What is Scientific Presentation?

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Sample Presentations

- What differences can you find in the two versions?
- Which is more effective? Why?
- Which version is more cohesive (strong connection between all parts)?

Key Question

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- What is the key question of presentation A?
  - Can saltwater frogs save rice paddies?
  - What happens to the eggs in freshwater?
  - What makes the membrane different?
  - How can we engineer a frog to survive in fresh water?

Key Question

- **Problem 1**: Unclear Key Question (KQ)
  - No question
  - Too many questions
  - Avoid broad questions
    - How can we engineer the frog to survive in fresh water?

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  - No question
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    - How can we engineer the frog to survive in fresh water?

    → Can the cell membrane of the frog be engineered to survive in fresh water?

Key Question

- **Problem 2**: Disconnection of KQ and body
  - Make sure body of presentation addresses KQ
    - Results, methods, etc. should all be clearly connected with answering the KQ
    - Audience should always know how the current slide helps to answer KQ

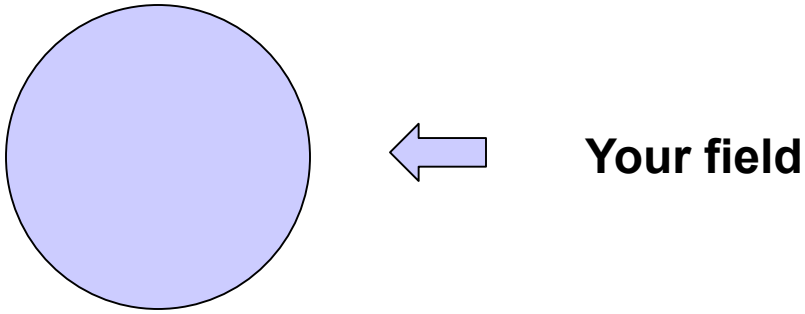
Key Question

- **Problem 3**: Late introduction of KQ
  - Audience wants to know the goal early
  - 10-15 minute talk: present KQ within 2 minutes
  - Place KQ on the slide for clarity

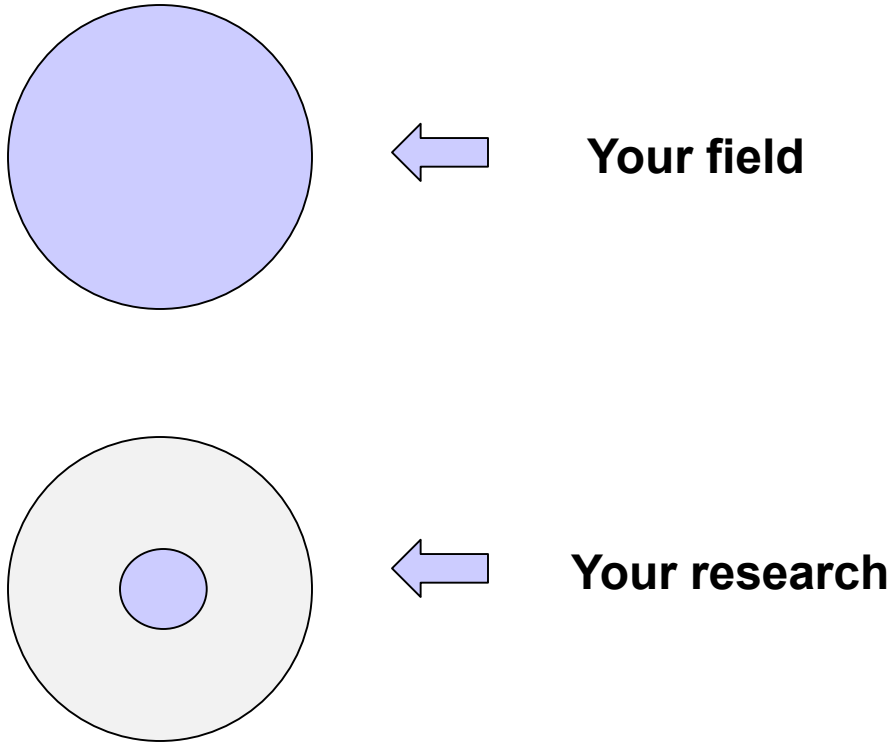
Key Question

- **Problem 4**: Unjustified Key Question
  - Audience needs to understand the **importance** and **motivation** for your research
  - Provide a “frame” to lead your audience to the KQ

