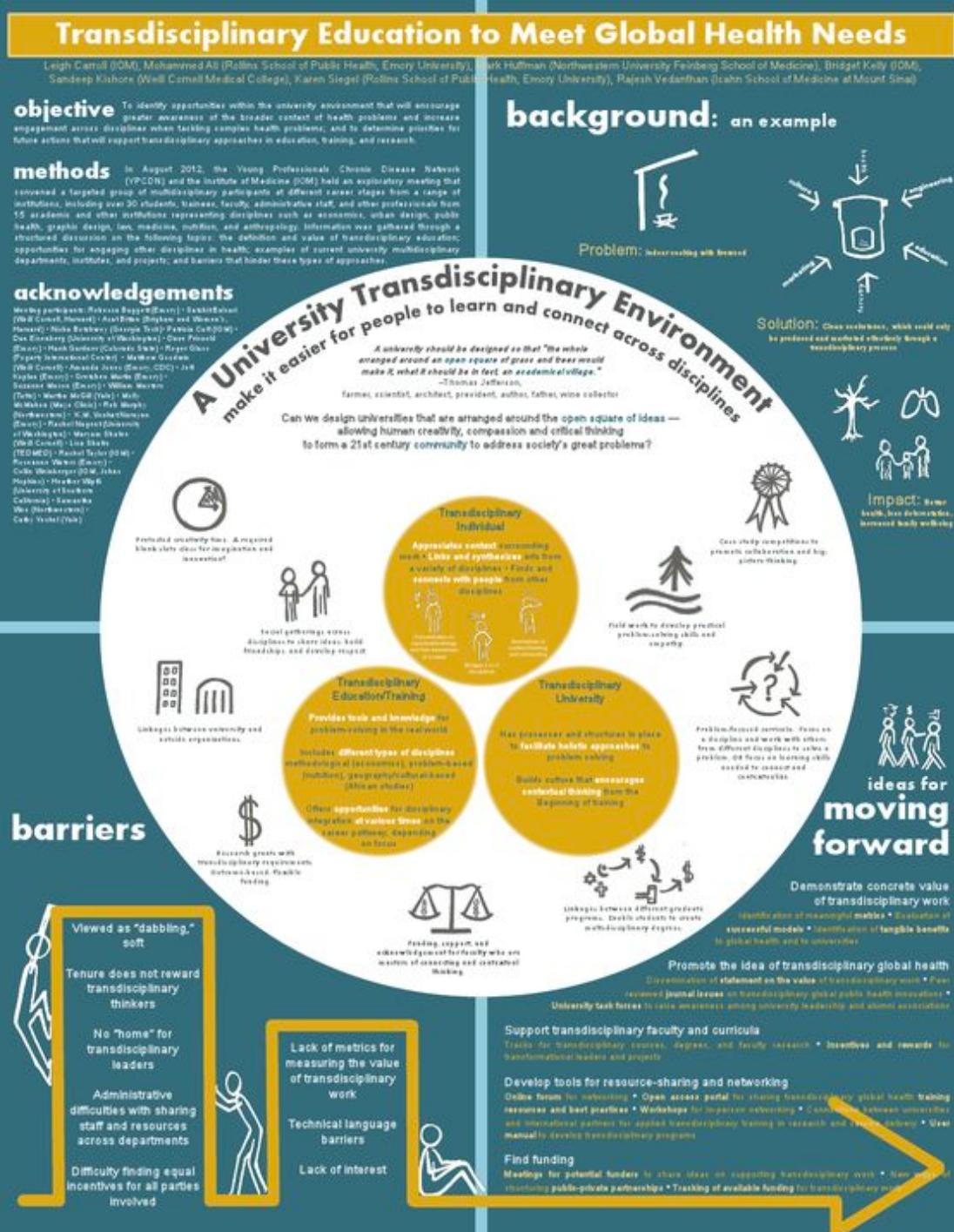


Fufy Demissie - D&S E-Mail: f.a.demissie@shu.ac.uk

Circle in the center is nice way to break up the 2-column portrait orientation, but there are too many things competing for my attention at once.

Also, the text in upper left/lower right is too dense.  
Bullets better than paragraphs.  
Acknowledgements can go at the end/bottom.

