ISI LPC
Comparative Evaluation of Poster & Oral Presentations at Academic Conferences

March 2011

Prepared by: Eoin Fitzpatrick
Supervisor: John Haslett
ABSTRACT

The aim of this project is to find a model for comparatively evaluating oral and poster presentation formats at academic conferences. If the proposed model is accepted, it will be used to evaluate these formats at the International Statistics Institute World Stats Congress 2011. As this is a relatively new area of research, a review of literature was carried out along with a number of interviews. Three academic conferences were also attended in order to understand their structure. A pilot test of the proposed evaluation was sent to the participants at these symposia.
The International Statistical Institute (ISI) is an organisation of professional statisticians and is one of the oldest scientific associations operating in the modern world. It is also the most international and combines seven specialised sections for many different types of statistics. There are over 2,000 elected members.

The ISI is also renowned for its biennial academic conferences where the entire membership assembles to present their ideas, findings and developments in the statistical field. The next conference, the ISI World Stats Congress August 2011, will be held in Dublin and the Local Programme Committee are interested in finding a method to comparatively evaluate poster and oral presentations at this event.

This report proposes a model for this comparative evaluation. The client has accepted that there is little to no knowledge on this type of evaluation and that this is a relatively new area of research. As a result of this, the proposed model is considered to be a pilot test. A number of interviews were conducted along with a review of any existing literature. Numerous academic conferences were also attended.

I would like to sincerely thank my client Andrew Parnell of University College Dublin for all his help and support throughout the project.

Finally I would like to thank John Haslett of Trinity College Dublin for his guidance and support. His constant direction helped steer the project to completion and his input added greatly to the project.
# Comparative Evaluation of Poster and Oral Presentations at ISI World Stats Congress Dublin 2011

*March 2011*

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>NO.</th>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>INTRODUCTION AND SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>The Client Company</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>The Project Background</td>
<td>1</td>
</tr>
<tr>
<td>1.3</td>
<td>Terms of Reference</td>
<td>2</td>
</tr>
<tr>
<td>1.4</td>
<td>Summary</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>CONCLUSIONS AND RECOMMENDATIONS</td>
<td>3</td>
</tr>
<tr>
<td>2.1</td>
<td>Conclusions</td>
<td>3</td>
</tr>
<tr>
<td>2.2</td>
<td>Recommendations</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>METHODOLOGY</td>
<td>5</td>
</tr>
<tr>
<td>3.1</td>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>3.2</td>
<td>Background Research</td>
<td>5</td>
</tr>
<tr>
<td>3.3</td>
<td>Academic Conferences</td>
<td>5</td>
</tr>
<tr>
<td>3.4</td>
<td>Interviews</td>
<td>6</td>
</tr>
<tr>
<td>3.5</td>
<td>Questionnaires</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>BACKGROUND RESEARCH</td>
<td>7</td>
</tr>
<tr>
<td>4.1</td>
<td>Research Overview</td>
<td>7</td>
</tr>
<tr>
<td>4.2</td>
<td>Defining a Presentation</td>
<td>7</td>
</tr>
<tr>
<td>4.3</td>
<td>Dimensions</td>
<td>8</td>
</tr>
<tr>
<td>4.4</td>
<td>Objectives</td>
<td>12</td>
</tr>
<tr>
<td>4.5</td>
<td>Conclusion</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>ANALYSIS</td>
<td>14</td>
</tr>
<tr>
<td>5.1</td>
<td>Pilot Test</td>
<td>14</td>
</tr>
<tr>
<td>NO.</td>
<td>SECTION</td>
<td>PAGE</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------</td>
<td>------</td>
</tr>
<tr>
<td>5.2</td>
<td>Conference Evaluation</td>
<td>17</td>
</tr>
<tr>
<td>6.</td>
<td>REVIEW</td>
<td>19</td>
</tr>
<tr>
<td>6.3</td>
<td>Data Collection Method</td>
<td>19</td>
</tr>
<tr>
<td>6.4</td>
<td>Evaluation Technique</td>
<td>20</td>
</tr>
</tbody>
</table>
# APPENDICES

<table>
<thead>
<tr>
<th>NO.</th>
<th>CONTENT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Original Project Outline</td>
<td>A.1</td>
</tr>
<tr>
<td>B.</td>
<td>Interim Project Report</td>
<td>B.1</td>
</tr>
<tr>
<td>C</td>
<td>Survey</td>
<td>C.1</td>
</tr>
<tr>
<td>D.</td>
<td>Interview Transcripts</td>
<td>D.1</td>
</tr>
<tr>
<td>E.</td>
<td>Open Ended Responses</td>
<td>E.1</td>
</tr>
<tr>
<td>F.</td>
<td>Graphical Results</td>
<td>F.1</td>
</tr>
</tbody>
</table>

REFERENCES  
R.1
1. INTRODUCTION AND SUMMARY

This chapter describes the client, project background, the terms of reference and a summary of the report.

1.1 Client

The International Statistical Institute (ISI), established in 1885, is an organisation of professional statisticians and is one of the oldest scientific associations operating in the modern world. It is also the most international and combines seven specialised sections for many different types of statistics. These include:

- The International Environmetrics Society (TIES)
- International Society for Business and Industrial Statistics (ISBIS)
- International Association for Statistics Education (IASE)
- International Association for Official Statistics (IAOS)
- International Association for Statistical Computing (IASC)
- Bernoulli Society (BS)
- International Association of Survey Statisticians (IASS)

There are over 2,000 elected members who are seen as the international leaders in the field of statistics. The permanent office of the ISI is situated in The Hague, Holland. The ISI is also renowned for its biennial conferences where the entire membership assembles to present their ideas, findings and developments in the statistical field. The Local Programme Committee of the 2011 conference, who is in charge of ensuring the conference runs smoothly, is the client for this project represented by Dr Andrew Parnell.

1.2 Project Background

In August 2011, the ISI World Stats Congress will be held in the Convention Centre Dublin (CCD), Ireland’s purpose built conference and event centre. The ISI has held these congresses biennially since 1853 and expects to attract 2,500 delegates to this year’s conference.

Participants at the event will comprise of academics and experts in the field of statistics. It is expected that 700 to 1000 papers will be “contributed” by individual delegates and these will be presented in poster and/or oral formats. The Local Programme Committee, who are in charge of ensuring the congress runs smoothly, are interested in comparing these presentation experiences. The task of this project is to outline a method of how to perform this evaluation which can then be used at the ISI World Congress.
It should be noted that the evaluation technique is based on “contributed” papers only and that the method used in this project is a pilot test. It may be the case that the technique found is not efficient in which case other more effective methods, if any, will be proposed. The client has specified that this project should be to find the best method for evaluation and not to do the evaluation itself. The main objective is to find what technique evaluates poster and oral presentation comparatively.

1.2 Terms of Reference

The following are the agreed terms of reference;

- To find a method for comparatively evaluating poster and oral presentation experiences for the ISI World Stats Congress 2011.
- To outline the dimensions and objectives that determine presentation format preferences.
- To test the evaluation technique by surveying participants at conferences and analysing the data obtained.
- To investigate any published literature on the topic.

1.3 Summary

The chapters of this report are outlined as follows;

- Chapter 2 defines the main conclusions and recommendations.
- Chapter 3 discusses the methods used to build an evaluation technique.
- Chapter 4 describes the background research done on existing knowledge of the topic.
- Chapter 5 discusses the analysis of the pilot test results and a critique of the evaluation method.
2. CONCLUSIONS AND RECOMMENDATIONS

This chapter summarises the main conclusions and recommendations found in this report.

2.1 Conclusions

A comparative evaluation of oral and poster presentations at academic conferences is a relatively new area of research. There has been little exploration of this study previously [Section 4.1]. In light of this, there is almost no published literature on this type of comparative evaluation.

