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How to Avoid Common Presentation Mistakes at International Conferences

Trevor Neville Haas

Abstract*— Academics and practising engineering professionals use conferences as a method to disseminate the results of their research. This is achieved through conference papers and oral presentations. It is compulsory that authors deliver an oral presentation of their work which is followed by a question and answer session. The success of the conference is thus mainly attributed to the quality of the papers and the oral presentations. To achieve this objective conference papers are peer reviewed to ensure it conforms with acceptable academic quality standards while the same does not apply to oral presentations. This results in many oral presentations being unprofessionally presented due to flaws / mistakes made by presenters. These flaws / mistakes result in delegates being forces to ask numerous questions to obtain clarity on the presentation. This could also lead to extremely heated debates between session participants, especially if the session chairperson is unable to control the situation. This paper thus focuses on the most commonly identified flaws made by presenters at engineering conferences and to offer suggestions for rectifying these flaws thereby helping presenters improve their presentations.

Index Terms—**Presentation mistakes, rectifying presentation errors, suggestions**

I. INTRODUCTION

Researchers and practising engineering professionals use conferences as a forum to disseminate the results of their research work. This is achieved through conference papers and oral / poster presentations. Since conference papers are peer reviewed, authors take significant time to prepare their papers to ensure it meets the required academic criteria and thereby be accepted for the conference proceedings. The peer review process ensures that conference papers are appropriate to the conference theme and that papers meet acceptable academic criteria. This usually results in conference proceedings of high quality which meets the conference objectives. Even though the conference papers are peer reviewed, it is not indicative that delegates will consider the conference a success. This is mainly due to delegates listening to the oral presentations before reading the papers. Thus, the quality of the conference is largely dependent on the first impressions of the oral presentations and not so much on the conference proceedings. Some authors do not put enough emphasis on their presentations after the conference paper is accepted. This leads to poor presentations even though the work reported in the paper may be ground breaking. Thus, the quality of the oral / poster presentations do indeed play a vital role in the dissemination of knowledge at international conferences.

Many presenters travel from various parts of the world, spending considerable time and money to attend international conferences. They therefore expect that the conference through the presenters delivers a conference which surpasses their investment. This is mainly achieved by:

- The stature of the delegates attending the conference,
- The opportunities which are created for interaction and networking,
- The quality of the conference proceedings and
- The quality of the presentations.

Between sessions, delegates have the opportunity of networking and discussing presentations. During these discussions many delegates voice their disappointment at the poor quality of many presentations. Delegates agree that this aspect requires attention which would lead to better presentations and thus allow the conference to achieve its stated objectives. Even though this concern has often been voiced, very little attention was / is given to this sensitive and yet relevant topic at international conferences.

Since some presentations do not meet acceptable presentation standards, it compromises the efficient sharing of the presenters' work. This leads to frustration amongst delegates as they carefully choose particular presentations to attend. Thus, delegates lose interest in the presentation or pose numerous questions during the discussion sessions

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to obtain clarity on the research work. Valuable time is thus lost and the credibility of the presented work could be jeopardized. If this happens delegates usually refrain from contact with the presenter and thus a valuable opportunity for networking is lost.

Numerous discussions with other delegates highlighted the importance of good quality presentations and the lack of mentoring of novice presenters. This paper therefore focuses on common flaws made by presenters at international conferences and to offers suggestions for rectifying these flaws, thereby helping presenters improve their presentations. This paper is also biased towards the engineering discipline as the curricula followed by engineering students, focuses predominantly on advancing mathematical concepts with little time devoted to developing the students' oral communication skills and even less time devoted to presentation skills.

II. DEFICIENCIES (FLAWS / MISTAKES) MADE DURING PRESENTATIONS

While attending several international conferences, I noticed presenters making similar fundamental flaws. These deficiencies even though criticized by fellow delegates during informal discussions are never communicated to the presenters. This leads to the presenters being unaware of their disappointing presentation and thereby repeating the same mistakes at future conferences. Since session chairs and delegates do not inform presenters of their mistakes, I thought it vital to highlight the common mistakes made at international conferences and stimulate discussion on this important but yet silent subject.