Perspective Frame



Perspective Frame



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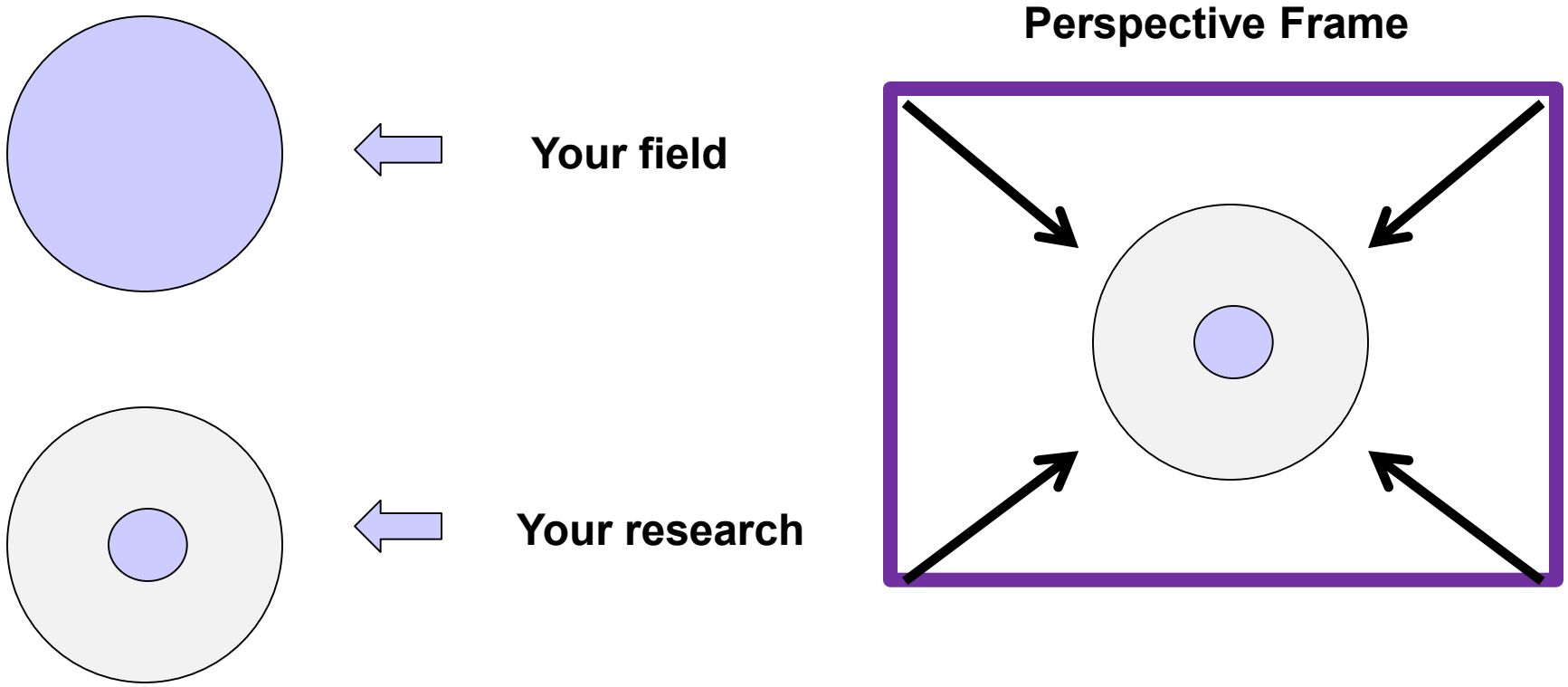

