WORKSHOP ON WRITING ABSTRACTS AND DEVELOPING POSTER PRESENTATION FOR INTERNATIONAL MEETINGS

Dr. Elizabeth Waligora
October 2018
AGENDA

- 09:30 – 10:00: Review of Abstract Development
- 10:30 – 11:30: Poster Information
- 11:30 – 11:45: Coffee Break
- 11:45 – 13:00: Tables, Figures, and Poster Design
- 13:00 – 14:00: Lunch Break
- 14:00 – 17:30: Poster Development and Poster Presentation
- 17:30 – 18:00: Closing Remarks
Are there any questions from yesterday’s discussion?
ABSTRACT REVIEW — HOW MUCH DO YOU RECALL?
Provides background, rationale, and research objectives

Describes experiments performed and how it was performed

Describes how research impacts scientific knowledge
You got accepted to the conference!

Now what?

Just like the abstract, each conference has different rules for posters!

Look for size limits and any special instructions.
POSTER DEVELOPMENT

- Just like the results section is the focus of the abstract, it is also in the center of the poster!
- Your abstract should be the framework of your poster, so use it as a way to put all the pieces in the right place.
- Your abstract is a short summary of the information you will be providing in the poster.
- Posters have more room to show your data, so you can provide more detail.
POSTER PRESENTATION LAYOUT

Posters are typically either wide or tall, depending on the conference.

Taller posters may be easier to read in a single view, since wider posters may require the reader to move from left to right.

Wider posters allow more readers to review the poster at the same time.

The same data can be presented in either format!
GENERAL LAYOUT OF A TALL POSTER

Title Title Title Title Title Title

Author 1, Author 2, Author 3*
Affiliation and Contact Info

Introduction

Methods

Results 1

Results 2

Conclusions/Discussion

References
GENERAL LAYOUT OF A TALL POSTER
Some posters have additional sections, as needed.
- These can include an objective/aims section, a references section, an acknowledgements section, etc.
- Authors may modify the layout to suit the research, but they all include an introduction section, a results section, and a conclusions section.
- Some authors include the abstract.

Look at the following posters. How have the authors included elements of the abstract? How have they specialized it?
Quick and Easy Meditation: Rapid state changes in Rajayoga practitioners

Ajay Kumar Nair, Arun Subashhan, John P. John, Saema Mehrotra, Bindi M. Kotha

*Department of Neurology, **Department of Psychology, Brain Imaging Analysis Laboratory, NRHM Health and Medical Research Institute (NMRCN), National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India

**INTRODUCTION**

Meditation is known to provide parasympathetic activation and relaxation effects. Easy Rajayoga meditation (Kathana Kriyana) has attracted practitioners in over 100 countries.

We examined face-scored and experienced Rajayoga practitioners could rapidly bring about state-related state changes, and if they could achieve state changes after engaging with cognitively demanding tasks.

**METHODS**

Rajayoga Meditation Practitioners (age-range 39-88) were recruited from meditation centers in Bengal. Long-term practitioners (LTP, n=10) had >10 years of daily meditation practice. Short-term practitioners (STP, n=10) had between 6 and 12 months of daily meditation practice.

**RESULTS & DISCUSSION - A**

Long-term Practitioners (LTP)

<table>
<thead>
<tr>
<th>Session</th>
<th>Parietal Lobe</th>
<th>Middle Lobe</th>
<th>Frontal Lobe</th>
<th>Eye Pupil Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Meditation</td>
<td>42.3</td>
<td>42.5</td>
<td>42.1</td>
<td>42.4</td>
</tr>
<tr>
<td>Post-Meditation</td>
<td>42.8</td>
<td>42.6</td>
<td>42.7</td>
<td>42.5</td>
</tr>
</tbody>
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Both LTP and STP showed significant changes across meditation states. The table shows the state shifts (paired t-test); significant changes are shown.

**RESULTS & DISCUSSION - B**

Long-term Practitioners (LTP)

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<td>42.5</td>
</tr>
</tbody>
</table>

Both LTP and STP showed significant changes across meditation states. The table shows the state shifts (paired t-test); significant changes are shown.

**CONCLUSION**

We found that both long-term and short-term Rajayoga practitioners exhibited EEG state changes during meditation as compared to rest states but those were quantitatively and qualitatively different.

These results suggest that brain functions are amenable to quick changes even with short-term meditation practice and that long-term practice yields significant benefits in bringing about state-related changes as well as trait effects for handling challenging tasks.

