

How to Make an Effective e-Poster

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Abstract

Background: Posters are an integral part of academic conferences, but have limitations. e-Posters offer a new way to overcome these limitations, but their potential is largely under-utilised because of misconceptions regarding their design, creation and use at conferences.

Aim and Method: By drawing on literature and our own experience of creating and judging e-posters, we aim to present some ideas for e-poster designers so that they can fully utilise the potential of this new medium.

Results: We present ideas that begin with conceptual considerations and then move to practical applications (including technical suggestions) for designing, creating, and presenting effective e-posters.

Conclusions: In the not-too-distant future, we believe that e-posters will evolve to become the standard poster format, and these ideas will assist in the presentation of research at conferences through this format.

Keywords: E-posters and conferences

Article

Introduction

At academic conferences, posters and poster presentations are useful ways of producing succinct summaries of research, whether in the early stages or once completed (D'Angelo 2010; D'Angelo 2012). Posters, however, have their own unique problems, including production costs, transportation on aircraft, and the fact that they offer so little space for graphs and other information. In addition, posters are frequently viewed as less prestigious than paper presentations (D'Angelo 2010; D'Angelo 2012) and recall of the poster information by delegates after the conference is known to be generally low (Goodhand et al. 2011).

A recent development has been the electronic poster, or e-poster. In several fields, including medicine and medical education, conferences are increasingly utilising the e-poster format (Powell-Tuck et al. 2002; Shin 2012). The Association for Medical Education in Europe (AMEE)

(www.amee.org) has been using e-posters since 2011, and each year, the number of e-posters increases.

The e-poster format, however, is evolving. While there are many guides on producing paper posters, there is less information guiding the creation of e-posters. As a result, there are many misconceptions about e-posters, and many delegates fail to see any real advantage to them.

The aim of this paper is to assist e-poster designers and conference delegates in understanding the potential of e-posters, so that they can be designed, presented and experienced to their full potential. These ideas are based primarily on our personal experience of creating and judging conference e-posters over the past four years; our hope is that once the concept is more fully accepted, the literature regarding their evaluation and potential will increase.

We begin with conceptual considerations, and then move into practical applications and suggestions. Because of the nature of e-posters, some of the discussion is technical, but we have kept that to a minimum or tried to explain the technicalities as straight-forwardly as possible.

1. Understand that an e-poster is not merely a poster that has not yet been printed on paper

Even paper posters usually begin their lives by being designed and produced electronically (e.g. in PowerPoint or something similar). There is a tendency for this electronic format of the poster to be considered an “e-poster.” Technically, yes, it is a poster in electronic format, but it is not what we consider an e-poster. In that format, it has only one advantage over the paper poster: it overcomes the difficulties of transporting it to and from the place of presentation.

An e-poster, on the other hand, should fully utilise the power of the electronic medium in order to be more dynamic in nature. More explanation is given in the points below, but essentially, this means taking into account that you can use multiple audio, video, enlarged graphics, hyperlinks and a different format that will allow your poster to be far more engaging and informative than a paper poster. If all you have produced is a static sheet on a screen, then it is merely a pre-printed paper poster.

Conceptually then, consider the e-poster as a book, but with greater flexibility. The flat page facing the audience is not the complete poster – it is rather the first page, a dynamic contents page inviting the participant to explore the real value of the poster with all the mixed media that lie behind the flat front piece.

Some designers will, therefore, wish to tone down the contents of the front page, leaving it as merely headings and short paragraphs, although that might result in a rather boring design. Others will want to be more elaborate, making the poster more interesting, encouraging the audience to examine the poster for a longer period of time (Foulsham & Kingstone 2011) and possibly remember more (Goodhand et al. 2011). The trick is to find the right balance. Whichever style you choose, make sure that the message is clear: this front page is primarily a gateway, and there is an immense amount of fascinating and informative material behind this - the front page is an imaginative taster for things to come.

2. Understand that the nature of your relationship with the audience has changed

In the past, and before poster presentations were actual presentations, there was a very limited connection between those who made the poster and those who actually read it; presenters frequently standing at the side of their poster and hoping that someone would stop and perhaps ask questions.

This relationship changed as more conferences created sessions in which poster authors could actually present their paper; the relationship between paper poster presenter and audience was focused on the live presentation, and that was the most important part of the work. Before and after the presentation, the poster might be available to view, and the conference attendees would be able to read the posters in their own time and pace, and also engage directly with the poster presenter (D'Angelo 2010; D'Angelo 2012). Presenters, however, have to balance remaining at their posters to explain more details to the passing audience against their wishing to attend other events at the conference.

When designing your e-poster, note that your relationship with the audience has seriously changed. Whilst your presentation is still very important, it might not be the most important element - the emphasis is now your poster which can potentially deliver a more powerful message in greater detail and over an extended period of time.

