Basics & Skills for Creating Proper Scientific Posters

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Table of Contents

• What is a poster?
• Types of posters.
• How to prepare a proper scientific poster.
• Tips and hints.
• Ideas for presenting.
• Examples.
• Practise 1.
What is a Poster?

• A poster is any piece of printed paper designed to be attached to a wall or vertical surface.

• Academic posters communicate summarized information or research concisely and attractively, to help publicize it and generate discussion.

• According to the French historian Max Gallo, "for over two hundred years, posters have been displayed in public places all over the world."
A poster can be defined as a multimodal communicative genre, with text, graphics, colour, speech, and even gesture used to convey meaning (Kress & van Leeuwen 2001).

They also help viewers to absorb a lot of information quickly.
Types of posters

• Political posters.

• Travel posters.

• Event posters.

• Educational posters:
  ✓ Research posters.
  ✓ Classroom posters.
Moment of inertia of flywheel

Theory:
When a torque (T) accelerates a flywheel of inertia (I), its acceleration (a) is related by, \( T = Ia \)

The analysis:
Torque = mass \times gravity \times radius of axel
\( T = mgk \)
\( V = \frac{mg}{k} \)
\( k = \frac{\text{radius}}{\sqrt{2}} \)
Angular acceleration = \( \frac{a}{r} \)

Acceleration due to gravity, \( g = 9.81 \text{m/s}^2 \)

\( L_1 = 5 \text{mm} \)
\( L_2 = 4.5 \text{mm} \)
\( R_1 = 19 \text{mm} \)
\( R_2 = 15.2 \text{mm} \)

\( I_{\text{met}} = \text{Moment of material} \)
\( I_{\text{net}} = mR^2 \)
\( I = M_1a^2 + M_2a^2 \)

Mass = Volume \times Density = \pi \times r^2 \times h

Density of steel, \( p_s = 7800 \text{kg/m}^3 \)
Density of aluminum, \( p_a = 2700 \text{kg/m}^3 \)
Volume of steel \( V = \pi \times (19x10^{-3})^2 \times 25x10^{-3} = 6.24 \times 10^{-4} \text{ m}^3 \)
Volume of aluminum \( V = \pi \times (15.2x10^{-3})^2 \times 38.7x10^{-3} = 9.09 \times 10^{-4} \text{ m}^3 \)

Mass of steel \( M_1 = V_s \times p_s = 458.8 \times 10^{-6} \text{kg} \)
Mass of steel \( M_2 = V_s \times p_s = 9.09 \times 10^{-4} + 7.126 \text{kg} \)
Mass of aluminum \( M_1 = V_a \times p_a = 6.24 \times 10^{-4} \times 2.770 = 5.672 \text{kg} \)
Mass of aluminum \( M_2 = V_a \times p_a = 9.09 \times 10^{-4} \times 2.770 = 5.672 \text{kg} \)

Radius of gyration \( K_i = \frac{r_i}{\sqrt{2}} = 13.4 \times 10^{-4} \text{ m} \)

Results of the experiment:

<table>
<thead>
<tr>
<th>Material</th>
<th>Mass (kg)</th>
<th>1st try Time (s)</th>
<th>2nd try</th>
<th>3rd try</th>
<th>Average (s)</th>
<th>Angular acceleration (m/s²)</th>
<th>Torque (N.m)</th>
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<tbody>
<tr>
<td>Aluminum</td>
<td>0.3</td>
<td>10.24</td>
<td>8.12</td>
<td>7.03</td>
<td>8.72</td>
<td>1.33</td>
<td>0.24</td>
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<tr>
<td></td>
<td>0.4</td>
<td>6.37</td>
<td>6.87</td>
<td>7.60</td>
<td>7.25</td>
<td>0.40</td>
<td></td>
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<tr>
<td></td>
<td>0.5</td>
<td>5.85</td>
<td>5.65</td>
<td>5.98</td>
<td>5.85</td>
<td>0.40</td>
<td></td>
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<tr>
<td></td>
<td>0.6</td>
<td>5.09</td>
<td>4.99</td>
<td>5.76</td>
<td>5.25</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.7</td>
<td>4.23</td>
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<td>3.82</td>
<td>4.12</td>
<td>0.51</td>
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</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Mass (kg)</th>
<th>1st try Time (s)</th>
<th>2nd try</th>
<th>3rd try</th>
<th>Average (s)</th>
<th>Angular acceleration (m/s²)</th>
<th>Torque (N.m)</th>
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<td>0.50</td>
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<tr>
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<td>4.55</td>
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<td>4.01</td>
<td>4.01</td>
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<td>3.83</td>
<td>3.86</td>
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<td></td>
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</tbody>
</table>

Discussion:
If the velocity increases, the torque must reduce in (inverse) proportion to when the velocity doubles the torque halves if we assumed that there was no losses.

There are some errors in this experiment such as human error. Error in using the timer. That has effect the graph as it shown the increase of angular acceleration was not increasing regularly.

Conclusion:
A flywheel is a mechanical rotating device, which is used to store rotational energy. The gradient (inertia) can easily be found through the graph by using the equation of line \( y = mx + c \).
How to Prepare a Proper Scientific Poster

• Your poster must include:

 ✓ Main title.

 ✓ Introduction/Background/purpose (states research problem and should quickly address the subject matter).

 ✓ Aims and objectives.

 ✓ Materials and methods (description of the approach). Results/finding (summary of findings).

 ✓ Summary/ conclusion/ discussion.
How to Prepare a Proper Scientific Poster

• You can also include:

✓ References.

✓ Acknowledgement (optional).