**ACKNOWLEDGEMENTS and REFERENCES**

We acknowledge funding from NATO Science for Peace and Security (RCP 3601-13) to B.K. and Department of Science and Technology Cognitive Science Institute (Grant No: SR/SCB/02211 to B.K.), and the facility provided by NIMHANS.

References


Contact: ajaykumar@gmail.com
**Introduction**

- Previously it was believed that motor neurons passively relay synaptic input to the muscle. Now it is known that motor neurons can generate and amplify current through the activation of persistent inward currents (PICs).
- PICs are mediated by voltage-gated ion channels activated below or near recruitment threshold.
- Neuronal oscillators derived from the brainstem are capable of amplifying PICs up to ten fold. Serotonin and norepinephrine are two prominent neuromodulators.
- It has been demonstrated in animals that the presence of neuromodulators, and therefore intrinsic excitability, changes depending on the task at hand, ranging from low excitability during sleep to high excitability during repetitive motor output.
- Trademark characteristics of PICs are higher firing rates at recruitment compared to demarcation as well as non-linear firing rates.

**Purpose**

To determine whether the intrinsic excitability of motor neurons changes depending on the task at hand, and if so, across the range of which this occurs.

**Methods**

8 participants completed isometric elbow flexion with the elbow flexed about 80 degrees. Motor units were recorded with intramuscular EMG.

- Conditions:
  1. Control
  2. Rest
  3. Cycle
  4. Cold Pressure Test (CPT)

\[ \Delta F = \text{Recruitment} - \text{Derecrution} \]

Delta F represents the reduction in synaptic drive needed to maintain unit recruitment. Two motor units are required to calculate Delta F. The lower threshold unit is a measure of synaptic drive to the motor pool. The higher threshold unit is used to indicate the time of recruitment and demarcation. Delta F is an indirect measurement; thus, units must meet two criteria for the pair to be valid:

1. Rate = -rate of change of recruitment (k) = 0.42
2. Time difference between control and test unit small < 1 second

\[ \text{Recruitment} = \frac{1}{(2 - 0.5) - (2 - 0.5)} \times \text{Recruitment} \]

Discharge rates of single units during the ascending phase of a contraction were fit with a saturating exponential function. The sum of squared errors for the linear and exponential fit were compared using an F test. If the P-value <0.05, the unit's firing pattern was designated as exponential. An exponential firing pattern suggests the presence of PICs and greater intrinsic excitability.

**Results**

- Torque: Units with Exponential Time to Firing Rate

**Single Motor Units**

- Torque at Recruitment and Demarcation

**Conclusion**

- We demonstrate preliminary evidence of changes to intrinsic excitability depending on the task at hand, however the ranges are not compatible with animal research. The measurements used may not be precise enough to observe the full range.

- Using the paired motor unit technique, CPT had the lowest intrinsic excitability. The mechanism responsible may be due to a withdrawal reflex that inhibits PICs. However, the Delta F measurement may not capture true intrinsic excitability because the low threshold unit may not be a linear measure of synaptic drive.

- CPT had the highest percentage of units with exponential firing patterns while Cycle had the lowest. It is probable that contractions produced during Cycle are not smooth enough to generate steady firing rates.

**Acknowledgements**

- URI
- ALEX LEY
- NSERC CRSGN
ESTIMATING THE MINIMALLY IMPORTANT DIFFERENCE (MID) OF THE DIABETES HEALTH PROFILE (DHP-18) FOR TYPE 1 AND TYPE 2 DIABETES MELLITIS

Brendan Mulhern & Keith Meadows

1 Health, Economics and Decision Science, University of Sheffield; 2 DHP Research and Consultancy Ltd

Introduction

There are now a range of diabetes-specific patient reported outcome measures (PROMs) designed to assess health-related quality of life. However, there remains a lack in understanding as to what a PROM score represents and what is a meaningful change in score. We report a study estimating the minimally important difference (MID) for the Diabetes Health Profile (DHP-18) using anchor and distribution-based techniques.

The Diabetes Health Profile

The DHP-18 (Meadows et al., 2006):

- Consists of 18 items assessing HRQL in diabetes across three domains: Psychological Distress, Barriers to Activity, Disability, and Quality of Life.

- It is the diabetes-specific outcome measure selected for the UK Department of Health Patient Reported Outcome Measures Pilot for long-term conditions in primary care.

- For more info visit www.diabeteshealthprofile.com

Sample

- UK Longitudinal dataset of 1756 type 1 and type 2 patients
- Distribution based estimation sample:
- French Cross sectional dataset of 3367 type 1 and 2 patients used alongside anchor sample

Calculating the MID

- Anchor based approach:
  - 5-point global health change question used as anchor to indicate change in health status
  - MID calculated as: Mean change on DHP dimensions (no change sample) – Mean change on DHP dimensions (small change sample)

- Distribution based approach:
  - Three calculations used:
    1. 0.2SD - 0.5 x standard deviation of baseline dimension score
    2. 0.5SD - 0.5 x standard deviation of baseline dimension score
    3. 1SEM = SD(baseline) x sqrt(1 - a reliability coefficient)

Results

Correlations

The global health change anchor was more highly correlated with the type 1 patient sample (see below):

<table>
<thead>
<tr>
<th>Psychological distress</th>
<th>Barriers to activity</th>
<th>Disability</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (n)</td>
<td>Follow up (n)</td>
<td>Baseline (n)</td>
<td>Follow up (n)</td>
</tr>
<tr>
<td>Type 1</td>
<td>0.163 (59)</td>
<td>0.140 (59)</td>
<td>0.132 (59)</td>
</tr>
<tr>
<td>Type 2</td>
<td>0.142 (1156)</td>
<td>0.135 (1156)</td>
<td>0.177 (1155)</td>
</tr>
</tbody>
</table>

Mid estimations:

Type 1

- Psychological distress
- Barriers to activity
- Disability

Type 2

- Psychological distress
- Barriers to activity
- Disability

Discussion

- We have estimated minimal important difference (MID) values for each of the three DHP-18 domains using both anchor and distribution based methods.

- Combining approaches has previously been used in a range of studies estimating the MID for measures of HRQL as there is no consensus about the best methodology to use.

- For Type 1 Diabetes MID values within the estimated range for all 3 dimensions may be useful in determining those who display clinically meaningful change in HRQL.

- For Type 2 Diabetes the anchor correlations are lower, and we recommend considering the full range of MID values, but applying more weight to the distribution based estimations.

- This is the first attempt to calculate MID values for the DHP-18. The estimations established in this study will help clinicians and researchers using the DHP-18 to identify clinically meaningful change in patient reported outcomes.
INTRODUCTION

Purpose
To investigate the relationship between traditional and online reading comprehension, to identify and compare how students of varying levels of online reading competence utilize reading strategies, and to investigate the influence of various factors including time on task, prior knowledge, and self-confidence on online reading comprehension.

Research Questions
RQ1: What is the relationship between 6th grade student performance in the MAP (Mathematics Assessment Program) Reading Test and the ORCA (Online Reading Comprehension Assessment)?
RQ2: How do students with various levels of digital reading comprehension competency approach the ORCA in terms of reading strategy use?
RQ3: What is the relationship between performance on the ORCA and participants’ time spent on task, prior knowledge of the knowledge domain, and patterns of daily technology use?

RESULTS

For Phase 1 (RQ1), patterns emerged in technology skills, navigation, reading strategy use, comprehension, and annotations. Analysis confirmed that 7 of the 11 reading strategies defined in the online comprehension research, and two novel reading strategies (grasping the main idea and scanning ahead to preview and plan) were used. Further, although time spent on task within the ORCA was a contributing factor, students who utilized more reading strategies and exhibited an understanding of the reading purpose, were more successful in answering questions and comprehending the text.

For Phase 2 (RQ2), successful online reading comprehension strategies included:
- Familiarity with the website and navigation
- Using multiple strategies to understand the text
- Identifying key ideas and main points
- Summarizing the text
- Using visual aids and interactive features

For Navigational, Stylistic, and Metacognitive Readers, more successful than Centralized, Skimming, or Skimming Readers (reading only one section of 10% of text without skipping the rest of the page),

Assumptions: Successful online reading strategy use is a critical factor for successful online reading comprehension. Successful readers could also better distinguish between online and offline reading tasks. The study revealed that students who utilized more strategies tended to switch between careful reading, summarizing, and ignoring text based on reading purpose.

