

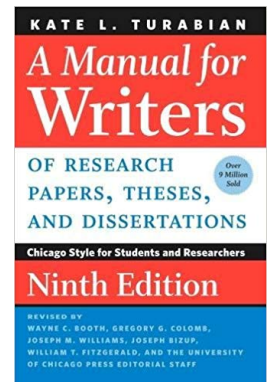
A Guide to Successful Research

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Last updated: 2018/9/12

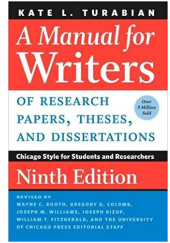
Overview

- Successful research is not only about having a “good topic”, other skills are also necessary
 - Seeing the big picture
 - Dealing with deadlines
 - ...
- You must be able to explain your research in order to fully understand it
 - Writing (slides, papers, etc.) is the best way to put your thoughts in order
 - Recommended reading
K. L. Turabian, *A Manual for Writers of Research Papers, Theses, and Dissertations*, Univ. of Chicago Press, 9th ed., 2018



Manual for Writers

Part I: Research and Writing (1)



- To explain your research, first of all create a sentence with the following structure

Topic => Question => Significance

Topic: I am working on X ...

Question: ... because I want to find Y ...

Significance: ... so that I can help others understand Z.

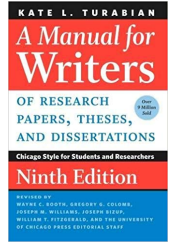
- Then, also create an extended “elevator story”
 - Three-part sentence as above
 - Working hypothesis (approach)
 - Major reasons supporting it (feasibility)

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Part I: Research and Writing (2)

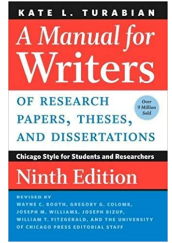


- As you progress in your research, assemble a more detailed argument
 - What are you claiming?
 - What are your reasons?
 - What evidence supports your reasons?
 - But what about other points of view?
 - What principle makes your reasons relevant to your claim?

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Part I: Research and Writing (3)



- By all means, avoid plagiarism
- Choose the most effective graphic
- Write final versions of introduction and conclusion *only* after finishing the final draft
- Revise the final draft (sentences, etc.)
- Find opportunities to present your work in front of an audience

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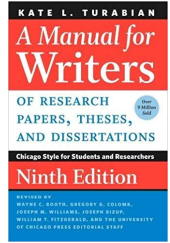
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Part II: Source Citation



- Most used styles

- Notes-bibliography style

- [1] Authors' Names, Paper/Book Title, Publication Details

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- Author-date style

- (Main author's surname, Publication year)

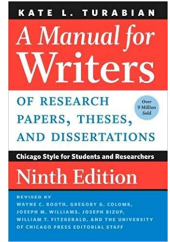
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- My advice

- Better to rely on predefined styles for references for a given conference (e.g., use LaTeX style files)
 - Make sure you write down your sources when doing surveys, so that you can properly cite them later

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Part III: Style



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- Style guidelines
 - Spelling
 - Punctuation
 - Abbreviations
 - ...
- My advice
 - You can ignore some recommendations if you think fit, but whatever style you choose, make sure to follow your choices consistently
 - Leaving “easy” mistakes in your paper will make readers think you did not try hard enough → they may not try much to understand your work either

Other pieces of advice

- Learn to see the bigger picture
 - Try to solve a class of problems, not just one task
- Take memo or logs during your tests
 - Helps you see how your system evolved in time
 - Enables you to prove your results if needed
- Be aware of deadlines (as it helps reduce stress)
 - Start preparing early
 - Make a time schedule
- Make acronym for your system
 - Easier to refer to it when discussing your research
- Don't forget to rest 😊

Conclusion

- It's good to spend some time thinking about *how* to do research instead of just doing it
- A few guidelines can be very helpful to put you on the right track
- Don't hesitate to ask your more experienced colleagues and, of course, your instructor

Anyone can do successful research if they
have the right know-how