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# *Research design*



*Professor : Caroline Mothe*


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## AGENDA – Jan 20 & 24, 1-4.30pm

Research design - exercises on the articulation between theory, methodology and empirical work  <b>COURSE OUTCOMES</b>	1. Know what a research question is and distinguish it from a managerial question
	2. Know how to write a literature review highlighting a gap
	3. Know which methodology to choose in relation to a research problem

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## OBJECTIVES

1. Present the progress of a thesis and its different phases


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2. Learn to decipher literature and research articles

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2. Know how to present research and the articulation between theory and empirics

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## Foreword



- No research without questioning
- No questioning without conceptual apparatus, without theoretical reflection
- No theoretical reflection without criticism
- No good research without a balance between theory and empiricism

→ importance of the problematic or RQ in order to **“create “actionable” research”** (Kalika, 2017: 17): the essence of a DBA!!!

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## Foreword (2)

- No research without method (for the theoretical reflection and for the field work) at each stage:

- exploration,
- documentation,
- research,
- writing.



No search without work ...

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## What is science ?



A systematic activity

- a coherent body of knowledge must be produced
- integrate them into a knowledge system

... focused on reality

- for example, nature, society, thought
- in other words, it is not speculation in the abstract

... which uses specific tools (assumptions, theories, methods, etc.)

... which attempts to generalize by contributing to theories, producing laws, etc.

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## What is science (2) ?



A frequent belief in determinism

- the belief that any phenomenon is the necessary consequence of common conditions.

In other words, chance in explanation would be a measure of our ignorance.

A belief in the principle of relativism:

- our knowledge is imperfect and relative

.... Especially in social sciences, where man is both subject and object, observer and observed.

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## What is an interesting research?



The aim is to produce something new:

- answer new questions or old questions that have not been answered adequately
- answering differently questions that have already been addressed
- to support responses with a new argumentation

... And something that "pleases"

- to a certain community (you do not write for yourself!)
- to yourself....

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Types of research: according to the degree of "theorization"



1. Pure **description**  
It has no great scientific value ...

2. **Classifications**, categorization, etc.  
 • The "smart" case study (exploratory research)  
 • Type (identification of classes of similar cases)  
 • The ideal-type (identification of "theoretical" cases)  
 • The model (or simulation, which shows interactions)

3. Research where **theory** plays an important role.  
Theory generalizes and shows patterns, seeks to understand and/or explain and/or predict.

Types of research: according to the scientific purpose

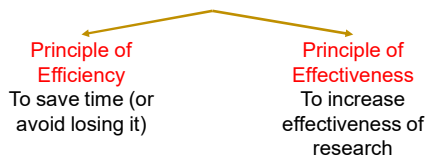


**Explain**  
 "Test / develop hypotheses"  
 "Explain by laws / theories"  
 "Predict with laws"

**Understand**  
 "Highlight mechanisms"  
 "Describe and explore"  
 "Propose theories"

**Design**  
 "Analyze a problem and give a solution"  
 "Engineering"

A useful little guide \*



« It is up to each individual to adapt these indications of method to his/her problem and research topic taking into account his/her own personality »

\* Source: ELEMENTS DE METHODOLOGIE POUR L'ELABORATION D'UN MEMOIRE OU D'UNE THESE de feu le Professeur Robert PATUREL, le 09/10/2007

Starting from a managerial problem

- Which problems? What is the managerial problem/question? Tensions?
- What does the literature say about it?
- Can you find a gap in the literature linked to it? What are the theoretical lenses used?
- How do you formulate your research question?



## Starting from a managerial problem (2)

- How do you want to respond to your RQ (**Research design**)?
  - Sub questions
  - How to respond: who, when, how
- What are the expected results?
- What contributions do you expect (theoretical but above all, managerial) and **for whom**?
- Which thesis do you want to defend?



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## The Research design in the whole research process

- 1: Identification of a theme of research
- 2: Literature review (and exploratory interviews ?)
- 3: Definition of the main research question
- 4: Elaboration of the research design (incl. methodology and epistemology)
- 5: Data collection
- 6: Data analysis
- 7: Results/discussion

All articles are articulated, more or less, around these steps. See: <https://carolinemothe.jimdo.com/>

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## Using ChatGPT along the process

(Thanks to Jean Moscarola for all slides on ChatGPT, BSI)

- Experimenting and participating to the evolution of research protocols!
- The intelligence is YOU, not the ChatBot!
  - Know how to ask questions
  - Know how to read the answers
  - Deepen interactions
  - Be transparent along process



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## The new tools do not change the scientific requirements

Like any other tool, the use of a ChatBot is subject to the **requirement of scientific work**.