The results from the pilot test conclude that the model should be broken into two categories: Dimensions and Objectives. Dimensions [Section 4.3] consist of the following variables: Stress, Workload, Sense of Enjoyment, Difficulty, Perceived Prestige and Departmental Help/Funding. The Objectives [Section 4.4] are made up of; “Share ideas with people within field”, “Share ideas with people outside field”, “Constructive criticism and feedback” and “Network and further studies with others”. The results from the pilot test [Section 5.1] demonstrate that:

- All presenters from the three conferences surveyed rate the oral presentation higher in every dimension. The difference in perceived prestige between oral and poster presentations is smaller than expected. [Section 5.1]

- 100% of respondents would rather do an oral presentation than a poster session. [Section 5.1]

- The most significant dimensions are “Perceived Prestige” and “Attendance” followed by “Sense of Enjoyment” and “Workload”. [Section 5.1]

- There is no significant difference in the importance of each objective. All four are deemed fundamental to this evaluation. [Section 5.1]

- Poster spotlights are regarded as an effective method for promoting posters. [Section 5.1]
2.2 Recommendations

For future evaluations using this model, the following is recommended;

- As the technique requires a higher response rate than that achieved in the pilot test, it is suggested that when collecting responses; [Section 5.3]
  - Receive permission to include a hard copy of the questionnaire in all welcome packs for presenters at conferences.
  - Interview a small sample of participants, preferably both oral and poster presenters, after the conference.
  - Use an online survey tool such as SurveyMonkey to email all presenters as soon as the conference has concluded.

- If the Local Programme Committee for the ISI World Stats Congress 2011 decide to use this evaluation method, it is recommended that; [Section 5.4]
  - In the dimension section of the questionnaire, the variable “Attendance” is included. [Section 5.4]
  - All dimensions should carry a weighting, as some are more influential than others. [Section 5.4]
  - The dimension, “Perceived Prestige”, is the most influential factor. It is recommended that this dimension be broken up into further sub categories. [Section 5.4]

- The LPC should take into account the varying sizes of academic conferences, along with the different disciplines when using this technique. Results from using this technique can fluctuate in both size and discipline. [Section 5.4]
3. METHODOLOGY

The following chapter details the methods used in order to better understand oral and poster presentations at academic conferences and how they are structured.

3.1 Introduction

As research into comparative evaluation of oral and poster presentations was necessary, a number of techniques were undertaken to discover an effective method of evaluation. An examination into any available literature was carried out, along with numerous interviews of academics. The client also believed it was beneficial to attend several academic conferences in order to get a feel for how these conventions are structured. The most notable step taken was the construction of two questionnaires. These represent the evaluation technique and are used to pilot test the information gathered from the literature review, interviews conducted and conferences attended.

3.2 Background Research

Analysing background research on a comparative evaluation of oral and poster presentations proved quite difficult. Many websites, articles and books are dedicated to helping presenters improve their presentation skills. Others provide a way of measuring a participant’s return on investment on their presentation at a conference. Although these can help improve the quality of a presentation, they do not provide any method for evaluating them and are therefore unusable for this project. This severely limits the scope for examining the literature. There has been two documented occasions where a similar comparative evaluation was undertaken, however these examples are dated. One article surveys presenters on how well they achieved specified objectives while the other discovers the different publication rates for both oral and poster formats. These are discussed more in depth in chapter 4 and are referenced in the appendix.

3.3 Academic Conferences

In order to gain a better understanding of how an academic symposium operates, it was decided that attending certain conferences would be beneficial. These conferences were helpful for networking with participants and organisers. It was originally planned to attend several different conventions of varying size and background. As getting permission to attend some of these symposia can be difficult and in some cases costly, only small sized conferences were attended with two related to biology. Three conferences were attended over a three month period. These are;

- Computational Biology & Innovation PhD Symposium 2010, December 6th-7th 2010.
- Quantitative Biology and Bioinformatics in Modern Medicine, Second International Conference, February 7th-8th 2011.

A description and analysis of each symposium can be found in chapter 5.
3.4 Interviews

A number of interviews were conducted to complement the research in order to obtain more detailed opinions of academics who had previously presented at several conferences. It was originally planned to interview participants at the attended conferences. Instead, academics with previous presentational experience at academic conferences in the Statistics Department in Trinity College Dublin were interviewed. These interviews proved to be a valuable source of anecdotal or qualitative information and helped gain a more personal input from interviewees.

Two detailed interviews were conducted. The first interview was with Brett Houlding, a post-doctoral research fellow at the Department of Statistics, Trinity College Dublin. The second was with Prof. Simon Wilson, an associate professor of statistics in the school of Computer Science and Statistics, Trinity College Dublin. An analysis of the information gathered from these interviews can be found in chapter 4. The transcripts of these interviews can be found in appendix D.

3.5 Questionnaires

It was decided that the most efficient method to obtain data for the evaluation was to use online questionnaires. As this was a significant aspect of the evaluation technique, a number of different versions were composed and sent to the client for verification. This ensured that the most efficient version was used. Both questionnaires were composed using the online survey building website SurveyMonkey.

In order to evaluate the presentation formats at the attended conferences, one questionnaire specifically for the participants at these conferences was composed. This is titled “Conference Presentation Evaluation”. Another, broader questionnaire, entitled “Evaluating Oral and Poster Presentations” is used to evaluate presentation formats at academic conferences in general. The latter also used as a template for the interview process. Both questionnaires are notably similar, with the wording of a number of questions altered to suit the target respondents. In comparing these two questionnaires, the version entitled “Evaluating Oral and Poster Presentations” could be used to survey participants before a conference while the other version could be used after a conference.

“Conference Presentation Evaluation” was sent via email on the 28th of February to the participants and organisers of all three symposia attended. “Evaluating Oral and Poster Presentations”, was sent to the Statistics, Maths and Computer Science departments in Trinity College Dublin. It is important to note that the distributing of both of these questionnaires is regarded as pilot testing the evaluation technique. Both questionnaires can be found in appendix C and the findings can be found in chapter 5.
4. BACKGROUND RESEARCH

This chapter investigates the steps taken to better understand a method of comparative evaluation for oral and poster presentation formats.

4.1 Research Overview

Academic conferences are one way for researchers to share their findings. The biennial ISI World Stats Congress will be hosted in Dublin this year and many presenters will present their findings via oral and poster presentation methods. In some cases, the papers and posters submitted are judged by an organising committee. There are thousands of websites, journals and books devoted to helping presenters improve the quality of their oral or poster presentation.

However, there is not much information on carrying out a formal quantitative comparative evaluation of both the oral and poster presentation. Searching for academic journals on the web for this type of evaluation yields no results. Searching for ways to measure the effectiveness of an oral or poster presentation yields many results. After examining through various types of literature, it is concluded that there are almost no methods discovered for performing a comparative evaluation of poster and oral presentations at academic conferences.

It is noted in the original project outline also, that research into comparative evaluation of poster and oral presentations was necessary. After searching for published literature related any similar evaluations online, it became apparent that this topic has not been investigated thoroughly. Therefore a brief literature review was undertaken along with a number of interviews with academics who have previously presented at academic conferences. This helped define what characteristics the evaluation method should encompass. Unfortunately the information gathered from the interviews and literature has no quantitative evidence to support their claims on this type of evaluation. The pilot test will help define what information obtained is important and which is not. The following chapter details characteristics that presenters deem important when evaluating poster and oral presentations from the point of the presenter and then the audience. They are broken into two categories; Dimensions and Objectives.

4.2 Defining a Presentation

Before describing the dimensions and objectives used to evaluate, it is important to define the presentation formats that are being comparatively evaluated. Academic conferences are normally divided into oral and poster presentations. At these symposia, a typical oral presentation consists of a speaker presenting their ideas to an audience with the help of digital slides, usually in a theatre or classroom. The duration of these presentations can be between 15 and 60 minutes depending on the speaker and conference. A keynote or invited speaker is generally permitted to present for longer than contributed papers. A keynote
speaker or anyone who’s invited is unlikely to do a poster.  When an oral presentation has concluded, a question and answer session follows where members of the audience query the findings of the presentation. The conferences attended for the purpose of this project all held the oral presentations separately from the poster session and were the only events occurring at that time. However, these were small sized conferences. The ISI World Stats Congress is considered to be a large conference.

