

## whiteboard or PowerPoint?

# which visual storytelling presentation maximizes the *picture superiority effect*?

### overview

The Picture Superiority Effect holds that concepts are much more likely to be remembered if they are presented as pictures rather than as words. Numerous experiments have shown that pictures dramatically outperform words or text alone when it comes to memory recall—perhaps by a factor of six or seven, according to some studies.

In this experiment, B2B DecisionLabs contracted with Dr. Zakary Tormala, an expert in messaging and persuasion and a social psychologist at the Stanford Graduate School of Business, to test what kind of visual presentation is most effective at taking advantage of the Picture Superiority Effect—PowerPoint presentations or presentations that employ whiteboard-style visual imagery.

### research objectives

The aim of this study was to test the potential effects of whiteboard visuals against more traditional PowerPoint approaches. Specifically, the set of experiments was designed to assess whether whiteboard-style visual storytelling can enhance presentation effectiveness, as defined by metrics of engagement, enjoyment, credibility, and—most critically—recall and persuasive impact.

### the study: part one

The initial study included 351 individuals—average age 34—who took part in an online experiment. Participants were instructed to imagine that they worked at a company where they were in charge of the sales staff and were considering ways to improve presentation skills. Participants were told they would be viewing a presentation on this topic, which would begin on the next screen.

Participants then viewed a short, two-minute video presentation about the “attention hammock,” a phenomenon in which, while listening to a spoken message, an audience’s attention starts high, dips in the middle, and peaks at the end. The substance of this presentation was identical for all participants.

However, unknown to them, participants were randomly assigned to one of three different presentation conditions that varied the visuals accompanying the spoken message. The three different presentation conditions included the following conditions:

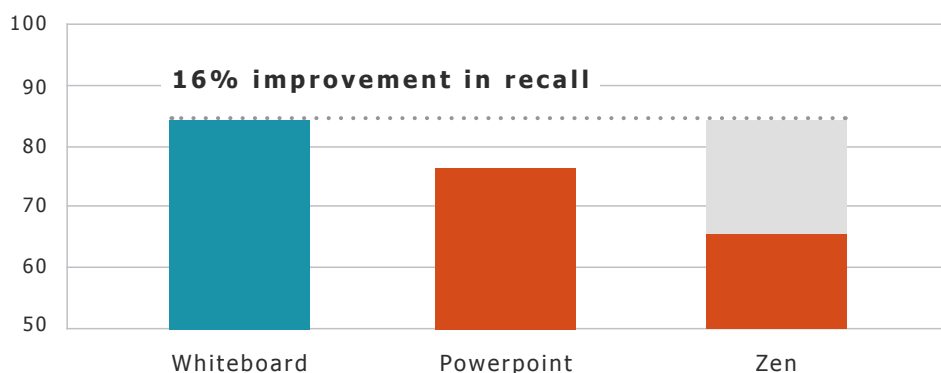
- **Whiteboard condition**, which was automated and in which graphics appeared to be hand-drawn on a whiteboard.
- **PowerPoint condition**, which featured a traditional PowerPoint presentation containing stock photography and bullet points.
- **“Zen” condition**, which contained one key phrase and an engaging metaphorical image.

While all participants received the exact same information—that is, identical message content—the study **revealed that the whiteboard presentation outperformed the PowerPoint and Zen presentations on a wide range of messaging impact metrics**, based on participants’ responses to a series of questions they answered after experiencing each presentation.

More specifically, in each of the following areas, there was a statistically significant difference in favor of the whiteboard presentation:

- **Engagement** – Participants in the whiteboard condition reported finding their presentation more interesting than the PowerPoint and Zen conditions, paying more attention to it and reflecting more deeply on its content. On average, the whiteboard presentation created an approximately **nine percent improvement in engagement** compared to the PowerPoint and Zen presentations, which did not differ from each other statistically.
- **Recall** – In a recall test at the end of the presentations, participants in the whiteboard condition were able to accurately remember significantly more message content than those in the PowerPoint or Zen conditions. Most importantly, as illustrated in figure one, the whiteboard presentation generated an approximately **16 percent improvement in memory for message content**.

**Figure 1: Percent recalled (immediate test)**



- **Presentation Quality** – By a margin of about eight percent, participants in the whiteboard condition rated the presentation as clearer, easier to understand, more enjoyable, and simply better overall than participants in the PowerPoint and Zen conditions.
- **Credibility** – Participants in the whiteboard condition also found the presentation to be more credible (i.e., based on scientific evidence) and rated their presenter as being more experienced and trustworthy. Overall, the whiteboard presentation created an eight percent increase in perceived credibility compared to the PowerPoint and Zen presentations, which again did not differ.

## the study: part two

In a second study, conducted a few weeks after the first, 401 new participants took part in the same experiment. This time, however, new measures were included to assess the persuasive impact of the whiteboard presentation versus the PowerPoint and Zen presentations. For example, in addition to assessing engagement, credibility, presentation quality, and recall (all areas measured in part one of the study), participants were asked: How compelling was the presentation?

- How important is it to remember the idea of “the hammock” when giving presentations?
- To what extent will the presentation about “the hammock” change the way you give presentations or deliver your own messages to others?
- How likely are you to follow the advice from the presentation the next time you have to speak in public?
- How likely are you to share the information from the presentation with someone else?
- Do you intend to tell anyone you know about “the hammock”?

