How to make an academic poster

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HIGHLIGHTS

- Academic posters are an excellent way for trainees to showcase their work at conferences and meetings.
- When done effectively they provide a succinct and attractive summary of your project.
- This guide aims to provide trainees with a practical and concise method to prepare their academic poster.

ARTICLE INFO

ABSTRACT

Academic posters are an excellent way to showcase your work at conferences and meetings. They can be used in poster presentations and serve as a summary of your project. In this how to article, we demonstrate how trainees can make and deliver a successful academic poster.

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Academic posters, when done effectively, are a succinct and attractive way to showcase your work at conferences and meetings. Unlike oral presentations, your audience may not be static so clear design and distilled content are all the more important. Similarly to oral presentations, successful posters can generate discussion amongst the audience members therefore its important to have a clear plan of what to say when stood alongside your poster. In this article, we highlight the important aspects to creating an effective academic poster.

1. Why make an academic poster?

A poster presentation allows you to summarise your project into a concise and aesthetically pleasing format. It is one of the main ways you will present your work when at conferences [1,2]. For this reason, you need to make sure your poster is of good quality. This guide will serve to help you with this.

2. How to prepare a poster

2.1. Tools

There are many computer programs you can use to create your poster. Many use Microsoft Publisher or PowerPoint. It is important that you are comfortable using these programs as you will likely be doing a lot of editing. If you are not familiar with these programs, librarians that are present in most universities will be able and usually willing to help you out.

2.2. Design

It is useful to attend a variety of scientific meetings to collate ideas on how to create an informative and aesthetically pleasing poster. The most important concept for the overall design is not to overly embellish the poster with formatting and pictures, as this may distract from the content. The information should be minimal, as in a slide presentation, stating only key points rather than complete sentences.

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The colour system should have effective contrasting backgrounds (e.g. blue and yellow, black and white) to ensure the text is easy to read. The flow of the poster should also be logical and ideally follow a longitudinal algorithm. This should begin with aims and objectives and flow downwards in columns to methods, results, conclusions and finally references. The same format is also adopted when writing scientific abstracts. Once the poster is drafted, it is important to adhere to the instructions provided by the congress you are attempting to submit to. Failure to comply to guidelines may result in your poster not being considered for a poster award, or perhaps even result in expulsion from the meeting altogether.

Prior to submission it is also important ask as many senior colleagues for feedback on your poster as possible. They will be able to provide feedback on the overall readability of the poster, including formatting. Start preparing your poster early — one month is sufficient time to allow for revisions to be made [3].

3. Information to include in the format — our top tips

3.1. Headings

This should be clear in bold and grab the reader's attention. It is recommended you use a short, sharp heading relevant to your study. Long scientific titles can often bore the reader and distract from the main body of text. The heading should also include the centre at which the study was conducted and the main contributory authors (as per the authorship critera of International Committee of Medical Journal Editors (ICMJE)). Logos for the trust you are working at, as well as the conference/congress you are attending can be placed on either side of the title.

- Title: this needs to have the largest font size of your entire poster to be eye catching. Keep the title as short as possible — it doesn't need to be a paragraph long [1,3].
- Type of manuscript: whether systematic review, research article or another manuscript type.
- Authors: include everyone who has contributed [4].
- Affiliations: should come directly under authors. This should show which organisations are represented by the authors and/or where the research took place and also contact details.

3.2. Main body

This should follow a logical structure guiding the reader through the poster. The more concise your poster, the better — approximately 100 words per section is ideal [5,6]. It is very important that your poster is not wordy. Too much text can be off-putting for the audience. The structure should follow a simple abstract outline.

These are the following sections we recommend as a rough guide, but do check the requirements at your specific conference:

- Introduction

This should include a short background of the topic to set the context and state the main aims and objectives of your piece of work. What differentiates your work from your competition? Why is your work novel in the field?

- Methods

The methods section (poster space permitting) should include basic parameters including target sample, setting, duration of study, inclusion/exclusion criteria, statistical techniques, key interventions assessed and primary outcome measures.

