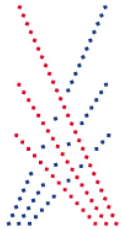

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"A systematic Approach for Evaluating Theoretical Frameworks in Social Sciences and the Development of New Theoretical Framework"

Nour Qatawneh

PhD student

Brunel University London- Eastern Gateway 104a

Nour.qatawneh@brunel.ac.uk

+447746314803

Dr Abrahim Althonayan

Senior Lecturer

Brunel University London- Eastern Gateway 202c

abraham.althonayan@brunel.ac.uk

+44 (0)1895 267705

"A systematic Approach for Evaluating Theoretical Frameworks in Social Sciences and the Development of New Theoretical Framework"

Abstract.

The aim of this paper is to propose comprehensive approach for step by step systematic evaluation of the theoretical frameworks in social science in order to develop a new theoretical framework in particular research interest. A systematic approach means evaluating and interpreting all available theoretical frameworks relevant to a particular research question, topic area, or phenomenon of interest. Systematic approach aims to present a fair evaluation of frameworks in particular research topic by using a reliable, strict, and auditable methodology which considered an evidence-based practice to develop a new theoretical framework

The evaluation approach presented in this paper were derived after extensive review of some similar guidelines and approaches used by researchers in different disciplines as well as reviewing different books, published empirical and theoretical researches and a series of interviews/discussions with researchers and practitioners from various research area who are involved in evidence-based practice. The systematic approach has been formulated to evaluate different aspects such as strengths, shortcoming, threats and opportunities of existing theoretical frameworks in social science research.

The approach covers four stages. The first three stages relate to the evaluation of existing theoretical frameworks namely: planning, conducting and reporting the evaluation, while the fourth stage involves developing the new theoretical framework. These stages provide a relatively high level of description.

1 Introduction

This paper presents general systematic approach (step by step) for performing rigorous evaluation of theoretical frameworks in social science research and therefore developing a new theoretical framework overcomes the shortcoming of previous frameworks. The original impetus for employing such approach was to construct an approach for performing systematic evaluation of theoretical framework that are appropriate to the needs of social science researchers.

Nowadays, the process of theoretical frameworks assessment in the social science researches happen without a systematic evaluation nor comparison of capabilities of the frameworks due to the absence of a structured evaluation criteria and consequently might establish inappropriate new framework. Criteria are available in literature, but they are spread across many sources. The purpose of this paper is to develop a systematic approach for evaluation the theoretical frameworks in social science where each framework is evaluated based on a number of criteria sorted on parts namely (design, analysis and conclusion) by using a detailed checklist for better assessment and for simplicity of understanding the evaluation process. This detailed checklist provide a valuable finding about the current state of theoretical frameworks and thus contribute in developing a new theoretical framework addressees the shortcoming of past frameworks and after reporting the result of evaluation, the new framework need to be evaluated by the same checklist to ensure it covers almost of shortcomings in the past frameworks. Most of the criteria were collected from literature, text books, guidelines and approaches used by researchers in different disciplines and some have also been developed by the Researchers.

2 Systematic Evaluations

In general, evaluation defined as a systematic determination of a theme's merit, value and significance by utilizing a group of criteria governed by a set of standards. Evaluation as a systematic and objective assessment that is closely related and meanwhile distinguishable from the traditional social research. The evaluation assesses the outstanding or completed project, programme, organization or any initiative regarding its design, implementation and results. The main goal of evaluation is to gain insight about existing initiatives as well as enable identification of future change and initiatives. However, evaluation examines the reasons behind the failure or success of some area of a project or programme.

Evaluation is a structured interpretation and providing a meaning to expected or current effects of proposals or outcomes. It focuses on original, predicted and completed objectives and how items were accomplished. The Evaluation of prior, relevant theoretical frameworks is an essential feature of any study desires developing a new framework. An effective evaluation creates a robust foundation for advancing knowledge. It supports development or testing of theory, closes parts where a plethora of research exists, and detects areas where research is needed. It is expected that an evaluation provide information that is reliable and beneficial, to provide a feedback or lessons learned for the decision making process.

The purpose of this paper is to develop an evaluation approach to enable social science researchers to evaluate and compare capabilities of different theoretical frameworks. After extensive research over social science researches in different field, an established approach for evaluation of theoretical frameworks is missing. Accordingly, we did a comprehensive survey from different sources and disciplines to collect as well as develop different criteria that might be used to evaluate frameworks in social science researches. Although, a number

of criteria are available but they are spread across various sources and different researchers have emphasized on different aspects. However, criteria are not presented in a structured form and this paper developed an evaluation approach consists of criteria and presented as a detailed checklist in a structured way and distributed on three stages (Design, analysis and conclusions).