Looking back at Point 1, remember that the front page is the invitation, the gateway; your live presentation is the part that further elaborates and piques interest. The most important part of the poster experience, however, happens when you walk away, and the audience changes from passive receivers into active participants. They are drawn to your poster by the opening page and by your presentation; now they explore the depths of the poster by themselves. However, habits seldom change and just as when reading a paper, delegates will focus on the Introduction and the Conclusion (Foulsham & Kingstone 2011), hence these elements remain very important and frequently require most thought and input.

Having this view of your audience should also affect your live presentation. As with paper presentations, you will usually have a short time to present. Do not try to cover everything – there is simply too much. Cover enough so that the audience understands the basics of what is going on, show them briefly some parts of the media (e.g. not a full 5 minute video clip, but just the part that will amaze them), and leave them desperate for more. Let the front page and your presentation encourage them to explore more on their own, or at question time when having such a rich amount of information deeper into your poster will allow you to present with ease.

Naturally, you will still have the opportunity to stand at your poster, because some audience members may be reluctant to interact directly with the media, and you can guide them on that.

In addition, professional colleagues who were unable to attend the conference, or conference delegates who were unable to attend the presentation, are frequently able to interact with the poster long after the conference has ended. This may be facilitated through the conference website, or through the company supplying the software. This facility increases your audience, and allows people to view the poster at their own pace.

3. Before designing, look for other examples of e-posters

As with paper posters, poor presentation of the material impacts on the audience's perception of your work (Goodhand et al. 2011). To assist you, it is a good idea to look at other examples of e-posters to see what possibilities exist. You can begin with posters from the *ePoster* site (ePoster 2014) or exploring examples from the *American Heart Association* (American Heart Association 2014).

Because e-posters are relatively new, however, you will find that many are currently merely the electronic copies of paper posters described above. Nevertheless, as e-posters become more commonplace, their sophistication will grow, and conference delegates will increase their expectations of what to find in e-posters.

4. Know the software and the requirements of the conference organisers

Although the points above have discussed the various options available in e-posters, because of their relative novelty, there is no industry standard software used to create and display e-posters. As a result, you will find a wide variation in design possibilities, and it is essential that you get to grips with the relevant software before completing your design.

Some conferences use PowerPoint or pdf files projected onto a wall or screen (Powell-Tuck et al. 2002; D'Angelo 2012), while others use special e-poster software, with templates. For example, ECR 2003 used EPOS (Haar Romenij & Barentsz 2003), and AMEE has used Innovative Technology (<http://www.innotech-sa.com/>).

In addition, some software may allow you to be extremely creative, but may also demand great technical skill. As a result, you might need to enlist technical support from either within or outside of your institution. If you are new to the software, you might also find yourself needing to make several versions of your poster before you are satisfied with it, so make sure you give yourself plenty of time for the design and creation of your poster.

Whatever software your conference is using, make sure you know it well so that you understand its freedoms and limitations.

5. Remember that many of the standard poster ideas still apply

Although this article emphasises the differences between paper and electronic posters, many of the good ideas from designing paper posters still apply to e-posters. These include:

- Ensure that your font is large and clear enough to be read at a distance. This may be difficult to judge with an e-poster, since the final product, presentation arrangements and similar influencing factors may be apparent only once you are at the conference. It is therefore advisable to err on the side of caution, and have a slightly larger font than you would normally have on a paper poster.
- Choose your colours carefully, especially when choosing a text colour against a non-white background.
- Remember to give your name, institution, and contact details.
- Don't clutter your page(s) with too much information.
- Ensure that the overall design has a logical flow.
- Ensure that you understand, and conform to, the dimensions and orientation required by the conference. Be especially careful of dimensions given in inches and centimetres.

For further general ideas on paper poster design, see (Shelledy 2004; Hess et al. 2009).

6. Create slide shows and movies that can run independently of the presentation

If the software permits, create and embed a slide show or video on the front page that can run even when you are not there. (Even if your poster is in PowerPoint, this is possible – but see Point 10 below on file formats). An effective and creative application is to introduce a “talking head” of yourself or your group, that can introduce yourself as an author and explain in summary what the poster is about and why others should look at it. If you like, you might wish to be even more creative.

If you don't have video-creation software, you can create a simple animated PowerPoint, and then save it as a video file.

Again, however, it is important to know the abilities and restrictions of the e-poster software you are using

7. Use the Internet in your e-poster

It is now standard practice for conference venues to have wifi in all presentation locations, including the e-poster display area; make use of this. Four purposeful examples of using wifi are:

- **Logos and Titles:** Let your institution logos and titles link directly to the relevant webpages. This can also be useful for links to your own research page.
- **References:** If your references are to open access (OA) articles, then each reference should link to the article. If the article is not OA, then place a link to the abstract (e.g. through PubMed).
- **Videos:** If your software does not permit video to be embedded in the e-poster, then you can upload the video to YouTube (or any other site), and link to it from your poster.
- **Further materials:** Place links to further materials that your audience can explore on their own.