TERMS & INSTRUMENTS

New Literacy: New skills, dispositions, and social practices required for comprehending and communicating online
Multimodal Text: Text presented in a variety of modes (print, image, color, sound, gesture, etc.)
Hypertext: A website where embedded in the text
Navigation: The process of moving through a website'

MAP Reading Test: A measure of traditional reading comprehension (determining word meaning in context, understanding, and analyzing text)
ORCA: Online Reading Comprehension Assessment (a performance-based assessment of a student's ability to conduct Internet research) Measures online reading skills including: locating, synthesizing, evaluating, communicating, students that can read with an essay and use their own knowledge to complete an online research project, even in a complex environment. Researchers use 10 tasks are scored using a rubric, curriculum or common task.

DISCUSSION

Implications: Assessments and instruction must recognize that traditional reading and online reading share similarities yet are also distinct. To distinguish and require unique online reading strategies and behaviors, instruction must encourage identifying a reading purpose, among other metacognitive abilities.

Flexibility: Students are flexible and reliable in online reading strategies and navigation, and strengths in synthesize (finding connections between text) and evaluation (identifying, critiquing, and analyzing texts). Literature Theory

This research confirms that online reading is an active process of navigating meaning through deliberate, goal-oriented strategies (online, offline). Online reading is cognitively demanding, requiring the use of multiple online reading strategies (Karo & Dobler, 2007). Engaging metacognitive ability, online reading, critical thinking, and the ability to read critically for online reading success.

Limitations: Small sample size, lack of diversity, and data collection issues. The ORCA protocol vs. student online behavior, and the need for a comprehensive online reading assessment.

REFERENCES


ALTITUDEOMICS: PERSISTENCE OF HIGH ALTITUDE ACCLIMATIZATION ON SUBSEQUENT RE-EXPOSURE – EFFECTS ON SUBMAXIMAL PERFORMANCE

Oghenona Evera1, Andrew Subudhi1, Jui-Fan Fan2, Nicolas Bourdillon1, Bengt Kayser2, Andrew Levering1, Robert Roach1

1University of California, Merced, Department of Human Nutrition, Merced, California, USA
2School of Medicine, University of California, Merced, Merced, California, USA

ABSTRACT

INTRODUCTION. Marked gains in endurance performance can be improved through acclimatization, however, sustained performance gains may be impaired due to an acclimatization ‘reversal effect’ in submaximal and high-intensity exercise. This study aimed to observe the effects of acclimatization and exercise on submaximal performance in hypoxic and normoxic conditions.

METHODS. Participants were randomized to either an acclimatization or a control group. The acclimatization group was exposed to high altitude (5,200 m) for 14 days while the control group remained at sea level. Submaximal tests were conducted at sea level, 3,300 m, and 5,200 m before and after exposure. The main outcome measures were the submaximal test performance and VO2 max.

RESULTS. Acclimatization significantly improved submaximal test performance at high altitude compared to sea level, with a mean increase of 12.8% (p < 0.05). VO2 max was also increased in the acclimatization group, with a mean increase of 20.1% (p < 0.05). However, when subjects were re-exposed to normoxia after acclimatization, submaximal test performance decreased again to baseline levels.

CONCLUSION. Acclimatization-induced improvements in submaximal performance can be partially overcome with 17 days of re-exposure to normoxia. This study shows that the time that submaximal performance benefit is maintained is dependent on the length of exposure to high altitude and subsequent re-exposure.

REFERENCES


ACKNOWLEDGMENTS

Support: Department of Defense (W81XWH-11-2-0044; U54)
Smart Campus – Understanding Intra and Inter Campus Distance and Travel Time Perceptions

Jonathan Lau (eaycla@nottingham.ac.uk)
Supervisors: Dr. Nancy Hughes and Emma Kemp

Introduction
The University of Nottingham wants to promote positive active travel behaviours for healthier living and to meet its green targets, whilst also reducing the operating costs of the hopper bus.

Hypothesis
Members of the University of Nottingham (UoN) are often inaccurate at estimating the distance and travel time of routes between or through campus. Thus choosing to use the hopper buses instead of walking.

Aim
Using an online questionnaire, interviews and “talk aloud” study to understand peoples perceptions so that The University of Nottingham can accommodate needs and encourage positive active travel behaviours.