3 The importance and purposes of Systematic Evaluation

Most social science researches that desire to build a new comprehensive theoretical framework begin with evaluating of all existing theoretical frameworks in particular field. However, unless an evaluation is thorough and fair, it is of little scientific value. This is the main rationale for undertaking systematic evaluation to synthesize the existing work in a way that is seen to be fair. However, the systematic evaluation must be undertaken in harmony with an established search strategy. The search strategy must allow the completeness of the search to be assessed. In addition, researchers performing a systematic evaluation must make every effort to identify and report research that does not support their preferred research hypothesis as well as identifying and reporting research that supports it to avoid bias and ensure the validity.

The evaluation contributes to secure the optimal quality of the new framework. They also help researchers to manage and improve their future initiatives in upcoming research. However, the most common purposes for undertaking a systematic evaluation are:

1. Summaries the existing evidence or outcomes concerning particular research question within different primary studies (e.g. to summarize the empirical evidence around advantages and limitations of a specific technology).
2. This systematic evaluation is a well-defined approach makes the results of theoretical frameworks assessment is less likely to be biased, but meanwhile does not keep the primary studies from publication bias.

3. This systematic evaluation describe and appraise the quality of subjects of interest in a vast range of human projects and provide evidence in different cases as follow:
4. This systematic approach identify gaps and provide evidence for some areas of variation that can be further investigated when the results of the theoretical frameworks evaluation of some selected primary studies is inconsistent as well as provide a detailed background in order to appropriately position new research themes.

5. This systematic approach provides evidence that the phenomenon is robust and transferable when the result of evaluation is consistent.
4. Considers the extent to which empirical evidence supports or contradicts theoretical hypotheses, or might help in generation of new hypotheses within a need for new theoretical framework.

4 Steps of Systematic Evaluation of the Theoretical Frameworks

Performing the systematic evaluation of theoretical frameworks needs considering three main stages: planning the evaluation, conducting the evaluation, reporting the evaluation. See Figure 1.

4.1 Planning the evaluation

Drawing up an evaluation plan that assign the research question being addressed on a range of relevant primary studies as well as the methods that will be used to precede the evaluation. This stage includes the following steps:

Figure 1: Theoretical Frameworks Evaluation for developing a new Theoretical Framework

Source: Researchers

4.1.1 The desire for systematic evaluation

The need for a systematic evaluation comes from the desire of researchers to summarize and assess all existing theoretical frameworks regarding a particular research question(s) in a comprehensive and unbiased approach. In addition to acquire more general conclusions on the phenomenon instead of evaluating individual studies separately that may permit for further research initiatives. Before conducting the systematic evaluation, researchers should ensure that there is a necessary need to do that. Therefore, researchers should scan and identify if there is any existing systematic evaluation of theoretical frameworks for particular research question or phenomenon of interest and assess those evaluations by suitable evaluation criteria (see checklist Table 1 Q15-Q23).

4.1.2 Determining the research question(s)

Determining the research questions is the most important part in the systematic evaluation. The evaluation questions lead the entire systematic evaluation methodology. The significant issue in any systematic evaluation is to determine the right question and ensure it is meaningful and reasonable as well as important for practitioners and researchers. However, this presented evaluation approach focus on: 1. The search process must specify the theoretical frameworks that address a particular research question(s). 2. The data extraction process must extract the data items needed to answer the determined questions. 3. The data analysis process must synthesize the data in such a way that the questions can be answered.

4.1.3 Developing the evaluation plan

The evaluation plan determines the methods that will be used to undertake a particular systematic evaluation. The evaluation plan is necessary to reduce the possibility of researcher bias because without a plan, it is possible that the selection and analysis of theoretical frameworks may be driven by researcher expectations and consequently reduces the reliability and validity.
The evaluation plan consists of strict path for all the steps of the evaluation to describe conducting and reporting the evaluation which includes determining the following areas: the research question, the search strategy, the selection criteria, study selection procedures, developing a quality evaluation checklist, data extraction and synthesis strategy and reporting as well as dissemination the evaluation. These areas were illustrated in detail in the section 4.2 and 4.3.