Common deficiencies identified and observed amongst presenters are, [1], [2], [3], [4], [5], [6]:

- Inadequate knowledge / ignorance of the conference theme
- Ignorance of the delegates' academic stature
- Grammatical and spelling errors
- Cluttering slides with too much text
- Not remaining within allotted presentation time
- Poor command of spoken English
- Ineffective use of modern technology
- Insufficient or excessive technical detail of research work (expressions)
- Lacking pre-requisite knowledge of presented material
- No validation of numerical work

There are many other aspects which could be added to the list. However, the above mentioned deficiencies attract the most discussion from delegates during informal discussions. Each item will be considered individually to provide clarity on the relevant aspect, as well as to provide suggestions for improvement, even though these flaws are inter-linked in some cases.

A. Inadequate Knowledge / Ignorance of the Conference Theme

Your abstract and paper was accepted for the conference proceedings. It is now necessary to prepare the conference presentation based on the submitted work and ensure that it remains within the conference theme. Many authors tend to ignore the conference theme while preparing their presentations which results in the presentation being outside the scope of the conference. The presentation is thus a misinterpretation of the title and the contents of the paper. This leads to delegates feeling frustrated that the focus of the presentation is different to the title printed in the conference proceedings and they thus consider the time spent listening to the presenter wasted [1].

Example of a typical mistake

An example of this is where the conference theme is on "Numerical Analysis of Civil Engineering Infrastructure". The author submitted a paper titled "Numerical Investigation of Crane End Buffer Impact Forces". During the investigation to obtain a numerical model the researcher was required to conduct experimental tests to calibrate the numerical model. In the paper the author focuses on the numerical model, however the major portion of the presentation deals with the experimental model and not the numerical model.

Suggestion

The author should always keep the conference theme in perspective when developing the presentation. Upon completion, the author must review the presentation to ensure that it is still within the ambit of the conference

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theme. For novice presenters, it is useful to ask senior colleagues to review the presentation without informing them of the focus of the presentation and thereafter discuss whether the presentation falls within the conference theme.

B. Ignorance of the Delegates' Academic Stature

Conferences usually attract academics that hold Doctorate degrees within the broad area of the conference theme. This however, does not mean that the delegates attending the sessions are experts on your particular topic. Therefore, it is extremely important to know the target audience and deliver a presentation at their academic level [1], [2]. This will ensure that the delegates' interest is maintained and that they do not become bored during the presentation.

Example of a typical mistake

The presentation being delivered focuses on a mathematical concept which is understood by only a handful of researchers. The delegates in the session have not been exposed to such mathematical concepts due to differences in their research work. The presenter skims over the mathematical theory without giving the delegates an opportunity to examine the mathematical theory which is the focus of the presentation.
or
The presentation being delivered focuses on a mathematical concept which is widely used by most researchers. The presenter spends a significant amount of time reviewing the common mathematical concepts and treating this as a new concept.

Suggestion

Thus, it is imperative to know the target audience and base the presentation at their level. This could be achieved by studying the other presenters' academic stature in the session if the conference program is available beforehand. This will allow the presentation to be aimed at the correct level and keep the delegates interested.

C. Grammatical and Spelling Errors

Grammatical and spelling errors are a common and yet avoidable mistake which occur regularly [1], [3], [6]. This detracts from the quality of the presentation and causes the delegates to look for more grammatical and spelling errors, instead of listening to the presentation. It also has a negative effect on the presenter, as the delegates' lose respect for the presenter because of the unprofessional preparation.

Example of a typical mistake

Figure 1 shows typical examples of a slide containing grammatical and spelling mistakes.

