

# ECEN 478: Senior Design

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- You will be required to make presentations in your academic and professional career - **count on it!**
- Those who express themselves well:
  - are held in high regard by their peers
  - tend to advance more quickly in their careers than those who don't - regardless (almost) of your technical expertise.



# Learning Objectives

By the end of this chapter, the reader should:

- Understand how people evaluate oral presentations.
- Understand common elements of a technical presentation.
- Be able to assemble an effective presentation.

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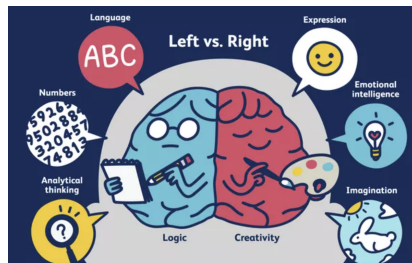
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# Left and Right Brain

- Right brain thinking is **intuition and emotion** and left brain thinking is **logic and reasoning**.



- Researchers have demonstrated that right-brain/left-brain theory is a **myth**, yet its popularity persists

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3 Vs should contribute **equally** for an effective talk



## 3 V's of Giving a Talk

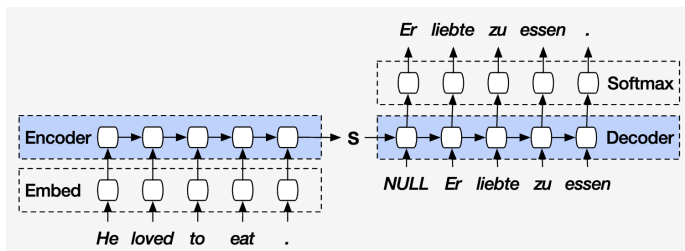
- A study on the impact of the 3 V's found the following percentages:
  - Verbal: 7 %
  - Vocal: 38 %
  - Visual: 55 %
- My guess: the impact for engineers is different.
- **Conclusion:** People pick up on **vocal** and **visual** cues more than verbal what you are saying.

# Example 1

We designed an automatic translation system based on sequence to sequence neural networks that improved the state-of-the-art accuracy to 97%

## Example 2

- We designed an automatic translation system from **English to German**
- Our system is based on **sequence to sequence** neural network architecture



- We improved the state-of-the-art accuracy to **97%**

## Preparing for the Presentation

- Before you start putting the presentation together, plan your strategy (creativity, brainstorming).
- **Design it! You are telling a story.**



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Remember **credibility** - you must have their interest at heart - not yours!

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- Emphasize **3 main points** in your talk. Research supports that people forget more than that.
- Structure your presentation to support these points.



## A Formula for Successful Presentation

- 1 Know the subject (substance does matter!)
- 2 Know the audience
- 3 Prepare

## The Conventional Wisdom

- 1 Tell them what you are going to tell them.  
(Introduction)
- 2 Tell it to them. (Body)
- 3 Conclude by telling them what you just told them.  
(Conclusion)

## The introduction

Absolutely critical that you introduce the material well:

- *"Nothing should be explained in such a way that it cannot be understood by an intelligent 12-year-old"*, Albert Einstein.
- Einstein's statement is especially important in the **Introduction**. Take time to explain the problem in **simple terms**.
- If the audience does not understand it from the beginning, they tune you out!

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- Rhetorical questions
- Narrate an experience the audience can relate to
- Motivate them to listen
- Answer the what? Why? And why person should listen?
- Use a joke (if you are good – and brave)

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  - Use analogies for complex material.



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- OR motivate them to future research.
- OR explain to them what the next things you are going to address are.

”Power Corrupts PowerPoint Corrupts  
Absolutely!”  
Edward Tuft (Yale Professor)

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- Do use PowerPoint to introduce bullet items **one at a time**. This helps keep you on track with your discussion.

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- If you show an equation talk about it!
- Every equation has its own story, it is your job to tell its story.

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- Don't be a **Speedy Gonzalez** or a **Slow-Poke Rodriguez!** (translation – don't go too fast or too slow)
- “It is a capital crime to exceed the allotted time”. – James Garland.
  - This is a sure way to make your audience unhappy, especially if there are presentations following yours.

## Time Constraints (Cont)

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- How would you describe all the material you know about Physics or Marketing Theory you know in 10 minutes or 2 hours?

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- Practice talk the night before the presentation, not right before the talk. Only do a brief review of them right before the talk.

## Handling Aggressive Questioners

Are you familiar with the work of Bozo and Bozo from 1984 in which they proposed the exact same idea as yours” GULP!

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- Don't let that happen by being knowledgeable about your subject.
- We live in a world of ideas - **TOUGH QUESTIONING IS ULTIMATELY GOOD FOR YOU AND THE FIELD.**

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- If you can't answer, admit it - don't B.S.
- Offer to discuss it after presentation if you just can't answer it.

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- People like to know how you applied it and what the tangible results are.
- Chalkboard is great in response to an “unexpected question”. Bonus points for knowing the material so well that you can go to the board and answer the question.
- Extra slides

Sincerity: Don't over use **the secrets**. It may help in some situations, but it will eventually catch up to you.

Know your stuff and be sincere with what you are saying and with your audience.

## Project Application: Design Presentation

- Table 12.1 describes items to include in different design project presentations.
- Table 12.2 is a checklist to apply when preparing a presentation.

## Summary

- Prepare for your presentation – identify the important points.
- Analyze your audience and address their needs. Organize.
- Teach – don't do a data dump.
- Practice.
- Be ready for questions.
- Go out there and make your work what people remember!

# References

- Ford, Ralph Michael Coulston, Chris S - Design for electrical and computer engineers theory, concepts, and practice-McGraw-Hill (2008)

Thank  
You!



Questions 