4.2 Conducting the evaluation

Once the evaluation plan has been developed, conducting the evaluation becomes clear. However, conducting the evaluation include a step by step approach starting with identification the relevant theoretical frameworks and ending with reporting the evaluation and readiness to develop a new framework.

4.2.1 Identification of theoretical frameworks

The aim of a systematic evaluation is to find as many theoretical frameworks relating to the identified research question as possible using an unbiased search strategy.

4.2.1.1 Generating a search strategy

Determine the suitable search strategy to detect all the relevant theoretical frameworks which related to a particular research question include search synthesis or idioms and the available resources such as electronic databases in digital libraries, journals, and conference proceedings and other resources.

The research strategy can be used by the reader as an evaluation tool to monitor the extent the perfection and strength as well as avoid the repetition during the process of evaluation. Search strategies can benefit from: 1. Preliminary search about any existing systematic evaluations and determine the scope of studies used in those evaluations. 2. Search using various combinations of search idioms, synonyms, abbreviations, and alternative spellings derived from the research question. 3. Documenting all the resources used in the evaluation in sufficient detail for different purposes such as to assess the completeness of the search and for potential re-analysis as well as the need for justifying the selection of particular resources. However, it is important that the search process determine the relevant theoretical frameworks in their primary studies that address the determined research question(s).

4.2.2 Selection criteria of theoretical Frameworks

Once the potentially relevant theoretical frameworks have been acquired, they need to be assessed for their actual relevance. It is necessary to determine which theoretical frameworks are included in or excluded from the systematic evaluation by using inclusion and exclusion criteria to evaluate the prospect theoretical frameworks that provide direct evidence about the research question. Inclusion and exclusion criteria must be strongly related to the research question in the area of research. They should be piloted during developing the evaluation plan and during the search process to ensure that they can be reliably explain and classify frameworks correctly as well as to ensure the precision and reduce the probability of bias in the evaluation. The inclusion and exclusion criteria aim to select the theoretical framework based on (for example journal, language, date of publication, participants, research setting, research design, etc.).

4.2.3 Quality assessment of the theoretical Frameworks

After selecting the general inclusion/exclusion criteria and consequently determining the most relevant frameworks, there should be a quality assessment of selected theoretical frameworks regarding a particular research question. The instrument of quality assessment of theoretical frameworks evaluates the extent to which the framework has the minimum bias and maximum internal and external validity within other frameworks. The term bias in this quality instrument means the tendency to provide outcomes that far systematically from the actual outcomes. However, when there are more unbiased results, the framework will be internally valid. While, the internal validity means the extent to which the design and conduct of the framework are likely to prohibit bias (systematic error). In addition, internal validity is considered a prerequisite issue to achieve the external validity that often called (generalisability, applicability) of the theoretical framework in different contexts. However, the quality assessment can provide the following benefits for researchers and practitioners: 1. Further detailed inclusion/exclusion criteria for precise selection of the most relevant frameworks for particular research interest. 2. Investigate whether quality differences provide an explanation for differences in study results. 3. Quality assessment serves as a tool for measuring the importance of frameworks studies after conducting the assessment. 4. A powerful tool for the interpretation the finding and analysis the strength of frameworks. 5. A quality assessment can provide recommendations for further research and developing a new framework that address the shortcoming of past frameworks.

The presented quality assessment provide a general checklist includes a detailed questions based on number of criteria sorted on three groups (design, analysis and conclusion) to evaluate the extent to which the selected frameworks addressed bias and validity.

4.2.3.1 Development of Quality Instrument (a checklist)

This paper develop a detailed "quality assessments instrument" which is called a checklist that commonly comes from a consideration the issues of bias and validity problems and reveals the intended and unintended effects that could affect the outcomes. The presented checklist (see Table 3) include questions about different issues that might occur at different parts (design, analysis and conclusions) in an empirical study and need to be assessed in each theoretical framework based on a number of criteria (see Table 1) that have been sorted into three parts.

Table 1: The Criteria of Evaluation the Theoretical Frameworks

Part	Criteria	Description
Design	Content relevance	Assessing the extent to which the theoretical framework is consistent with the research questions and objectives, complying with past researches.
	Connectivity	Assessing the extent to which the connections between constructs in the framework is compatible and founded on the related literature review
	Operationalizing	Assessing the extent to which theoretical framework has operationalized the constructs in the right way and whether has a systematic implementational guidance for using framework
Analysis	Methodological quality	Assessing the methodological quality of the framework as well as the extent to which the operationalization allow the research questions to be answered
Conclusion	Effectiveness	Assessing the extent to which the theoretical framework's objectives were achieved/ answered the research question.

