Practice Based in Learning Theory: Peer Leaders Explain their Poster Projects

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Abstract

Three Peer Leaders present their final projects, one in Mathematics and two in Statics (Civil Engineering), for a one-credit course in Peer Leader Facilitation at New York City College of Technology, City University of New York, at the Honors and Emerging Scholars Poster Presentation in December 2015. The impetus for videotaping their presentations was the commemoration of a process which could be termed "How to Make a Poster." The abbreviated directions are provided here. To aid the viewer of the videos, editing provides the static text of the poster section as the Peer Leader discusses that section. Introducing videos as exemplary practice advances the presentation of research in Peer Leader facilitation and theory.

Keywords: Videos, Learning Theory, Facilitation Practice, Peer Leaders, Poster Presentation

Introduction

How can Peer Leaders showcase what they have learned in their first semester of facilitating small group sessions? A project, in the form of a poster, was the final requirement for a one-credit course at New York City College of Technology of the City University of New York. The course, focused on peer-led facilitation strategies and learning theory, was formalized in 2011 (see Appendix A for topics). Peer-Led workshops were offered in designated sections of mathematics, chemistry, and statics (the first-level course in civil engineering). While content preparation was conducted by the faculty in the respective departments, all first-time Peer Leaders were enrolled in the course to learn how to facilitate workshop sessions. Details of the facilitation preparation course are presented in Supporting Information, Appendix A.

The final project is a defined version of a qualitative research exercise. It encompasses scholarly research, observations, analysis, critical thinking, understanding of agency, as well as writing, design, creativity, and public speaking skills. The various sections of the poster are presented (Appendix B) with a conversational version of prompts.

Three examples of poster presentations are presented here in two disciplines: Mathematics and Civil Engineering. The use of video allows the suspension of time when the Peer Leader explains the project. It provides a first-time explanation of the linking of practice and learning theory, for a deeper understanding of the peer leading process.

Videos

Abubakarr Jalloh
How can students use real problems to improve their knowledge in Statics?
https://youtu.be/usyi3A9Zic8

Joshua Grillasca
How can the Peer Leader increase students' deep learning in a Mathematics Workshop?
https://youtu.be/z-cw61bYrIs

Amanda Hayley Abrew
How can the Peer Leader engage women in workshop to develop their skills in Statics?
https://youtu.be/N51mpRnjI_E

How to make a poster – the process

Posters offer a summary of research, and by their limitation of space, do not seem as daunting as a paper. They provide not only the opportunity to create an artifact that can be listed on a resume, but also present a public-speaking opportunity; the presenter shares learning and insights in ways that the listener can visualize in interaction with the presenter. Appendix B provides the technical aspects and guidelines for designing a poster using PowerPoint's custom slide feature. What follows here is a delineation of each section of the poster and the prompts to write the section.

The instructor/learning specialist will meet with each Peer Leader at least twice during the poster development process (over a month's time), and meetings can be scheduled for half-hour increments. Generally, conversations run longer as Peer Leaders consider their topic and the development of the poster.

The initial conversation

The process starts with a conversation between the instructor and the Peer Leader.

"What was interesting to you about the experience of peer leading?"

"What did you find challenging?"

"The journal from Week 3 mentioned…"

And probing further:

"Was there a workshop session that you felt was especially good or bad?"

"What made it good or bad?"

"Was there a technique you used so that students all participated?"

The Peer Leader will respond in some way that provides a bridge to an incident or series of incidents that is significant to them. This initial conversation will form the basis for the *Introduction* section of the poster.

Observations

The easiest place to start is to delineate the situation that the Peer Leader mentioned. What happened? Then what happened? This is the opportunity for the Peer Leader's action to change the dynamics of the situation. Observations have three phases:

1. Initial situation (problematic or notable in some way)
2. Peer Leader's action (intervention)
3. Change in situation

This section forms the middle of the poster. It is based in qualitative research, as it is formative and tentative. It is important to introduce students to concepts of qualitative

research; most students are unaware that qualitative methods provide means of researching what has not been well-documented or tested.

Observations include details: how many students? Who did what? What was the reaction(s)?

Layout

The first draft of the poster (see Appendix B) starts with the creation of text boxes and adding the section titles. This creates an awareness of what needs to be done.

The layout and design follow both prescriptive sequences and allow for individual creativity. The spacing is generalized and recommendations are made: sans-serif fonts are preferable for easier reading; font sizes are within a range, depending on text; bullets are helpful; phrases or short sentences are used to aid reading.

Only after all sections have been drafted are design elements added, such as background color, shapes, and images.

Choosing Literature

The Peer Leaders have been introduced to learning theories as a basis for facilitation techniques and strategies that they practice in their weekly workshop session (Appendix A). The weekly journals are written within the week, combining how strategies and theories were used in practice, so there is familiarity from readings and application. Most choose theorists to whom they have been introduced. Some decide to explore other theorists.

Five papers must be read, and the information synthesized into a narrative order, explaining ideas and their use. Finding empirical studies is encouraged – this allows for discussion of comparison of study participants and interpretation of findings.

This section forms the left-hand column of the poster.

Title

The title is in the form of a question, using "How" or "What" and generally incorporates both the observation question and the learning theorist used. The Peer Leader's name, title, and semester are listed, as well as the institution's name and logo. This is helpful if the poster will be used again, at a conference for example.

The title is at the top of the poster, centered, with large font sizes.

Discussion

How do the Observations compare and contrast with the Literature? Why is this theory useful to explain the observations? Here, additional literature can be introduced.

This section forms the top half of the right-hand side of the poster.