Questionnaire Results

<table>
<thead>
<tr>
<th>Route Origin</th>
<th>Destination</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Portland Building</td>
<td>Rose &amp; Crown</td>
</tr>
<tr>
<td>2</td>
<td>The Exchange Building</td>
<td>Portland Building</td>
</tr>
<tr>
<td>3</td>
<td>Trent Building</td>
<td>King Edward Building</td>
</tr>
<tr>
<td>4</td>
<td>George Green Library</td>
<td>David Ross Sports Village</td>
</tr>
<tr>
<td>5</td>
<td>Hallward Library</td>
<td>Lakeside Pavilion</td>
</tr>
<tr>
<td>6</td>
<td>Spence Library</td>
<td>Mathcal Building</td>
</tr>
</tbody>
</table>

Interview Results

Route 3 had the most variations due to multiple exits from Trent Building

Talk Aloud Results

Lack of shortcut awareness as longer routes were taken

Participants were asked to describe their decision making and feelings while walking between two UoN campuses.

Conclusion
Members of UoN typically overestimated distances especially on intra-campus routes but were far better at estimating travel times. Increasing exposure time to the campuses augments university members’ familiarity with routes, therefore they are more likely to walk.

How to Encourage Positive Active Behaviour

- Create a map indicating the best walking routes and travel time between key points using staff/student experiences.
- Work with Nottingham City Council to implement more substantial barriers to give members of UoN greater reassurance when walking between campuses.

Figure 1: Table of Routes

Figure 2: Actual Distance vs Personal Distance for all Routes

Figure 2: Actual Time vs Personal Time for all Routes

Figure 3: Interview Results

Figure 4: Talk Aloud Results
Continuous, Non-Invasive Blood Pressure Measurement

Imara Kassam, Anisha Banda, Joanna Harbia, Alborz Feizi, Michael Teng, Amir Kaboodrangdiema
Department of Bioengineering, University of California, Los Angeles, CA 90025 USA
Bioengineering Capstone Design Course

Abstract
Blood pressure is an essential biomarker in assessing both short-term and long-term patient health. Noninvasive methods such as sphygmomanometry and arterial tonometry are able to obtain blood pressure readings; however, they have shortcomings in areas including accuracy of measurement and real-time monitoring, while at the same time ensuring adequate safety of patient. Thus, our goal was to develop an alternate method of blood pressure measurement, one that is both continuous and noninvasive. We designed a method that utilizes ultrasound and Doppler ultrasound to detect blood flow velocity and arterial diameter in order to ultimately calculate blood pressure. Five differential pressure measurements taken on aphantom phalanx artery were used to calibrate a correlation between the diameters and pressure差值. The log of pressure difference was found to be linear of the log of diameter difference. This linear relationship was then used to establish an inverse standard blood pressure correlation between a differential pressure gradient, which was calculated using the observed blood velocity and arterial diameter from Doppler and dioptral ultrasound, and actual blood pressures which were measured using the gold standard of sphygmomanometry (MPR-675). Our method was tested on patients with healthy vascular systems.

Introduction
Continuous blood pressure monitoring is crucial especially for hospitalized patients in intensive care units or on old age patients during, and after surgery, as intravascular blood pressure can significantly affect the patient’s overall health. There are two main categories of blood pressure monitors, both continuous and noninvasive. Continuous blood pressure monitors can be classified based on the technology used to measure pressure. Noninvasive methods measure blood pressure using a sphygmonanometer or auscultation band. These two methods measure blood pressure by the auscultation of sounds produced by blood flow through the artery. Continuous, noninvasive blood pressure monitors measure blood pressure by using Doppler ultrasound or photoacoustic sensors. The disadvantages of these sensors is the requirement of an occlusive cuff that can cause patient discomfort. Our goal is to develop a method that can monitor blood pressure continuously and noninvasively.

Materials and Methods

- Ultrasonic Image of Brachial Artery and Corresponding Viscosity Profile: The image shown in Figure 4 was captured using an ultrasound transducer. The ultrasound wave at the desired location will be attenuated by the tissue surrounding the blood vessel. The attenuation coefficient is inversely proportional to the viscosity of the blood. This relationship was used to calculate the viscosity of the blood.

- Pressure-Pulse Waveform Correlation with Experimental Data: The correlation coefficient (R) of the pressure waveform with the experimental data was calculated in Figure 6. The correlation coefficient was calculated using the formula:

\[ R = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \]

Where \( x \) and \( y \) are the experimental and calculated values, respectively, and \( \bar{x} \) and \( \bar{y} \) are the mean values of the experimental and calculated values, respectively.

- Results

- In Vivo Blood Pressure Correlation with Normalized Radius

- Pressure Correlation Curve with Normalized Radius: Plot of differential pressure gradient (ΔP) obtained through ultrasound against blood pressure (P) obtained with a sphygmomanometer. Each ΔP and P measurement was taken simultaneously and was taken from the same patient. The red puffs represent the differential blood pressure measurements. The results of the baseline artery used in these ΔP calculations was the average human brachial artery of 2.25 mm

Conclusions/Future work
In conclusion, we were able to develop a continuous and noninvasive method utilizing ultrasound to measure blood pressure. Namely, we first imaged, through obtaining a phantom model, our enabling hypothesis that differential pressure gradient in a human arm can correspond to blood pressure. We were then able to correlate the differential pressure gradient, which was obtained utilizing B-mode and Doppler ultrasound, with blood pressure sphygmomonometric measurements in order to create a standard calibration curve. The correlation coefficient (R) of the calculated ΔP with the experimental ΔP was calculated in Figure 7. The correlation coefficient was calculated using the formula:

\[ R = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \]

Where \( x \) and \( y \) are the experimental and calculated values, respectively, and \( \bar{x} \) and \( \bar{y} \) are the mean values of the experimental and calculated values, respectively.

Future Directions
- Obtain more accurate brachial artery images measurements of fibers on a software program that will use ultrasound at the desired location. This will then be used to calculate the differential pressure gradient of the blood pressure.
- Create a wireless ultrasound patch that will be able to monitor changes in blood pressure measurements in a real-time analysis.

Acknowledgements
Distribution and natural history of large invasive waterfowl in Texas

**Egyptian Goose and Mute Swan**  
(*Albopenus aegyptiacus* and *Cygnus olor*)

**METHODS**  
When tracking their activities for distribution, a line was taken to create a north-south transect which would allow birds to be monitored from the same point. The terrains were divided among several lines, and bird watching notes were recorded in the local bird watching manual to provide continuous and accurate bird count records.

**TEMPORAL ASPECTS**  
Year-round residents  
Number of reports received per month for Egyptian Goose and Mute Swan (Fig. 3)

**POPULATION AND NESTING ASPECTS**  
- Egyptian Goose  
  - Mean group size: 4+  
  - Nesting site: 4+ (Fig. 5)

- Mute Swan  
  - Mean group size: 1+  
  - Nesting site: 4+ (Fig. 5)

**DISTRIBUTION IN TEXAS**  
The reports for both species were generated from the bird’s activity in the Texas area

- Egyptian Goose distribution in Texas from reports generated

- Mute Swan distribution in Texas from reports generated

- When comparing Egyptian Goose and Mute Swan, it was noted that Mute Swans are more abundant and widespread than the other species.

**BEHAVIOR**  
Foraging was the most frequent behavior reported (Fig. 5)

**HABITAT**  
Most Shikashkashkiehai marshland other species such as a park or golf course.

**ARE THESE SPECIES A THREAT TO OUR ECOSYSTEM?**

- Egyptian Goose  
  - 31% of observations are at least 1 mile
  - Nesting site: water

- Mute Swan  
  - 21% of observations are at least 1 mile
  - Nesting site: water

- Are these species outcompeting native species?  
  - Yes, they are

- Are these species a threat to the water we use?  
  - Yes, they are

**ACKNOWLEDGMENTS**

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Houston Museum of Natural Science, Department of Vertebrate Zoology, 5555 Hermann Park Drive, Houston, Texas 77030-1799  
dbrooks@hmns.org

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**LITERATURE CITED**


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**FIGURES**

- Fig. 1: Temporal aspects of Egyptian Goose and Mute Swan
- Fig. 2: Population and nesting aspects of Egyptian Goose and Mute Swan
# Abstract to Poster Text: Expansion and Additional Detail

## Introduction
- Expand this section to include more background data than the abstract, especially from other sources.
- The goal is to briefly inform readers of all relevant information, so that the reader understands the rationale and impact of your research.

## Methods
- Often included in a poster to explain briefly the methods used in the experiments shown in the Results section.

## Results
- Tables, Figures, and graphs are added to SHOW the readers what you described in the abstract.
- Authors often use short paragraphs between the table/figure/graph to indicate the result and rationale for the next piece of data.

## Conclusions/Discussion
- Can include the conclusion and discussion section from the abstract, often with more details.
- Often include immediate next steps needed to address discussion recommendations.
QUESTIONS?
The text font is important — you should be able to easily read the text from a few steps away!

- Minimum recommended text sizes: 85 pt font for the title, 36 pt for section titles (Introduction, Methods, etc.), 24 pt for body text, and 18 pt for graph, table, and figure captions.
- Choose a font that is easy to read. Arial is one example of an easy font to read.
- Maintain consistency! Make all section titles 36 pt.