		The possibility to cover different research context (generalizability or continuity of the effects) The extent of bias exists in the framework.
	Assessing Value	Assessing the extent to which the framework has extended the existing knowledge.
	Impact	The extent to which the framework produce a positive and negative ,directly or indirectly, effects. The extent to which the framework considers the technological, economic, social, cultural, political, ecological effects.

Source: Researchers

The questions in the presented checklist were collected as well as developed based on reviewing a list of questions and guidelines from different references. A framework might not use all the questions in the checklist. Researchers should select those quality assessments questions that are most applicable for their selected theoretical frameworks.

4.2.4 Data Extraction and Synthesis

The aim of extracting and synthesizing data is to record all needed information for the evaluation of theoretical frameworks and summarizing the outcomes of the included theoretical frameworks in proper way for conducting the evaluation. The accurate extraction of available information leads to accurate results in evaluation. This paper offers a form to facilitate extracting the information and to minimize the probability of bias. Table 2 shows a general data extraction and synthesis form that is formulated to cover the evaluation questions and the quality assessments criteria.

It would be beneficial if the hallmarks of the data extraction and synthesis form defined and piloted during developing the evaluation plan to ensure the completeness as well as the usability of the form. In addition, data synthesis activities should be determined in the evaluation plan. However, it is important that the data extraction and synthesise process extract and synthesis the data needed to answer the identified question(s) for the evaluation.

4.3 Reporting the systematic evaluation

There is no doubt that a systematic evaluation of existing frameworks regarding a particular interest is considered a valuable contribution. Therefore, it is important that the systematic evaluation published in a way that allows researchers to view and evaluate as well as identify whether outcomes from frameworks are consistent with one another. The last step in the systematic evaluation includes writing up and diffusing the outcomes of the evaluation to other interested parties. This paper proposes specific point need to be taken to report the evaluation as follow: 1. writing up an original report about the systematic evaluation of theoretical frameworks after analysing and criticizing the result of evaluation. 2. Specifying the publication strategy to announce the results of the systematic evaluation effectively in the academic journals, conferences, or in a part of a PhD thesis, web pages or direct communications with researchers etc. However, disseminating the report enables the evaluation to have a peer review which may ensure it's validly as a systematic evaluation.

4.2 Developing the new theoretical framework

After evaluating the previous frameworks and reporting the results of the evaluation, the idea of developing a new framework is easy to begin. This research paper is considered as a facilitator of the development of a new theoretical framework based on addressing the research gaps in previous theoretical frameworks and building a more comprehensive framework. The new theoretical framework should be evaluated by using the same checklist in table 3 to realize the extent to which the new framework is well-established and improved more than the past theoretical frameworks.

Table 2 Data extraction and synthesis for theoretical framework

Part	Data Source	Statement of data required	Additional note
Design			
Analysis			
Conclusion			

Source: Researcher

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Table 2: A Checklist for Evaluation the Quality of Theoretical Frameworks in Social Sciences Research

Questions		If yes (X)
Part 1: Evaluating the Design		
Content Relevance		
1	Does the theoretical framework founded with consistent with the research questions?	
2	Do the originally defined aims and objectives of the framework were clear, realistic and compatible with existing knowledge?	
3	Was the framework developed clearly to address the literature gap/s for the study?	
4	Does the literature gap that need to be addressed using the theoretical framework is compatible with past research?	
5	Has the theoretical framework covered the most relevant and significant literature of area of interest or at least a representative sample?	
6	Have the theoretical framework founded on an up to date literature?	
7	Does the constructs in the framework is compatible with past literature elements?	
8	Did the framework consider researches that are counter to its theoretical perspective during developing the framework?	
9	Did the framework distinguish clearly between the previous researches' facts and opinion during the formulation of your theoretical framework?	
10	Does the framework present precisely how the literature has been searched and the criteria used to select specific researches to formulate the framework?	
11	Are the constructs in the theoretical framework subject to a set of relevance criteria for inclusion in the framework or not?	
12	Does the structure of the framework clearly reflect the focus of its research interest?	
13	Has the framework been subjected to inclusion or exclusion criteria during the development of the theoretical framework?	
14	Are the constructs in the theoretical framework is based on up to date researches?	
15	Did the framework take into account the finding of any existing evaluation of frameworks evaluation during developing the framework? If yes answer Q 16 – Q23	
16	Does the evaluation objectives were rational and reasonable? Was it reasonable to combine the studies?	
17	Were there any restrictions on searching on relevant theoretical frameworks?	
18	Are the evaluation's inclusion and exclusion criteria appropriate and described in proper way?	
19	Are the resources used to search for relevant theoretical frameworks in this evaluation in their primary studies adequate and covered all relevant studies?	
20	How sensitive are the results to the way that the evaluation has been done?	
21	Have numerical results been interpreted with common sense and due regard to the broader aspects of the problem?	
22	Does the evaluation use a systematic structural approach in assessment the frameworks?	

