

Successful thesis proposals in architecture and urban planning

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Abstract

Purpose – The purpose of this research is to improve the understanding of what constitutes a successful thesis proposal (TP) and as such enhance the quality of the TP writing in architecture, planning and related disciplines.

Design/methodology/approach – Based on extended personal experience and a review of relevant literature, the authors proposed a conception of a successful TP comprising 13 standard components. The conception provides specific definition/s, attributes and success rules for each component. The conception was applied for 15 years on several batches of Saudi graduate students. The implications of the conception were assessed by a students' opinion survey. An expert inquiry of experienced academics from architectural schools in nine countries was applied to validate and improve the conception.

Findings – Assessment of the proposed conception demonstrated several positive implications on students' knowledge, performance and outputs which illustrates its applicability in real life. Experts' validation of the conception and constructive remarks have enabled further improvements on the definitions, attributes and success rules of the TP components.

Research limitations/implications – The proposed TP conception with its 13 components is limited to standard problem-solving research and will differ in the case of other types such as hypothesis-based research.

Practical implications – The proposed conception is a useful directive and evaluative tool for writing and assessing thesis proposals for graduate students, academic advisors and examiners.

Social implications – The research contributes to improving the quality of thesis production process among the academic community in the built environment fields.

Originality/value – The paper is meant to alleviate the confusion and hardship caused by the absence of a consensus on what constitutes a successful TP in the fields of architecture, urban planning and related disciplines.

Keywords Urban planning, Architecture, Built environment, Postgraduate research, Writing successful thesis proposals

Paper type Research paper

1. Introduction

After the postgraduate student completes her/his coursework in a master programme or passes the comprehensive exam and becomes a doctoral candidate in a doctoral programme,

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The authors acknowledge the sincere assistance provided by the team of experts from several Architectural Schools worldwide to verify and improve the TP Conception. Appreciation is also extended to the post graduate students of the College of Architecture and Planning, IAU, who have positively responded to the students' opinion survey.



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s/he is allowed to submit a “Thesis Proposal” (TP) to her/his department whose main concern is to assess whether the topic is suitable for a graduate study and for the time and resources available (Afful, 2008; Kivunja, 2016; Reddy, 2019).

The department then sends the submitted TP to higher bodies for official approval. Once approved, the TP becomes a legal binding or “a formal contract” (Walliman, 2017) and “a statement of intent” (Hofstee, 2006) between the researcher and the university. If the student adheres to all prescribed TP requirements within the specified time, s/he will be awarded the degree (Leo, 2019).

Guided by his/her academic advisor, the student prepares the TP within which the researcher explains the research problem, questions, aim and objectives, scope, and methodologies to describe, analyse and synthesize the research problem and develop solutions for it (Paltridge and Starfield, 2007). In addition, the proposal includes a brief about research significance and expected contributions; a preliminary review of literature; thesis structure and approximate completion timeline; and a list of relevant references (Kivunja, 2016; Thomas, 2016; Kornuta and Germaine, 2019).

1.1 Statement of the problem and research aim

After decades of writing, supervising and refereeing master and doctoral theses in the fields of Architecture and Urban Planning, the authors noticed that TP’s differ in format and content from a school to another. This may be considered a healthy matter because it gives room for flexibility that absorbs the variety of research problems and techniques. Yet, the absence of a consensus on what constitutes a successful TP could cause confusion and hardship to both students and advisors (Kamler and Thomson, 2008; Abdulai and Owusu-Ansah, 2014). The review of literature indicates that TP writing has been tackled in depth in many fields (see for instance Gonzalez, 2007; Balakumar *et al.*, 2013; Eco, 2015; Kivunja, 2016; Glatthorn and Randy, 2018; Kornuta and Germaine, 2019). Apart from thesis proposal instruction and guideline manuals posted on universities’ websites, the authors believe that there is a lack of in-depth research on the issue of producing successful thesis proposals in the fields of Architecture and Planning.

Therefore, the aim of this paper is to improve the understanding of what constitutes a successful thesis proposal and as such enhance the quality of the TP writing in architecture and planning and related disciplines. To achieve such an aim, the paper has the following procedural objectives:

- (1) To propose a successful TP conception which determines the standard components of TP and sets specific definitions, attributes and rules of success for each component.
- (2) To apply the proposed conception on several batches of graduate students, then assess its impact on students’ performance and output along the years of application.
- (3) To validate the proposed conception by getting the insights of experienced academics from architecture and planning schools worldwide, and as such, improve and finalize the conception.

1.2 Research methodology

Figure 1 summarizes the process pursued to develop the “Successful TP Conception”. From 2000 to 2005, the conception was proposed and included in an unpublished textbook (Abdellatif and Abdellatif, 2005). From 2005 to 2020, the conception has been applied on several batches of graduate students in the College of Architecture and Planning, Imam Abdulrahman bin Faisal University (IAU), Dammam, Kingdom of Saudi Arabia (KSA). In February 2020, the impacts of the conception on students’ performances and outputs were