✓ Useful links/ For further information (optional).
Sizes

• Typical academic poster sizes:

  A0: 118.9 cm x 84.1 cm,      A1: 84.1 cm x 59.4 cm
  A2: 59.4 cm x 42.0 cm,    A3: 42.0 cm x 29.7 cm

• Posters layout!!
Ideal Word Counts

The ideal length for the text of a poster is approximately 800 words.

- **Introduction:** 125 words.
- **Materials and methods:** not exceed 150 words.
- **Results:** 250 words.
- **Conclusion:** 150 words.

(Dale J. Benos, 2012)
Font Sizes

• **Main title**, use 72 -120 point font. The title should be readable at a distance of 15 feet.

• **Authors and affiliations**: use 40 - 80 point, bolded font, same style and case as used for the main title.

• **Headings**: use 36-42 point bolded font, same style and case as used for the title and subtitles.

• **Text**: Use 24-36 point font.

(Dale J. Benos, 2012).

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Practice 1

• Create an attractive title!!!

*Implementation of Alternative Assessment in a Premedical Students’ English for Specific Purposes Course*

*Beyond Exam: Alternative Assessment in English for Specific Purposes Course*
Practise 1

• How can you create an attractive title for your poster?

• Brain storming!!! Can you think of one?

• Work in a group...

• You have 5 minutes to think of one ....
Tips and Hints

• Before designing remember, your poster must be:
  ✓ Simple.
  ✓ Clear.
  ✓ People can read it quickly.
  ✓ People can read it easily.
  ✓ Define Your Audience.

• How to summarise your work?!
• How to guide your readers?!
Think and Draw!!
Result?
Tips and Hints

• While designing remember:
  ✓ Focusing on images, graphs..etc.. Why?
  ✓ Attention, how can I buy the audience attention?
  ✓ What are the information that I want to deliver?
  ✓ Attraction, how can I attract others?
  ✓ Think of: the main title and the sub titles.
  ✓ Do not typeset the title in all capital letters—such text is difficult to read.
Tips and Hints

- Balance the placement of text and graphics.
- Blank space is good as it makes the poster seem less complicated and more approachable.
- Select dark color (black/blue) for main text, select red for important text.
- Design individual sections so that they can be quickly read (use numbers or bullets).
Try to keep your graphs/images and figures above 13cm x 15 cm. This is a good size relative to the size of an A0 sheet.

The most suitable image format for poster creation is a high resolution JPEG (.jpg) file.

Avoid low resolution images from web pages.
Example

- **Horizontal Symmetry**
- **Horizontal & Vertical Symmetry**
- **Diagonal Symmetry**
- **Asymmetry** (text-heavy on left, image-heavy on right)
Tips and Hints

• Before presenting your poster remember:

✓ Make sure you know the time, date, and location of the session.

✓ Allow plenty of time to prepare.

✓ Think bout what you will say, anticipate likely questions and practice your responses.

✓ Have colleagues comment on drafts.
Tips and Hints

• Before presenting your poster remember:

• Relaxation Techniques

   Breathing – Positive Thinking – Bottle of water

• Check mistakes.
Remembre!

• Although academic posters also have a spoken component (presenters are required to verbally describe the poster, summarize it, point out the most salient elements and interact with viewers).

• If your poster is to be distributed online, convert it to PDF.
Tips and Hints

• While presenting your poster remember:

✓ You.
✓ Your voice >>> 35%.
✓ Your words >>> 7%.
✓ Your body language >>> 55%.
✓ Don’t stand in the front of your poster!
✓ Answer questions.
Tips and Hints

• While presenting your poster remember:

• How can you deal with questions?

• How can you pay the audience attention while you are standing next to your poster?
English Vs. Arabic Posters?

1. What are the differences between them?

2. What are the similarities between them?

3. Have you prepared poster with the two languages before?
Evaluation

Visual display and organization

Demeanour of the presenter

Content
Examples & Templates

- The most popular software you can use for creating posters are:
  - PowerPoint.
  - CorelDraw.
  - Publisher.
  - InDesign.
  - LaTeX (Mathematical research).
- Posters templates online.
Ideas for Presenting!

Electronic copy (QR Code)

A4 Copies of your poster

Audience Feedback

27/07/2016
Ahd Mohammad Aljarf
Exploring the Ecosystem of Empowerment of Women in Entrepreneurship in the Kingdom of Saudi Arabia (KSA) during the Twenty-First Century

Al Haddad, Raihan

Ahd Mohammad Aljarf

Ahd Mohammad Aljarf

Exploring the Ecosystem of Empowerment of Women in Entrepreneurship in the Kingdom of Saudi Arabia (KSA) during the Twenty-First Century

Ahd Mohammad Aljarf
E-Posters
Common Mistakes

• Choose the wrong size of the poster while designing.

• Use different font formats for the content.

• Too small font.

• Large spaces between sections.

• Large spaces between paragraphs.

• Include too much text and/or figures.

• Leave preparation and printing of your poster to the last minute.
Practise 2  
(Evaluation Posters) 

• Write down the strengths and the weakness points. 

• How can we improve them? 

• Work in a group… 

• You have 5 minutes to evaluate the posters in front of you ....
References

- http://samar-almossa.com/blog/p/2109
- www2.napier.ac.uk/getready/writing_presenting/academic_posters.html
- https://www.ncsu.edu/project/posters/
- http://colinpurrington.com/tips/poster-design
References


Posters Templates:

• [http://www2.le.ac.uk/offices/ld/help-with/posters](http://www2.le.ac.uk/offices/ld/help-with/posters)
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الملصقات (البوسترات) وإستخداماتها


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خطأ عند تصميم الملصقات العلمية وأشهر البرامج للتصميم

Thanks for your attention

Questions!!
Contact Me

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الملصقات_العلمية

#الملصقات_العلمية_مع_عهد_الجرف

27/07/2016

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