23	Do the conclusions flow from the evidence?	
Connectivity		
24	Does the connectivity (relationships between variables) within constructs in the framework compatible and founded on the related literature review?	
	Does the framework determine a reason for such connectivity to link between elements? (The directions of each connectivity)	
25	Does the framework consider the significance or (priority) between constructs in the framework?	
26	Does the framework present a reason or a base for adopting these particular constructs and/ or sub-elements?	
27	Are the rationality of selecting the particular elements in the framework is justified in scientific way convinces the reader?	
Part 2: Evaluating the Analysis		
Operationalization		
28	Does the framework operationalize the constructs in a way ensure measuring it in the right way?	
29	Does the framework use an illogical argument, emotionally toned words or appear to choose only those cases that support the point being made?	
30	Does the theoretical framework develop a systematic step by step implementational guidance for using the framework?	
31	Does the theoretical framework support the implementational guidance with examples on how to use the framework?	
32	Does the theoretical framework use a systematic structural approach in evaluation the previous frameworks?	
33	Does the language and spelling in operationalizing the theoretical framework incorrect?	
34	In recent years, some terms have been replaced by others; does the theoretical framework use incorrect terminology/synonymous?	
35	Does the framework avoid jargon and using accepted terminology?	
36	Does the framework provide guidance for future research? Is there a scope for future research activities?	
Methodological quality		
	Are the hypotheses/ proposition covered each section of the framework?	
37	Was methodological quality assessed in the framework?	
38	Does the operationalization (measure) of theoretical framework allow the research questions to be answered?	
39	Does the framework use a sufficient population to investigate its validity?	
40	Does the data collection method (e.g. survey or interview) likely to have introduced significant bias?	
41	Does the sample represent the whole population to allow generalizing the framework to another research context?	
42	Did the researcher(s) assess the quality/ validity of the included frameworks?	
43	Are the constructs in the framework valid, reliable and adequately measured?	
44	Is the scope of variables in the theoretical framework sufficient to have changes in the area of research to be identified?	
45	Are there omissions or bias in operationalizing the theoretical framework?	

Part 3: Evaluating the Conclusion		
Assessing Value		
46	Has knowledge or understanding been extended by the theoretical framework?	
47	Does the selection of constructs in the framework appear to be biased?	
48	Has the theoretical framework established on the most relevant theories in the area of research?	
49	Was the framework developed after assessing the strengths and weakness of the previous frameworks in the area of interest?	
50	Did the framework assess the existing theoretical frameworks in the research area objectively?	
51	Does your theoretical framework is based on a coherent and cohesive arguments that convince the reader?	
Effectiveness		
52	Are all research questions answered through the theoretical framework?	
53	Have the objectives of the framework been achieved ?	
54	Did the theoretical framework clearly and sufficiently overcome the literature gap/s in the study?	
55	Did the main findings of the study favourable/supported for the theoretical framework?	
56	Is the theoretical framework has an inconsistencies in current knowledge and understanding?	
57	Does the framework might cover different research contexts (generalizability or continuity of the effects?	
58	Are the results of implementing the framework consistent (in line) with previous research?	
59	Has any consequences been detected in the validity and /or reliability of the validation of the theoretical framework?	
60	Is the theoretical framework has a lack, inconclusive, contradictory or limited evidence?	
61	Are the findings which based on the framework is credible and important?	
62	Does the theoretical framework have inconsistencies in current knowledge and understanding?	
63	Is the assumption (theoretical perspective/values) underlying the theoretical framework well established, clear and easy to understand?	
64	Are there omissions or bias in the theoretical framework?	
Impact		
65	Does the evaluated theoretical framework need further investigations?	
66	Does the framework produce a negative, directly or indirectly, effect?	
67	Does the framework consider the effects of the technical, economic, social, cultural, political, ecological factors?	