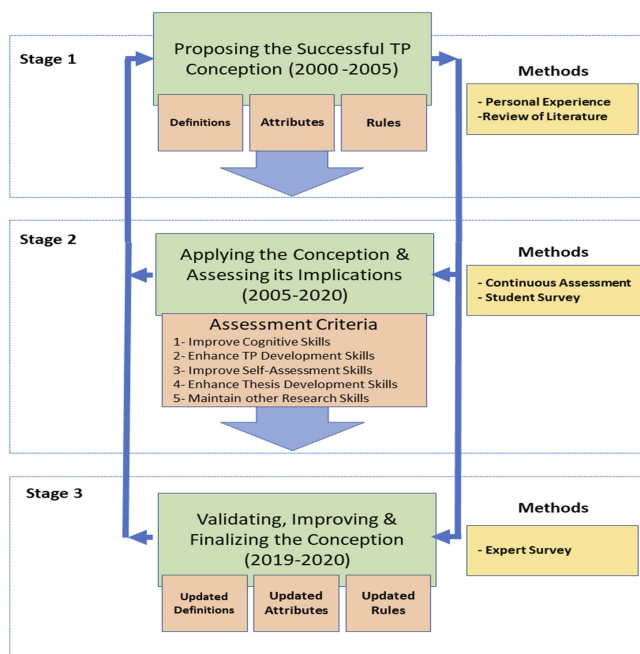


Figure 1.
The stages of
developing the
successful thesis
proposal conception

assessed by students' survey. From November 2019 through March 2020, the conception was validated by an experts' inquiry of worldwide academics; then it was improved and finalized.

- (1) *To propose the Successful TP Conception*, the authors relied on two sources: knowledge extracted from their extended experience and a review of relevant studies and instruction manuals and guidelines for preparing TP in several worldwide universities. The Conception has been applied on several batches of master and doctoral students from IAU, KSA for almost 15 years between 2005 and 2020 during their enrolment in three courses in the College of Architecture and Planning, IAU, KSA. These courses are "ARPL 603 Research Methods" and "BISC 600 Research Methods" for the master's level and "URPL 803 Seminar (3): Doctoral Research Methods" for the doctoral level.
- (2) *To assess the implications of the Successful TP Conception* on students' performance and outputs, the authors designed an online questionnaire ([Students_Survey, 2020](#)) and distributed it to a sample of 60 graduate students who studied and applied the conception:
 - From a total of 60 students, 39 students (65%) completed the survey; of whom 12 students (31%) were doctoral and 27 students (69%) were masters students.
 - The survey used a five-point Likert scale to assess the impact of applying the rules of Successful TP Conception taught to students on their performances and outputs; that is, how the conception helped the students:
 - Improve their understanding of the components of a successful TP.
 - Enhance their performance in developing their TP's.
 - Conduct a more effective self-assessment of their developed TP's.

- Enhance their performance along other stages of producing their theses and dissertations.
 - Maintain any other benefits adding to students' research capabilities.
- (3) *To validate and improve the conception*, the authors used an expert inquiry to get the insights of a selected sample of academics experienced in supervising master and doctoral theses in worldwide architecture and planning schools. The authors designed an online survey ([Experts_Survey, 2019](#)) and sent it to 80 experts; of whom 35 experts (43.75%) responded. The survey included two parts:
- The first part recorded the general characteristics of respondents.
 - The second inquired about experts' viewpoints on the definitions, attributes and the rules of success of the components of the proposed TP conception.

2. Proposing the Successful TP Conception

2.1 Components of a TP for a standard problem-solving research type

A review of thesis writing guidelines posted on universities' websites and other related literature has indicated that the number of components of a masters' or doctoral thesis proposal varies. After a thorough review of related literature and with their experience, the authors have been convinced that, in its standard form, a TP should include 13 components. Chronically arranged, as appearing in the proposal, they are: title page, abstract, keywords, background, statement of the problem, research questions, research aim and objectives, research scope, research significance and contributions, preliminary review of literature, research methodology, thesis structure and timeline, and references list ([Ostler, 1996](#); [Simpson and Turner, 2004](#); [Zhou, 2004](#); [Davies, 2011](#); [Axelrod and Windell, 2012](#); [Donohue, 2018](#); [Glatthorn and Randy, 2018](#); [Kornuta and Germaine, 2019](#)). It is worth mentioning that these 13 components will differ in the case of a hypothesis-based research whose aim is to validate a specific hypothesis that a specific variable/s is/are or is/are not the main cause/s of an investigated research problem. This paper is limited only to the standard problem-solving research type.

2.2 Building the Successful TP Conception

To propose the Successful TP Conception, the authors applied three steps on each of the 13 components:

- (1) Setting a general *definition* for each component including its meaning, importance, functions and contents.
- (2) Outlining the most important *attributes* that must be considered when writing the component.
- (3) Based on step 1 and 2, the authors extracted a list of *success rules* which provides a concise definition for each component of the TP, and/or describes the relationship between the component and other components of the TP (the list is summarized at the end of Part 2).

2.2.1 Research title. This is the first item that appears to the reader. It invites or detains him/her from proceeding to other contents ([Blaxter et al., 2010](#)). The research title is positioned in the title page along with several basic data, namely, the title; the names of the Department, College, University, study programme, researcher and advisory committee; and submission date.

The *research title* should be *useful*, discussing an issue critical to society; *true*, conveying a real message about the investigated problem ([Donohue, 2018](#)); *concise*, presenting the

message with the minimum number of words; *adequate*, using the right wording to explain the intended meaning; and *attractive*, stimulating the reader's attention. Iterations in refining the research title go hand-in-hand with refining the research question (Groat and Wang, 2013).

2.2.2 The abstract. It is the first item that appears in the TP after the title and of the same significance; yet, it is the last to be written (Kornuta and Germaine, 2019). It has a marketing function (Lamanauskas, 2019); it calls the reader in or alienates him out. A comprehensive abstract contains a summary of the problem, aim, scope, methodology, importance, contributions and outline (Koopman, 1997).

The *Abstract* should be *concise* or brief with a maximum of 200–300 words; *adequate*, including profiles of all parts of the proposal; *clear*, expressing its message without ambiguity; and *interrelated*, serving as a body of sequential, coherent and connected ideas (Blaxter *et al.*, 2010).

