PAT 514 (Winter 2025)

Contemporary Software Techniques in Performing Arts Technology

How to read a paper?

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Communications

- **Course website**: Syllabus, schedule, readings, recordings, etc.
- **Email**: Announcements
- **Google Chat**: Q&A

hermandong.com/teaching/pat514_winter2025

Course Format

- **Workshop** style
- The **semester-long project** is the main component of this course!
- In class, we will be **discussing papers**
  - (Week 2–4) **How to *read*, *write* and *review* a paper?**
  - (Week 5–6) **Peer review session** on your writing samples
  - (Week 7–8) **Paper discussions** on best papers in selected conferences/journals
  - (Week 10–13) **Paper discussions** on related work to your project
  - (Week 15–16) **Project presentation** & **peer review session** on report drafts
  - Before each class, we will do **quick 10-min updates** on your project progress

Project

- **Open-ended individual project**
- Requirement: **New techniques you haven't explored before**
- **Milestones** (tentative)
  - **Pitch**: Jan 29
  - **Report draft**: Apr 2
  - **Presentation**: Apr 14
  - **Final report**: Apr 28
- Due at **11:59pm ET** on the date specified
- **No late submissions!** Submit your work early and update it later.

The Mindset

- I am no expert on reading, writing and reviewing research papers
  - But I might be slightly more experienced in doing these tasks
  - That's my job as a researcher anyway
  - That's part of the training of a PhD
- This is a **workshop-style** course
  - **We work together!**
  - **We learn from one another!**
  - **We provide feedback to one another, and we receive feedback from one another!**

How to read a paper?

Efficient Reading (Hanson & McNamee)

- **Preparation**
  - Quiet place
  - Pencil, paper, photocopy of article
- **Deciding what to read**
  - Read title, abstract
  - Read it, file it or skip it?
- **Read for breadth**
  - What did they do?
  - Skim introduction, headings, graphics, definitions, conclusions and bibliography
  - Consider the credibility
  - How useful is it?
  - Decide whether to go on
- **Read in depth**
  - How did they do it?
  - Challenge their arguments
  - Examine assumptions
  - Examine methods
  - Examine statistics
  - Examine reasoning and conclusions
  - How can I apply their approach to my work?
- **Take notes**
  - Make notes as you read
  - Highlight major points
  - Note new terms and definitions
  - Summarize tables and graphs
  - Write a summary

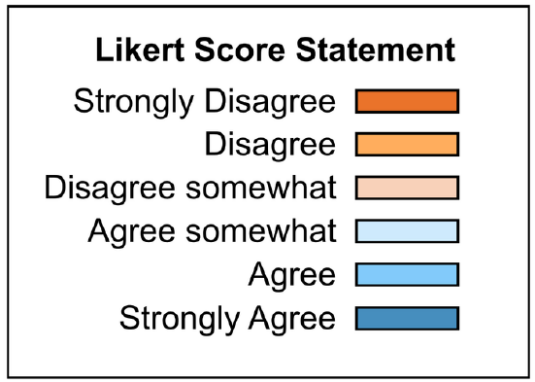
How to Read a Paper (Keshav)

- **The first pass**
  - Carefully read the title, abstract, and introduction
  - Read the section and sub-section headings, but ignore everything else
  - Read the conclusions
- **The second pass**
  - Look carefully at the figures, diagrams and other illustrations in the paper. Pay special attention to graphs
  - Remember to mark relevant unread references for further reading
- **The third pass**
  - Attempt to virtually re-implement the paper: that is, making the same assumptions as the authors, re-create the work