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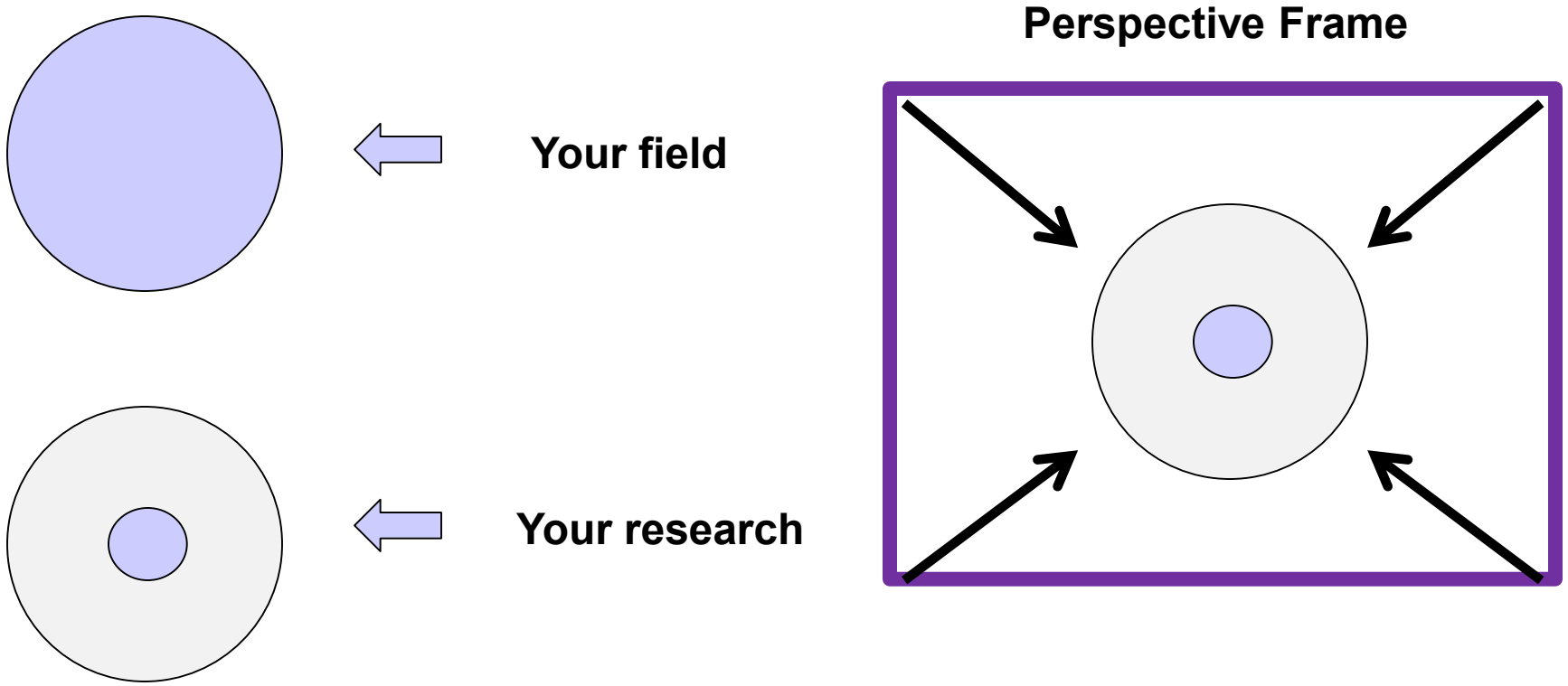


Perspective frame shows the audience how to look at the KQ, why it's interesting/important

Introduction

- Introduction ≠ Background ?
- **Problem 5**: Confusion of “introduction” and “background”
  - Background should be presented throughout the presentation, only at the moment it is needed
  - What should be in introduction?

Introduction

- Key Question
- Perspective frame
- Background to understand KQ and frame
- What will the audience be learning about?