Pro Tip: Put key findings/innovative outcome in center.



A better use of the center-circle layout, I think. If I had one suggestion it would be to elect colors that created a more subtle contrast between foreground and background. This one kind of hurts to look at.

Nice, clean title

RE: section layout... I'm not sure how each of these sections relates to background/methods/results, etc. If the center circle represents the main result, I would label it "Innovative Outcome" or something like that.

# Developing and characterising a novel combined nanoelectrode system



L. P. Robinson, A. Mount

## Electrochemistry at nanoelectrodes

Nanoelectrodes have several advantages for electrochemical sensing.

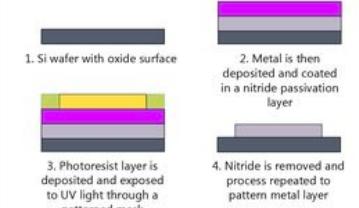


In contrast, the diffusion pattern for nanoelectrodes quickly becomes hemispherical. This profile is much more efficient, and they are not so affected by convection or iR drop. They can reliably detect very low (attomole) concentrations of analyte.

A Pt microsquare nanoband edge electrode (MNEE) array system in which the Pt nanoband acts as the working electrode has been developed. The project now aims to create a nanoelectrode device based on this system which has all three electrodes necessary for analysis on one chip.

## Fabrication

This design has been fabricated at the Scottish Microelectronics Centre using photolithography. In this technique layers of metal and insulator are deposited and patterned to produce the desired arrangement.



Each layer is deposited and patterned sequentially. This approach reliably produces uniform electrodes cheaply and easily.

## Objectives

Having made the initial measurements, the next steps will include;

- complete fabrication of the combined system, including optimisation of nanoband and cavity dimensions
- further investigation of the sensitivity of nanoelectrodes for use in DNA sensing and the relationship between the response and concentration of the target
- optimisation of a galvanostatic silver plating protocol

## Ag/AgCl as a combined electrode

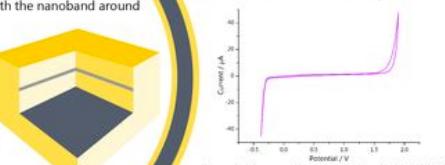
The combined reference/counter electrode is created by electroplating a thin film of Ag onto the Pt microsquare.

Potentiostatic plating causes Ag to grow preferentially at the corners, creating dendrites. A galvanostatic plating protocol is being developed to provide the required smooth, shiny Ag deposit.

To convert the newly plated Ag surface to AgCl, it must be functionalised. Chemical functionalisation by immersion in  $\text{FeCl}_3$  has been shown to produce uniform deposits of AgCl.

## Characterisation

Cyclic voltammetry and electrochemical impedance spectroscopy will be used to verify that the system is behaving as predicted. The nanoband should have a similar reponse to the current nanoelectrode array.



## Combined nanoelectrode system

This design consists of a microsquare at the bottom of each cavity in the array, with the nanoband around the cavity edge.

The Ag/AgCl microsquare is a combined reference and counter electrode. As its area is so much larger than the Pt nanoband, the current passing through the square is not large enough to affect its use as the reference electrode.

This could create an on-chip device for sensitive analytical detection.

## An application

By coating the surface of the working electrode in a probe nucleic acid, the corresponding DNA sequence can be detected using electrochemical impedance spectroscopy (EIS). Before the target molecule is hybridised, the resistance measured for the redox couple is small. When the correct target is hybridised the resistance, and therefore the EIS response, is much larger.