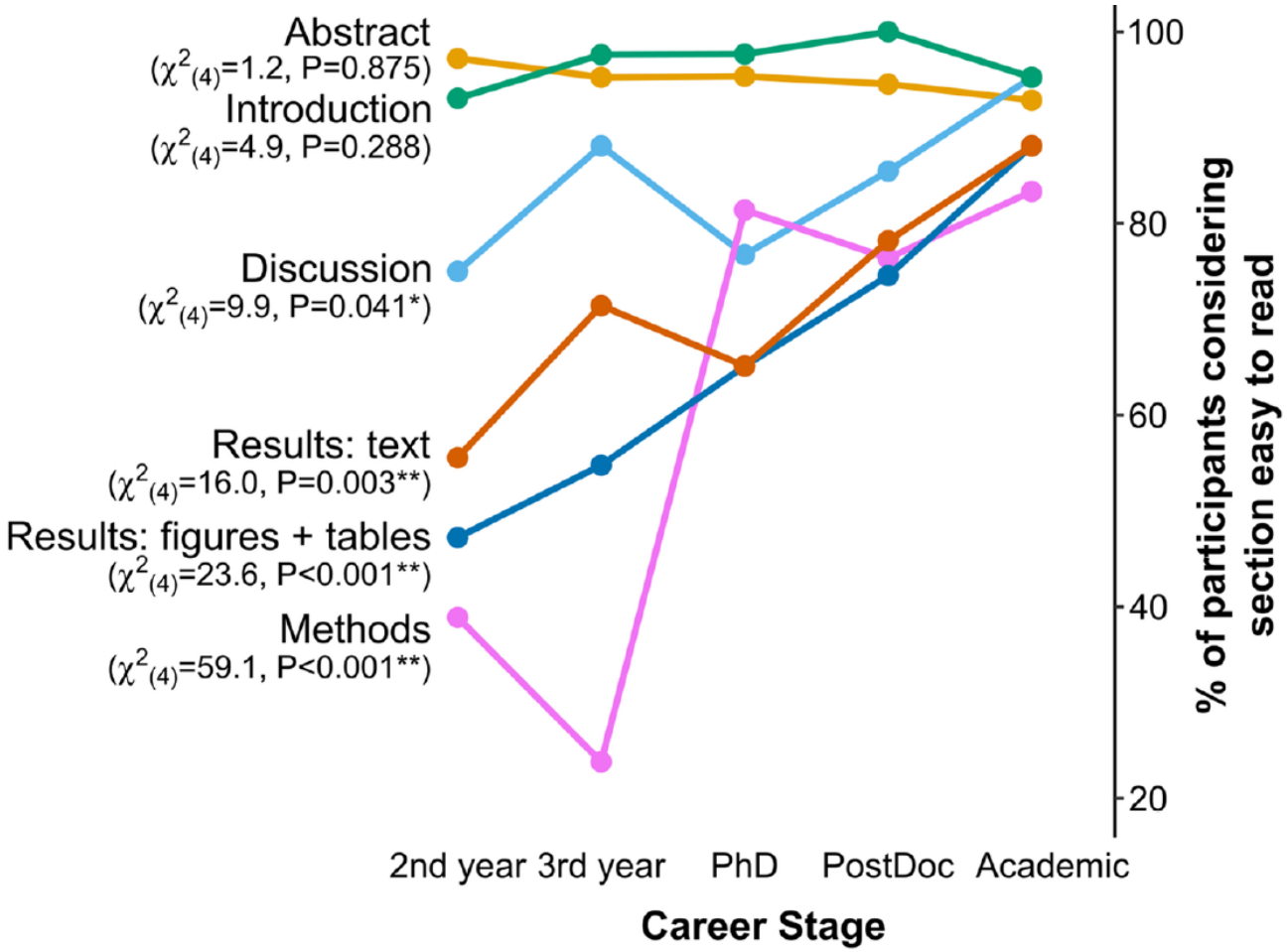
How to read a research paper (Mitzenmacher)

- **Read critically**
  - Reading a research paper must be a critical process. You should not assume that the authors are always correct. Instead, be suspicious
- **Read creatively**
  - Reading a paper critically is easy, in that it is always easier to tear something down than to build it up. Reading creatively involves harder, more positive thinking.
- **Make notes as you read the paper**
- **After the first read-through, try to summarize the paper in 1-2 sentences.**
- **If possible, compare the paper to other work**