Structure

- **Problem 6**: Paper-like construction
  - Audience can’t refer back like in a paper
  - Give them the information when they need it
- Small Repeated Units:

  Background → Result → Discussion

Structure

- **Problem 7**: Careless ordering of data

- Your presentation is like a story
  - The order you actually did things probably isn't the easiest to understand for the audience
  - Think about the best way to order and link your results and conclusions with the KQ

- Present results in an order that creates a logical storyline for the audience

Structure

- **Problem 8**: Too many methods
- Unless it's a new technique, audience not interested in how you did things
  - They want to hear what you learned
- Avoid overly-detailed methodology
  - Focus on why the method was chosen
  - Talk about the purpose of the experiment and its connection to the storyline and KQ

Structure: Slide Content

- Slides aid in audience comprehension
  - Present results & data visually (e.g. bar graphs rather than tables)
  - Write short statements for key points & conclusions
  - Avoid using too much text
  - Slide title should give the main idea (conclusion)

Conclusion

- Presentation 1 – restated main points

  “This is what I talked about.”

- Presentation 2 – presented main ideas, logical connections, answer to the Key Question, where research leads

  “This is what we have learned.”

Conclusion

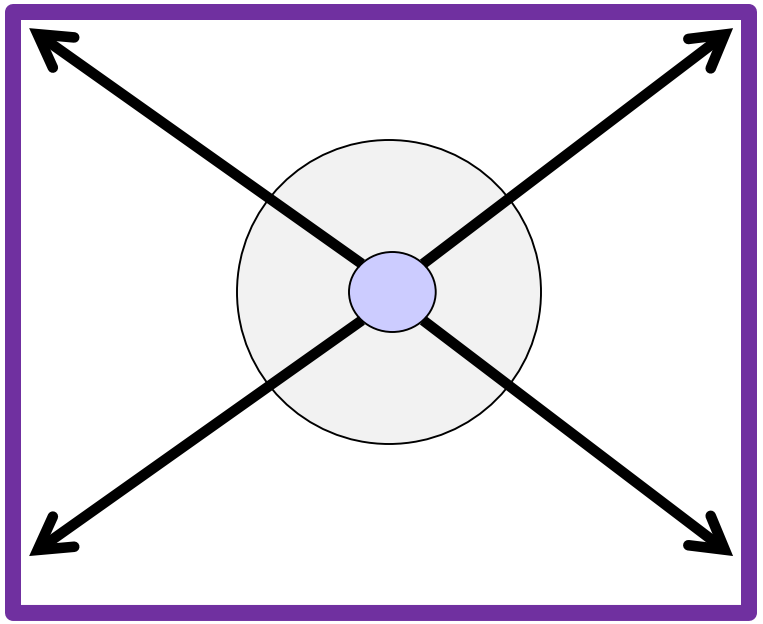
- **Problem 9**: Meaningless repetition of points

- Main points by themselves aren't helpful
  - Tell the audience:
    - How they connect to each other
    - How they help to answer the KQ
    - Why they are important
    - How they lead to future research

Conclusion

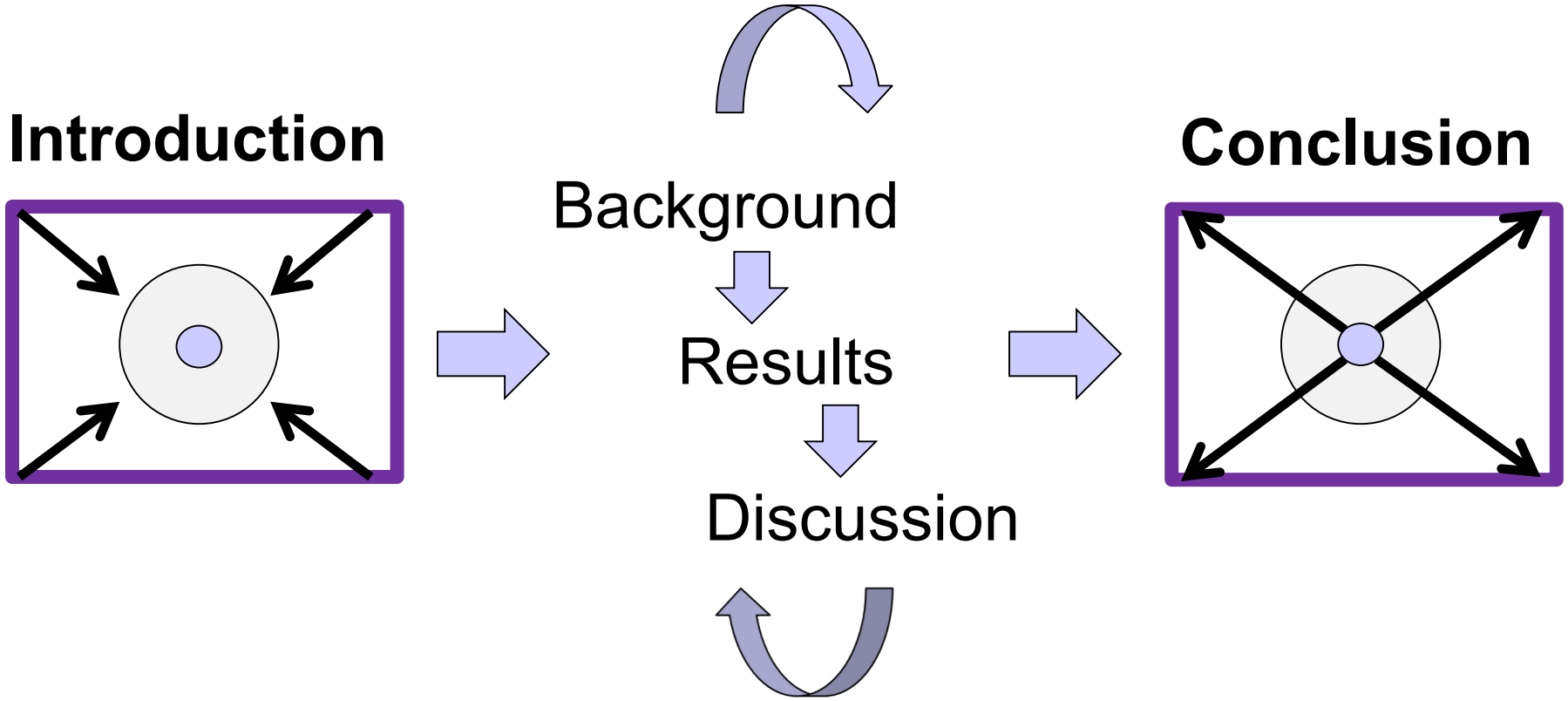
- Take Home Message – What do you want the audience to remember?
  - → The answer to the KQ
- Direction of further research, new questions, new hypotheses, predictions, applications …

Conclusion



Explain how your findings lead to your future research and help us better understand the “Big Picture”

Overall Structure



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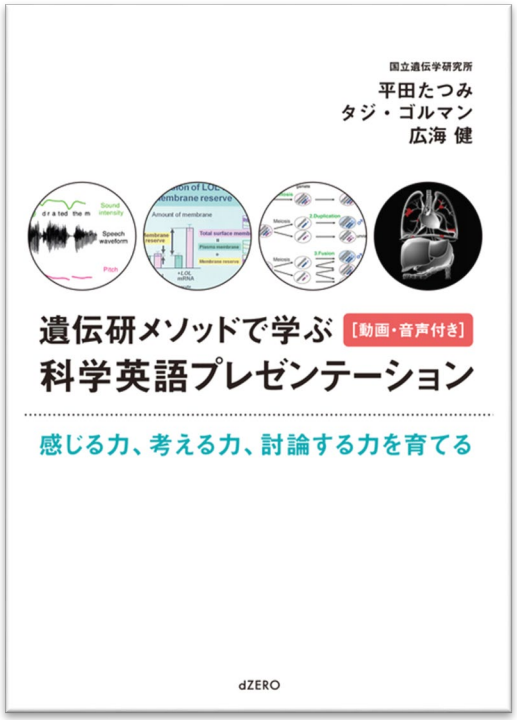

「遺伝研メソッド」科学英語プレゼンテーションの出前研修(Seminar based on this book) is also available.
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