Although the structure of oral presentations is the same at most academic symposia, the layout of the poster session can differ in conferences of varying size and discipline. The general poster presentation is in a separate area from to the oral presentations, where researchers stand by a poster. These posters vary in size and describe the key findings of the researcher. The duration of these poster sessions can vary and is specific to each conference. For example, some small gatherings may host posters in a 15 minute break from oral presentations or during the lunch break. In contrast, a large convention might hold the poster session during the oral presentations as well as for the entire duration of the conference. Some poster presenters are afforded the opportunity for a spotlight presentation. This is where participants presenting via poster get a small amount of time to present and advertise their work to an audience in the form of an oral presentation.

4.3 Dimensions

In order to evaluate the presentations from the perspective of the presenter, a number of characteristics that determine the overall experience of the presentation are used. These are called the “Dimensions” of the presentation. After interviewing academics and some discussion with the client, it was decided that the dimensions used are:

- Stress
- Workload
- Enjoyment
- Difficulty
- Perceived Prestige
- Departmental Help/Funding

Each dimension also takes into account the preparation involved before making a presentation. A five point scale was used to rate each dimension. For example, when rating stress for an oral presentation, users chose “1” if they found preparing and giving an oral presentation not stressful and “5” if they found it most stressful. Respondents were then asked which of the dimensions they felt were the most influential when choosing which type of presentation format they preferred. An analysis of the pilot test results can be found in chapter 5.

Stress
A fundamental aspect of all forms of public speaking is the stressful nature of speaking in front of an audience. Brett Houlding, who has presented 3 posters and 6 papers at various academic conferences, believes that an oral presentation
“can be quite daunting, intimidating and also getting the timing right can be quite stressful” (2011).

An article in The Chronicle of Higher Education by Female Science Professor (FSP, a pseudonym of the author) contrasts this belief stating that the audience in an oral presentation is more likely staring at a large screen and that the presenter is a disembodied voice (2010). However, this article is an opinion piece and contains no quantitative evidence to support the author’s ideas. It is unknown why a pseudonym is used for this entry. The poster presentation is generally considered to be less stressful but this is not to say that it is stress free. A poster presenter may become tense if no attendees are interested in their findings and has to stand alone at their poster for the duration of the session. Simon Wilson, who has given an estimated 20 presentations in both formats, believes that they are equally stressful. Preparing the poster is more taxing than preparing the talk. However, giving the oral presentation is more stressful than the poster session. As a result of these contrasting opinions, a measure of stress is included in the evaluation technique.

Workload
The amount of work involved when giving a presentation is also taken into consideration. This is a result of the literature and interviews providing contrasting arguments on which format has more work involved. For example, FSP (2010) believes that the posters require a lot more work because of the logistics of printing, ensuring that the poster itself contains all the necessary information and that it looks appealing enough to attract people to it. Another aspect is the duration of the poster session. If the poster session is operational for the entire conference, the presenters may find that standing beside their posters is tedious. However, similar to stress, there is also a high level of work involved with the oral presentation. This includes making sure every slide is in logical order and that the presenter knows what they are going to say. For an oral presentation;

“there’s a sequence to the story you’re describing” (Houlding, 2011).

These contrasting beliefs outlined above provide a good argument for which format has more workload involved.

Sense of Enjoyment
“Sense of Enjoyment” takes into account which format researchers find more comfortable presenting. In a response to FSP’s article, the Association of College and Research Libraries (ACRL, 2010) posted an entry on their website that the oral presentation is “too stodgy and formal” whereas the poster session is a more relaxed environment with plenty of informal conversation. This type of discussion can be beneficial to the researcher in obtaining constructive feedback on their research and also to network with others. This is echoed in Wilson’s comments where he states that the poster session is more predictable. However, constantly repeating a speech can reduce this sense of enjoyment when presenting via poster. With an oral presentation, once the presenter has finished they are able to enjoy the rest of the conference. Regardless, it is expected that the pilot test will demonstrate the view that poster presentations are more enjoyable than oral presentations.
Difficulty
Each format contains different characteristics of difficulty. With limited space, the constraints of the poster can prove to be challenging (ACRL, 2010). The presenter must be careful in choosing what aspects of their project they include or omit. There’s also the challenge of making the poster look appealing in order to make people initiate a conversation with the presenter. Murray (2007), who wrote an article on the forms, norms and values of the poster session comments how posters are perceived in many areas. This article provides excellent insight into how a poster session operates and is how it is viewed from many perspectives. He describes how one particular judge at an academic conference commented;

“I should be able to walk by a poster and within thirty seconds know what the key messages are and no one should have to be there.”

The oral presentation is less forgiving of mistakes than the poster presentation. If an error is identified by an audience member, the entire audience can see and this can prove to be embarrassing for the presenter;

“In a poster presentation, if someone disagrees you can have a discussion about it. In an oral presentation, there’s no taking it back if you make a mistake” (Wilson, 2011).

Perceived Prestige
Perhaps the most important dimension included in this evaluation is the perceived prestige of each format. Posters are often considered as second class, perhaps unfairly (Murray, 2007). This could be a result of presenters who apply for an oral presentation and get rejected with the option of presenting via poster instead. Therefore, it’s viewed as more of a consolation prize. Oral presentations have been around for much longer than the poster session and are consequently more prestigious (Wilson, 2011). The talk is also viewed as more prestigious because keynote or invited speakers always present orally. Generally, students or postgraduates presenting for the first time will present via poster as they are deemed less important than these invited speakers. Murray describes this phenomenon as “The Hidden Curriculum”.

Oral presentation achievements are more likely to be placed on a presenters’ CV in order to obtain a promotion or possibly a new job (Wilson, 2011). This can also be said for publications in an academic journal or otherwise. Juzych, et al., (1993) carried out a study on the fate of abstracts from the Association for Research in Vision and Ophthalmology (ARVO) conference in 1985. Their report is one of the few articles found that can reinforce their ideas with evidence and analysis. It found that 68% of oral presentations were published whereas poster abstracts had a publication rate of 56%. This is expected from the perceived prestige difference in oral and poster formats. They speculate that the selectors for oral presentations tend to be more selective based on parameters such as timeliness, interest, scientific merit and significance. Juzych et al demonstrate that the format the research was presented in is the most important parameter leading up to possible publication.
Another reason posters may be perceived as less important is the setting and time of the poster session. For example, it is not unusual for another more enticing event to be happening for attendees during the poster session (the lunch or coffee break when there are no oral presentations are occurring). The organisers of academic conferences are constantly trying to diminish this perception of posters by promoting them with the use of spotlight presentations, prizes and many other methods;

“Conference organisers go to a lot of pain and time to reduce that but it’s just so entrenched in peoples mentalities.” (Houlding, 2011).

There are some, for instance FSP (2010), that believe the prestige gap between oral and poster presentations is closing and both formats will soon have an equal impact on the presenters’ careers. Regardless, the perceived prestige plays an important role in evaluating these presentation formats comparatively.

Departmental Help/Funding
It is sometimes the case that that researchers may receive funding in order to present at an academic conference. This can include travel expenses, allowances and printing costs. It is widely believed that oral presentations are more likely to be funded although there is no evidence to support this. Both Wilson and Houlding stated that departmental help should be provided for both oral and poster presentations. When asked if they could see funding being reduced for poster presentations in other departments, Wilson replied;

“I can see that happening but it would probably be for the wrong reasons” (Wilson, 2011).

This is most likely tied to the perceived prestigious nature of oral presentations in comparison to poster presentations. A committee may feel that sending a representative from their department for an oral presentation is more prestigious and are more likely to provide funding as a result. The client believed that it might be interesting to discover if there is any difference in the funding of these formats and this was therefore included in the questionnaires.
4.4 Objectives

To supplement the dimensions, a series of objectives is used in order to rate the performance of each presenter. Although there are several objectives to achieve during any form of presentation, it was decided to focus on the ones that comparatively evaluated oral and poster presentations the most effectively. After interviewing academics and some discussion with the client, it was decided that the objectives used are;

- Share ideas with people within field.
- Share ideas with people outside field.
- Constructive criticism and feedback.
- Network and further studies with others.