- Results

The results section should include data analysis and stratification and should only include the results which answer the stated hypothesis. Moreover, essential to the results section is the inclusion of pertinent and key graphs, graphics, images and tables. These need to be large enough for the audience members to see and be as attractive and clutter-free as possible.

- Conclusion

The conclusions must derive directly from the results section and answer solely what has been proposed at the start of the paper. Obvious confounders and limitations should also be acknowledged. Key improvements as well as potential for project expansion should also be considered.

- References

Only cite key references integral to your study, as references are wordy and space consuming. Use a smaller font to the main body text to reduce this.

3.3. Templates

Your host institution or the conference may require you to use a specific template for the poster. This may include a logo, colour scheme or a certain layout. You should check this before you start designing your poster.

Numerous templates for designing poster exist online and within your local trust library. Computer software may also have inbuilt templates to assist with the design process.

3.4. Tables and figures

It is a good idea to include graphs/images/tables as this will make your poster look more aesthetically pleasing [1,6,7]. They can also provide more information without crowding the poster with text. Make them colourful, though avoid colours that clash with the text colour [8]. Tables and figures can add new information or graphically present what has already been said in the poster. The arrangement of figures and tables varies and there is no universal rule, however figures interspersed within text is popular and looks attractive. Furthermore, ensure that the figures and images chosen are of a good resolution to avoid blurring when printed and presented.

3.5. Font size

The conference may specify this, however, generally for the main body, size 24 is used for text and size 32 for titles. The introduction section at the top of the poster should have a larger font than this [2].

3.6. Colour

It is a good idea to stick to one or two colours for main text; anymore and your poster may look too busy. It is also important to check colours in advance at the place you wish to print your poster, as certain colours may come out in a different way to that expected [9].

3.7. Printing

Make sure to factor in the time (and cost) of printing the poster if this is required. Some companies will print the same day, while

others may take longer. Check with your host institution/conference if they use a specific company, as they may be able to provide a discount.

3.8. Electronic posters

A growing number of conferences are using electronic posters (e-posters), which are screens that display an electronic copy of your poster, rather than a paper version. These can either be static images which are laid out similarly to a paper poster, or they can be slide shows of your work, which are displayed like a PowerPoint presentation which then go on rotation at the conference. They may also include videos and animations, so bear this in mind when you are selecting content for your poster [7,8].

4. On the day

Poster presentations are generally more relaxed than oral presentations. You will need to arrive on time to put your poster up — bring extra pins or Velcro tabs as these aren't always in supply. Many presenters also place a plastic pocket to the bottom or side of their poster on the day which provides a small version of their poster for readers to take away — this can be useful.

Delegates of the conference will usually be able to look at the posters throughout the day or during tea/lunch breaks. However, there will usually be a set time when judges will inspect the posters. During this time, you will need to stay with your poster, perhaps present it and answer the questions which the judges or audience members will have.

4.1. Presentation

While presenting, the intention is to guide the reader through your poster which if organised in a logical order, should not be read off but simply used to illustrate your point. What you say can then be substantiated by pictures which you can refer to for emphasis. Do keep your presentation succinct and highlight the salient points of your study. Moreover, its good practice to provide some background to your work at the start — it may sound obvious, but the audience may not necessarily know why this work is important and it is up to you to set the scene on the relevance of the project.

It's a good idea to refresh your memory on your project and be familiar with it before the presentation as the audience will likely have questions and there are often prizes for the best posters. Examples of common questions to prepare for include: how your work may be relevant to current clinical practice, how can it be developed further and what the limitations of your study were.

Attire is also often overlooked. You must maintain a professional appearance throughout and this can often add hidden points to your poster score under presentation. Be friendly and approachable and if there are any questions left unanswered, acknowledge this and offer to develop your study further.

5. Summary

- Academic posters are a good way to showcase your work.
- Preparing posters in advance is vital.
- Stick to a clear format which is easy to read from 1 m away.
- Practice your presentation in advance and think about questions you may be asked after your presentation.

Conflicts of interest

None.

Guarantor

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