Test all links through the e-poster itself – if you test them only through your institution computer whilst building your e-poster, you might be accessing a toll-access only article through your institution's access without realising it, and this might not be available to your audience at the conference.

Support your links, graphs and images with QR codes so that visitors can access more materials directly through their mobile devices.

8. Add subtitles to all your videos and animations

While videos and animations are extremely useful, there are good reasons for adding subtitles or captions to them. These include:

- Sometimes the audio in the e-poster is a little distorted, and cannot be heard properly.
- You are presenting for an international audience, and the accent of the speaker in the video may be difficult for members of the audience to understand. (If you really want to be clever, you can even have sub-titles in different languages, and allow the audience to choose their language).

- Members of the audience may be hard of hearing, or may be standing back from the poster, and not hear the speaker properly.
- The conference may have restrictions, preventing audio on one poster from playing while a poster presentation is happening in the vicinity. Therefore, if your e-poster software allows a “mute” button, that will be useful.

Simple tools like Windows Movie Maker (<http://windows.microsoft.com/en-us/windows-live/movie-maker>), iMovie (<https://www.apple.com/mac/imovie/>) or Jubler (<http://www.jubler.org/>) can be used to make subtitles and captions.

9. Balance media quality against technical ability

For your videos, audio and graphics, you should use the best quality possible. You might find, however, that the quality is too great to be played properly in the e-poster.

To find the right balance, you should always:

- Create the original media in the best quality possible.
- Keep your original, and make a copy which you then reduce in quality to fit the e-poster specifications.

Keeping your original ensures that you can use it elsewhere, while having a lower-quality version for the poster ensures that your audience will be able to experience the media without excessive buffering or similar effects.

10. Choose common file formats

The media file format used to capture your original media may not be recognised by the conference software. Similar to retaining your high-quality original and converting to a lower-quality copy for presentation, you need to retain your original format, but convert your media to a more commonly-used file format so that you know that they will be recognised by the e-poster software. The conference organisers may specify particular file formats; if they do not, then we recommend the following:

- **Video:** MP4, MPEG4, AVI. If your video is really long, and you’re struggling with file size, you might also try 3GP. The video software listed in Point 8 can be used for video editing.
- **Audio:** MP3, WAV. Audacity (<http://audacity.sourceforge.net/>) is good free audio editing software.
- **Still Graphics:** JPG, GIF, PNG. If a higher resolution is really required, you can use BMP, but these increase your file size considerably. Paint.Net (<http://www.getpaint.net/>) is good free image editing software.

You can also use a free tool like Format Factory (<http://www.pcfreetime.com/>) to convert between file formats. Always convert from the original (or a copy of it) directly to the desired format. Going through multiple conversions will degrade the quality of the media.

11. At the conference, practice with the software

Even if you have used the software before, different conferences will use different versions, or the software may be installed with different settings. It is, therefore, imperative that you practice your presentation with the conference software beforehand, and can bring any technical problems to the

attention of the technical staff, so that they can be resolved before your presentation. This will ensure that you are completely familiar with the software, and that your presentation will not be disrupted by technical problems.

Remember that, even if the problems are not of your own causing, the audience will be keeping to a tight schedule, the Chair will be under pressure to move the presentations along, so you might find your presentation time being curtailed if technical problems occur during your presentation.

12. A few extra general pointers

- With e-posters, there might also be a risk that the audience, when exploring by themselves, get lost in a maze of hyperlinks – ensure that there is “Home” link on every screen so that they can get back to the main page quickly.
- If you have detailed graphs, place thumbnails on the main page, and have these clickable; when clicked, the participant is taken to a larger and/or animated version of the graph or image. This will allow you more space on your main page, and also allow you to show a great amount of detail in the overall poster.
- You can provide links to your raw data, inviting further work that goes beyond your initial analyses (Masters 2014).
- Resist the temptation to put in everything. Because the e-poster frees the presenter from the constraints of the paper poster’s single page, there is the temptation for designers to overload the poster with the new media. Placing too much information into the poster can overwhelm your audience.

Conclusion

The academic poster has been, and will continue to be, an integral part of academic conferences. The change for the future is the medium, and the promise that it holds. As the world embraces electronic technology as the norm, so too will e-posters become the norm. Today, we distinguish between “posters” (meaning paper posters) and “e-posters” (meaning electronic posters). Much like we use “mail” today to refer to “email,” in the not too distant future, we will distinguish between “paper posters” and “posters” (meaning e-posters), and the term e-poster will fall away completely. We hope that this short guide will enable you to produce posters that will demonstrate your research and other work effectively.

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