The main reason these objectives were chosen is a result of a report published by Tulsky and Kouides (1998). The authors surveyed the participants at the 1995 Society of General Internal Medicine to determine which format better met predetermined objectives. The objectives above are similar to the ones in this report. It is worth noting that the report by Tulsky and Kouides is the most recent research on comparatively evaluating oral and poster presentations. Along with the article by Juzych et al, it is the second of two articles found that supports their conclusions with quantitative evidence and analysis.

Objectives focus more on the presenter’s interaction with the audience. An audience at a presentation can influence the success of both the oral and poster presentation. For example, one aspect could be who the audience members are. One problem could be in an oral presentation, the audience is small and have no interest in the presentation but are waiting to present their own ideas.

Similar to dimensions, a five point scale was used to rate each objective. For example, when rating “Constructive criticism and feedback” for an oral presentation, users chose “1” if they found that they don’t receive good (or any) feedback and “5” if they received constructive feedback when presenting. Respondents were then asked which of the objectives they felt were the most important when presenting. An analysis of the pilot test results can be found in chapter 5.

Share ideas with people within field

This objective can be conference specific in some ways. At most conferences, this objective is achieved more effectively through an oral presentation as the prestige factor adds more attendance to the presentation. At a large conference, it may be the case that there are many talks on at the same time and the only audience members are people waiting to present. Poster presentations tend to struggle in this regard as attendance to any particular poster is optional. It can be difficult to achieve this objective if no one approaches the poster. Both Houlding and Wilson believe that this objective is achieved better through oral presentations.
Share ideas with people outside field
The next objective applies to people who have limited or no knowledge in the presenter’s specific area of research. This is one of the more difficult objectives to achieve. With regards to the oral presentation, at most small and medium sized conferences, these are the only presentations occurring and people outside the field are “forced” to attend. Therefore the oral presentation provides at least some platform in which to share ideas with people outside the field. However, these talks are usually formal and this audience may find it difficult to understand the presentation. An advantage of the poster presentation is its informal nature. Perhaps it is easier to explain the findings to someone with limited knowledge through this format;

“If a poster gets you in a conversation with someone outside your field then that’s ideal, they can look at the poster and you can interpret the findings and tell them what to ignore” (Wilson, 2011).

Constructive criticism and feedback
At an oral presentation, constructive feedback and criticism occurs in the questions and answer session after the presentation has concluded. These questions are usually only asked by members of the audience who are comfortable asking questions in front of an audience and there is always a limited number of questions permitted. The poster session is generally a one-to-one conversation and is therefore more manageable. It provides a good platform for gaining feedback on the researcher’s findings.

“A poster session is a bit more accessible” (Wilson, 2011).

Network and further studies with others
This objective is similar to “Constructive criticism and feedback”, and contains nearly the same characteristics. A one-to-one conversation makes it easier for people to network and gain contacts. However, Wilson believes that if a person is going to contact another concerning their research, they will do so regardless of presentation format. “You don’t necessarily have to be giving a poster” (Wilson, 2011).

4.5 Conclusion

After confirmation with the client, it was decided that the evaluation technique would be broken into two categories; Dimensions and Objectives. There are ten variables used in these two categories in total. These were inserted into a questionnaire in the form of 5 point rating questions. It was also asked of the respondents which of the dimensions and objectives were the most important when deciding which format a participant would choose.

However, it is not known if these dimensions and objectives are the most effective to use in the evaluation. This results from a lack of literature and previous examples of this evaluation. Therefore this method is regarded as a pilot test.
5. ANALYSIS

The following chapter contains analysis of the findings from the pilot test and an assessment of the evaluation technique.

5.1 Pilot Test

Demographics
The pilot test questionnaire was sent to all oral and poster presenters at each of the three conferences. This total number of participants is estimated to be around 120. The total number of oral presentations is estimated to be 65 with the remaining 55 being poster presentations. Of this potential number of returnable surveys, 14 were returned for a response rate of 12%. It was expected that the response rate would be around 10%; however this is still considered to be too low. 58% of respondents were male, although a total gender breakdown of all presenters is unknown. With regards to what stage the respondent is at in their profession, 73% of respondents are post graduates and 27% are post doctorates. 83% are between the ages of 25 and 35 while the remaining 17% are between the ages of 36 and 50. Lastly, 55% of respondents are Irish with British, Chinese, Austrian, Indian and French making up the remaining percentage of nationalities.

The client also wanted to find out which form of presentation the participant used at their conference in order to examine and compare the answers that followed. A bar chart of the percentage response from each conference is displayed in appendix F.1. It is noted that there is a higher response rate from the more recent conferences. It is recommended for future evaluations to survey participants as close to the conclusion of the conference as possible. Out of these responses, 39% did oral presentations, 46% for poster presentations and 15% performed both poster and oral presentations.

Dimensions
Using a 5 point scale, respondents were asked to rate certain dimensions from their presentation format. The formats are “Oral”, “Poster” and “Oral and Poster”. The main objective here is to analyse any significant differences in the dimensions between oral and poster presentations and then the importance of each dimension. From figure F.2.1 in appendix F.2, oral presentations are rated the highest in all dimensions. The largest difference between oral and posters is the stress level. This is more likely due to the “more relaxed environment” in the poster session discussed in the interviews. A prominent result is that of perceived prestige. It was expected that the prestigious nature of the oral presentation would be a deciding factor in choosing either format, but the poster session is rated reasonably close to oral presentations in perceived prestige. It was also expected that the “Sense of Enjoyment” would have been rated higher for poster presentations but these results show that this is not the case.

In a situation where respondents could choose to do either an oral or a poster presentation, 100% chose the oral which is unsurprising. Participants were then asked to provide a reason as to why they would choose this. Although the perceived prestige was rated almost
equal for both formats, most respondents chose this perceived prestige dimension as a reason for choosing to do the oral presentation. The measure of attendance to oral presentations was also chosen by many respondents, but perhaps this is related to the prestigious nature of the talk. Replies also concluded that the dimension “Stress” is the least influential reason for choosing to do an oral presentation, which is unexpected as the talk was rated much more stressful than the poster.

Respondents could also choose to enter other reasons if none of the dimensions listed affected their decision. One respondent stated; “I believe it is good practice and improves public speaking ability”. It may be beneficial to include another variable entitled “Training” as a result and this will be discussed later. A complete list of all open ended responses can be found in appendix E.

Fig 5.1.1 – Reasons for choosing oral over poster presentations
Objectives
The second measure in the comparative evaluation is the objectives to achieve when presenting. Similar to the dimensions, respondents were asked to rate how well they felt they achieved each objective when giving a poster or oral presentation. They were then asked to choose which objective they felt was the most important. Fig F.2.2 in appendix F.2 displays the information received from the three academic conferences attended. Oral presentations are found to be more effective for sharing ideas with people within their field and for networking and furthering research with others. This is most likely a result of the prestigious nature of the oral presentation. Poster presenters achieved the objectives of sharing ideas with people outside their field and for getting constructive feedback and criticism.

More vital to the evaluation technique is how respondents rated the importance of each objective. It was asked of each participant to rate the importance of each objective from most important to least. In order to interpret these values, each rating was assigned a weighted value. The number of ratings each objective achieved, along with their weighted totals can be found in table below;

<table>
<thead>
<tr>
<th>Importance of each Objective</th>
<th>1-Most Important</th>
<th>2</th>
<th>3</th>
<th>4-Least Important</th>
<th>Weighted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Constructive feedback and criticism</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>32</td>
</tr>
</tbody>
</table>

Fig 5.1.2 – Importance of each Objective

The above demonstrates that with a score of 32, networking and furthering studies with others is regarded as the most important objective when presenting in either format. This is closely followed by the objective entitled, “Share ideas with people outside your field”. This is interesting as the information gathered from interviews contrasts this. However, it was also agreed that all four of these objectives are considered to all be fundamental to a presentation and should be used in the comparative evaluation.
**Promoting Posters**

The client expressed an interest in finding out how oral and poster presentations are promoted at each conference. Since the poster session is viewed as the less appealing option, posters were the main focus of this section. Respondents were asked which conference they attended, if any, where the poster presentations were most effective and why. Some of the responses contained the following points:

- “The content was most applicable to my research.”
- “very close ‘knit’ conference where everyone there is interested - ie scope of conference not too wide.”
- “organise posters into themes to make it easier for people to find relevant posters.”