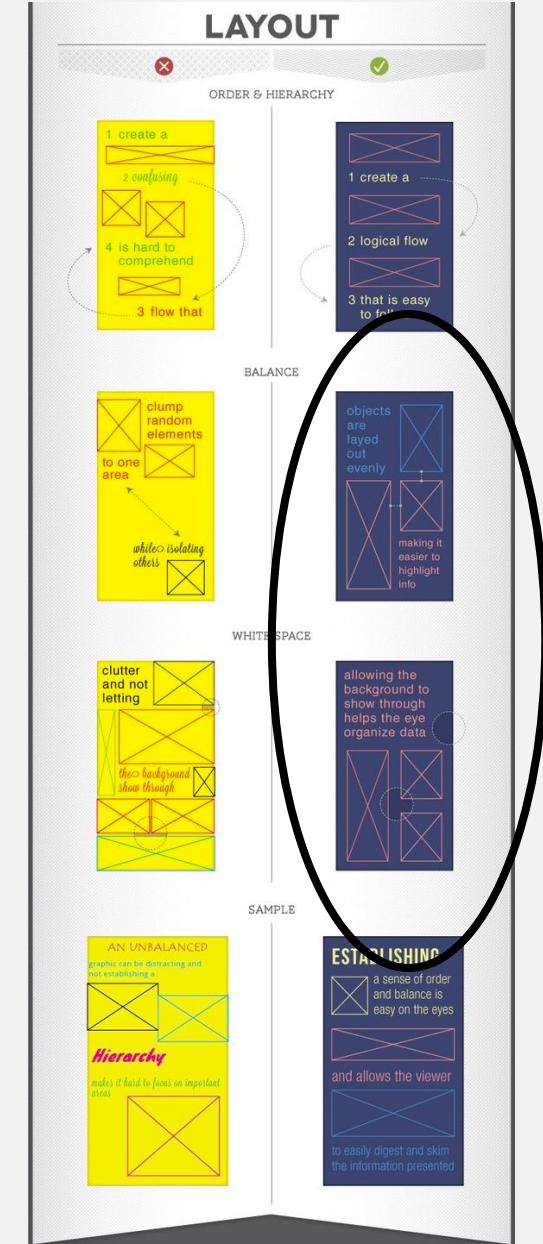
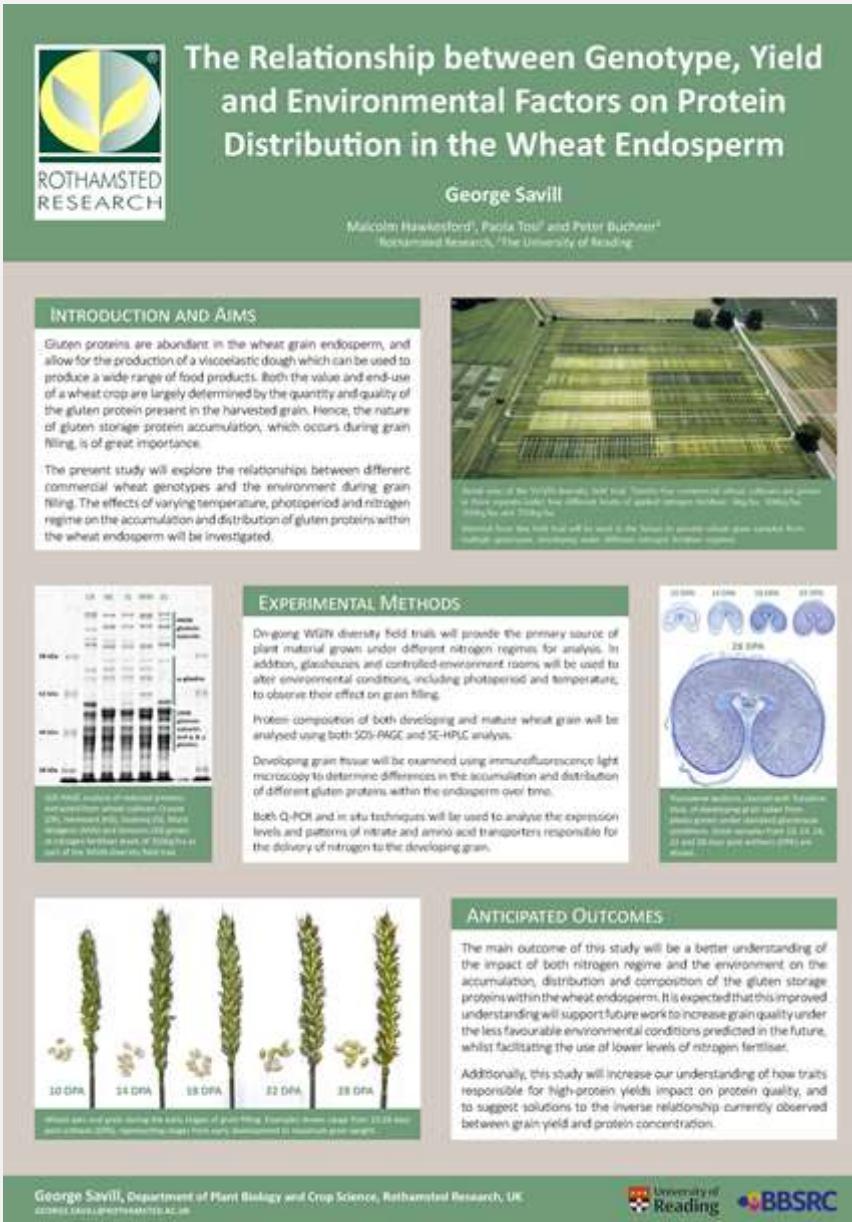
EIS measurement of 50 nm electrode shows the increase in resistance upon addition of the target nucleic acid.

