INTERNATIONAL ECOENERGY ACADEMY

INTERNATIONAL CAMPUS

The Structure of a Dissertation for A Specialized PhD Program.

Preparation and organization by:

IEEA Department of Research

Dissertation Structure

- Title page
- Acknowledgements page
- Abstract (or executive summary)
- Table of contents, list of figures and tables
- The core chapters (the “meat” of the dissertation)
    - **Chapter 1: Introduction**
    - **Chapter 2: Literature review**
    - **Chapter 3: Methodology**
    - **Chapter 4: Results**
    - **Chapter 5: Discussion**
    - **Chapter 6: Conclusion**
- Reference list
- Appendix

Title page

The title page of your dissertation is the very first impression the marker will get of your work, so it pays to invest some time thinking about your title. But what makes for a good title? A strong title needs to be 3 things:

1. **Succinct** (not overly lengthy or verbose)
2. **Specific** (not vague or ambiguous)
3. **Representative** of the research you're undertaking (clearly linked to your research questions)

Typically, a good title includes mention of the following:

1. The broader area of the research (i.e. the overarching topic)
2. The specific focus of your research (i.e. your specific context)
3. Indication of research design (e.g. quantitative, qualitative, or mixed methods).

Acknowledgements

This page provides you with an opportunity to say thank you to those who helped you along your research journey. Generally, it's optional (and won't count towards your marks), but it is academic best practice to include this.

So, who do you say thanks to? Well, there's no prescribed requirements, but it's common to mention the following people:

- Your dissertation supervisor or committee.
- Any professors, lecturers or academics that helped you understand the topic or methodologies.
- Any tutors, mentors or advisors.
- Your family and friends, especially spouse

Abstract or executive summary

The dissertation abstract (or executive summary for some degrees) serves to provide the first-time reader (and marker or moderator) with a big-picture view of your research project. It should give them an understanding of the key insights and findings from the research, without them needing to read the rest of the report – in other words, it **should be able to stand alone**.

For it to stand alone, your abstract should cover the following key points (at a minimum):

1. Your **research questions and aims** – what key question(s) did your research aim to answer?
2. Your **methodology** – how did you go about investigating the topic and finding answers to your research question(s)?
3. Your **findings** – following your own research, what did do you discover?

4. Your **conclusions** – based on your findings, what conclusions did you draw? What answers did you find to your research question(s)?

So, in much the same way the dissertation structure mimics the research process, your abstract or executive summary should reflect the research process, from the initial stage of asking the original question to the final stage of answering that question.

Table of contents

This section is straightforward. You'll typically present your table of contents (TOC) first, followed by the two lists – figures and tables. I recommend that you use Microsoft Word's automatic table of contents generator to generate your TOC.

Chapter 1: Introduction

Right, now that the "admin" sections are out of the way, its time to move on to your core chapters. These chapters are the heart of your dissertation and are where you'll earn the marks. The first chapter is the introduction chapter – as you would expect, this is the time to introduce your research…

It's important to understand that even though you've provided an overview of your research in your abstract, your introduction needs to be written as if the reader has not read that (remember, the abstract is essentially a standalone document). So, your introduction chapter needs to start from the very beginning, and should address the following questions:

1. What will you be investigating (in plain-language, big picture-level)?
2. Why is that worth investigating? How is it important to academia or business? How is it sufficiently original?
3. What are your research aims and research question(s)? Note that the research questions can sometimes be presented at the end of the literature review (next chapter).
4. What is the scope of your study? In other words, what will and won't you cover?
5. How will you approach your research? In other words, what methodology will you adopt?
6. How will you structure your dissertation? What are the core chapters and what will you do in each of them?

These are just the bare basic requirements for your intro chapter. Some universities will want additional bells and whistles in the intro chapter, so be sure to carefully read your brief or consult your research supervisor.

If done right, your introduction chapter will set a clear direction for the rest of your dissertation. Specifically, it will make it clear to the reader (and marker) exactly what you'll be investigating, why that's important, and how you'll be going about the investigation. Conversely, if your introduction chapter leaves a first-time reader wondering what exactly you'll be researching, you've still got some work to do.

Chapter 2: Literature review

Now that you've set a clear direction with your introduction chapter, the next step is the literature review. In this section, you will analyse the existing research (typically academic journal articles and high-quality industry publications), with a view to understanding the following questions:

What does the literature currently say about the topic you're investigating?

Is the literature lacking or well established? Is it divided or in disagreement?

How does your research fit into the bigger picture?

How does your research contribute something original?

How does the methodology of previous studies help you develop your own?