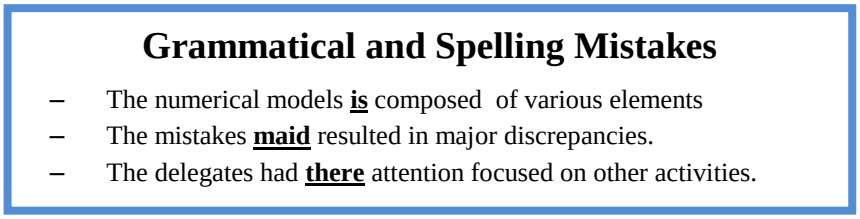

Fig 1 Common mistake found in slide presentations

Suggestion

Since it is difficult to identify our own mistakes, it is beneficial to ask a colleague whose first language is English, or has a good command of English, to review the presentation. Grammatical and spelling errors, as well as uncertainties, can easily be corrected through this type of peer review. Also most software are equipped with reading the presentation aloud thereby allowing the author to listen for mistakes.

D. Cluttering Slides with Text

It is important for presenters to realize that they are presenting a summary of their research work and not testing the delegates' ability to speed read. It is also essential to note that the audience can read much faster than the presenter

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is able to speak. This causes boredom amongst delegates and results in an uninteresting presenting. It also takes the presenter several minutes to read the slide presentation, usually word by word to the delegates [1], [3], [4].

Example of a typical mistake

Figure 2 shows a typical slide overcrowded with text.

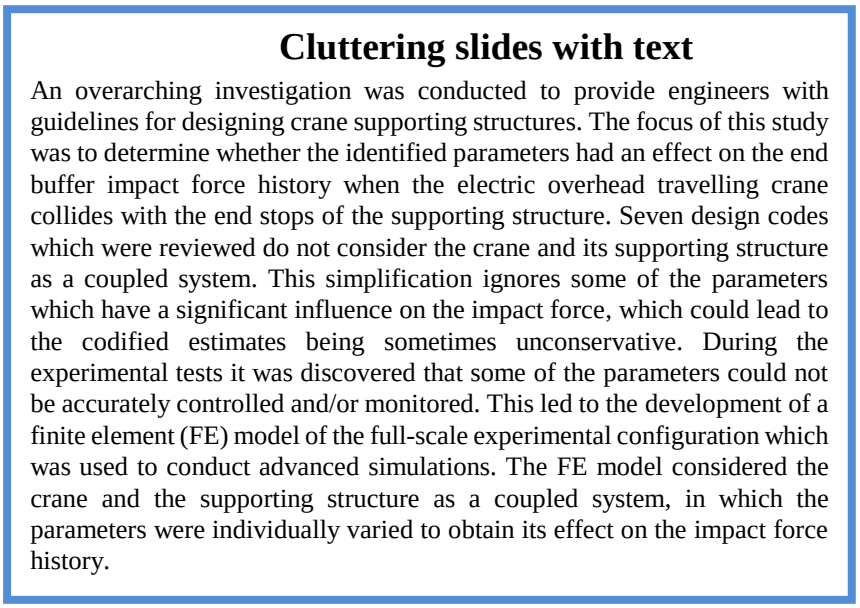

Fig 2 Uninspiring slide covered with text

Suggestion

The use of several sentences and / or paragraphs on a slide should be avoided and replaced with keywords or phrases. It would be useful to capture the delegates' attention using photos or even video clips of the research work, thereby illustrating the concept which needs to be conveyed. This reduces the explanation time and also visually presents the research to the delegates which allow them to immediately connect with the concept being conveyed.

E. Not Remaining Within the Allotted Presentation Time

Some conference venues are equipped with time keeping devices which helps presenters stay within their allotted presentation time. For venues where this is not the case, some presenters tend to speak beyond their allotted presentation time. Presenters who do not conform to the allotted presentation time cause significant disruptions to the session. This is especially the case when the session chair is unable to enforce time limitations. Poor time management leads to other presenters' time being reduced, the session running late and inconveniencing delegates wanting to attend other presentations. The biggest disadvantage of this deficiencies is that the core items of the research is omitted resulting in the core objectives of the presentation not being fulfilled. It is also disrespectful towards the other presenters and delegates not to remain within the allotted presentation time.

Suggestion

This flaw can be eliminated if the presenter prepares adequately by practising the presentation aloud while monitoring the time taken without rushing through the slides. The presentation can easily be adjusted prior to the presentation to either remove or add slides to ensure that the presenter remains within the allotted time. Practising the presentation aloud and infront of colleagues will also help novice presenters gain confidence [1], [5], [6].

F. Poor Command of Spoken English

At the outset I want to emphasize that I am not referring to different accents. People speak English or any other language fluently even though they have an accent. What the author is referring to here is the inability to properly

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convey ideas and thoughts during a presentation [1], [2]. This is usually a problem to presenters for whom English is a third or sometimes a fourth language. Presenters who struggle with spoken English tend to have slides cluttered with text and tend to read the sentences / paragraph word for word. This again leads to delegates becoming bored and losing interest in the presentation.

Suggestion

Although patience should be exercised, it is accepted that conference delegates are all professionals and should thus be adequately prepared to deliver high quality presentations. Thus delegates should refrain from cluttering slides with text and rather use key words / photos / video clips in the presentation. Flash cards which elaborate the keywords can be used to guide the presenter through the presentation. The presenter should also ensure that the suggestions to other mentioned flaws are taken into account.

G. Ineffective Use of Modern Technology

Many presentations can be significantly enhanced if modern technology is used effectively and appropriately [1], [2], [3]. This can transform a dull and boring presentation to a lively one, which will result in the conference delegates wanting to interact with the presenter. The benefits of spending extra time improving the quality of the slides, results in increased interest in the presentation. This can be achieved by adding colour to text and backgrounds, including photos and video clips and efficiently moving between slides using hyperlinks.

Example of a dull slide

Figure 3 shows a dull and uninteresting slide.

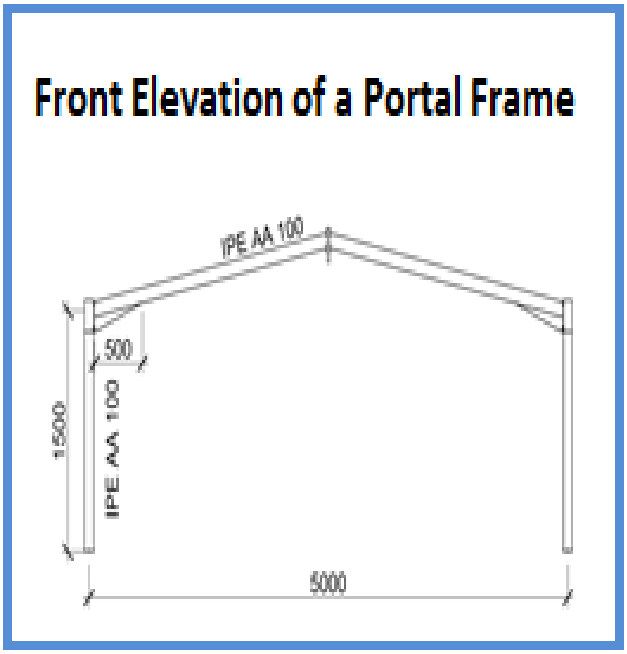

Fig 3 A dull slide depicting the front elevation of a portal frame

Suggestion

The slide shown in Figure 3 shows very little detail, of except for the dimensions of the members and their section sizes. No detail of the actual connections is provided to allow the delegates to visualize how the members are connected to one another. Hyperlinks could be used to zoom into details or more detail could be included in the slides. The use of color can also be used to attract delegates' attention to certain important aspects. Figure 4 shows how the slide can be improved to focus the attention of the delegates on important aspects.

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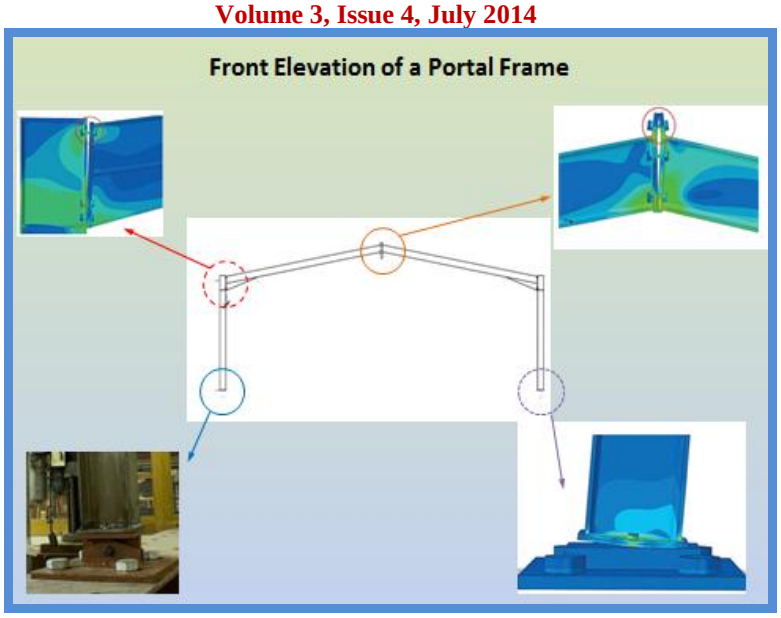

Fig 4 enhanced providing connection details and adding colour

H. Insufficient or Excessive Technical Detail of Research Work (Expressions)

Some authors tend to present either insufficient or excessive detail especially when highlighting mathematical equations [1], [6]. This could leave the delegates confused where after they find it difficult to follow the remainder of the presentation. This is probably the most difficult challenge to resolve since trying to find a balance can be extremely difficult, especially if the mathematical concept is new and minimal oral explanation is provided. Figure 5 presents a slide which contains several sophisticated expressions which are not observed daily and with many intermediate expressions omitted. The delegates will try and understand how the equations were obtained and miss the point that the Lagrange multipliers is a technique which was simply used to obtain an answer subject to certain constraints.

Example of an excessive mathematical expressions

Figure 5 shows a slide with excessive mathematical expressions with many intermediate steps omitted.

Determining Impact Force using Lagrange Multipliers

$$\bar{\nabla} f(\bar{x}) + \bar{\nabla} g(\bar{x}) \cdot \lambda = \bar{0}$$

and

$$g(\bar{x}) = 0$$

Equation 1

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} \times e^{-\frac{(x-\mu)^2}{2\sigma^2}} \qquad \text{for } -\infty < x < \infty$$

Equation 2

$$f(P) = -\frac{1}{2 \times \sigma_{11}^2} \times (P_1^2 - 2P_1 \times \mu_1 + \mu_1^2) - \frac{1}{2 \times \sigma_{22}^2} \times (P_2^2 - 2P_2 \times \mu_2 + \mu_2^2) = -\frac{1}{2}\beta^2$$

Equation 3

Fig 5 Slide containing several mathematical expressions

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Suggestion

It is important to establish what message needs to be conveyed with each slide. Figure 5 would require a significant amount of time to understand the Lagrange multipliers concept and how to apply it to one's particular research environment. Since this is not an original expression but only a technique used to determine a magnitude, it would be prudent to only present equation 1 and mention that equation 3 was obtained subjecting equation 1 to certain constraints. The detail of the final expression can be found in the paper.

I. Lacking Pre-Requisite Knowledge of Presented Material

Research is usually conducted by graduate students under the supervision of a professor / supervisor. This entails the student doing the work has detailed knowledge of the research work. The student usually consults the supervisor when problems or uncertainty exist. This however does not mean that the supervisor is completely familiar with the all underlying work. Graduate students will also prepare the presentation which the supervisor delivers at conferences. During the question and answer session when the supervisor is unable to answer basic questions that the credibility of the work is questioned which leads to embarrassment of the presenter [1], [2].

