How to do research with me in deep learning

Research Question

Related work

Why RQ interesting?
What is the 10-15 bullet point main story line?
What is the RQ precisely? (Formalize/Simplify)?
Does the problem exist? How often? When (not)?

For which work is the RQ interesting?
How different from existing work?
Building on what existing work?
How does existing work (baselines?) work?

Drawing conclusions

Method/ Approach

What are all conclusions we can draw?
How well do results align with previous expectations?
How well do results align with RQ?
Is there a simpler experiment with same conclusions?
To which new hypothesis lead these results?

Can you motivate why this method? Each step?
What's going on? (visualize output for each step)
What precisely? (Formalize/Simplify)?
Does method make sense? (Alternatives?)
Does method align with RQ?

Analyzing results

Experimental setup

How to validate results?
How to verify correctness of baseline?
Do we understand all results?
When does it fail?
Do results answer the question of the experiment?

What empirical questions belong to the RQ?
What are relevant baselines?
What exact question is answered by this exp?
What exact outcome is expected/wanted?
What is the minimal setting? (simplify?)

Blue line: Presented path
Red line: Actual path taken (an example)

Slides: http://jvgemert.github.io/HowToDoResearchInDL-slides.pdf