5 Research Quality

This section discusses the general standards for assessing the quality of the present paper regarding its reliability and validity where these concepts have been replaced to the term 'verification' by different researchers such as (Denzin and Lincoln, 1994; Strauss and Corbin, 1998). However, it is worth to justify the quality of the proposed systematic approach for evaluating the theoretical frameworks in this paper.

Internal validity expresses the strength of qualitative research (Creswell, 1998; 2003). There is some strategies suggested by Creswell (2007) used for ensuring the validity of research where it is recommended to use at least two strategies in each particular research. This research paper used a peer review as one of the research collaboration strategies to ensure validity. The proposed approach was supervised by academic scholars with extensive quantitative experience by criticizing the selected criteria and the checklist for the presented evaluation approach. In addition, the Researchers consulted external editors who have a sufficient experience in evaluating the research standards to ensure preventing any kind of bias (systematic error) in the research paper.

The reliability refers to the extent to which the procedure has identical findings when replicate an earlier study (Tabachnick and Fidell, 2007; Gill and Johnson, 1991). However, (Neuman, 2003) referred to some of the verification strategies to support the reliability of research where the presented research used the methodological coherence to express the congruence between the research questions and the components of the method.

6 Discussion and Conclusion

This article has presented a detailed guide to developing a systematic literature review with the purpose of evaluating the theoretical frameworks. The steps have been delineated so as to assure a rigorous review, one that is valid in its goal of producing a comprehensive summation and discussion of the existing literature on a research question of interest. We have emphasized the need for such a review to be explicit in describing the procedures followed, to the extent that the results could be reproduced by independent researchers carrying out the same review process.

This guide presents a step-by-step approach to carrying out the rigorous, scientific methodology of a systematic literature review to evaluate frameworks. this written approach generally enough to be applicable to a broad range of fields, it incorporates SLR guides from related fields—social sciences, management, and software engineering; it covers synthesis of both quantitative and qualitative primary studies. Moreover, for each step of the process, it provides references to helpful resources that provide further detail on conducting each step of the SLR. While reproducibility is an important mark of a rigorous study, the value of the study depends mainly on it being comprehensive in incorporating all relevant literature. To assure this, the practical screen must be careful not to unreasonably exclude studies that could be significant to the general body of knowledge on the topic. In addition, the search for literature must be thorough and far-reaching, so as not to miss any potentially important studies.

While we have been fairly detailed describing each step, it is impossible to elaborate on all the particulars necessary to create a literature review in one article. The cited studies go into more detail on specific procedures, considerations, and judgments that must be made along each step. We hope that in conjunction with these additional sources, this guide may serve its purpose in aiding the development of rigorous and valuable research literature reviews.

This originality of this paper lies in its distinctive systematic approach in conducting evaluation for theoretical frameworks in general. The paper offers a clear approach that will allow future scholars in social sciences to improve the quality of their research evaluation. Systematic evaluation of the theoretical frameworks effectively reveals the shortcomings and weaknesses and provides a chance to develop more comprehensive frameworks in the area of

interest. In the past, a systematic approach for evaluating the theoretical frameworks in social science is missing. This is due to the absence of structured criteria that can be used for evaluating the theoretical frameworks. Therefore, we develop a systematic approach based on some criteria covering different parts (design, analysis and conclusions) which consequently used for evaluating the collected theoretical frameworks after implementing strategies in searching, selecting, data extracting and synthesising data for conducting a comprehensive evaluation via a detailed quality assessment instrument called checklist. In table 3, we conclude our important evaluation questions to be used by researchers to evaluate frameworks as a main pre-quasits to develop a new theoretical framework that overcomes the weaknesses of past frameworks.

7 Implication

There are also some limitations of this study which we plan to overcome in an extended version of the paper. In table 1, the criteria are described very briefly and motivation of including each criterion is not presented due to space limitations. The motivation for selection of each criteria and its related reference will be presented in the extended version of the paper.

8 Recommendations

Researchers can work with this evaluation approach to make further improvement to attain a full coverage of evaluation criteria as well as to overcome some of the constraints affecting the evaluation, for example through the greater use of contrast between frameworks. In addition, this paper recommends developing a systematic evaluation approach of the literature review which will be supported by a detailed checklist.

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