Preparing for a Poster Presentation: Tips and Tricks

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By the end of this session, you should be able too:

1. Describe elements which make for an effective poster
2. Execute best practices in design and layout
3. Identify tools and software available to create posters
4. Prepare for presenting research and interacting with attendees
The session is divided into three parts:

1. Preparing for creating your poster
2. Creating your poster
3. Preparing for the presentation
The effects of sub-anesthetic doses of the non-competitive NMDA receptor antagonist ketamine on reconsolidation and expression of fear memory in Sprague Dawley rats

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Introduction

Ketamine, a non-competitive NMDA receptor antagonist, has historically been used as a sedative in veterinary and human medicine. Recent reports suggest that it displays anti-depressant as well as anxiolytic effects at sub-anesthetic doses. Several non-competitive NMDA receptor antagonists that have been shown to disrupt fear memory processes; however, surprisingly little work has been done on the effects of ketamine in this domain.

The objective of this study was to investigate the effects of ketamine on reconsolidation and expression of fear memory in Sprague-Dawley rats.

Methods

Subjects:
Male Sprague-Dawley rats (275-300 g) were maintained on a 12h light/dark cycle and given ad libitum access to food and water.

Drug:
Ketamine, dissolved in saline was administered intraperitoneally at doses of 1, 3, or 10 mg/kg. The control (vehicle) animals received an equivalent volume of saline alone.

Procedure:
Acquisition:
Rats were placed in conditioning chambers (Coulbourn Instruments) where they received either 1/16 hontards (1.0 mL; 1x duration) on a random schedule (contextual training) or 2-5 pairings of a 30-tone with a 1.0 Hz (1.0 s) continuous soundtrack delivered during the final second of the 30-tone (cued training).

Experiment 1: Reconsolidation

Results

Acknowledgements

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Future research

Future research into ketamine's effect on fear memory processes should focus on the possibility of its implication in a different mechanism in the amygdala, as well as its effects on fear memory acquisition.

Implications of such studies could eventually lead to novel treatments for anxiety disorders, such as PTSD.
Developing and characterising a novel combined nanoelectrode system

L. P. Robinson, A. Mount

Electrochemistry at nanoelectrodes
Nanoelectrodes have several advantages for electrochemical sensing.

- Linear diffusion profile
  - Transport to nanoelectrodes proceeds through a relatively inefficient linear diffusion profile.
  - They are also highly affected by convection and IR drops.

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

A Pt microarray nanoband edge electrode (MNME) 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 the three electrodes necessary for analysis on one chip.

Ag/AgCl as a combined electrode

- Dendritic growth
  - The combined reference counter electrode is created by electrolytically depositing a thin film of Ag onto the Pt microarray.
  - 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 HCl has been shown to produce uniform deposits of AgCl.

Combined nanoelectrode system

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

- The Ag/AgCl nanowire is a combined reference and counter electrode. As its area is 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.

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.

1. Spin-coat with oxide layer
2. Metal is then deposited and patterned to form a thin metal layer
3. Photolithographic pattern is used to deposit metal layer
4. Metal is etched away leaving a patterned layer

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

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 response to the current nanoelectrode array.

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 increases, and therefore, the EIS response is much larger.

- Post hybridisation: the redox couple has access to the electrode.
  - The presence of the redox species is restricted, and so the resistance rises at the electrode.

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

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SMC
EPSRC

Managing research and skills
EASIER, FASTER, BETTER?

How social media facilitate tacit knowledge sharing practices between employees within governmental bodies.

1. THE ISSUES

- Tacit knowledge has a lot of value for organizations, because it is a mode of people's experiences, ideas, and skills.
- It is difficult to share because it is often in our heads and cannot be transferred.
- The hardest way to share tacit knowledge is when new people have to convey it to someone.
- Employees who work alone or with different backgrounds need to share their tacit knowledge.
- Knowledge which is shared collectively creates an added value (cognitive and social capital) from which the entire organization can benefit.
- Employees need the appropriate tools to enable the sharing of tacit knowledge.
- Social media enable social interactions between people whenever they are located.
- There is a lack of awareness on how well they can share the tacit knowledge.

2. RESEARCH QUESTIONS

- How do social media facilitate the sharing of tacit knowledge between employees?
- To what extent do social media bring new capabilities in the sharing of tacit knowledge?
- Which environmental factors may provide the appropriate context for using social media to enhance tacit knowledge sharing practices?

3. KEY THEMES

**TACIT KNOWLEDGE**
- Knowledge that is implicit in our heads and cannot be explicitly articulated.
- Mode of our experiences, environment, thoughts, emotions, feelings.
- Tacit knowledge needs to be made explicit (written, formalized, recognized) so that it can be easily shared with others.

**KNOWLEDGE SHARING**
- Digital technologies can facilitate the sharing of tacit knowledge.
- Wikis (Knowledge Base) and repositories (for case studies).
- Using the methods of knowledge sharing can serve as guidelines.

4. METHODOLOGY

**ACADEMIC CONTRIBUTION**
There is very limited evidence on the role of social media within governmental bodies in facilitating the sharing of tacit knowledge. This thesis will bring new understanding on this subject.

