



# **GUIDELINES FOR ASSESSMENT THESES**

**Graduate Research Committee  
College of Science – KNUST**

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# Outline of Presentation

## ❖ Introduction

## ❖ Key Areas of Assessment

- Statement of Problem
- Critical Review of Literature and Theoretical and Conceptual Framework
- Research Design and Methodology
- Analysis of Data and Presentation of Results



# Outline of Presentation – cont'd

## ❖ Key Areas of Assessment – cont'd

- Statement of Main Findings and Discussion
- Conclusion and Recommendations
- Presentation



## ❖ Questions and Answer



# Introduction

- KNUST students write theses in partial fulfilment of the award of various degrees.
- Programme completion is contingent on passing the thesis.
- The guidelines are designed to:
  - Ensure uniformity in assessment
  - Objectivity in the assessment of thesis
  - Enable students know the content and structure of standard thesis



## **Section One:**

# **Statement of Problem and Justification for the Study**



Areas	Explanation	Comments
<p><b>1) Ability to articulate or explain the import of the topic and its implications</b></p>	<p>Does the student manage to state the problem clearly and unambiguously, and does s/he convey the relevance of the research to non-specialist readers?</p>	<p>The research problem can be any of the following:</p> <ul style="list-style-type: none"> <li>● Gap in the conventional literature</li> <li>● Debate in the literature</li> <li>● Validation of a theory</li> <li>● Replication of an earlier study with the aim of validating the results</li> </ul> <p>The research problem should have a good <b>context/situation</b>. Thus the <b>relevant literature reviewed</b> to arrive at the research problem must be clearly indicated in the text.</p>



# Problem

- A research problem is a conflict, something unsettled, perplexing, distressful and in the **need of investigation**
- Not all problems are research problems!
- A research problem **must integrate concepts and theoretical perspectives of the literature** into the problem to be addressed
- A research purpose is not the same as the research problem!
- The problem that your thesis is addressing should be **clearly stated!**



## Problem (continued)

### Research problem anatomy

An applied research problem has two dimensions:

1. A **knowledge-related** dimension (theory)
2. A **real-life manifestation** of the knowledge-related problem (the population/case studied - justification)





Areas	Explanation	Comments
<p><b>2)</b>  <b>Justification:</b>  <b>An explanation of why the topic merits a study in and/or international perspectives</b></p>	<p>The author justifies the choice of topic with insight and from the point of view of theory building, previous research and practical needs.</p>	<p>The candidate must explain clearly, the need to address the research problem. Issues can include:</p> <ul style="list-style-type: none"> <li>● Why is there the need to address the knowledge gap?</li> <li>● Why is there the need to settle the debate?</li> <li>● Why should the theory or results of earlier works be validated?</li> </ul> <p>The author should indicate how the answers in the above questions <b>contribute to the advancement of science and/or address the practical needs.</b></p>



Areas	Explanation	Comments
<b>Statement of Research Questions, Objectives and Hypotheses / Propositions (Where necessary)</b>	<p>The objectives of the dissertation are innovative and original.</p> <p>They are clearly defined, contextualised and scientifically grounded.</p>	<p>Answers to the following questions can be explored:</p> <ul style="list-style-type: none"> <li>• Do the aim (general objective) and objectives derive from the research problem?</li> <li>• Do the objectives stand alone but collectively address the aim of the study?</li> <li>• Are the objectives original and if not clearly justified?</li> </ul>



## Response

### **In addition.....**

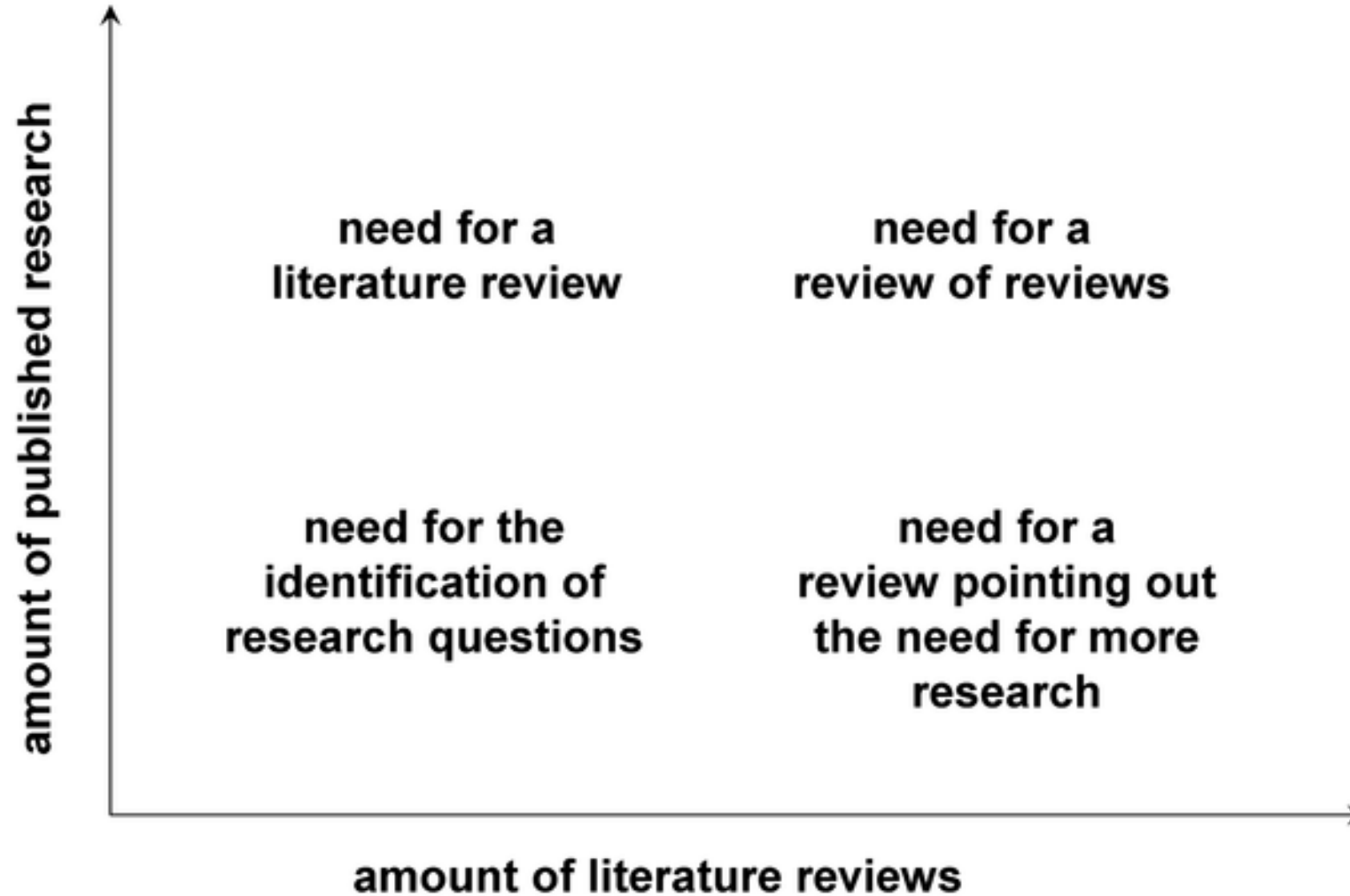
- What did you do to try and answer the question? In other words, summarise in a sentence or two the investigation or study that you carried out to obtain an answer (the method, the population etc.)
- State your main message. Make sure it is a response to the most important question provoked by the problem

## **Section 2:**

# **Critical Review of Literature and Theoretical and Conceptual Framework/Modelling Techniques**



# A conceptual diagram of the need for different types of literature reviews depending on the amount of published research papers and literature reviews.



Pautasso M (2013) Ten Simple Rules for Writing a Literature Review. PLoS Comput Biol 9(7): e1003149. doi:10.1371/journal.pcbi.1003149  
<http://dx.doi.org/10.1371/journal.pcbi.1003149>



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**PLOS**

COMPUTATIONAL  
BIOLOGY

Areas	Explanation	Comments
<p><b>Candidate's demonstration of evidence of scholarly analysis, and criticism of research relevant to the topic / problem being investigated</b></p>	<p>Excellent knowledge coverage, interpretation and application of the relevant literature.</p>	<p>The following should be covered:</p> <ul style="list-style-type: none"> <li>• <b>Synthesis</b> of relevant literature.</li> <li>• The literature should be <b>analysed (critiqued)</b> to present a <b>logical story</b>.</li> <li>• <b>Confirmation</b> of the research problem presented in 'the problem statement' with the literature review.</li> </ul>



Areas	Explanation	Comments
<p><b>Meticulous citation of relevant scholarly work by quotation, paraphrasing and/or commentary</b></p>	<p>The author is well-informed about referencing style acceptable to the School of Graduate Studies.</p>	<ul style="list-style-type: none"> <li>● Including all the <b>in-text references</b> in the <b>reference list</b>.</li> <li>● Correctly identifying and citing the various sources of literature.</li> <li>● <b>Correctly paraphrasing texts</b> and keeping quotations in quotation marks.</li> <li>● Following the School of Graduate Studies Guidelines on referencing.</li> </ul>



<i>Areas</i>	<i>Explanation</i>	<b>Comments</b>
<b>Demonstration of competence in understanding and evaluating the material</b>	The candidate shows appropriate familiarity with, and understanding of the relevant literature	<ul style="list-style-type: none"> <li> <input type="checkbox"/> <b>Critical engagement</b> with both <b>canonical</b> and <b>current</b> relevant literature in the field.         </li> <li> <input type="checkbox"/> <b>Correct discussion</b> of the ideas expressed by the original author.         </li> <li> <input type="checkbox"/> <b>Avoiding false attribution.</b> </li> <li> <input type="checkbox"/> Conclusions from the literature are <b>based on evidence.</b> </li> </ul>





Areas	Explanation	Comments
<p><b>Candidate drawing differences and similarities between the thesis and previous investigations and identifying knowledge gaps.</b></p>	<p>Candidate demonstrates the <i>gap in the literature</i> relevant to the study.</p> <p>Makes a compelling argument about how the research will address the gap, significantly contributing to the body of research in their field.</p>	<ul style="list-style-type: none"> <li>• State in clear language the difference between the <b>current study (your thesis)</b> and <b>pervious ones. Concluding paragraph</b></li> </ul> <p>There should be clear statements on how the present study:</p> <ul style="list-style-type: none"> <li>• Addresses the knowledge gap</li> <li>• Clarifies the ongoing debate</li> <li>• Validates an existing theory or results of earlier studies</li> </ul>



<b>Areas</b>	<b>Explanation</b>	<b>Comments</b>
<b>Candidate developing robust conceptual / theoretical frameworks / modelling technique and justifying references from the literature</b>	Comprehensive analysis and synthesis of critical points of knowledge, ideas and theories, resulting in themes that are concise, unbiased, and relevant to the thesis topic. Clear and logical flow of ideas.	The following checklist is useful: <ul style="list-style-type: none"> <li>● Does the author present critical points of knowledge, ideas and/or theories from the review of literature?</li> <li>● Does the author present unbiased themes that result from the literature review?</li> <li>● Is there a clear and logical flow of ideas from the literature?</li> <li>● Are the critical points, ideas and/or themes appropriate for the present study?</li> </ul>



## **Section 3:**

# **Research Design and Methodology**



<i>Areas</i>	<i>Explanation</i>	<b>Comments</b>
<p><b>Statement of a design or blueprint for the study: Whether qualitative, quantitative, mixed and whether cross-sectional in the collection mode, with justification.</b></p>	<p>Demonstrates advanced control, understanding, depth and insight in the application of relevant research methodology, techniques and analysis.</p>	<p>The following checklist is useful:</p> <ul style="list-style-type: none"> <li>• Has the candidate stated clearly the research philosophy?</li> <li>• Has the candidate stated clearly research design and how that is influenced by the research philosophy?</li> <li>• <b>Has the candidate justified the appropriateness of the design in answering the research questions?</b></li> </ul>



Areas	Explanation	Comments
<p><b>Sampling Procedures: Determination of sample size, sample frames, techniques with justification.</b></p>	<p>Descriptions and justifications of population, number of sample / participants and sampling method</p>	<p>The following checklist is useful:</p> <ul style="list-style-type: none"> <li>● Are the population and units of enquiry clear?</li> <li>● Is there the need for a sampling frame and has this need been clearly stated in the study?</li> <li>● Is there a sample size? Is the method used for the determination of the sample size clearly explained in the study?</li> <li>● Are the sampling techniques appropriate for the study?</li> <li>● Is the sampling design comprehensive enough to enable the study to be repeated or replicated?</li> </ul>



Areas	Explanation	Comments
<b>Data collection techniques / tools, processes in the field and data analysis framework</b>	<p>Choice of data and methods of collection clearly described, including extent of data gathering.</p> <p>Methods well-handled and convincingly justified, including discussion of access issues.</p> <p>Full relevant background material supplied as appendices</p>	<p>In terms of <b>data collection</b>, the write-up should address the following:</p> <ul style="list-style-type: none"> <li>• Have the data collection methods been clearly explained and justified?</li> <li>• Are the data collection methods appropriate based on the research design?</li> <li>• Compliance with ethical standards in research.</li> <li>• Period of data collection</li> </ul>



<i>Areas</i>	<i>Explanation</i>	<i>Comments</i>
<b>Data collection techniques / tools, processes in the field and data analysis framework</b>		<p>In terms of <b>data analysis</b>, the write-up should address the following:</p> <ul style="list-style-type: none"> <li>• Clear statement of the variables of the study</li> <li>• Connection with the critical points and themes in the theoretical or conceptual framework</li> <li>• Analytical methods should be based on the research design and linked directly to the variables</li> <li>• Methods detailed enough to facilitate replication or repetition</li> <li>• Methods comply with ethical standards</li> </ul>



# **Section 4: Analysis of Data and Presentation of Results**





<b>Areas</b>	<b>Explanation</b>	<b>Comments</b>
<p><b>Use of appropriate methods and techniques to analyse the data</b></p>	<p>Approach to analysis clearly explained and applied coherently and convincingly.</p> <p>Relevant results clearly set out and compellingly supported by appropriate evidence – qualitative and/or quantitative</p>	<p>The following should be looked out for:</p> <ul style="list-style-type: none"> <li>● Has the candidate complied with ethical standards in data analysis (such as ensuring anonymity of respondents)?</li> <li>● Have the analysis methods been based on the analytical section in the research <i>methods</i>?</li> <li>● Has the data analysis been based on the research variables and organised according to the objectives?</li> <li>● Are the results supported by the data that have been analysed?</li> </ul>



<i>Areas</i>	<i>Explanation</i>	<b>What the Committee Thinks</b>
<p><b>Accurate and clear presentation of results</b></p>	<p>The author describes the criteria for reliability clearly and in consideration of the methodology.</p> <p>Evaluates the findings and methods systematically and critically in relation to the selected criteria.</p>	<p>The following should be looked out for:</p> <ul style="list-style-type: none"> <li>• Are the data relevant to the research objectives?</li> <li>• Is the candidate consistent in the method of analysis as indicated in the methods section of the work?</li> <li>• Is there a logic in the order of analysis of the data?</li> <li>• Were <b>appropriate</b> tables and charts used to display results?</li> </ul>



## **Section 5:**

# **Statement of Main Findings and Discussion**



<i>Areas</i>	<i>Explanation</i>	<b>Comments</b>
<b>Findings and discussion to be based on the data from the thesis</b>	The research findings are suitably analysed, set out, and accompanied by adequate exposition.	<p>Checklist:</p> <ul style="list-style-type: none"> <li>● Do the results emanate from data analysis?</li> <li>● Have the findings been organised according to the research objectives?</li> <li>● Has the candidate appropriately interpreted the data that have been analysed?</li> <li>● Are the inferences in the thesis <b>accurate</b> and are they based on the <b>results obtained from the analysis?</b></li> </ul>



<i>Areas</i>	<i>Explanation</i>	<i>Comments</i>
<p><b>Coherence in the presentation of the argument</b></p>	<p>The dissertation is set out in a systematic way, closely argued and well structured, with excellent coherence in terms of argumentation, organisation and style.</p>	<p>The guiding questions include:</p> <ul style="list-style-type: none"> <li>■ Is there a logical order and arrangement (alignment) of the key parts of the research?</li> <li>■ Has the dissertation been organised in such a way that it reflects a linkage among the various <b>objectives</b>/chapters?</li> <li>■ Do the various <b>sub-sections</b> within a chapter <b>wholly address the theme</b>?</li> </ul>



<i>Areas</i>	<i>Explanation</i>	<i>Comments</i>
<p><b>Presentati on of major findings of the project</b></p>	<p>Demonstrates advanced levels of understanding and originality in the analysis (theoretical and/or empirical) of the research findings.</p>	<p>The checklist below shall be considered:</p> <ul style="list-style-type: none"> <li>• Does the candidate demonstrate <b>ownership of the primary data</b> used in the work?</li> <li>• Has the candidate demonstrated <b>adequate understanding</b> and view on the issues being studied?</li> <li>• Has the candidate interpreted the results using <b>appropriate interpretative frameworks</b> indicated in the methods section?</li> </ul>



<i>Areas</i>	<i>Explanation</i>	<i>Comments</i>
<p><b>Discussion / arguments to reflect the results in the context of the relevant research questions, theory, hypotheses or propositions</b></p>	<p>Is the discussion building on existing knowledge and supported by the results? Does the work address the questions asked?</p>	<ul style="list-style-type: none"> <li>● Is the discussion related to the results obtained from the analysis?</li> <li>● Has the candidate discussed the results in line with: <ul style="list-style-type: none"> <li>○ <b>Results of earlier study?</b></li> <li>○ <b>The critical points and concepts in the literature?</b></li> <li>○ The theory that was used in the present study?</li> </ul> </li> <li>● <b>Significant contribution</b> of the findings to knowledge in the field being explored?</li> </ul>



# **Section Six:**

## **Conclusion and Recommendations**





<i>Areas</i>	<i>Explanation</i>	<i>Comments</i>
<p><b>Conclusive statements to incorporate the major findings of the thesis</b></p>	<p>The conclusions are logical and valid and show a strong awareness of the authoritative published literature.</p> <p>The conclusions are clearly communicated and evaluated and, where applicable, they refute the existing beliefs in the field.</p>	<p>The assessment should consider if the candidate:</p> <ul style="list-style-type: none"> <li>• Provides relevant conclusions to address research objectives.</li> <li>• Shows extensive reading and placing of new findings in existing literature.</li> <li>• Supports or disagrees with findings already in contemporary literature based on results.</li> <li>• Writes conclusion such that it summarises the important parts of the whole work.</li> </ul>



Areas	Explanation	Comments
<p><b>Critical discussion of the key issues arising from the research, in terms of what was discovered, achieved, established and argued.</b></p>	<p>Discussion of what can be strongly concluded and what is more speculative.</p> <p>Clear and realistic proposals for action based on new insights, generally informed by the forefront of a field of learning.</p>	<p>The assessment should consider if the candidate:</p> <ul style="list-style-type: none"> <li>• Presents a brief explanation of new findings from the work</li> <li>• States concisely, how the new insights can inform learning</li> </ul>



Areas	Explanation	Comments
<p><b>Statement of major contributions to knowledge in terms of theoretical or model building and methodology and policy recommendation / industrial application</b></p>	<p>Thesis makes an appropriate contribution to the knowledge of the subject with which it deals and shows that the candidate understands the relationship between the content of the thesis and the wider context of knowledge to which it belongs</p>	<ul style="list-style-type: none"> <li>● Establishes the overall relevance of the thesis in contemporary knowledge</li> <li>● Establishes how the thesis contributes to improving / modifying the method (where appropriate)</li> <li>● Indicate the relevance of the thesis to theory</li> </ul>



<b>Areas</b>	<b>Explanation</b>	<b>Comments</b>
<p><b>Addressing and accounting for limitations such as researcher/interviewer biases.</b></p>	<p>There should be a short statement of the limitations of the research (E.g. Extent of generalization)</p>	<p>Consider the following:</p> <ul style="list-style-type: none"> <li>● Candidate should state clearly how he/she overcame the limitations in the research</li>   <li>● Candidate should establish the extent to which research findings can be generalised</li> </ul>



Areas	Explanation	Comments
<b>Recommendations as related to the objectives, and brief discussion of relevant and interesting future research directions</b>	Identify clear and practical recommendations / opportunities for further development	Where recommendations are appropriate, a candidate is required to: <ul style="list-style-type: none"> <li>● Cover policy recommendations (still based on the purpose of the study)</li> <li>● Empirical</li> <li>● Institutional reforms</li> <li>● Areas for further research</li> </ul>



# Section Seven: Presentation



<b>Areas</b>	<b>Explanation</b>	<b>Comments</b>
<p><b>Formatting, language, citation and referencing, sectioning, use of upper and lower cases, typing, clarity of tables, figures and plates, conforming to word-length requirement etc.</b></p>	<p>The style and quality of tables, illustrations and/or graphical representations are of a high quality and contribute to the formulation of innovative research findings. Adhere to all formal conventions and standards.</p>	<p>Consider the following:</p> <ul style="list-style-type: none"> <li>● Language should be British English</li> <li>● Citation must be Harvard Style (be consistent with the form you choose and use under this tradition)</li> <li>● There should be consistency in tenses</li> <li>● Consider correct syntax</li> <li>● The formatting of the thesis must be based on the School of Graduate Studies guidelines.</li> </ul>



# Q & A