This suggests that poster sessions are more applicable to small conferences where the topic is more specific. It could also be said that, especially for large conferences, that the poster presentations should be broken into different sections in the poster area. This makes it easier for attendees to examine posters that may be relevant to their research. Both Houlding and Wilson (2011) stated that the best conference they attended where posters were most effective was the Valencia Bayesian Statistics meeting. This particular symposium has a history of importance with poster presentations where ninety per cent of participants present via poster. These posters were hosted when all oral presentations had concluded. It is also noted that this session was hosted after dinner and was located in the bar area.

An increasingly popular method of promoting posters is poster spotlights. This technique is being considered for the ISI World Stats Congress as a worthwhile option. Poster spotlight presentations are where participants presenting via poster get a small amount of time to present and advertise their work to an audience in the form of an oral presentation. 91% of respondents felt that this was an effective way of promoting posters and there was no other techniques proposed. This suggests that poster spotlights are the most effective method of promoting posters.

### 5.2 Conference Evaluation

The structure of an academic conference can greatly affect the success of the presentations. All three symposia attended are comparable in operation but differ in certain aspects, especially the poster session. In order to find out which method was best, the objective ratings of the presenters at each conference could be examined. The Computational Biology Symposium in December 2010 consisted of 54 listed participants in total, 26 oral presenters and 28 posters. As the Quantitative Biology Conference, there were 38 listed presenters in total which was made up of 17 oral presentations and 21 posters. However there were also 4 spotlight presentations which lasted for 10 minutes each. An organiser at the conference stated that all posters submitted were judged and the best 4 were awarded a spotlight presentation to promote and advertise their poster. The final conference, Sustainable Development consisted of 22 oral presentations. The number of posters is
unknown but is estimated to be 10 – 15 presenters. In order to evaluate these conferences comparatively, the average ratings of objectives from each conference are examined below;

<table>
<thead>
<tr>
<th></th>
<th>Share ideas with people within your field</th>
<th>Share ideas with people outside your field</th>
<th>Constructive feedback and criticism</th>
<th>Network and further studies with others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computational</td>
<td>3.7</td>
<td>3.0</td>
<td>3.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Quantitative</td>
<td>3.4</td>
<td>2.7</td>
<td>3.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Sustainable</td>
<td>2.8</td>
<td>3.6</td>
<td>3.4</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Fig 5.2.1 – Objective Ratings by Conference*

Unfortunately, these results may not be accurate. This is because of a small response rate and the fact that some respondents presented at both the Computational Biology and Quantitative Biology Conferences. However, this could be used as a tool to comparatively evaluate different conferences provided that all respondents have presented at separate conferences.
6. **REVIEW**

The following chapter reviews the evaluation method and recommends a number of ways to improve it.

6.1 **Data Collection Method**

In order to find an effective method for comparative evaluation, a suitable tool must be used to obtain an efficient response rate and also to interpret the findings. Various methods were discussed, including:

- Using an online survey tool.
- Questioning participants at the conference in person.
- Contact organisers in advance of conference and include questionnaire in welcome pack.
- In depth interviews after the conference.

It was attempted to interview presenters at conferences but this proved too difficult as participants were more focused on their presentation and networking with others. Although interviews are a good source of anecdotal information, using only this method would not result in a large number of responses. However, it is recommended to interview a small number of participants along with a questionnaire to other participants. The third method listed above, contacting the organisers, is a good method also as this ensures that every participant receives a questionnaire. However, in most cases it is difficult to receive permission for this. In order to receive an effective number of responses from an academic conference, it is recommended for future evaluations to combine these methods into the following step by step technique;

- **Step 1** - Receive permission to include a hard copy of the questionnaire in all welcome packs for presenters at conferences.
- **Step 2** - Interview a small sample of participants, preferably both oral and poster presenters, after the conference.
- **Step 3** – Use an online survey tool, such as SurveyMonkey to email all presenters as soon as conference has concluded.

It was decided for the pilot test to use the online survey tool SurveyMonkey. This was used in order to create both questionnaires which can be found in appendix C. SurveyMonkey also allows for the creation of collector links. This link was included in an email sent out to the participants of the conferences attended which allowed for the collection of responses. Analysing the data obtained can be done through two methods. SurveyMonkey can provide a summary online for the user or all responses can be downloaded into almost any file type. It is recommended for future evaluations to use this online tool.
6.2 Evaluation Technique

The above process of comparatively evaluating oral and poster presentations is only a proposed method. It is found that there are some modifications needed in order for this technique to be more effective.

Future Techniques
A notable precaution to take with this kind of evaluation is that most of the dimensions and objectives can differ greatly depending on the conference. This can include conferences of different size and field of research. With regard to the size of the conference, the rating of dimensions can change as a result of the poster session being hosted at the same time as oral presentations. At the three conferences attended, the poster session was hosted separately from the oral presentations. The evaluation technique should also take into account the different disciplines, for example, statistics, maths, medicine etc. The results from each field could be correlated differently. The final aspect to take into account is the number of responses. Although the pilot test returned a number of conclusions, a higher number of responses are needed to further test the technique.

Dimensions and Objectives
The technique used is broken into two categories. Dimensions measure the performance indicators experienced by the presenter when preparing and giving the presentation. Objectives measure how well the presenter felt they interacted with the audience. This is the proposed model for this evaluation, however there are some flaws found with this model. It is found that the variables “Stress”, “Workload” and “Difficulty” are notably similar. In order to simplify the technique, two of these variables could be combined. Another method to simplify could be to remove “Stress”. Although there is a notable difference in stress levels between oral and posters listed in fig F.2.1, no respondents chose this dimension as a reason to do an oral presentation over the poster session. Perceived prestige is also a notable dimension. Although the perceived prestige is rated almost equal for poster and oral presentations, over half of respondents chose this as a reason to apply for an oral presentation instead of a poster presentation. For future evaluations, this dimension could be broken up further. Some suggested sub-categories of this could be;

- Reference on CV.
- Publication in an academic journal.
- Further career prospects
- Attendance

In the questionnaire, “Attendance” was not listed as a dimension that participants could rate. It is recommended that “Attendance” be used in future evaluations, especially at large conferences where oral presentations and the poster session are hosted at the same time, for example, the ISI World Stats Congress. This should be rated on how the presenter feels the attendance level was at their presentation. “Sense of Enjoyment” should also be included as a result of contrasting opinions from the questionnaire and interviews. “Departmental Help/Funding” is one of the least influential variables; however this should be incorporated until funding for oral and poster presentations is equal in all fields. Another
suggestion to improve this technique is to use weighted values for each rating. These weights could be taken from the results fig 5.1.1. These values could improve the overall result of the ratings of each presentation.

With regards to the objectives of a presentation, results show that there is no significant difference between the importance of each one. It is suggested that this part of the questionnaire remain the same. These objectives also prove to be an adequate model for comparatively evaluating different conferences as well as oral and poster presentations.
APPENDICES
A. ORIGINAL PROJECT OUTLINE

Client: Local Programme Committee LPC, IS WSC 2011
International Statistics Institute/TCD

Project: Comparative Evaluation of Poster and Oral Presentations at
ISI World Stats Congress Dublin Aug 2011

Location: Dublin

Client Contact: Prof. John Haslett

School Contact: John Haslett

Client Background

The International Statistics Institute \url{http://isi-web.org/} is one of the oldest professional societies in Statistic; it is by far the most international. It holds biennial congresses. The Dublin meeting \url{http://www.isi2011.ie/content/} - in the newly built Dublin Convention Centre DCC - follows meetings in Durban (2009) and Lisbon (2007); the 2013 and 2015 meeting will be in Hong Kong and in Rio de Janeiro respectively. The 5 day congress is anticipated as having 2500 delegates, presenting 1400 - 1800 papers.