**PROFESSIONAL CONTRIBUTION**
This work will provide governmental bodies with an understanding of the place of social media in the context of knowledge work.
Go to menti.com and enter the code 87 43 77
A poster is **not:**

- A place to squeeze in all of your research data and technical lingo
- An academic paper printed out

A poster is **is:**

- A communication tool
- A networking tool
- A conversation starter
Spend some time planning:
The session is divided into three parts:

1. Preparing for creating your poster

2. Creating your poster

3. Preparing for the presentation
Getting Started with your design: 5 Rules to follow

1. Bullet points are your friend – but use them wisely

In your eyes: Critical reflection through team teaching
Allison Carr, Social Sciences Librarian, and Talitha Matlin, STEM Librarian, California State University San Marcos

What is Critical Reflection?
Examine our assumptions about teaching within historical, cultural, social, economic, and political contexts. It can be ideologically transformative.¹

Transform your reflection into critical reflection by consistently focusing on unearth and scrutinizing how power affects our educational interactions and our hegemonic assumptions.²

Engage in critical reflection
Ask each other:
- Why do I believe what I believe about teaching?
- Do I teach in a way that actually works against my own best interests and/or the interests of my students?
- What are some assumptions I have about teaching and learning?
- What are some assumptions I have about my students?
- How do my experiences and background affect the way I teach?

A critical friend is a “trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person’s work as a friend.”³

References


Team teaching: The colleague lens
Team teaching provides us with the opportunity for praxis – the combination of action (teaching) with reflection.

It offers:
- An environment to critically examine our own strengths and weaknesses in a safe and collaborative environment;
- An opportunity to invigorate and sustain our teaching in new ways;
- Each participant with a “mirror, mentor, or critical friend” who can provide a different version of the events we experience;²
- Validation of our own instincts;²
- A critical friend relationship where each participant is an advocate for the other.³

#acrlteamteaching
2. Use headers and defined sections

**Sowing Seeds of Success**
Community Collaboration for College Readiness

**Sixth-Grade Students**
A local middle school targeted by the district for improvement.
Most students from families with low socioeconomic status.
Will receive scholarship money to participating Michigan institutions upon graduation from high school.

**Information Literacy**
Weekly hour-long research skill workshops led by academic librarians.
Workshops take place during the school day, in the 6th grade reading class.
Students work through the research process and create a formal presentation.
Curriculum focuses on the basic concepts of information literacy.

**University Students**
Education students enrolled in EDF 315: Diverse Perspectives in Education.
Work as research mentors to the sixth-graders in the weekly workshops.
Assist in assessing individual student mastery of research skills.
Receive service learning credit and classroom experience.

**Community Partners**
- University Libraries
- College of Education
- Community Foundation
- Middle School teachers & administrators
- University Office of Multicultural Affairs
- University Office of Inclusion & Equity
- University Office of Academic Services
- University exhibit event of research projects for students and families
- Transferable information literacy skills for sixth-graders
- Community service learning experience for university students
- Building college awareness among families and school community

**Outcomes**
Getting Started with your design: 5 Rules to follow

3. Less (words) is more
4. Graphs are good… but in moderation
5. Stick to a colour palette

- www.canva.com/color-palette/
- www.pictaculous.com
- Color.adobe.com
Where to find templates


• There is also a SMH template on the intranet – you are not required to use it, but you can.
  • From the intranet home page under quick links > Forms and Templates > Templates > Research Poster Template (36” X 72”)
Where to find inspiration:

Faculty of 1000 posters: https://f1000research.com/browse/posters?&selectedDomain=posters

Pimp my Poster Flickr Group: http://www.flickr.com/groups/pimpmyposter
Demo: Using PowerPoint to create a poster

Demo: Using Canva to create a poster
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The “elevator speech”

= Using your poster as a tool to succinctly summarize and explain your research

I wanted to conduct this research because...

The objectives of my research were to...

As you can see in this graph...

Something interesting I learned was...
Activity: 5 minutes

1) Start getting practice talking about your research by filling out the fill-in-the-blank pitch on your handout
2) In groups of 2 or 3, practice presenting your research by reading your pitch
Types of people you may encounter at the presentation:

The browser:
- May read your title and move on (not everyone will be interested in your project and that’s okay!)

The interested:
- May stay and look at your poster for awhile
- You can initiate conversation by asking “Would you like me to walk you through my poster?” or “Do you have any questions?”

The conversationalist:
- May have specific questions for you right away
- May have a lot they walk to talk about
- You can always give them your contact information and follow-up
Tips for potentially difficult questions:

It is okay not to know everything!

• “I’ve never considered that before, can you tell me more about it?”

• “I’m less familiar with that aspect of this research, but it’s an area I’d like to learn more about”
Final Suggestions:

- Take business cards if you have them, or another way to easily distribute your contact information.

- Another option is to print out smaller versions of your poster that you can hand out to people.

- Don’t forget to enjoy yourself a bit!
THANK YOU!

Email the library: hslibrary@smh.ca

Email me (Glyneva): BradleyRidoG@smh.ca

Find the slides and more resources here: