

A Abstract

1. Introduction

PowerPoint is the most widely used presentation software tool. As of 2012, PowerPoint had more than 200 million presenters worldwide. Presenters all over the world use the program. Some use it for university teaching, others for business meetings and some even use PowerPoint to deliver a sermon. But the program doesn't always seem to be used to the satisfaction of the audience. In many critical articles, presenters are accused of using too many words on their slides and too often looking at the projection instead of keeping eye contact with the audience. Some authors also criticize the program itself for what they see as a negative influence on presentations.

If these critical observations are valid, then PowerPoint presentations don't conform to the advice given in instruction books nor to the outcome of research into human information processing. This advice usually proposes the use of minimal text on slides, and instead using pictures or other graphics. This would help the audience process the information. In addition, the instruction books stress the importance of maintaining eye contact with the audience. It is remarkable that the program is so frequently used, while it is so often criticized for what seem to be valid reasons.

There has been some research into PowerPoint use in the classroom, investigating the effects on student appreciation and grades.

Much of this research does not describe how nor why the program is used in these situations. The critical articles on PowerPoint are mainly based on personal experiences and not on research. So there has not been much empirical evidence that presenters actually do use too many words or that they look too often at the projection, nor has the influence of PowerPoint on the presentation been established. In addition it is not clear why so many presenters don't seem to follow the advice in instruction books, which say to use a minimum amount of text on a slide and which stress the importance of maintaining eye contact with the audience.

This dissertation focuses on the role of the presenter. It investigates how presenters use PowerPoint and if they are guilty of the negative behavior mentioned above. If they are guilty, what are the reasons they use PowerPoint in this way? Some authors have suggested that presenters use PowerPoint not only for the benefit of the audience, but that they also use the words on the slides as speaking notes. In particular, presenters suffering from speaking anxiety might be afraid of being "lost for words" or forgetting the structure of their presentation. They would then be able to turn to the text on the slides as support. This dissertation will investigate the possible role of speaking anxiety and how it affects PowerPoint usage.

The research looks at the use of PowerPoint by scholars presenting conference papers. Conferences play a central role in the network of scientific communication and are important for a researcher's profile. The majority of scholars present their work at conferences several times a year and these presentations can be demanding and challenging. In contrast with writing and publishing a paper, conferences

allow scholars to interact with an audience of their peers who will evaluate their work by posing critical questions.

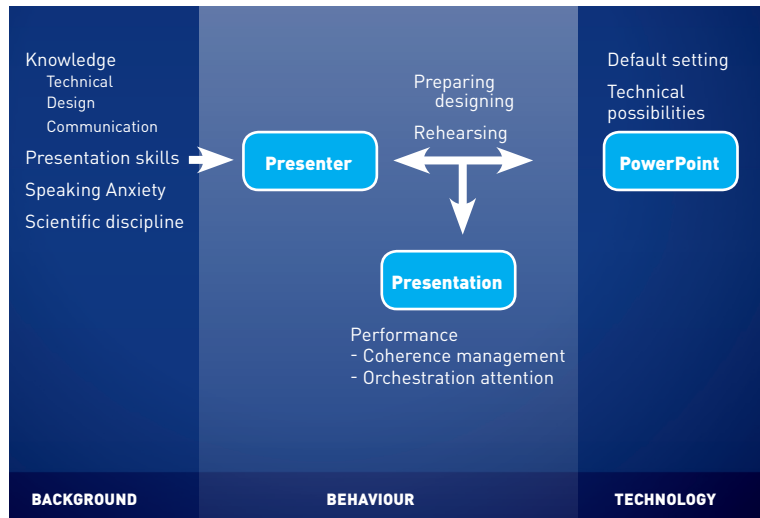
Challenging exposure of this kind might well engender or increase speaking anxiety in the presenter.

Clearly there is a need for empirical research on PowerPoint use, research focused on the program's use in delivering scholarly presentations. Questions to be answered by the research include:

- How do scholars use PowerPoint?
- Why do scholars use PowerPoint in the way that they do?
- Does speaking anxiety influence the way that scholars use Power Point?
- Does PowerPoint influence the quality of presentations?

This thesis studies the use of PowerPoint in a real life setting and looks at presentations as being complex interactions among slides, presenter behavior and audience. An overview of the different elements regarding the presenter, his/her background, the presentation, the presenter's behavior and the PowerPoint program itself can be found in Figure 1.

Figure 1 Elements of PowerPoint presentations



2. Method

There is a literature review and three empirical studies. The literature review compares the program with its predecessors and describes the software, slide design and the user's presentation behavior, focusing on the interaction of these elements. Instruction books and articles on PowerPoint, criticism and empirical research on the topics of slide design, presentation behavior and its effects on audiences are discussed.

In the first empirical study, fifteen scientific presentations of language scientists are analyzed on the use of text and pictures on the slides. The physical and verbal behavior of the presenter has also been studied, specifically investigating how often presenters look at the projection and if they verbally introduce a slide. Furthermore the relation

between the slides and the presenter's behavior has been analyzed.

The second empirical study employs interviews with scholars about their reasons for PowerPoint use. It distinguishes between first-year PhD students (beginners) and advanced, prize winning scholars from different disciplines of science (humanities, physical science, social science and medical science). Special attention is given to the acquisition of PowerPoint skills.

The third study consists of a survey using social scientists and focuses on the influence of speaking anxiety on the use of PowerPoint. It tests if speaking anxiety causes presenters to spend more time on preparing and rehearsing the presentation, and analyzes the possible relationships among speaking anxiety, time spent on preparing and rehearsing a presentation, and the use of words on a slide.

3. Results

Certain characteristics of PowerPoint such as its default-settings and the ability to use slides on the Internet and as handouts may tempt the presenter to increase the amount of text on slides. These choices, however, are not necessary, and are decisions made by the presenter. The scholars in our study used a relatively large number of words when compared to what instruction books advise (a maximum of 20 to 36 words per slide, depending on the author). An average number of 35 (language scientists) and 50 (social scientists) per slide was found. Many of the scholars used a small number of pictures (depending on the scientific discipline).

Presenters look on average 73 times at the projection during their

presentation of 20 minutes (more than three times a minute). Looking at the projection to indicate a new slide or 'new' elements on a slide seems to be characteristic for the use of PowerPoint. Presenters turn away from the audience and break eye contact, something which is considered negative in making presentations. The critics of PowerPoint clearly have a point when they complain about the high number of words on the slides and about presenters looking towards the projection.

There are differences, however, between beginning and advanced presenters. Beginners use more than twice as many words per minute than advanced presenters and only half as many pictures. In maintaining contact with the audience there is also a difference between beginning and advanced scholars. Advanced presenters often like to present without the use of PowerPoint because this allows more contact with their audience.

Some scholars say that they use the text on the slides as speaking notes. Many have also said that they use pictures almost exclusively for the benefit of the audience. Beginners probably use more text and fewer pictures because they suffer more from speaking anxiety than advanced presenters. They might be more concerned with their own performance. Advanced scholars on the other hand have indicated that they have their audience in mind when preparing and delivering a presentation. Speaking anxiety, in an indirect way, also plays a role in the number of words used on the slides. Anxious presenters spend more time rehearsing the presentation; this is related to the number of words used on the slides.

Scholars often seem to lack knowledge about how to use Power-

Point in an appropriate manner. Instead of receiving training in using PowerPoint, they learn to present with the program by experimenting and by observing colleagues and designing slides on the basis of common sense, which is often against the advice in instruction books. Moreover some scholars erroneously think that PowerPoint makes rhetorical skills redundant.

4. Conclusions

The concept of "performance" seems to be appropriate in describing all the elements that matter in the presentation itself: speech, animated slides, working with projections, physical motion and maintaining eye contact with the audience. Presenters need an understanding of how audiences process different sources of information, and they must then be able to orchestrate their presentation skills in appropriate ways. If we look at PowerPoint presentations as performances, we can see that presenters must be designers, actors and directors at the same time.

It is clear that PowerPoint elicits behavior that is not always consistent with what is considered to be good presentation form. This, however, is not the fault of the program. The apparent user friendliness of PowerPoint might disguise the fact that presentations with the program are in fact complex. It is not PowerPoint itself which causes some bad presentations, but the choices and behavior of the presenters who must deal with all the new possibilities and requirements inherent in this program.

Presenters should be educated in appropriate slide design. They

also should be taught how to direct the attention of the audience. It is not sufficient to teach presenters how they should design and present their slides, however, if they aren't helped to learn how to reduce their speaking anxiety in ways other than using the PowerPoint slides as support. This thesis suggests ways of teaching these skills.