Suggestion

It is vital that the smallest detail of the presentation be studied especially if the presentation is prepared by the graduate student. The presenter must acquaint himself / herself with the underlying information and not simply rely on past knowledge and experience to answer questions. In the case of numerical work, issues such as element type, element size, type of analysis (linear or non-linear), static or dynamic analysis, type of software used and its limitations, type of failure criterion used, etc. must be known in order to answer questions effectively.

J. No Validation of Numerical Work

The biggest mistake which any presenter can make is to provide numerical results without verification through experimental or hand calculations [1], [6]. Many presenters believe that the results obtained from Finite Element Analysis are correct and do not require verification. Cognizance is taken that many models are extremely large and it is impossible to verify the entire model. However, certain aspects of the numerical model must be verified to ensure credibility of results.

Example of incorrect numerical results

A client required that a dynamic response of a water tower be determined. Experimental tests and finite element simulations were performed. The numerical results were significantly different to the experimental results and no obvious mistakes in the numerical model were detected. The researcher performed another numerical analysis with different software. The results from the two softwares were identical. The researcher concluded that since the numerical results were identical, the measurement devices on the experimental setup were faulty. It was only during a symposium that the author was informed that the damping associated with the numerical models had a significant effect on the results and could mostly likely account for the differences between the numerical and experimental results.

Suggestion

It is imperative that numerical results be verified, to avoid the results being criticized and leading to the embarrassment of the presenter. If the numerical results are different to the experimental results, the researcher must determine the source of the potential problem(s) and resolve it. It is only once all potential parameters causing discrepancies are eliminated that a hypothesis can be made. It is important to note that simply using other software to conduct the same test does not provide a verification of results.

III. CONCLUSION

During Ph.D. studies, students are mentored on how to conduct research and how a thesis should be written. The writing style of the thesis is usually governed by the supervisors writing style. Also, at certain institutions very little emphasis is placed on the oral presentation skills of the student. This leads to some researchers writing excellent papers but delivering substandard and unprofessional presentations at I international conferences.

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Therefore, this paper was written to elicit discussion amongst academics / presenters on the silent and yet important topic of substandard and unprofessional presentations delivered at international conferences and how the presentations could be improved. Many delegates attending these conferences are either novice presenters and feel intimidated when making presentations while the remaining group are seasoned presenters having delivered numerous presentations using the same methodology. The novice presenters' presentations usually contain several of the mistakes / flaws identified in section "Deficiencies (Flaws / Mistakes) Made During Presentations". This easily results in the novice presenters' confidence being shattered resulting that they refrain from attending conferences. The seasoned presenters believe that the way they have presented in the past is correct and therefore their presentation skills do not need to be improved, whether correct or not.

Therefore, it is vital to provide feedback to presenters (or those requesting feedback) to enhance the quality of future presentations and conferences. This is where the session chairperson could play an invaluable role in mentoring novice presenters and seasoned presenters who have strayed from delivering a respectable and professional presentation. This could be done via email or during break sessions without embarrassing the presenters in front of their colleagues. This will help develop researchers to present better quality presentations together with the highlighted aspects raised in this paper.

The list of deficiencies provided earlier is not meant to be all-encompassing. There are obviously many more aspects which can be added to the list. These are however the most frequently discussed flaws made by presenters at conferences. These flaws are detrimental to the presenter and result in a substandard and unprofessional presentation.

The suggestions made earlier are hoped to help novice and seasoned presenters enhance their presentation skills to deliver better presentations.

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AUTHOR BIOGRAPHY

TREVOR HAAS is a Senior Lecturer in Structural Engineering at Stellenbosch University. He obtained the National Diploma (1991) and National Higher Diploma (1992) in Civil Engineering from the Peninsula Technikon, now Cape Peninsula University of Technology, South Africa. In 1999 he was awarded the M.S. in Civil Engineering from Southern Illinois University at Carbondale, USA. In 2007 he was awarded a Ph.D. from Stellenbosch University, South Africa. His research interests include numerical (FEA) modelling of steel structures, retrofitting of existing structures, structural dynamics and engineering education.