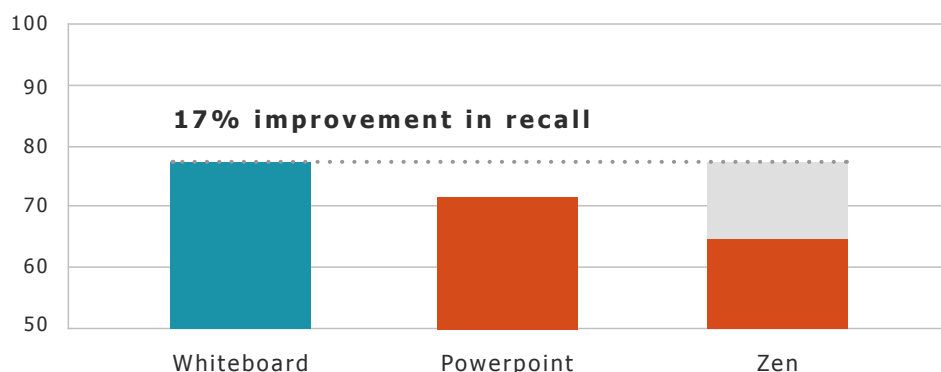
Across these measures, the whiteboard presentation had a statistically significant advantage over the PowerPoint and Zen presentations, which were no different from each other. On average, the **whiteboard presentation enhanced the persuasive impact of the message by approximately eight percent.**

To determine whether the whiteboard advantage persisted over time, a follow-up survey was sent to the same participants two days later. This survey assessed recall and continued engagement and impact. Importantly, none of the original presentation was shared in the follow-up survey and participants needed to rely on their memory to respond to the following three questions:

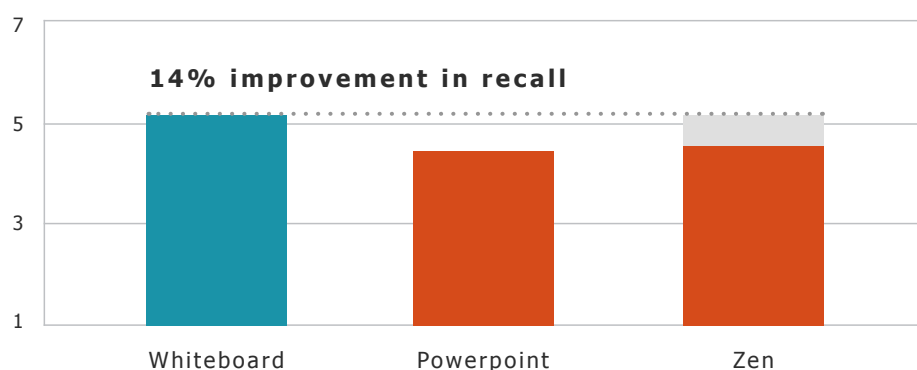
- How often have you thought about the content of the presentation since you viewed it?
- How likely is it that you will use or apply the insights from the presentation in the future?
- Has the presentation changed, in any way, the way you interact or communicate with others?

In this follow-up test, the whiteboard presentation again produced a statistically significant boost in recall relative to the PowerPoint and Zen presentations (see figure two) and continued to be more engaging and impactful compared to those presentations (see figure three). On average, two days after its viewing, the **whiteboard condition outperformed the other presentations by 14 percent and 17 percent on recall and engagement/impact**, respectively. So, the advantage of the whiteboard presentation over the PowerPoint and Zen presentations persisted over time.

**Figure 2: Percent recalled** (delayed test, 2 days later)



**Figure 3: Continued impact** (delayed test, 2 days later\*)



\*Based on composite index scores

## conclusion

This series of experiments demonstrates that whiteboard-style visuals can give marketers and salespeople a statistically significant advantage across some of the most important areas of presentation delivery and visual storytelling, compared to traditional PowerPoint or “Zen” PowerPoint presentations. By using whiteboard-style imagery to tell stories visually, presenters stand to gain substantial advantages in engagement, recall, perceptions of quality, and persuasive impact, helping them take maximum advantage of the picture superiority effect.

## meet our research team



### **Tim Riesterer**

Chief Visionary, B2B DecisionLabs

Tim Riesterer, Chief Visionary at B2B DecisionLabs, is dedicated to helping companies harness the power of Decision Science to win more business with prospects and customers. He is a recognized thought leader, keynote speaker, and practitioner with more than 20 years of experience in marketing and sales management. Riesterer is co-author of four books, including *Customer Message Management*, *Conversations that Win the Complex Sale*, *The Three Value Conversations*, and *The Expansion Sale*.



### **Erik Peterson**

Chief Executive Officer, Corporate Visions

Erik Peterson, Chief Executive Officer at Corporate Visions, helps companies and salespeople around the world win at the three-foot level—when they're sitting across the table from their most important prospects. Peterson is a recognized author, keynote speaker, and has trained thousands of sales teams in some of the most prestigious companies around the world. He is co-author of three books: *Conversations that Win the Complex Sale*, *The Three Value Conversations*, and *The Expansion Sale*.



### **Dr. Zakary Tormala**

Expert in Messaging and Persuasion

Zakary Tormala is a social psychologist with expertise in the areas of messaging and persuasion. He was contracted by Corporate Visions to create this research, conduct the experiment, and help ensure academic rigor and empirically valid results. Dr. Tormala is a professor at the Stanford Graduate School of Business.

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