Many thanks to Dr Damian Corrigan, Ilka Schmuessner, Professor Andy Mount, the Mount group and the SMC for their continuing support and expertise.



A fine poster, but it would flow better if the author opted for one of the circled lay out options on the right.

The title could be more intriguing – e.g., Wheat Production Affected by both Genetics and Environment



## Next up

An overview of elements that generated winning marks at a recent American Evaluation Association (AEA) Conference followed by the winning posters with commentary.

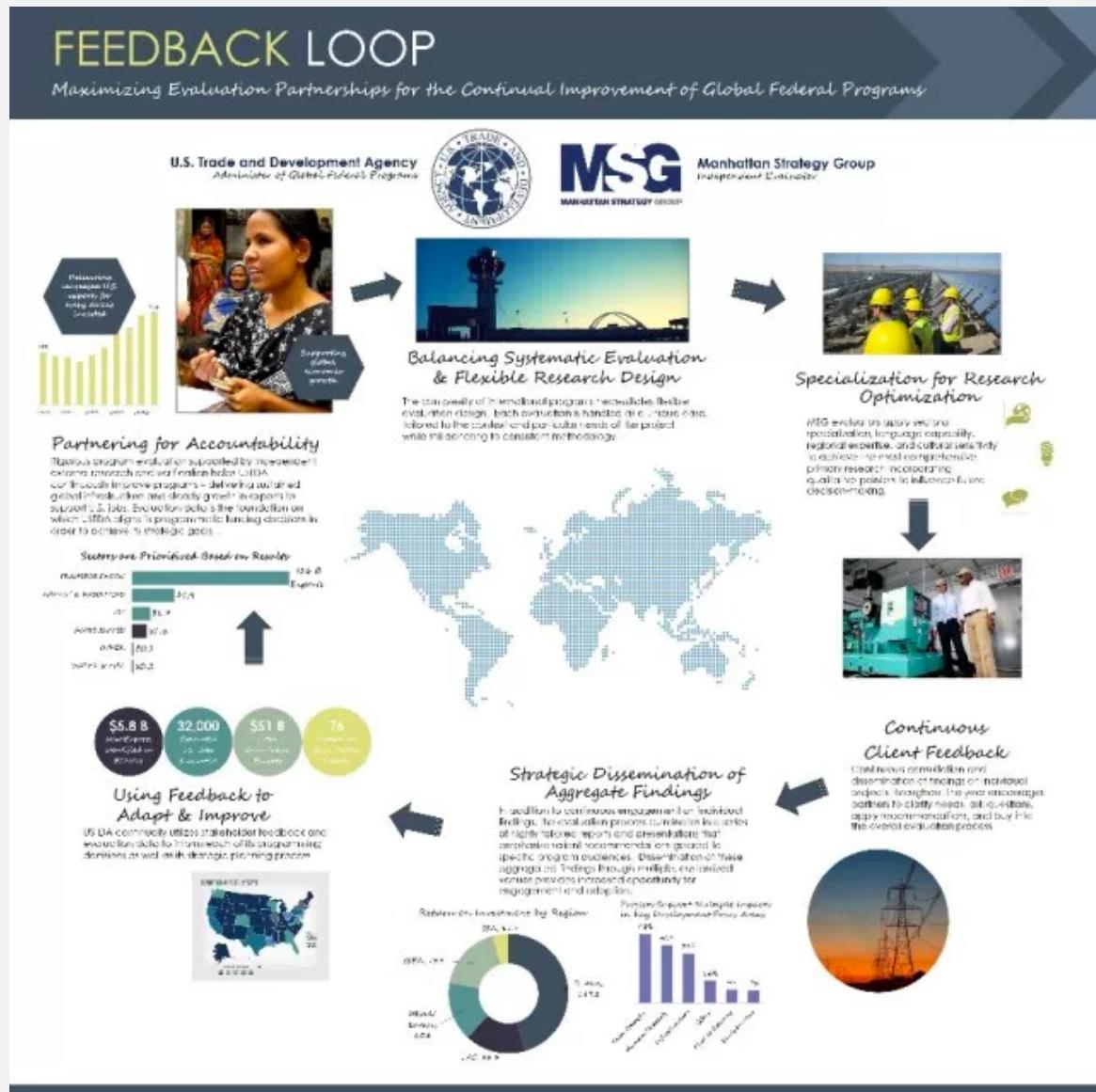
From the American Evaluation Association:

"What the winning designs had in common were an **emphasis on the results/findings** of the work featured in the poster. Most posters had the punchline, the findings or results, at the lower bottom right hand corner, which is the most de-emphasized real estate of the poster. Typically the amount of real estate that the findings/results took up was less than 25% of the poster.

In the **winning** designs, the **results/findings took up nearly half of the real estate** of the poster (The designs could have been even better if that information was located in the upper left hand corner--prime poster real estate). This is what drew us into these posters to learn more about what the presenters had learned from their work that they could share.

## From the American Evaluation Association:

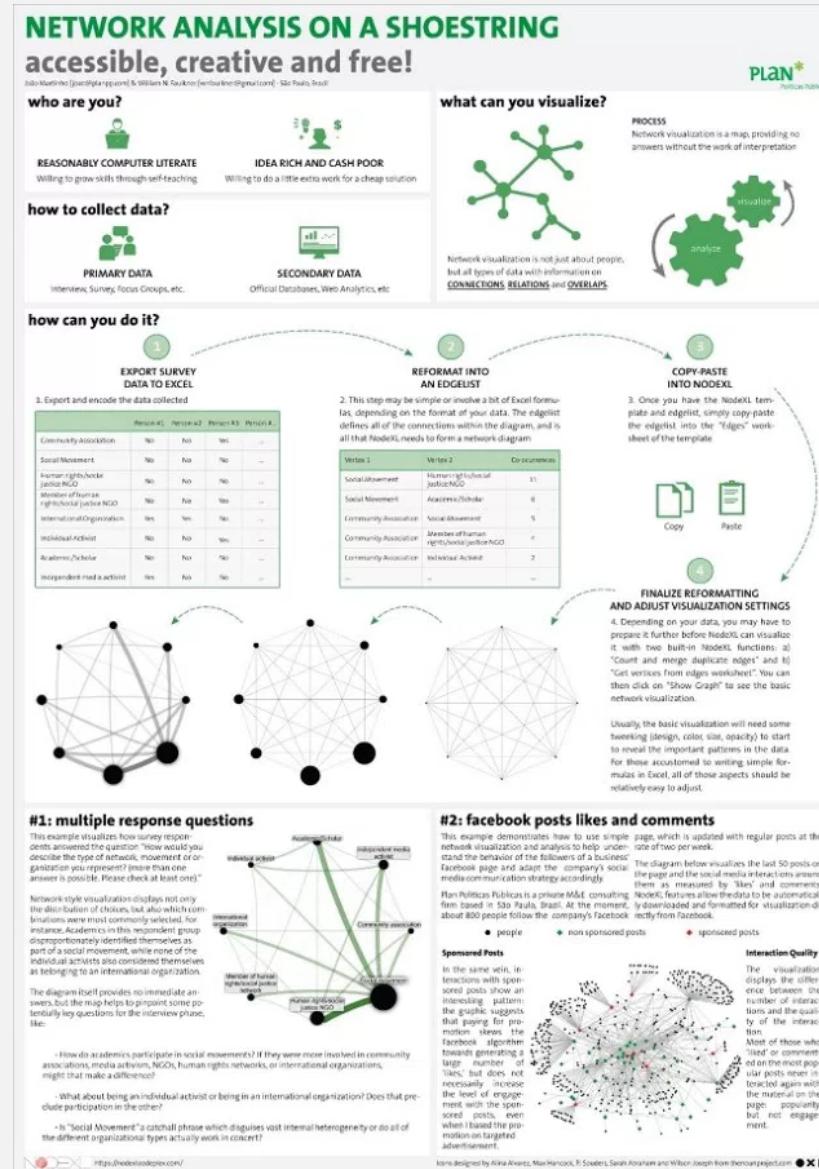
“The poster successfully uses colors, big pictures, and data visualization to communicate key points. The poster isn’t overloaded with text; rather, there’s just enough text to support the content. Nice!”