Consider your color choices.

- You should choose colors that are easy to read on the background.
- If possible choose a dark color, a light color, and an accent color that matches your theme.
- Picture backgrounds make the poster unique but may make it difficult to read.
- Remember that printers may make some colors darker than they are on your computer screen.
EXAMPLES

- **Heading**
  - This color combination makes me **happy**!

- **Heading**
  - This color combination makes me **sad**!

- **Heading**
  - This font is **easy** to read!

- **Heading**
  - This font is **hard** to read!
Presenters include tables, figures, and graphs to SHOW readers the experimental results.

These elements need titles, labels, and a short description of what the author considers this element to show.

The results section will be the most exciting to discuss, so double check that these elements are very clear and easy for readers to understand quickly.

Readers should be able to understand the experiment and the result based on the labels.
Tables are an excellent choice for parallel analysis of different variables among multiple items.

Clearly identify each column and row, including the units of measurement.

To indicate an important row, column, or value, consider **bolding** the text or highlighting the cell.

- Use this sparingly, otherwise you lose the emphasis!
Smart Campus – Understanding Intra and Inter Campus Distance and Travel Time Perceptions

Jonathan Lau (easycla@nottingham.ac.uk)
Supervisors: Dr. Nancy Hughes and Emma Kemp

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<td>Portland Building</td>
<td>Rose &amp; Crown</td>
<td>An issue campus route</td>
</tr>
<tr>
<td>2</td>
<td>The Exchange Building</td>
<td>Portland Building</td>
<td>Reflection of Route 1</td>
</tr>
<tr>
<td>3</td>
<td>Trent Building</td>
<td>Kingston Building</td>
<td>Multiple exits from Trent Building</td>
</tr>
<tr>
<td>4</td>
<td>George Green Library</td>
<td>David Ross Sports Village</td>
<td>A long intra-campus route</td>
</tr>
<tr>
<td>5</td>
<td>Hallward Library</td>
<td>Lakeside Pavilion</td>
<td>A gradient down to the Lakeside</td>
</tr>
<tr>
<td>6</td>
<td>Sports Library</td>
<td>Students Union</td>
<td>Could pass through buildings</td>
</tr>
</tbody>
</table>

Interview Results

Participants were asked to draw the route they were most likely to take on a map from the six routes seen on the Figure 1.

- Route 3 had the most variations due to multiple exits from Trent Building
- Lack of short cut awareness then longer routes were taken
- Never students tend to stick to main road as they do not get lost
- Balance on the hopper bus to get near final destination if route is long

Talk Along Results

Participants were asked to describe their decision making and feelings while walking between two UnN campuses.

- Participants did not like the close proximity of cars to the pavement causing unease
- Lack of barriers on routes, frequently used by participants safety concerns
- Participants are aware that completion of building work could make journeys shorter
- Weather is a major factor if people decide to use positive active behaviours

Conclusion
Members of UnN typically overestimated distances especially on intra-campus routes but were far better at estimating travel times. Increasing exposure time to the campuses augments university members’ familiarity with routes, therefore they are more likely to walk.

How to Encourage Positive Active Behaviour
- Create a map indicating the best walking routes and travel time between key points using staff/student experiences
- Work with Nottingham City Council to implement more substantial barriers to give members of UnN greater reassurance when waiting between campuses
FIGURES

These can be images of samples, specimen, collection sites, etc.

Provide a descriptive figure title, figure number, and a descriptive caption.

Label the image clearly, including any noteworthy aspects. Arrows, stars, or boxes can highlight these areas.
# Graphs

<table>
<thead>
<tr>
<th>Line Graph</th>
<th>Bar Graph</th>
<th>Pie Chart or Stacked Bar Graph</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Excellent for showing trends over time</td>
<td>• Shows measurable quantities</td>
<td>• Shows parts of a whole</td>
</tr>
<tr>
<td>• Can show multiple items over the same time period</td>
<td>• Can show discrete measurements</td>
<td>• Excellent visual impact for substantial changes in composition</td>
</tr>
</tbody>
</table>
GRAPH ELEMENTS

Titles
- Include the experimental conclusion in the title to show readers what you interpret the data to mean.

Axes
- Label axes!
- Include units!

Graph Legend
- Identify all samples in graphs with multiple samples.

Figure Legend
- Clearly state the Graph number and indicate the data measured on the graph.
ANTIBIOTIC TREATMENT REGIMEN INITIATED IN 2012
REDUCED INFECTION RATES AMONG DRAGONS

Figure 1: Over 1000 dragons were swabbed each year with fire-retardant swabs and tested for common viral and bacterial infections. In 2012 (denoted with the star), an antibiotic treatment was orally administered to over 1000 dragons, resulting in the reduced infection rate among the dragons tested.
QUESTIONS ON GRAPH LABELING?

Does anyone have a graph they would like to volunteer to discuss with the group for suggestions on titling?
Example from Waligora et.al, Journal Of Bacteriology, Oct. 2010
MAPS

- Adds a unique perspective for trans-border diseases.
- Remember to label countries, cities, and oblasts in English for international audiences.
- If you generated the data on the map, it should go in the Results section.
- If the map is to identify previously published information or identify the area studied, it should go in the Introduction section.
Ebola Prevention and Health Care Projects in Kpala, Ghana: A Cultural Perspective

INTRODUCTION
The Ebola outbreak in West Africa in 2014 was the largest in history. International aid has grown, and individuals and groups have travelled abroad to serve disadvantaged and, often, unfamiliar populations. My goal was to understand the impact of Ghanaian culture on methodologies of medical and health care outreach during a neighboring outbreak, as well as understand other local health-related cases.

QUALITATIVE METHODS
• Collaborated with UNITED NGO, local translators and community members to develop pamphlets and presentations to about the Ebola outbreak. Proper language and method of communication was assessed for best delivery of presentation.
• Conducted educational presentations and discussions at St. Patrick Hospital with staff health educators for in- and out-patients, covering topics of Ebola, HIV/AIDS, cholera, and malaria.
• Worked with staff and physicians to learn about malaria, contraction and incidence of malaria, and methods of prescribing anti-malarial drugs.
• Coordinated wound care project to aid 6 patients (male and female, 16 to 64 years old) with acute ulcers from chronic diabetes and hypertension; also assisted physically disabled woman with rehabilitation.
• Traveled to Lake Volta’s Kpala Island; helped maintain local clinic, assessed needs of residents, and reviewed delivery of health care with

EBOLA & ST. PATRICK HOSPITAL
Emphasis was placed on preventative efforts, translations into local (English) and easily understood representations of infections and signs and symptoms ofEbola.

WOUND CARE & REHABILITATION
Accommodated all patients; provided a clean and well-ventilated area to treat wounds, as well as cleaned and cared for patients. Patients were taught how to use their wounds.

KPALA ISLAND
This visualization of how Guinean worm is spread came out of Sierra Leone: There it’s no doctor, it is one of many easy-to-understand representations of disease for local residents to refer to.

LOCATION
Burkina Faso
Benin
Togo
Lake Volta
Ghana
Google

CONCLUSIONS
My experience in Ghana was contextualized from a global and international perspective coming from a Westerner, while learning about and understanding various health care methodologies. The importance of listening to the community, patients, and understanding cultural values and perspectives has been shown to be necessary, to best suit the needs of individuals and the local population. Whether serving a local community or going abroad, it is essential to aim for personal cultural humility and local cultural competency when attending to health care needs.

ACKNOWLEDGEMENTS
I would like to gratefully thank the warm-hearted community of Kpala and Kpala Island, participants in the projects. UNITED, Edem Adjour, Nsia Adjorn, The Adjorn Family, Children and Staff of KpalaMaven, staff and patients of St. Patrick Hospital, Dr. Thomas Flores, Dr. Gabrielle Wernick, Dr. Cindy Quittasom-Brown, Brittney Wright, Reginald A Holmes, Esq., Division of Biological Sciences, Global Health Program, and supporters of my trip.

REFERENCES
[1] [URL: www.unt.edu]
[2] [Note: Any author, 2019]
DATA SUMMARY

- Labels and conclusive titles help readers understand how you are interpreting the data.
- Identify what type of graph fits the data to improve reader interpretation of the data.
- Emphasis on specific areas of interest can be accomplished by bolding text or highlighting the area, or notation with a star or arrow.
RECAP OF POSTER DEVELOPMENT

- Use appropriate font colors and size to develop the poster to encourage readers.
- Use your abstract to provide the backbone for the sections in your poster.
- Clearly define the sections of the poster to guide readers in reviewing your research.
- Label all graphs, tables, figures, and maps to increase clarity.

Let’s review some of the sample posters to identify elements that work well, and some that could be improved. (Slide 14)