Project Background

Of these papers 700 - 1100 will be 'contributed' by individual delegates; these will be in addition to ~ 700 papers in pre-organised sessions. The deadline for contributed papers is 15 Feb 2011. Contributed papers will be presented orally and by Poster. In Oral presentations 7 papers will be presented in 135 minute Contributed Paper Sessions scheduled in parallel to many other sessions. In Poster Sessions, many (150 - 200) will be displayed for one day on stands in the Exhibition Hall, in parallel with other sessions except at lunchtime. These numbers are dictated by the physical capacity of the DCC. In the eyes of many presenters, poster presentations are 'inferior' to oral presentations. The local organisers - the LPC - will be making a special effort to promote posters in a variety of ways. It is hoped that the poster 'experience' will be better in several ways than the experience of those presenting orally.

Client Requirement

The objective of this project is to devise a way of comparing these experiences, and thus of evaluating the efforts made by the LPC. The technical challenge arises from the fact that no presenter will present in both formats; many will have experience of both formats at other meetings.

This evaluation may well be via a survey of the presenters and/or interviews. It is NOT the task of this project to DO the evaluation; the report will be submitted several months before the Congress. A well designed procedure may well be conducted on behalf of the LPC in Aug 2011.

What's involved for the Student?

It will necessary to identify and attending some conferences in Dublin in order to get a feel for what's involved. It will involve locating 'literature'; a Google search for (comparing "poster and oral presentation") yields 21,000 hits; the phrase "comparing poster and oral presentations" yields one hit.
B. INTERIM REPORT

**Project:** Comparative Evaluation of Poster and Oral Presentations at ISI World Stats Congress Dublin Aug 2011

**Client:** Local Programme Committee LPC, IS WSC 2011 International Statistics Institute/TCD

**Student:** Eoin Fitzpatrick

**Supervisor:** Prof. John Haslett

**Review of Background and Work to Date**

The International Statistics Institute (ISI) is one of the oldest scientific organisations in the world. It is also the most international and combines seven specialised sections for many different types of statistics. There are over 2,000 elected members which are seen as the international leaders in the field of statistics. The ISI is also renowned for its biennial conferences where the entire membership assembles to present their ideas, findings and developments in the statistical field.

In August 2011, the ISI World Stats Congress with be held in the Dublin Convention Centre and the event will comprise of participants presenting their ideas in poster and/or oral formats. The Local Programme Committee are interested in comparing these experiences for contributed papers. The task of this project is to outline a method on how to perform this evaluation which can then be used at the ISI World Congress.

In order to discover the most efficient way to carry out this evaluation, interviews with academics and attending the Computational Biology & Innovation PhD Symposium 2010 have been undertaken. A review of literature on the topic is also underway.

**Terms of Reference**

- The terms of reference for the project are outlined as follows;
- To find a method for evaluating comparatively poster and oral presentation experiences for the ISI World Stats Congress 2011.
- To outline the dimensions and objectives that determines presentation format preferences.
- To test the evaluation technique by surveying participants at conferences and analysing the data obtained.
- To investigate any published literature on the topic.

**Further Work**

The current objective is to keep networking with academics and professionals to gain more insight into the correct dimensions and objectives on evaluating these experiences. This will include attending more conferences if possible, interviews and a review of the literature on the topic. A pilot test of the evaluation technique at a conference is also recommended to ensure that it can be properly implemented at the ISI World Congress.
Conclusions
After attending an academic symposium and reviewing general opinion, it has been decided that the evaluation would be broken into 2 sections; dimensions and objectives. Dimensions would consist of a measure of factors which determine the overall experience of presenting, for example, “Stress levels”. An example of the objectives would be, for example; “Feedback and criticism”.
C. SURVEY

C.1. Conference Presentation Evaluation

1. Introduction

The purpose of this survey is to evaluate comparatively oral and poster presentation experiences at academic conferences. These conferences are:

1) Computational Biology & Innovation PhD Symposium 2010
2) Quantitative Biology and Bioinformatics in Modern Medicine
3) Sustainable Development 2011

Your responses are greatly appreciated and the survey should only take about 10 minutes to complete.

You may opt out of the survey at any stage.

* 1. Please read the following declaration carefully:

* I am 18 years or older and am competent to provide consent.
* I have read, or had read to me, this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.
* I agree that my data is used for scientific purposes and
* I have no objection that my data is published in scientific publications in a way that does not reveal my identity.
* I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.
* I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.
* I understand that my participation is fully anonymous and that no personal details about me will be recorded.
* I understand that if I or anyone in my family has a history of epilepsy then I am proceeding at my own risk.

Please confirm you have read, and agree to, the declaration above. You are free to close this window, or to decide not to answer any question on the survey.

☐ I have read, and agree to, the terms of the declaration.

2. Conference Experience

2. Which of these conferences did you attend?

☐ Computational Biology & Innovation PhD Symposium 2010
☐ Quantitative Biology and Bioinformatics in Modern Medicine
☐ Sustainable Development 2011
3. Which format did you present in at the conference you attended?

☐ Oral
☐ Poster

4. How many times have you presented your findings in the following formats at academic conferences?

<table>
<thead>
<tr>
<th>Format</th>
<th>0</th>
<th>1-5</th>
<th>5-10</th>
<th>15-20</th>
<th>20+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poster</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Performance Factors

This page will help determine what the important performance indicators are when presenting.

5. Please rate the following factors in reference to preparing and presenting your particular presentation.

<table>
<thead>
<tr>
<th>Factor</th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of enjoyment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prestige level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. In a scenario where you could choose to do either a poster or oral presentation to present your findings, which would you choose?

☐ Oral
☐ Poster
7. Why would you choose this format over the other? Please tick all that apply.
- Stress
- Workload
- Difficulty level
- Prestige Level
- Attendance
- Fun
- Departmental help/Funding
- Other (please specify)

8. If you listed one method as more difficult than the other (oral/poster), please provide a reason for your answer.

9. If you listed one method as more prestigious than the other (oral/poster), please provide a reason for your answer.

10. Did you receive departmental help or funding (materials/transport etc) for your presentation?
- Yes
- No

4. Objectives
This page will help determine what the main objectives are when presenting in both formats and how well they are achieved.
11. Please rate how well you feel you achieved the following objectives when you gave your particular presentation.

<table>
<thead>
<tr>
<th>Objective</th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Constructive feedback and criticism</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

12. Which of the above do you feel is most important when giving a presentation? Please rank 1 to 4, 1 being the most important.

<table>
<thead>
<tr>
<th>Objective</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Constructive feedback and criticism</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

5. Previous Experiences

13. In your experience what, from the point of view of those presenting contributed papers by poster, was the best large meeting you have attended? What made it 'best'?

14. In your experience what, from the point of view of those presenting contributed papers orally, was the best large meeting you have attended? What made it 'best'?

15. Do you feel that poster spotlights (where people who are giving a poster get a few minutes to present orally also) are an effective way of promoting posters?

- [ ] Yes
- [ ] No

If No, what method would you use to promote posters?

6. Personal Information (Optional)
16. What age category do you fall into?
- Under 18
- 18-24
- 25-35
- 36-60
- 51-65
- Over 55

17. What gender are you?
- Male
- Female
- Other

18. What nationality are you?

19. Please select the option that best applies to you.
- Undergraduate
- Postgraduate
- Postdoc
- Lecturer
- Professor
- Other (please specify)

20. With regards to comparatively evaluating poster and oral presentations at academic conferences, are there any questions you feel should be included in this survey?

21. Any other comments regarding this research?

7. Thank You
C.2. Evaluating Oral and Poster Presentations

1. Introduction

The purpose of this survey is to evaluate comparatively oral and poster presentation experiences at academic conferences.

Your responses are greatly appreciated and the survey should only take about 10 minutes to complete.

You may opt out of the survey at any stage.

* 1. Please read the following declaration carefully:

* I am 18 years or older and am competent to provide consent.
* I have read, or had read to me, this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.
* I agree that my data is used for scientific purposes and
* I have no objection that my data is published in scientific publications in a way that does not reveal my identity.
* I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.
* I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.
* I understand that my participation is fully anonymous and that no personal details about me will be recorded.
* I understand that if I or anyone in my family has a history of epilepsy then I am proceeding at my own risk.