## From the American Evaluation Association:

“The poster relies on one spot color (green), arrows, and light background colors to guide the reader through the poster and the work it represents. The bold headings framed as questions further serve to draw the reader in. Beautiful and engaging!”

Megan: I would have preferred a layout that guided the eye without arrows. This is an important reminder that poster judging is subjective. That is why we solicit feedback from more than 1 person.



From the American  
Evaluation  
Association:

“Note the central focus on the image, very succinct supporting text, a QR code to get more information about the study, the visual depiction of a complex topic (augmented reality).”



For more layout options & poster tips:

<https://gradcollege.okstate.edu/content/poster-layout-tips-and-examples>

Or just Google it – there's a lot of great information & examples out there.

## Where to Print your poster on campus:

DAAP Computer Graphics Center [http://daap.uc.edu/about/facilities/cgc.html/](http://daap.uc.edu/about/facilities/cgc.html)

Design Services [http://www.uc.edu/ucomm/design\\_copywriting.html](http://www.uc.edu/ucomm/design_copywriting.html)

Art & Design Services <http://healthnews.uc.edu/communications/artdesign/>

CECH Library <http://www.libraries.uc.edu/cech/Services/poster-printing.html>

Many departments offer free poster printing for their majors. Each may have its own rules in terms of size and ink options. For example, some require a white background to save on the cost of ink. In this case, it's a good idea to box your sections and give them a little color.

## **How to Create a Poster Using PowerPoint**

**Step 1** Gather your contents in the form of text, graphs and photos.

**Step 2** Open PowerPoint, choose Blank Presentation and click OK.

**Step 3** Choose the Blank slide layout and click OK.

**Step 4** Go to File in the toolbar and click Page Setup.

**Step 5** Enter the Height and Width of your poster.

**Step 6** Click Insert on the toolbar, choose Text Box. A text box drawing tool will appear on your PowerPoint slide. Click and drag to create the box. This is where you will place your prepared text. Simply cut and paste from Word or type directly into the text box. The box will expand to fit the information entered. Remember to consider your font size and make it suitable for poster use. Font sizes of approximately 36 to 54 are recommended for titles, approximately 18 for text. Use your judgment for your specific poster needs. PowerPoint does not recognize all fonts; Arial and Times New Roman are recommended for use. Symbol is the font recommended for scientific symbols. To choose the characteristics of the text box such as line, color or size, go to Format in the toolbar or right click on the text box and select Format Text Box. You can copy and paste directly from Word documents into PowerPoint text boxes. We would suggest using black on a white background in text boxes for easy reading.

**Step 7** To add logos, charts or photos, go to Insert in the menu bar and select Picture, and then From File and browse to your file containing your charts or scanned and saved pictures. Select it and click the Insert button.

**Step 8** Once you have inserted your pictures, you can move or resize them to suit your needs. The dotted guide lines on the templates are there to tell you where on the sheet your boxes are and can help in getting things properly aligned. If you click and hold them, a box will appear giving the lines' locations on the sheet. You can then move them into position. They will not appear when the poster is printed. If the Guide lines are not visible on your screen, select View, then Guides.

**Step 9** Once your text and pictures are in place, you may decide to add some color or texture effects. The color options and background effects are found under Format on the toolbar, or you may double click the border of any text box to view Format Text Box with color and line options.

**Step 10** Carefully review your poster. It is a good idea to print it as an 8.5 X 11 and let your friends/mentors review it for you. Edit as needed.

**Step 11** Print.