Conclusions

What has been learned? What would the Peer Leader like future Peer Leaders to know? Has the title question been answered?

This section forms the bottom half of the right-hand side of the poster.

References

Students are introduced to using references (APA style): if someone's idea or information is used, it must have a reference; if an idea or information is listed in the references, it must be pertinent so is listed, either in the Literature section, in Discussion, and occasionally elsewhere.

This section's text is in a smaller font and is placed at the bottom of the poster, wherever it fits best, generally under Literature or Observations.

Acknowledgments

A standard line acknowledging sources of support for the PLTL program is used; this also helps Peer Leaders appreciate the organizational aspects and support. Then Peer Leaders are encouraged to acknowledge support from colleagues, students, and mentors. This section's text is also in the smaller font and is placed at the bottom of the poster, wherever it fits best, usually under Conclusions.

Videotaping and Editing

The three videos were edited in 2021 (Najera) although they were recorded in 2015 (Dreyfuss). The videotaping provides a record of the presentations by the three Peer Leaders and their journey in making their posters. To aid a viewer's understanding, selected portions of the posters were projected for viewing clarity within the videos, and titles were added.

posters were presented at the Honors and Emerging Scholars Poster Presentations in December 2015.

SUPPORTING INFORMATION

<u>Appendix A</u>

Topics for One-credit Course: Peer Leaders' Facilitation of Workshops

Session/Week	Topic
Pre-semester	Orientation: Introduction to course Icebreakers; questioning techniques
1	Communication Skills; Pair Problem-Solving
2	Mattering & Marginality; Jigsaw technique
3	Learning Styles (Felder, Kolb, McCarthy)
4	Stages of Group Formation (Tucker, Stetson)
5	Feedback Mechanisms (Angelo & Cross) Motivation (Deci & Ryan)
6	Language, Scaffolding (Vygotsky); Observations (Bloom)
7	Developmental Stages (Perry, Belenky)
8	Assumptions & Misconceptions (Argyris & Schon)
9-13	Final Project Development
14	Final Project Presentation

Course requirements: attendance (ten sessions; meetings for final project); completion of weekly journal with readings (nine in total; posted to discussion board (Blackboard); comments weekly on two colleagues' journals; final project

Readings

Roth, V., Goldstein, E., & Marcus, G. (2001). *Peer-Led Team Learning: Handbook for Team Leaders*. Upper Saddle River, NJ: Prentice Hall.

Peer-Led Team Learning International Society. (2021). Selected readings from Resources: Leader Training. Online at https://pltlis.org/leader-training/
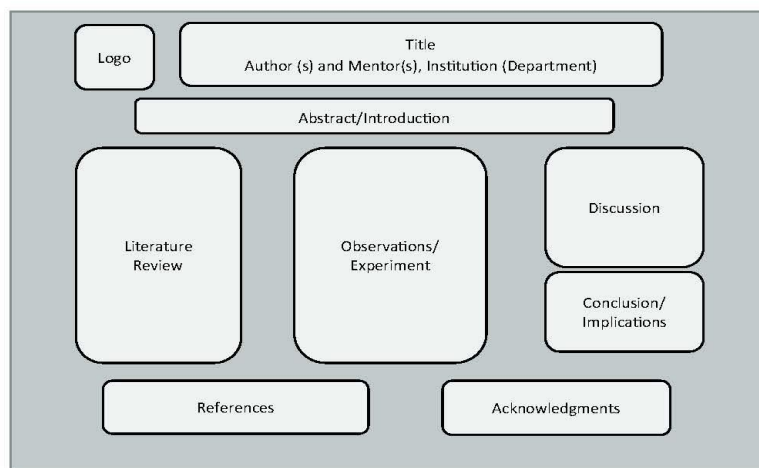
Appendix B

Guidelines for Poster Design Using PowerPoint

New York City College of Technology

1. Use PowerPoint and select "custom" slide
2. Insert the following specifications: Size: 48" wide; 36" height   Layout: Blank
   Use only the Textbox tool (no WordArt as it cannot be manipulated)

SAMPLE POSTER FORMAT

| Logo | Title
Author (s) and Mentor(s), Institution (Department) |

| Abstract/Introduction |

| Literature Review | Observations/Experiment | Discussion |
| | | Conclusion/Implications |

| References | Acknowledgments |

3. Select the Textbox tool and create a box; type in title of box to "anchor" the box
4. Use Font: Arial, Tahoma, Calibri, Helvetica (any font that is "sans serif")
5. Use the guidelines for the following text boxes:

   Title: Top of slide

   a. Title: Size: 72 point   b. Author(s)/Mentor(s): Size: 54 point   c. Name of Institution: Size: 42-54 point

   Abstract, Literature Review, Observations/Experiment, Discussion, Conclusions): Middle of slide

   a. Title of section: Size: 36 to 44 point   b. Text of section: Size: 32 to 40 point

   Abstract/Introduction: Often in narrative format

   Literature Review, Observations/Experiment, Discussion, Conclusions: Depending on presentation, bullets are often used to convey information concisely

   References & Acknowledgments: Bottom of slide

   a. Title of section: Size: 24 to 36 point   b. Text of section: Size: 18 to 32 point

   References: Citation style must follow rules designated by discipline, e.g., MLA, APA, etc.

   Acknowledgments: Cite funding sources and those who supported the work

6. Use a light background (avoid using a dark background and white/light text: it will take a lot of time and ink to print); if using images, be sure they enhance the concept of the presentation. Images must be cited if not original work.
   Special Effects: each text box can be "filled" with color; the text can be in color; the outline of each box can have color and the look of the line can be changed (heavier weight, dashes)