Please confirm you have read, and agree to, the declaration above. You are free to close this window, or to decide not to answer any question on the survey.

☐ I have read, and agree to, the terms of the declaration.

2. Conference Experience

2. How many times have you presented your findings in the following formats at academic conferences?

<table>
<thead>
<tr>
<th>Format</th>
<th>0</th>
<th>1-5</th>
<th>5-10</th>
<th>10-20</th>
<th>20+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poster</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Performance Factors

This page will help determine what the important performance indicators are when presenting.

If you have not presented in the formats listed, please select N/A where applicable.
3. Please rate the following factors in reference to preparing and presenting an oral presentation.

<table>
<thead>
<tr>
<th></th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of enjoyment</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prestige level</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Please rate the following factors in reference to preparing and presenting a poster presentation.

<table>
<thead>
<tr>
<th></th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of enjoyment</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prestige level</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. In a scenario where you could choose to do either a poster or oral presentation, which would you choose?

□ Oral
□ Poster

6. Why would you choose this format over the other? Please tick all that apply.

□ Stress
□ Workload
□ Difficulty level
□ Prestige Level
□ Attendance
□ Fun
□ Departmental help/Funding

Other (please specify)
7. If you listed one method as more difficult than the other (oral/poster), please provide a reason for your answer.

8. If you listed one method as more prestigious than the other (oral/poster), please provide a reason for your answer.

9. Have you ever received departmental help or funding (materials/transport etc) for either? If so which?
   - Oral
   - Poster
   - Neither

10. Do you feel that your funding to attend conferences might be withdrawn if presenting your work in poster rather than oral form?
   - Yes
   - No

4. Objectives

This page will help determine what the main objectives are when presenting in both formats and how well they are achieved.

11. Please rate how well you feel the following objectives are achieved when giving an oral presentation.

<table>
<thead>
<tr>
<th>Objective</th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive feedback and criticism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Please rate how well you feel the following objectives are achieved when giving a poster presentation.

<table>
<thead>
<tr>
<th>Objective</th>
<th>1 - Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive feedback and criticism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Which of the above do you feel is most important when giving a presentation? Please rank 1 to 4, 4 being the most important.

<table>
<thead>
<tr>
<th>Objective</th>
<th>1 - Least Important</th>
<th>2</th>
<th>3</th>
<th>4 - Most Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share ideas with people within your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share ideas with people outside your field</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feedback and criticism</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network and further studies with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Previous Experiences

14. In your experience what, from the point of view of those presenting contributed papers by poster, was the best large meeting you have attended? What made it 'best'?

[Blank space for response]

15. In your experience what, from the point of view of those presenting contributed papers orally, was the best large meeting you have attended? What made it 'best'?

[Blank space for response]

16. Do you feel that poster spotlights (where people who are giving a poster get a few minutes to present orally also) are an effective way of promoting posters?

- Yes
- No

If No, what method would you use to promote posters?

[Blank space for response]
17. What age category do you fall into?
- Under 18
- 18-24
- 25-35
- 36-50
- 51-65
- Over 65

18. What gender are you?
- Male
- Female
- Other

19. What nationality are you?

20. Please select the option that best applies to you.
- Undergraduate
- Postgraduate
- Postdoc
- Lecturer
- Professor
- Other (please specify)

7. Thank You

21. With regards to comparatively evaluating poster and oral presentations at academic conferences, are there any questions you feel should be included in this survey?

22. Any other comments regarding this research?

Thank you for completing this survey!
If you have any questions or comments regarding this research, I am contactable at fitzpaed@tcd.ie.
D. INTERVIEW TRANSCRIPTS

D.1. Interview with Brett Houlding

Interviewer - How many posters have you presented at these academic conferences?
Brett Houlding - I think its 3 posters at 2 conferences.

Interviewer - How many oral presentations/papers have you presented?
Brett Houlding - Oral presentations, probably about half a dozen.

Interviewer - So you've done more oral presentations than poster. Would that be unusual?
Brett Houlding - No I don't think it is unusual. I always ask to give an oral presentation if possible. I only give a poster when I'm not able to do an oral.

Interviewer - When you're preparing or giving an oral or poster presentation, which do you find more stressful?
Brett Houlding - More stressful is the oral. I think it's the standing in front of an audience of individuals. It's quite daunting, can be intimidating, and also getting the timing right is quite difficult. You're told you have 15 minutes. You have to make sure it's not too short or that you're halfway through after 15 minutes. With the poster, you know the size. With an oral, everybody eyes are on you as an individual whereas in a poster you could be talking one to one with someone, it's a much more relaxed environment.

Interviewer - With regards to the workload?
Brett Houlding - There's more work in the oral presentation. Almost the same reason. With a poster, you have an A1 picture to represent. With an oral, there's a sequence to the story you're giving. You have to make sure the slides are informative, there are more of them, so there's basically a number of graphics. With a poster, there's a limit to what can be produced in the area you've got. Whereas with an oral, there could be various dimensions.

Interviewer - Which would you find you enjoy doing more?
Brett Houlding - The oral. Certainly in its delivery. You have a 15 minute presentation, talking to the entire audience. The poster session can be quite tedious in that you have to repeat the argument each time somebody new comes over. You could be stuck by your poster for several hours.

Interviewer - Would you feel that it's a more relaxed atmosphere giving a poster presentation?
Brett Houlding - It is more relaxed but it's almost like doing guard sentry.

Interviewer - With regards to difficulty?
Brett Houlding - The oral is more stressful but the poster is more tedious. It's a bit of a balance.

Interviewer - Which would you say has more prestige?
Brett Houlding - The oral. It goes without saying. Conference organisers go to a lot of pain and time to reduce that but it's just so entrenched in peoples mentalities. A keynote speaker, anyone who's invited will never do a poster. There always going to be invited to give a talk.

Interviewer - In a scenario where you could choose to do an oral or a poster, which would you choose?
Brett Houlding - I would always choose to do the oral.

Interviewer - What's the biggest reason for this?
Brett Houlding - For me personally, I don't like the tediousness of standing by the poster. I like to get the job done and then I can enjoy the rest of the conference. It's also deemed as more important work if it's given as an oral.

Interviewer - Have you ever received departmental funding?
Brett Houlding - Yes, all costs are covered by the research grant under which I work. For both oral and poster presentations.

Interviewer - Do you feel that your funding might be reduced if you give a poster instead of oral?
Brett Houlding - In my discipline I can't see that being the case. There may be an effect in industry.

Interviewer - Which do you feel is better for sharing ideas with people within your field?
Brett Houlding - The oral. It's more prestigious and if you're in a poster session, you rely on people coming up to you whereas in an oral, everyone's there. There's more attendance.

Interviewer - Sharing ideas with people outside your field?
Brett Houlding - Equally likely.

Interviewer - Feedback and criticism?
Brett Houlding - If you've got an audience of people with an oral session, you may have individuals who have questions but may be intimidated asking them in front of the whole audience. They may not want to ask the question if they think it's a silly one. In a poster, it's one to one probably better.

Interviewer - Network further with others
Brett Houlding - I would say the posters. You have a closer relationship with the person you’re talking to. You can go into depth into their own personal interest into your topic.

Interviewer - Could you rank those 4 objectives in order of importance?
Brett Houlding - Share ideas in field, Network, feedback, outside field.

Interviewer - What's the best meeting for poster presenters you attended and why?
Brett Houlding - Valencia Bayesian Statistics. History of importance with posters. They were hosted at a separate in the evening after dinner had finished and they were held in the bar.

Interviewer - What's the best meeting for oral presenters you attended and why?
Brett Houlding - Research Students conference (RSC). It was made by postgrads for postgrads and it was taking into account that individual giving a talk had never given a talk before.

Interviewer - With regards to poster spotlights, do you think that's a good way of promoting posters or do you think there's a better way?
Brett Houlding - Yes, that's a good way of promoting posters. Computer presentations are also very good.

Interviewer - Personal details
Brett Houlding - Postdoc. Research fellow at Department of Statistics at Trinity College Dublin.