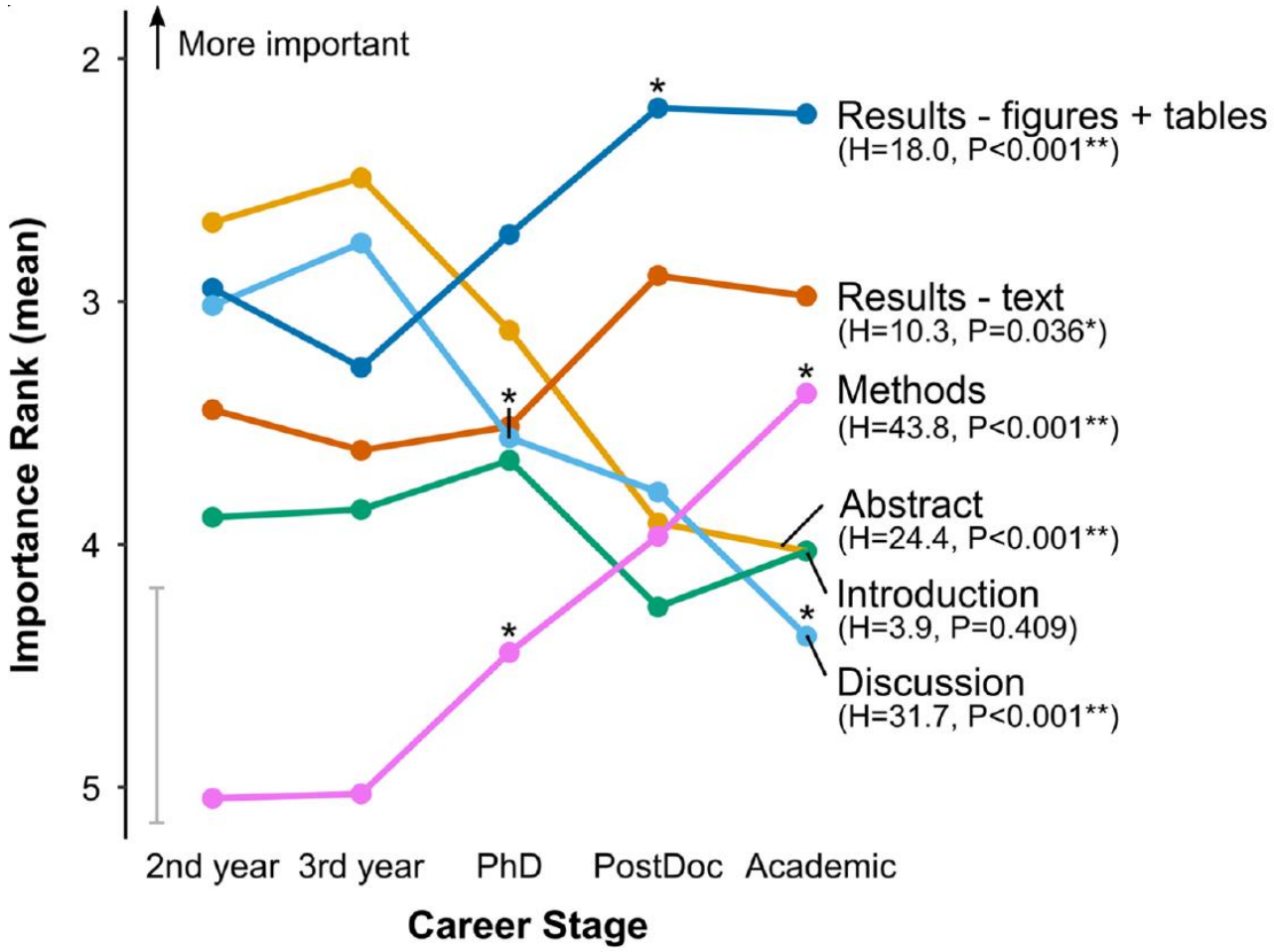
Hubbard & Dunbar



Hubbard & Dunbar



Hubbard & Dunbar



Hubbard & Dunbar

Table 1. Thematic analysis of advice researchers gave to someone reading a scientific paper for the first time.

Theme (% of participants mentioning advice, n = 88)	
Major theme	Sub-theme(s)
Read selectively within the paper (68%)	Read sections in a specific order (32%)
	Read the abstract first (18%)
	Look at the figures first (7%)
	Prioritise specific sections of the paper (20%)
	Prioritise the figures (8%)
	Identify key ideas in the paper (9%)
Practical strategies for reading papers (53%)	Read the paper multiple times (20%)
	Take your time (7%)
	Use specific sections of the paper to determine if it is worth reading at all (6%)
	Don't get bogged down in technical details and/or terminology (6%)
Read critically (34%)	Assess whether the authors conclusions match the data (15%)
	Interpret the data for yourself (6%)
Read the paper with a specific purpose or questions in mind (7%)	