2.2.3 The keywords. These are a set of words or terms used for archiving, tabulation and electronic search on databases. They should include essential “subject terms” describing the research topic, the unique sub-specializations and focus of the research (what is researched), the contextual scope of the research (where and when), and the used research methodology (how to conduct the research) (Lamanauskas, 2019). They are better written by splitting the title into its separate single words or terms which must be found in the abstract, as well (Mack, 2012).

Keywords should be *brief*, not more than 8–12 words; *adequate*, conveying the research theme, scope, aim and approach; *exact*, focusing on the investigated topic and scope; and *standard*, using scientific terminology used in the field.

2.2.4 The background. This is a gradual preparation of the reader from the larger scientific field to the specific field, from the wider geographic area to the immediate area, and from the larger timeframe to the immediate one. It starts from the strategic level and general scope of the research and gradually reaches the level closer to the examined problem (Abdellatif and Abdellatif, 2005). It places the study within the larger context of the research, creates interest to the reader and catches his attention, and includes quotations and statistics leading the reader to proceed (Babbie, 2014).

The *background* statement should be *striking*, drawing the reader's attention to the research; *brief*, not lengthy; *gradual*, moving from the general level surrounding the investigated issue to the specific level; and *careful*, not speeding up in disclosing the study problem, aim or methodology to the reader (Axelrod and Windell, 2012; Pautasso, 2013).

2.2.5 The statement of the problem. This is a statement presented in two forms: an overall/general form and a specific/articulated form (sub-problems).

- (1) *Statement of the General Research Problem* is a narrative describing a negative aspect/s prevailing in the investigated urban environment/ecosystem or architectural setting; it is equivalent to the negative wording of the research aim (Abdellatif and Abdellatif, 2005). It stimulates interest in the study; scientifically explained to convey a simple, clear and specific issue to which a reader can relate and is useful to the society at large (Balakumar *et al.*, 2013). In the humanities and social sciences many dissertations endeavour to establish the conditions of the problem, not to solve it (Dorst, 2011).

In formulating the research problem, it is useful to consider it a problem which hinders the natural development of the society and/or environment and leads to a decline in the Quality of Life (QOL) or Quality of Environment (QOE) or both. A development problem is a factor/cause leading to either a quantitative or qualitative deficiency in satisfying a human need or both such as a lack of certain service or inadequate provision of the service (Abdellatif, 2015). To arrive at a successful statement of the general problem, the researcher should pinpoint the main cause/s behind the study problem. All what comes next depends on the clarity of the problem statement.

Research problems in architecture and related disciplines may be classified under different frames of references (Salama, 2019):

- Technically oriented research (TOR), which places emphasis on the process and procedures as the primary basis of effective design, TOR can be either systematic, or computational, or managerial.
- Conceptually driven research (CDR), which can be either psychological or person–environment. The psychological type is driven by the goal of matching knowledge with the nature of the design problem, its components, context and social and environmental requirements. Whereas, the person–environment type places emphasis on the socio-cultural and socio-behavioural factors as they relate to the design process itself and to settings, buildings and urban environments.

The *general problem of the study* should be *brief*, comprised from one to two sentences; *clear*, using straightforward words with simple meaning that cannot be confused; *specific*, focusing on the main cause of the study problem (Kornuta and Germaine, 2019); and *outlining*, highlighting the general problem without elaborating on sub-problems.

- (2) *Statement of the research sub-problems* is a narrative that describes the general problem in detail; sub-problems are simply the various causes of the general problem (Goetz *et al.*, 2005). Identifying sub-problems will ensure focusing during the investigation on important factors causing the general problem. It is useful when tracing sub-problems to apply the following steps (Abdellatif, 2015):

- *Classify the investigated situation* to branched dimensions, e.g. demographic, planning, regulatory, economic, social, environmental, etc.
- Trace the *causes or the influencing factors* that lead to the emergence or aggravation of the problem/s in each dimension.
- Clarify the problem more by identifying the *consequences or adverse effects* (the symptoms of the problem) that resulted from those causes. This helps isolate the causes from the consequences to focus on treating the causes not the consequences. Using temporary painkillers will not eliminate the disease; it only tranquilizes the symptoms.

The *research sub-problems* should be *focused*, where each sub-problem concentrates on one independent side of the general problem; *articulate*, non-compositing and non-overlapping with other sub-problems; *rooted*, relating to one of the roots of the general problem; *deep*, addressing the cause not the symptom of the problem; and *comprehended*, easy to perceive, determine and describe (Groat and Wang, 2013).

- (3) *Statement of the consequences of the problem* is a narrative that describes the negative effects caused by sub-problems on the investigated environment (Goetz *et al.*, 2005).

The statement of *consequences of the problem* should be *focused*, where each consequence focuses on one independent sub-problem; *articulate*, not overlapping with other consequences; *rooted*, relating to one of the roots of the general problems; *deep*, providing description for specific symptom; and *comprehended*, could be perceived, described and determined (Abdellatif, 2015).