Interviewer - Do you feel there is anything else I should include in this evaluation?
Brett Houlding - The different disciplines. You may find that the responses you get are correlated differently in each discipline.
D.2. Interview with Simon Wilson

**Interviewer - How many posters have you presented at these academic conferences?**
Simon Wilson - 2-3 posters a year, 1 or 2 talks a year over the last 10 years. Roughly 20 posters and 20 to 30 talks. About an equal amount of both.

**Interviewer - When you're preparing or giving an oral or poster presentation, which do you find more stressful?**
Simon Wilson - No question, presenting orally is more stressful. As regards preparation, the poster is more stressful. You have to print sometime before you go whereas you could be editing your talk right up to the presentation. I would say they're equally stressful. One you get your stress over with, once it’s printed. Giving the poster presentation is fine.

**Interviewer - With regards to the workload?**
Simon Wilson - About the same. The talk and the poster require pretty much the same amount of time to prepare.

**Interviewer - Which would you find you enjoy doing more?**
Simon Wilson - I would say that a poster is more predictable, in that in most situations you’re going to stand there and if you’re lucky, on a good day you might have 2 to 4 interesting conversations with people. With the talk it’s highly dependent on the audience. I’d say I suppose on the whole the poster is more enjoyable as the conversation is more comfortable.

**Interviewer - With regards to difficulty?**
Simon Wilson - I would definitely say giving an oral presentation is more difficult. It’s just less forgiving of mistakes. With a poster and someone disagrees, you can have a discussion about it. In an oral presentation, there’s no taking it back if you make a mistake.

**Interviewer - Which would you say has more prestige?**
Simon Wilson - Oral presentations are considered to be more prestigious and I think that’s because it’s a thing that people have done for much longer. I think also because invited speakers are always invited to give a talk. I’ve never heard of an invited poster session.

**Interviewer - In a scenario where you could choose to do an oral or a poster, which would you choose?**
Simon Wilson - There is an obvious answer to that but I suppose it depends on what you’re looking for. If you’re looking for feedback, is it any good, is there anything wrong with it, and could be that the poster is a better way to go, depending on the conference. In terms of putting something on your CV, going to get you promoted or going to get you a job, then you would always go for the talk. I think at this stage while I’m still trying to climb up the ladder I would go for the oral presentation.

**Interviewer - Have you ever received departmental funding?**
Simon Wilson - I’ve probably used the college travel money for both oral and poster.

**Interviewer - Do you feel that your funding might be reduced if you give a poster instead of oral?**
Simon Wilson - I can see that happening but it would probably be for the wrong reasons. The department probably feels that the talks are more valuable.

**Interviewer - Which do you feel is better for sharing ideas with people within your field?**
Simon Wilson - Again its very conference specific. On the whole I would probably have to say oral because in all conferences that will work as a way of getting your message across. I think you’re more likely to get more attending via oral presentation.

**Interviewer - Sharing ideas with people outside your field?**
Simon Wilson - If a poster gets you in a conversation with someone outside your field then that’s ideal, they can look at the poster and you can interpret the findings and tell them what to ignore. So the poster is better.
Interviewer - Feedback and criticism?
Simon Wilson - In an oral presentation, the ones asking questions are the ones that are comfortable asking questions. A poster session is a bit more accessible. If a poster session works well, then I would say the poster. The problem is that often it doesn’t work very well. For grad students, if it does work, it’s great to get that sort of feedback.

Interviewer - Network further with others
Simon Wilson - I would say to have the sort of conversation you need to have to network, that’s hard to do in a talk. In fact even if you’re walking around having giving a talk, that’s when people will talk to you about networking. You don’t necessarily have to be giving a poster. They would be equal just different ways of contact.

Interviewer - Could you rank those 4 objectives in order of importance?
Simon Wilson - Feedback, network, in field, outside field.

Interviewer - What’s the best meeting for poster presenters you attended and why?
Simon Wilson - Same as Brett. 90% of people presenting via poster.

Interviewer - What’s the best meeting for oral presenters you attended and why?
Simon Wilson - BISP because it’s a nice size, well defined topic and everyone’s interested in it. Everybody knows what you’re doing. And everyone knew each other as well which created a nice environment.

Interviewer - With regards to poster spotlights, do you think that’s a good way of promoting posters or do you think there’s a better way?
Simon Wilson - I haven’t had any experience with it but I think it’s definitely worth trying and seeing what effect it has.

Interviewer - Do you feel there is anything else I should include in this evaluation?
Simon Wilson - No I think you’ve covered the main reasons there.

Interviewer - Any other comments regarding this research?
Simon Wilson - When a poster session works well, I think it’s really great and very stimulating at a conference but it seems to be hard to make it to work. I’ve been to more meetings where it hasn’t worked well than ones where it has. It’s not easy to see how it worked well in those situations. I don’t think there’s a magic solution yet.
E. OPEN ENDED RESPONSES

If you listed one method as more difficult than the other (oral/poster), please provide a reason for your answer.

- Speaking in front of an audience is more difficult, especially to people who could be experts in your field.
- For the workload you put into making a poster (for sometimes very little interest/reward) it’s easier to put slides together.

If you listed one method as more prestigious than the other (oral/poster), please provide a reason for your answer.

- I think speaking to an academic audience to inform them of your work holds more prestige than a poster.
- Sometimes get very little interest in poster-talks have to be listened to.
- Oral presentations are regarded as more prestigious. I suppose this is partly because I'm more likely to list them in a full CV, and they are more difficult to get. Most posters get accepted for conferences, not all talks do.

In your experience what, from the point of view of those presenting contributed papers by poster, was the best large meeting you have attended? What made it 'best'?

- As 2010 - 3rd International Congress “ARSENIC IN THE ENVIRONMENT”. The content was most applicable to my research.
- Genes and Cancer meeting at Warwick.
- Poster sessions are very informal yet food and drink supplied for atmosphere and a decent length of time to talk and look. It’s a very close nit conference where everyone there is interested - ie scope of conference not too wide.
- I guess one's that try to organise posters into themes to make it easier for people to find relevant posters. I think making sure that there is plenty of time available for poster sessions or that the space is conducive to mingling and finding the actual author. In general I don't think large meetings are conducive to poster presentations. The Conway festival did a great job by making the poster presenters do a five minute oral presentation with a microphone. This worked well and was well received.
- Cancer Proteomics, relevant.
- Welcome Trust Conference - From Genomics to Systems Biology.
- ISMB 2010. This meeting comprise a wide range of topics in computational biology. Best Researchers/speakers across the world participated in the conference. This includes tutorials, workshops, poster session, companies talks, key note speakers talk, parallel session of speakers, in a one conference."
In your experience what, from the point of view of those presenting contributed papers orally, was the best large meeting you have attended? What made it ‘best’?

- "As 2010 - 3rd International Congress “ARSENIC IN THE ENVIRONMENT”. The content was most applicable to my research
- IACR. Atmosphere was relaxed - which allowed for those whom wouldn’t normally ask questions to ask some and not feel embarrassed. The students giving the presentations got a lot out of this too.
- Themed presentations and tracks make life easier for attendees.
- Biocomp 2011.
- ISMB 2011.

With regards to comparatively evaluating poster and oral presentations at academic conferences, are there any questions you feel should be included in this survey?

- I suppose discussion of new publication formats like Nature Proceedings would be useful. To see how people judge these outlets.
F. Graphical Results

F.1. Respondents by Conference

![Bar Chart: Respondents by Conference]

**Fig F.1.1 - Respondents by Conference**

The above graph shows that the Quantitative Biology Conference and the Sustainable Development Conference made up most of the respondents. This is most likely a result of the fact that the questionnaire was sent out closest to the conclusion of these conferences.
F.2. Respondent Ratings of Dimensions and Objectives

**Dimensions of Oral and Poster Presentations**

![Bar chart showing the dimensions of oral and poster presentations]

**Objectives Achieved of Oral and Poster Presentations**

![Bar chart showing the objectives achieved of oral and poster presentations]

*Fig F.2.1 - Dimensions of Oral and Poster Presentations*

*Fig F.2.2 - Objectives achieved of oral and poster presentations*
REFERENCES