Depending on the nature of your study, you may also present a conceptual framework towards the end of your literature review, which you will then test in your actual research.

Again, some universities will want you to focus on some of these areas more than others, some will have additional or fewer requirements, and so on. Therefore, as always, its important to review your brief and/or discuss with your supervisor, so that you know exactly what's expected of your literature review chapter.

Chapter 3: Methodology

Now that you've investigated the current state of knowledge in your literature review chapter and are familiar with the existing key theories, models and frameworks, its time to design your own research. Enter the methodology chapter – the most "science-ey" of the chapters…

In this chapter, you need to address two critical questions:

Exactly HOW will you carry out your research (i.e. what is your intended research design)?

Exactly WHY have you chosen to do things this way (i.e. how do you justify your design)?

Remember, the dissertation part of your degree is first and foremost about developing and demonstrating research skills. Therefore, the markers want to see that you know which methods to use, can clearly articulate why you've chosen then, and know how to deploy them effectively.

Importantly, this chapter requires detail – don't hold back on the specifics. State exactly what you'll be doing, with who, when, for how long, etc. Moreover, for every design choice you make, make sure you justify it.

In practice, you will likely end up coming back to this chapter once you've undertaken all your data collection and analysis, and revise it based on changes you made during the analysis phase. This is perfectly fine. Its natural for you to add an additional analysis technique, scrap an old one, etc

based on where your data lead you. Of course, I'm talking about small changes here – not a fundamental switch from qualitative to quantitative, which will likely send your supervisor in a spin!

Chapter 4: Results

You've now collected your data and undertaken your analysis, whether qualitative, quantitative or mixed methods. In this chapter, you'll present the raw results of your analysis. For example, in the case of a quant study, you'll present the demographic data, descriptive statistics, inferential statistics, etc.

Typically, Chapter 4 is simply a presentation and description of the data, not a discussion of the meaning of the data. In other words, it's descriptive, rather than analytical – the meaning is discussed in Chapter 5. However, some universities will want you to combine chapters 4 and 5, so that you both present and interpret the meaning of the data at the same time.

Chapter 5: Discussion

Now that you've presented the data analysis results, its time to interpret and analyse them. In other words, its time to discuss what they mean, especially in relation to your research question(s).

What you discuss here will depend largely on your chosen methodology. For example, if you've gone the quantitative route, you might discuss the relationships between variables. If you've gone the qualitative route, you might discuss key themes and the meanings thereof. It all depends on what your research design choices were.

Most importantly, you need to discuss your results in relation to your research questions and aims, as well as the existing literature. What do the results tell you about your research questions? Are they aligned with the existing research or at odds? If so, why might this be? Dig deep into your findings and explain what the findings suggest, in plain English.

Chapter 6: Conclusion

The final chapter – you've made it! Now that you've discussed your interpretation of the results, its time to bring it back to the beginning with the conclusion chapter. In other words, its time to (attempt to) answer your original research questions (from way back in chapter 1). Clearly state what your conclusions are in terms of your research questions. This might feel a bit repetitive, as you would have touched on this in the previous chapter, but its important to bring the discussion full circle and explicitly state your answer(s) to the research question(s).

Next, you'll typically discuss the implications of your findings. In other words, you've answered your research questions – but what does this mean for the real world (or even for academia)? What should now be done differently, given the new insight you've generated?

Lastly, you should discuss the limitations of your research, as well as what this means for future research in the area. No study is perfect, Discuss the shortcomings of your research. Perhaps your methodology was limited, perhaps your sample size was small or not representative, etc, etc. Don't be afraid to critique your work – the markers want to see that you can identify the limitations of your work. This is a strength, not a weakness. Be brutal!

This marks the end of your core chapters.

Reference list

The reference list is straightforward. It should contain a list of all resources cited in your dissertation, in the required format, e.g. APA, Harvard, etc.

It's essential that you use reference management software for your dissertation. Do NOT try handle your referencing manually – its far too error prone. On a reference list of multiple pages, you're going to make mistake. To this end, I suggest considering either Mendeley or Zotero. Both are free and provide a very straightforward interface to ensure that your referencing is 100% on point.

Appendices

The very last piece of the puzzle is the appendix or set of appendices. This is where you'll include any supporting data and evidence. Importantly, supporting is the keyword here.

Your appendices should provide additional "nice to know", depth-adding information, which is not critical to the core analysis. Appendices should not be used as a way to cut down word count. In other words, don't place content that is critical to the core analysis here, just to save word count. You will not earn marks on any content in the appendices, so don't try to play the system!