

Graduate Research School

Response to Examiners

This template is to be used by HDR candidates to respond to the comments made by their examiners.

Thesis Revisions Checklist

1. Have *all* examiners’ comments been included in your response, verbatim? Each column of the form should address *one* issue raised by the examiner.
2. Have *all* of the examiners’ general comments been addressed? These usually come before a detailed list of comments for each chapter.
3. Have *all* revised text and figures been included in your response? Please put this revised text in a different **colour** to make it clear that this is revised text in the final version of the thesis. In cases where revisions may be too extensive, it *may* be acceptable to include just one or two examples of how the text has been changed.
4. Has the *section and page number* in the revised thesis been indicated in your response where the changes can be found?
5. Have the examiners’ comment been addressed by *changing* the final version of the thesis?
6. Please do not criticise your examiners – this is generally a very bad idea. If the examiner is demonstrably in error, then you should point this out, but you might consider changing the thesis to clarify the issue the examiner has questioned.

Examples of appropriate (and inappropriate) responses are shown over the next few pages.

Please delete these before submitting your responses.

Also, please insert/delete rows in the following table as required,

**RESPONSE TO EXAMINER 1**

| ***Examiner comments***  *(please reproduce exactly as in the examiner report)* | ***Response***  *(include text added to revised thesis)* | ***Section / Page*** *(in original thesis thesis)* | ***Section / Page*** *(in revised thesis)* | ***Reviewer’s Comment*** *(if applicable)* |
| --- | --- | --- | --- | --- |
| **GENERAL COMMENTS** |  |  |  |  |
| One major issue is that, majority of the chapters comprise of literature review and related work. I would recommend conducting more experimentation and results (especially in Chapter 5), provided that the thesis is in the computer science/engineering field. |  |  |  |  |
| The in-text citations throughout the thesis should be numbered depending on the order of mention. Section 1.1 starts with reference [107]. This can be fixed through automating the reference process (eg. Mendeley). | I changed the numbering order of the citations to be based on the order of mention rather than alphabetically. This change could be observed throughout the thesis. Now Section 1.1 starts with citation [1]. |  | Page 1 |  |
| **Provide a Chapter summary at the end of each chapter** in order to wrap up the findings. This will help the reader follow through the thesis better. |  |  |  |  |
| Double check the quality of the images when converted to PDF, as some look a bit blurry. Try exporting them to >=400 dpi. |  |  |  |  |
| Be consistent with capitalization of the first letter when mentioning specific chapters and sections. |  |  |  |  |
| The title of the thesis can be improved by removing the punctuation mark colon (:) After examining the thesis, I am suggesting the title to be more straight forward explaining the content of thesis, such as “Automated and Improved Search Query Effectiveness Design for Systematic Literature Reviews” | I have removed colon (:) mark from the title of the thesis.  Automated and Improved Search Query Effectiveness Design for Systematic Literature Reviews |  |  |  |
| Abstract is clear and sufficiently written. However, the page number is missing. | I have fixed the numbering of the pages throughout the thesis, Including the abstract page. Please note that the title pages don’t show the page numbers. |  |  |  |
| Add list of abbreviation in the thesis | I have added a new section, “Acronyms” located on page xvi. This section includes a list of abbreviations and their explanations used in this thesis. |  | Section “Acronyms”. Page xvi and xvii of 169 |  |
| Correct the page numbers starting from Chapter 2 onwards | I have fixed the numbering of the pages throughout the thesis, Including the abstract page. |  |  |  |

**RESPONSE TO EXAMINER 2**

| ***Examiner comments***  *(please reproduce exactly as in the examiner report)* | ***Response***  *(include text/figures added to the revised thesis; use a different colour to identify the new text in the thesis)* | ***Section / Page*** *(in original thesis thesis)* | ***Section / Page*** *(in revised thesis)* | ***Reviewer’s Comment*** *(if applicable)* |
| --- | --- | --- | --- | --- |
| **GENERAL COMMENTS** |  |  |  |  |
| One major issue is that, majority of the chapters comprise of literature review and related work. I would recommend conducting more experimentation and results (especially in Chapter 5), provided that the thesis is in the computer science/engineering field. | I have conducted a new experiment for chapter 5. The details about this experiment and the results are presented in Chapter 5, Section …… |  |  |  |
| The in-text citations throughout the thesis should be numbered depending on the order of mention. Section 1.1 starts with reference [107]. This can be fixed through automating the reference process (eg. Mendeley). | I changed the numbering order of the citations to be based on the order of mention rather than alphabetically. This change could be observed throughout the thesis. Now Section 1.1 starts with citation [1]. |  | Page 1 |  |
| Provide a Chapter summary at the end of each chapter in order to wrap up the findings. This will help the reader follow through the thesis better. |  |  |  |  |
| Double check the quality of the images when converted to PDF, as some look a bit blurry. Try exporting them to >=400 dpi. |  |  |  |  |
|  |  |  |  |  |
| **CHAPTER 1** |  |  |  |  |
| Typo in line 5 of Section 1.3: bee -> been | This typo has been corrected by changing "bee" to "been". | line 5 of Section 1.3. | Section 1.3. page 6, paragraph 2. |  |
| In Section 1.3, first line of the 2nd paragraph -> chapter should be written with a capitalized first letter. Be consistent with this throughout the thesis. | I have corrected this typo throughout the thesis. I capitalized the first letter of the word "Chapter" when relevant. |  | Section 1.3, 1.4, 2.2 and 6.4. |  |
| I would recommend a revision of how the research questions are answered in Section 1.2. It would be better to introduce the research questions in bullet points first (or even a table), and discuss them accordingly. | In Section 1.2, I have added a table presenting all the research questions (Table 1.1, Section 1.2). I have then explained the objectives of each research question, the research gaps, followed by describing the studies that are done in order to answer the questions. I have also described the research methodology that is used in each study. These changes could be found on pages 3,4 and 5. | Section 1.2 | Section 1.2. pages 3,4 and 5. |  |
| Include a summary of the research contributions in bullet points. Further, in Section 1.3, focus more on what needs to be solved, as well as the importance of the identified issues, rather than indicating the methods that you will be using. | In Section 1.3, I have restructured the presentation of research contributions and presented them in bullet points, followed by a discussion on each study's contributions. These changes and additional text could be found on pages 5,6,7 and 8. |  | Section 1.3, pages 5,6,7 and 8. |  |
|  |  |  |  |  |
| **CHAPTER 2** |  |  |  |  |
| In section 2.1, subsequent to defining SLRs, provide an explanation about the word systematic and what makes SLRs systematic. | To provide an explanation about the “systematic” part of the systematic literature review, I have added the first paragraph to Section 2.1. | section 2.1 | section 2.1, first paragraph |  |
| In the “Defining Research Questions” section, what does the acronym PICO stand for? I can see that this is answered in Figure 2.2, but this should be mentioned prior. | I provided an explanation of “PICO” in Section 2.1.1.1, in the “Defining Research Questions” subsection, paragraph 2. In addition, I have added an example to more clarify the PICO term, paragraph 3 Section 2.1.1.1 |  | Paragraph 3 Section 2.1.1.1 |  |
| Figure 2.3 is placed in between text | In Section 2.1.1.1, subsection "Defining Search Strategy", I fixed the position of figure 2.3 to be between two paragraphs and avoid breaking the text of a paragraph. |  | Section 2.1.1.1, subsection "Defining Search Strategy" |  |
| At the end of Section 2.1, I would suggest adding a subsection briefly explaining the succeeding methodologies that will be discussed in the remaining sections, as well as their roles in SLR. | I have added a subsection “Theoretical and Conceptual Foundations” Section 2.2. I have added two paragraphs explaining the remaining sections of the chapter and briefly explained how the introduced methods are related to systematic reviews automation. |  | “Theoretical and Conceptual Foundations” Section 2.2 |  |
| Further, prior to closing the other subsections in Chapter 2, I suggest including a table comparing the techniques that have been reviewed in terms of their advantages and disadvantages, clearly identifying the research gaps from these techniques, and the plan on how these gaps will be addressed through the thesis experiments. | I have added a table to summarize the techniques that have been reviewed in this chapter. Including their usage in systematic review and the highlighting the research gaps from these techniques and how the study in the following chapters addressing the gaps. |  |  |  |
| **CHAPTER 3** |  |  |  |  |
| Title of the chapter can be revised to simply “Automation Techniques for Facilitating Systematic Literature Review”. | I have changed the title to "Automation Techniques for Facilitating Systematic Literature Review" Section 3.2, first line. |  |  |  |
| As in Chapter 1, I would recommend a revision of how the research questions are answered. Introduce the research questions in bullet points first (or even a table), and discuss them accordingly. | In Section 3.1, I have added a table presenting the research questions (Table 3.1 ). I have then explained the objectives of the research question, the gap in research, the study that was done in order to answer the question including the research methodology that was used. These changes could be found in in Section 3.1, paragraph 2, 3, 4. |  |  |  |
| Section 3.2, first line: To justify the need for conducting a new review" [107], -> “To justify the need for conducting a new review" [107]. | I changed the quotation mark to "To justify the need for conducting a new review" [107] in Section 3.2, first line. |  |  |  |
| At the end of Section 3.2.1, you mentioned “The chief limitation of all search tools is the large amount of manual work they impose on researchers (e.g., manually removing duplicates from retrieved results, composing search queries with different syntaxes for digital libraries).”. I would suggest you to expound more on these limitations in order to steer a clearer direction in overcoming them. | In Section 3.2.1, I have expanded more on the limitations of the existing SLR search tools based on the finding of discussed related works. The text can be found on paragraph 3 and 4 of Section 3.2.1. |  |  |  |
| Section 3.2.2 requires details regarding pros and cons of the mentioned techniques. | I expanded the explanation of the two related works explained in Section 3.2.2. I have added more on their findings as well as the pros and cons of the methods. I have rewritten all the paragraphs of Section 3.2.2 and added a new paragraph ( paragraph 3) explaining the limitation of using VTM in study selection. |  |  |  |
| Section 3.3.1 -> The review question does not necessarily have to be in a table. | In Section 3.3.1, I removed the table and added the RQ in a new paragraph. |  |  |  |
| Table 3.4 is placed in between text. | I fixed the position of Table 3.4 to be between two paragraphs and avoiding breaking the text of a paragraph. |  |  |  |
| Placements of Table 3.3 to 3.5 seems a bit confusing, as the paragraph mentions 3.5 ahead of 3.3. | In Section 3.3.2 , Search Strategy, I have reorganized the tables to follow the reference based on appearance and not floating. I also made sure that the tables don't break the paragraphs text. |  |  |  |
| Section 3.5.1, “focused on data Extraction” -> e should be a small letter. | I changed the letter ”e” in word Extraction to lower case. |  |  |  |
| **CHAPTER 4** |  |  |  |  |
| Improve quality/readability of Figure 4.1. | I improved the quality of Figure 4.1 by using better resolution and bigger fonts as shown in the new version of the thesis. | Figure 4.1 |  |  |
| Provide the survey questionnaire in the thesis appendix. | I have provided online appendix before ( https://tinyurl.com/4zzx9wb2) . Now, I also added the survey questions in Appendix A : Survey Questionnaire at the end of the thesis. |  | page |  |
| Include more diagrams (such as pie charts, bar graphs, and tables) to constitute the findings while improving the readability of the thesis. | I have added bar charts showing the summary of the findings. The charts are added to  Section 4.5.1 (Figure 4.2: Challenges distribution over SLR phases). Section 4.5.2 (Figure 4.3: Solution distribution over the SLR phases) and 4.5.3 (Figure 4.4: Participants views distribution by their level of experience). Each section include discussion around these findings. |  |  |  |
| At the concluding section of Chapter 4, include a paragraph aligning the findings of this chapter to what will be solved in the succeeding chapter. Basically, focus on improving the chapter-by-chapter connections throughout the thesis. | I added a paragraph at the end of Section 4.7 Conclusions, to make a clear connection to the next chapter. I explained on how the findings of previous chapters are used to shape the next study and chapter of the thesis. |  |  |  |
| **CHAPTER 5** |  |  |  |  |
| Table 5.2 placed in between text. | In Section 5.5.5.1, I placed Table 5.2 between two paragraphs to avoid breaking the text of one paragraph. |  |  |  |
| Include more detailed justifications and reasons for selecting methodology in Experiments 1 and 2. Further, I would recommend conducting other similar experiments and techniques to compare the results to, as this will strengthen the claims made in the thesis. | I have expanded on the objectives of experiment 1 and 2 as well as the new experiment that I conducted (experiment 3).  The new experiment (experiment 3) details is presented in Section 5.5.4 “Experiment 3- Query Enrichment Using Domain-Specific Word Embeddings.”  I have conducted the new experiment to compare the affect of using domain-specific word embeddings on the pipeline when enriching the search queries.  The result of this experiment is also presented in Section 5.5.6.3 |  |  |  |
| Provide more explanation about the platform used for implementation. |  |  |  |  |
| According to the experiments, GEN-RQ and RQA represent the research questions addressed, However, it is not clear what methodology were used in these approaches. |  |  |  |  |
| Further, the experimental results of the proposed system responses to different deep and machine learning techniques which were previously mentioned in Table 3.8 were not stated. I would highly recommend that this shows clearly in the thesis, as it is a very important aspect. |  |  |  |  |
| **CHAPTER 6** |  |  |  |  |
| A section on study limitations should also be added | I have added a new section (6.3 Limitations), I have summarised the limitation of each study which are derived from the studies methodologies or limitation of the experiments. |  |  |  |
| Further highlight the research contributions under Section 6.2. | I tried to provide more information, highlighting the research contributions under section "Summary of the Research Outcomes" Section 6.2 for each study. This text could be found in paragraphs 1, 2, 3 and 4 for study 1. Paragraphs 4,5,6 for study 2 and Paragraphs 7, 8 for study 3. |  |  |  |
| It would also be a good idea to separate the research contributions with the impact or advantages offered towards the selected application, on a societal perspective. |  |  |  |  |
| **Reference** |  |  |  |  |
| The in-text citations throughout the thesis should be numbered depending on the order of mention. Section 1.1 starts with reference [107]. This can be fixed through automating the reference process (e.g. Mendeley). | I changed the numbering order of the citations to be based on the appearance in the text, rather than alphabetically. |  |  |  |