2.2.6 Research questions. These are a set of questions the research tries to answer. Each question usually covers one of the research sub-problems. Questioning is an alternative way to present research problem/s but in a question format. As indicated by Grix (2001) and Groat and Wang (2013), research questions simplify the problem and provide insight for articulating the aim and objectives and setting the proper methods to achieve them. Research

questions should “contain within themselves the means for assessing their achievement” (Blaxter *et al.*, 2010). If the environment under investigation suffers from a specific development problem/s, the following are typical examples of questions raised (Abdellatif and Abdellatif, 2005):

- (1) What is the nature of the development problem as defined by the latest findings of previous literature, similar studies and published statistical reports?
- (2) What are the key features of the investigated problem according to a direct field survey?
- (3) What are the appropriate links between different variables of the study (causes, consequences, etc.) according to the information gathered from the theoretical review and field surveys?
- (4) What are the extracted results and the appropriate solutions and/or recommendations to deal with the general research problem and its sub-problems?
- (5) What are the critical contributions of the research findings on the life and/or environmental qualities?
- (6) How can the research increase the benefits of research results on the ground?
- (7) What are the research areas/points that need further investigation?

Research questions should be *specific*, each question addresses one sub-problem; *unduplicated*, each question does not repeat itself in a different format; *sequential*, or arranged according to their importance and order; and *interrelated*, where each question relates to other questions.

2.2.7 Research aim, goals and objectives. It is advisable to define the general aim of the study first then define two kinds of objectives: procedural and developmental objectives.

- (1) *The general aim of the research* is a specific and clear statement presenting the overall purpose of the study. It is directed to find an appropriate and effective solution to the general research problem (Donohue, 2018). It is an attempt to fill a gap between a negative reality of an environment/ecosystem/or development situation and a desired positive future to be achieved at the end of the research process (Glatthorn and Randy, 2018). The aim should be properly stated to ensure the success of all the following stages of the scientific research process.

The general aim of the research should be Specific, Measurable, Achievable, Realistic and Timely (SMART) (Doran, 1981): *specific*, by focusing on a branch or root of a complicated development problem; *measurable*, by using standard units to enable measuring the achievement of goals; *achievable*, by being real not elusive or difficult to investigate considering available resources which include the time allowed for the degree and the funding available to gather information, to conduct the planned experiments and measurements, to finalize the necessary research analysis and to develop appropriate solutions; the scientific expertise of the researcher in the subject of research; the level of academic support from the academic advisor; access to references, and office and field resources needed to collect information on the problem; *realistic*, dealing with a real problem happening in the environment surrounding the researcher; and *timely*, directed towards an urgent problem with high societal priority not outdated and studied many times before.

- (2) *The procedural objectives* are the sub-goals emanating from the main aim of the study. They provide a roadmap and illustrate important stages leading to sequential targets towards achieving the general aim. They are articulated sub-goals that in their totality

compose the main research aim (Abdulai and Owusu-Ansah, 2014). Procedural objectives of a typical research include conducting the following tasks (Abdellatif and Abdellatif, 2005):

- *Exploring the problem* by defining the research problem, formulating aim and objectives, designing the methodology, defining the scope, and highlighting the expected contributions.
- *Collecting secondary data* by defining basic concepts and terms, reviewing relevant literature and previous studies, and describing the most important characteristics of the investigated environment from secondary sources and statistical reports.
- *Collecting primary data* via direct field surveys and based on the views of concerned population, experts and officials to describe the characteristics of the investigated development problem.
- *Analysing the gathered data* by using theoretical and field data to determine the appropriate links among different variables of the study (e.g. causes, consequences, etc.).
- *Synthesizing the gathered data* by integrating the findings of analysis to build appropriate approaches or solutions to deal with the general problem.
- *Extracting conclusions and writing recommendations* to highlight research findings and make them more useful and effective.

Procedural objectives, in addition to being *SMART*, they should be *focused*, where each objective focuses on a phase of achieving the overall goal; *non-overlapping*, where every objective does not exceed a defined limit; and *sequential*, chronologically arranged as specified in the timeline.

- (3) *The development objectives* are objectives which focus on solving the research sub-problems leading to solving the main research problem. They should describe quantitative and/or qualitative improvements in the physical and/or human environment rather than stating the steps of a study (Donohue, 2018). Well-defined development objectives help focus on solving the studied problems only. They deal with development problem/s on the micro level but will contribute to the macro level, as well (Abdellatif, 2015):

- A micro level objective contributes to solving the specific investigated problem (e.g. a specific quantitative or qualitative problem that hinders the development of a sector of society, environment, or eco-system).
- A macro level objective contributes to realizing a higher goal (e.g. improving the overall quality of life of a larger community, upgrading the quality of the larger environment, etc.).

Development objectives should apply the *SMART* goal rule (previously explained); and be *non-overlapping* by ensuring that each objective is focused and not conflicting with other objectives.

2.2.8 Research scope. This is a statement which defines the thematic, geographic/spatial and temporal limits of research. By narrowing these three scopes, the research process becomes more effective, efficient and doable (Abdellatif and Abdellatif, 2005):

- (1) *Thematic scope* clarifies the general and specific areas of the research (e.g. the research falls within the field of sustainable development in general and focuses on social sustainability).
- (2) *Geographic/Spatial scope* specifies the spatial boundaries of the physical environment within which the research is applied (e.g. a specific local or regional setting).
- (3) *Temporal scope* shows the past, present and future spans the research will cover indicating the number of years from the historical information inventory until the expected completion date. If the research aim is to develop future strategies or policies, the span will extend to future target point.

Research Scope should be *categorized*, by being classified by subject, place and time; *focused*, by reaching the closest limits of the investigated research problem, environment and time; and *clear*, by not being so general or ambiguous.

2.2.9 Research significance and contributions. They highlight the most important benefits and the main beneficiaries from solving the research problem; the potential positive impacts of the study on the life and environmental qualities (Groat and Wang, 2013). Contributions differ in nature (theoretical or applied or both) and in size (huge, average, or marginal). There is a positive relationship between the size of contributions and the size of impacted beneficiaries (individuals, groups, institutions, communities, societies), the scale of the impacted geographic boundaries (local, national or global), the type of impacted development sectors (service, production, etc.) and the numbers of the impacted sectors (one, a few, or all sectors). Research significance increases as the size of contributions increases. Specifying the research significance, expected contributions and potential beneficiaries helps promote the research and provides rational justifications for conducting it. The higher the contributions and the greater the sectors of the beneficiaries, the more significant the research is (Abdellatif and Abdellatif, 2005). According to Balakumar *et al.* (2013) research significance justifies the need for the research that is being proposed.

Research significance and expected contributions should be *categorized*, in terms of type (theoretical or applied contribution or both), size and nature of the beneficiaries (individuals, institutions, communities, etc.) and geographical extent (small site, district, city, region, nation, etc.); *clear*, simple and comprehensible to the reader; and *realistic*, real, accurate and not exaggerated.

2.2.10 The preliminary review of literature. This is an initial review of literature dealt with relevant problems. It aims to build an initial understanding of the problem, identify the most important variables that have been considered, cite methodologies used to deal with the problem; make use of the latest findings and record the various recommendations/solutions suggested to deal with the problem (Hart, 1998; Grix, 2001). According to Dunleavy (2003), it is a critical review on related recent research that is well documented, structured, analysed and synthesized. It offers the researcher an opportunity to engage with other scholars in one's disciplinary community.

In addition to having a separate part, it is useful to combine the literature review with other components of the TP (e.g. the research problem, questions, aim and objectives, and methodology). It is important that the review presents differing perspectives or contrasting views of the topic and reports the complexities of the issue (Kornuta and Germaine, 2019). By conducting the review, the researcher becomes able to build an initial but comprehensive understanding of the causes and consequences of the problem, the methodologies used to study and analyse the problem and the solutions proposed to deal with it by synthesizing various viewpoints of previous studies, thereby, supporting her/his

principle argument about the study problem with the results derived from previous literature (Pautasso, 2013).

The preliminary literature review in the TP is a “pilot review” or a sample of the extensive literature review to be made later in the actual thesis. It contains three subsidiaries (Abdellatif and Abdellatif, 2005):

- (1) Definitions of key terms and concepts; standard terms to appear in the research and special concepts which are not formally provided by previous scholars. The definitions must be logic and derived from scientifically recognized sources.
- (2) Review of previous studies; focusing on identifying several issues, namely, the most important dimensions and variables of the research problem (the causes of the problem; why the problem has emerged or aggravated; the most important consequences of this problem on the human and/or physical environment); the methods used to deal with the problem; the latest findings of previous studies and the various approaches/solutions suggested to deal with the problem.
- (3) Contextual aspects of the investigated development situation; including a review of relevant characteristics of the researched environment (its basic dimensions and elements) as found in previous studies. Contextual aspects may be classified into physical and human components; or into environmental, functional, aesthetic, structural, economic and social design determinants; or into demographic, planning, regulatory, economic, social, environmental sectors or other classifications.

Preliminary review of literature should be *indexed*, from reliable scholarly sources; *categorized* or documented according to standard classification system; *employed*, used wisely to achieve a desired purpose; *up to date*, recent, however, in topics which address chronological development or evolutionary aspects references could be recent and old; and *related*, relevant to the study problem (Hart, 1998).

2.2.11 *Research methodology*. This provides explanation of the appropriate methods to be used in data collection, analysis, synthesis and presentation; for the extraction of results; and for the development of appropriate approaches or solutions to deal with the research problem (Blaxter et al., 2010; Kivunja, 2016). The following methods could be used (Abdellatif and Abdellatif, 2005):

- (1) *Data collection methods* including office methods used to collect secondary data from previous literature and case studies as well as field methods used to gather original data through field visits, surveying, questionnaires, interviews with stakeholders, etc.
- (2) *Data analysis methods* including methods used to analyse both the secondary and primary information collected from office and the field surveys such as Statistical Analysis, Environmental Scanning (SWOT), Development Components Analysis, etc.
- (3) *Data synthesis methods* including methods used to compile, synthesize the analysis and develop appropriate alternative scenarios or solutions to deal with the problem.
- (4) *Data presentation methods* including methods to present the research process and findings such as scientific research paper containing narratives, tables, figures, forms, maps, results and recommendations as well as final visual presentation to review panel to get remarks and write the last version of the TP.

Research methodology should be *appropriate*, aligned with the purpose/s in which they will be used; *achievable*, within the reach of the researcher; *effective*, achieving the purpose fast and

with high quality; *reliable*, previously tested, applied and approved in similar cases; and *precise*, accurate and specific.

2.2.12 Research structure and timeline. This is a brief statement of the main sections of the master's/doctoral thesis with tentative dates for completing the various stages of the research. Careful preparation of research structure and timeline ensures the effectiveness and integrity of the plan of actions towards the completion of the study (Kivunja, 2016). It is also a criterion to judge the achieved progress and seriousness of the researcher.

Research structure and timeline should be *sequential*, arranged according to a standard scientific research process; *logical*, proportionate to the total period available for completion; and *balanced*, distributing time properly among various stages.

2.2.13 The list of references. This is a list which contains a reasonable number of relevant references on the topic which were actually cited in the TP (Kornuta and Germaine, 2019). Including a list of the references about the topic demonstrates that the researcher is familiar with the basic and latest knowledge on his/her problem.

The list of references should be *relevant*, closely related to the investigated subject; *up to date*, recent yet containing old and new according the topic and context; and *reliable*, published in dependable vessels.

2.3 Extracting the success rules

Based on the above definitions and attributes provided for each of the 13 TP components, the authors were able to extract a number of success rules that took the form of equations, each of which describes an equality function between each component and its counterpart component/s as shown in Table 1. For instance, rule #1 shows that "research title" is equal to "the general aim of the research" and is equal to "the negative wording of the research problem".

3. Assessing the Successful TP Conception from students' viewpoints

After proposing the Successful TP Conception and applying it on several batches of graduate students in the College of Architecture and Planning at IAU for a period of 15 years from 2005 to 2019, it becomes necessary to assess the conception to ascertain its positive impacts on improving the quality of students' performance and outputs concerning the development of their TP's and their overall research capabilities. This part summarizes the results of the survey of a group of graduate students who studied and applied the TP conception from the College of Architecture of Planning, IAU, KSA. The survey contains a five-indicator scale which assesses the impact of applying the success rules of the TP Conception on the students' performance and output. The results of the survey demonstrated the following positive impacts:

- (1) The students' understanding of the components of thesis proposals has improved as follows:
 - They better understood the meanings of each component (97% agree and strongly agree and 3% neutral).
 - They better understood the attributes of each component (94% agree and strongly agree and 6% neutral).
 - They better understood the rules which control the relations between the various components of the TP (87% agree and strongly agree and 13% neutral).
- (2) The students' performance in developing their thesis proposals has improved as follows:

Table 1.
Proposed list of success
rules for the TP
components

#	Research proposal component	Equals	The corresponding component
1	Research title	=	The general aim of the research
2	The abstract	=	Solving the main research problem
3	Keywords	=	Profiles of all components of the research proposal
		=	Title in a fragmented manner
		=	Words that compose the research title
4	Background	=	Gradual preparation of the reader to enter the study
5	The statement of the problem		
5-1	General problem of research	=	The main cause of quantitative or qualitative deficiency in the investigated environment
5-2	Research sub-problems	=	The secondary causes of each sub-problem of the general problem
5-3	Research consequences	=	Subsidiary symptoms of the general illness of the examined environment
6	Research questions	=	Presenting general problem and sub-problems of the research in the question format
7	Research aims, goals and objectives	=	Specific, measurable, achievable, realistic and timely goals
7-1	General aim of the research	=	Solving the general problem of the research
7-2	Procedural objectives of the research	=	Research stages
7-3	Development objectives of the research	=	Sections or chapters of the thesis
8	The scope of the research	=	Solving sub-problems of the study
9	Importance of the study and expected contributions	=	Finding a cure for the secondary causes of the problem
10	Preliminary review of literature	=	Thematic, geographical and temporal limits of the study
		=	expected positive impacts of research (theoretical, practical or both)
11	Research methodology	=	Building a comprehensive conception from previous studies about the causes and consequences of the problem, the methodologies used to understand and analyse it, the most important findings and the solutions developed to deal with it
12	Research skeleton and completion timeline	=	Techniques, methods and tools used in each stage of study
12	List of references	=	Main chapters of research along the completion timeline
14	Thesis proposal (using future tenses)	=	Stages of the scientific research process along the completion timeline
		=	Latest local and international references about the research
		=	General introduction of the final thesis (Using past tenses)

Source(s): Prepared by the authors based on the above definitions and attributes of the TP components

- The process of writing the proposal has become easier and more convenient (100% agree and strongly agree).
 - The effort, cost and time spent in submitting the proposal have been substantially saved (87% agree and strongly and 12% neutral).
 - The relationship with academic advisor has improved (87% agree and strongly agree and 12% neutral).
- (3) The students have become able to make a more effective self-assessment of the research proposal before submitting it to their academic advisor:
- The students' confidence in advancing their own learning abilities has improved (93% agree and strongly agree and 7% neutral).

- The students' abilities to address the strengths and weaknesses of their personal skills have improved (93% agree and strongly agree and 7% neutral).
 - The students' abilities to manage their learning process more independently have improved (90% agree and strongly agree, 7% neutral and 3% disagree).
- (4) The students' performance along other stages of producing their theses has improved:
- The students have created a clearer and better mutual understanding with their academic advisors (90% agree and strongly agree and 10% neutral).
 - The students have reduced their distraction from the original target set out in the proposal (81% agree and strongly agree, 16% neutral and 3% disagree).
 - The students have been able to finish their research on time (78% agree and strongly agree, 19% neutral and 3% disagree).
- (5) The students have gained other benefits that improve their overall research skills, including:
- They gained better analytical skills (87% agree and strongly agree, 10% neutral and 3% disagree).
 - They gained better problem-solving skills (87% agree and strongly agree, 10% neutral and 3% disagree).
 - They gained better critical thinking skills (87% agree and strongly agree, 10% neutral and 3% disagree).

4. Verifying the Successful TP Conception based on experts' viewpoints

Having proposed, applied and assessed the Successful TP Conception, it becomes important to validate it using the insights of experienced academics from Architectural and Planning schools worldwide. This part summarizes the results of the experts' inquiry survey conducted in November 2019 to February 2020. It shows the characteristics of experts and their viewpoints and remarks on the originally proposed definitions, attributes and success rules.

4.1 Experts' characteristics

The characteristics of the 39 experts who participated in the inquiry are summarized as follows:

- (1) They were from nine countries, namely, the United States of America, Canada, United Kingdom, Australia, Egypt, Saudi Arabia, United Arab Emirates, Qatar and Bahrain.
- (2) About 75% of the experts were males and 25% were females. About 5% were 35–45 years old, 20% were 45–55 years, 55% were 55–65 years and 20% were 65 years and over.
- (3) About 5% were Assistant Professors, 10% Associate Professors and the majority (85%) were Professors.
- (4) The experts had teaching experiences in undergraduate and graduate levels (masters, doctoral, diploma, postdoctoral and continuing professional development).

- (5) The general specialization of 70% of the experts was Architecture and 30% of experts were specialized in Urban Planning. They taught in several built environment fields (Architecture, Interior Design, Building Technology, Urban Design, Landscape Architecture and Urban and Regional Planning).
- (6) The experts had several focus areas, namely, Architecture, History and Theories of Architecture, Assessment of Designed Environments, Design Methods, Pedagogy, Architecture and Digital Technologies, Heritage Conservation, Middle East Architecture and Cities, Construction Project Management, Urban Design, Spatial Development Planning, Landscape, Built Environment and Behaviour, Urban Studies, Techniques and Quantitative Methods of Urban Planning, Urban Conflict, Urban Justice, Community Development, Environmental Management and Planning and Development Approaches.
- (7) About 10% of the experts supervised 5 theses, 5% supervised 6–10 theses, 50% supervised 11–20 theses and 35% supervised more than 20 theses.

4.2 Experts' viewpoints and remarks

The contributions of experts have been very constructive; the experts have verified the proposed definitions, attributes and success rules; their acceptance rates and remarks could be summarized as follows:

- (1) Concerning the proposed *definitions* of the TP components, the experts expressed their agreement which ranged between 73 and 96%. Some experts provided additional remarks to help improve the definitions. Table 2 presents the originally proposed definitions, the percentages of agreed experts and their additional remarks.
- (2) Regarding the *attributes* of each component of the TP, the original conception proposed 38 attributes, the experts added 18 attributes resulting in a total of 56 attributes. Table 3 presents a matrix showing the percentages of experts' agreement of the originally proposed attributes as well as the added attributes. The lowest agreement percentage was 59% and the highest was 96%.
- (3) Concerning the proposed *success rules* which were called "equations" in the originally proposed conception, the experts suggested to change the expression into "rules"; which is more appropriate for subjective contents than mathematical expression. Table 4 presents the final 19 success rules for the components/sub-components of a TP and the percentage of experts' agreement which ranged between 57 and 95%.

5. Conclusion

Based on their experience in preparing and supervising masters and doctoral theses and after a thorough review of the literature on preparing thesis proposals, the authors drafted a conception of a successful thesis proposal comprising specific definitions, attributes and rules for each of the 13 components of a standard TP. The conception had been applied over a duration of 15 years (2005–2020) on several batches of master and doctoral students in IAU, KSA. Through an online survey, the majority of students (78–100%) have indicated that understanding and applying the conception helped them improve their performances and outputs during the TP development process and beyond.

The conception was then validated by getting the insights of 39 experienced academics from worldwide architectural schools. The experts accepted the proposed definitions with (73–96%) agreement rate. The experts also accepted the proposed attributes with (59–96%) agreement rate. As for the success rules, the experts' agreed as well with an acceptance rate

#	Component of a thesis proposal	% of experts agreement of Proposed definition	%	Experts additional remarks
1	Research title	The first item that appears to the reader. It invites the reader to proceed to other contents	73	It should be reflective of research topic, questions, objectives, content and approach and convey the aim, the purpose, the scope and the outcome
2	The abstract	The first item that appears in the TP after the title and of the same significance. It calls the reader in or alienates him out	79	Although some experts commented that in several schools an abstract is not a compulsory component of TP, 79% of the experts agreed that the abstract is needed
3	Keywords	A set of words or terms used for archiving, tabulation and electronic search on databases	75	Keywords are better written by splitting the title into its separate single words or terms. They should include essential terms describing the research topic, the unique sub-specializations and focus of the research (what is researched), the contextual scope of the research (where and when) and the used research methodology (how to conduct the research)
4	Background	A gradual preparation from the larger scientific field to the specific field, from wider geographic area to the immediate area, and from the strategic level to the level closer to the examined problem	74	The background should place the study within the larger context of the research, create interest to the reader and catch his attention, help him understand why the study is significant, include limitation and arguments of pervious research, and include quotations and statistics leading the reader to go to the next component of the TP
5	Statement of the problem			
5-1	Statement of the general research problem	A narrative describing a negative situation prevailing in the investigated urban environment/ecosystem or architectural setting	92	A statement which stimulates interest in the study; scientifically explained to convey a simple, clear and specific issue to which a reader can relate"; "equivalent to the negative wording of the research aim"; and "in the humanities and social sciences many dissertations endeavour to establish the conditions of the problem, not to solve it
5-2	Statement of the research sub-problems	A narrative that describes the general problem in detail; sub-problems are simply the various causes of the general problem	84	One expert commented that "the above definition is valid and useful in causal research types only; other research types might consider different approaches"
5-3	Consequences of the problem	A narrative that describes the effects of sub-problems on the investigated environment	83	None

(continued)

Table 2.
Proposed definitions of each component of the TP and experts' agreements and remarks

#	Component of a thesis proposal	% of experts agreement of Proposed definition	%	Experts additional remarks
6	Research questions	A set of questions the research tries to answer. Each question usually covers one of the research sub-problems	96	None
7	Research aim/goal/objectives	The goal should be Specific, Measurable, Achievable, Realistic and Timely	96	None
7-1	General aim of the research	A specific and clear statement presenting the overall purpose of the study	96	None
7-2	Procedural objectives of the research	The sub-goals emanating from the main aim of the study. They provide a roadmap and illustrate important stages leading to sequential targets towards achieving the general aim	79	They are articulated sub-goals that in their totality compose the main research aim
7-3	Development objectives of the research	The objectives which focus on solving the research sub-problems and eventually solving the main problem of the investigated situation	74	None
8	Research scope	A statement which defines the thematic, geographical/spatial and temporal limits of research		None
9	Research significance and contributions	Highlight potential positive impacts of the study on the life and environmental qualities	87	Expected contributions can only be tentative in the early research proposal stage, the researcher must remain open to unexpected findings upon the finishing stage of his/her study
10	Preliminary review of literature	Builds an initial understanding of the problem, identify the most important variables considered, cite methodologies used; make use of the latest findings and record the various recommendations/solutions suggested	91	Related directly to the stated research questions; identify areas of controversy in the literature; describe the relationship of each work to others; point the way forward for further research; and be organized into categories or themes
11	Research methodology	Contains explanation of the appropriate methods to be used in data collection, analysis, synthesis and presentation; for the extraction of results; and for the development of appropriate approaches or solutions to deal with the research problem	82	None
12	Research structure and timeline	A brief statement of the main sections of the master's/doctoral thesis arranged on the tentative dates for completing the various stages of the research	95	None
13	List of references	A list which contains a reasonable number of relevant references on the topic	82	None

Table 2.

Source(s): Prepared by the authors based on the above analysis and the results of expert inquiry

Source(s): Prepared by the authors based on the above analysis and the results of expert inquiry

Table 3.
Experts' remarks on
the proposed attributes
of each component of
the thesis proposal

Rule #	% of experts agreed	Component of a thesis proposal	Relationship nature (→)	Success rule Its concise definition (and/or) its relationship to another component/s
1	60%	Research title	Should reflect	The general aim and scope of the research The negative wording of the research problem
2	75%	The abstract	Should be	A concise brief of all necessary components of the research proposal
3	74%	Keywords	Should include	Terms representing research title, topic, unique sub-specializations, methodology and scope
4	74%	Research background	Should cover	A gradual contextual literary analysis relevant to the study preparing the reader to enter the study
5		The statement of the problem		
5-1	73%	Statement of the general research problem	Should reflect	The main cause of a quantitative and/or qualitative deficiency in the environment under investigation The negative wording of the research aim
5-2	80%	Research sub-problems	Should describe	The subsidiary causes of the main problem
5-3	79%	Consequences of the Problem	Should describe	Subsidiary symptoms of the general illness of the examined environment
6	79%	Research questions	Should rephrase	The research sub-problems in a question format The research objectives in a question format
7	63%	Research aims, goals and objectives	Should be	SMART (specific, measurable, achievable, realistic and timely)
7-1	63%	General aim of the research	Should reflect	A target responding to the general research problem/question A potential alternative scenario that may enable the development of solutions
7-2	57%	Procedural objectives of the research	Should articulate/represent	The research title with the same or different wording The sub-goals that compose the main research aim The stages of the research
7-3	70%	Development objectives of the research	Should reflect	The sections or chapters of the thesis Targeted solutions to the sub-problems of the study Targeted possible cures/fixes for the subsidiary causes of the problem
8	83%	Research scope	Should cover	Thematic, geographic and temporal limits of the study
9	87%	Research significance and contributions	Should highlight	The expected positive theoretical or practical impacts of the research or both
10	95%	Preliminary review of literature	Should cover	A well-documented, structured, analysed and synthesized critical review of relevant research

Table 4.
An extracted list of
success rules for thesis
proposals

(continued)

Rule #	% of experts agreed	Component of a thesis proposal	Success rule	
			Relationship nature (→)	Its concise definition (and/or) its relationship to another component/s
11	82%	Research methodology	Should explain	The methods, techniques and tools used to accomplish the research objectives in each stage of the study
12	82%	Research structure and timeline	Should articulate/represent	The stages/phases of the research and their expected completion dates The main chapters of the research distributed along the completion timeline
13	77%	List of references	Should present	The references relevant to the research problem
14	General rule	The thesis proposal (using future tenses)	Should resemble	The general introduction of the final thesis (using past tenses)

Source(s): Prepared by the authors based on the above analysis and the results of expert inquiry

Table 4.

ranging from (57–95%). The experts suggested constructive remarks which were considered in writing the final version of the conception.

The extracted success rules combine the definitions and attributes of each component of the TP and present them in a concise statement which defines the component and, where applicable, exemplifies its relationship to another corresponding or counterpart component of the TP. For example, rule #1 shows that “research title” should *reflect* “the general aim and scope of the research” and should also *reflect* “the negative wording of the research problem”. Extracted also is rule #14 which indicates that “the whole thesis proposal” written in future tenses, should *resemble* “the introduction of the final thesis” written in past tenses.

The research has reached a conviction that the proposed conception with its success rules can provide a useful model to follow when preparing thesis proposals. It provides both researchers and academic advisors with a directive and evaluative tool to apply along the process of developing proposals of master or doctoral theses:

- (1) *A directive tool* that assists the researcher in writing a sound TP. Combining the last three tables (2, 3 and 4) into a comprehensive checklist would aid the students in preparing their TP's; enhancing the quality of their performance and outputs.
- (2) *An evaluative tool* that helps in assessing the validity and integrity of the submitted TP's that can be used by the researcher for self-assessment, or by the academic advisor, or by an examiner/evaluator before sending the proposal to higher authorities for approval.

The findings of this paper could be useful not only in evaluating thesis proposals, but also, with proper modifications, in assessing various scientific research documents, including scientific thesis, research papers and others; which is another research topic that will be addressed in the future.

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