**Critically examine the statements** it produces: they are only plausible and potentially biased.

**Resist the ease or temptation to copy**. Read, rephrase. Or, better yet, write remotely from the ChatBot. Or cite it if necessary.

**Publish your exchanges** with the ChatBot in the text as a link in a footnote or as an appendix.



They increase the risk in proportion to their effectiveness


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**This applies to all stages of the research**

- 1/ Formulate the research question
- 2/ Finding bibliographical references
- 3/ Find the sources and collect the data
- 4/ Analyze data and produce results
- 5/ Communicate and develop managerial implications

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**8 phases of a research**



- **THE RESEARCH PROJECT**
  - 1 - The exploration and reflection phase leading to the choice of the specific theme
  - 2 - The phase of formulation of the hypothesis/central idea of the work and the main articulations of the demonstration
  - 3 - The drafting of the research project
- **THE RESEARCH ITSELF**
  - 4 - The in-depth documentation phase
  - 5 - The verification of the idea or the hypothesis by processing the data
  - 6 - Acceptance or rejection of the idea or hypothesis
  - 7 - The synthesis phase of the work, drafting and development
  - 8 - The defense before the jury

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**1. Exploration and reflection leading to the choice of a specific subject**


**RESEARCH PROJECT**

**The problem**  
To move from a theme of general character to a real subject ... from a problem to a problematic/research question!

- **Social demand**  
Be relevant at the time of the defense  
>> respond to a social demand **without confusing science** (production of a reproducible - teachable scientific statement) **and consultancy** (pragmatic response to a circumstantial problem).
- **Justification of the subject**  
Why is it difficult to treat?  
Why does it take a researcher or have been trained to research to drive it?  
What lock does the researcher want to blow up with the work?

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**Starting to interact to find a research question**



Let's learn about the dialogue with **ChatGpt**


This will allow us to build prompts that can answer what is expected of a research question.

To do this, you need to:

- 1/ Have general knowledge of what a research question is
- 2/ Be aware of the project yourself to inform the ChatBot
- 3/ Know how to translate this in the form of a prompt
- 4/ Be able to react to answers

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### How to start a search and find a topic



**Starting from the observation.**  
State a problem or difficulty: "I can't ... I don't understand... I don't understand why... »

**Starting from an idea:** To state a curiosity, formulate an intuition: "what does this notion correspond to... I feel like... »


**Starting from a will, a desire for action or a project:** "I want to set up, use... »

Explain the situation to **ChatGPT** by writing a prompt that specifies:

- Your professional identity and as a researcher
- What motivates your project
- Your project to do a thesis
- What you're waiting for as an answer

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### Formulate a question: The prompt. Project Management Example



**The prompt**

I am responsible for the harmonization of project management methods in a large global public works company.

I am faced with a wide variety of situations in different countries and I find it very difficult to rationalize approaches.

I would like to use this experience from my professional life to start a DBA thesis.

1/ What do you recommend?  
2/ To move forward, propose 3 research questions

**Provide connexions**

- Situate yourself
- Set the context
- Indicate your intention
- Specify your request

Then, your prompts should help you to refine concepts and design the relationships between them. This is how we can define a research question that allows a good understanding of the phenomena.

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### Scope and Limitations of ChatGPT Responses

The prevailing impression is that of an **enumeration of points stated independently of each other**. The only perceptible links are those of belonging: the great ideas are detailed, which contributes to an initial organization of thought.

But there is **no progression of thought, no memory of antecedent or causal links**. The texts produced by the AI do not explicitly include any argumentative links linking different paragraphs.

It is up to the **reader, user and author**, to rely on these enumerations to:

- construct a **reasoning**,
- evoking **causalities**,
- bring out the **possible explanations**,
- Point out the **complexity of the interactions**.

The design of the research question is traditionally done by taking note of the literature and mobilizing one's own knowledge

Brainstorming can continue with ChatGpt:

A/ By stating the possible causal links to ask if:  
-the AI finds traces of this reasoning. AI is used to "test" a hypothesis semantically;  
-there are any examples to illustrate this reasoning. AI is used to "test" empirically.

B/ By asking the AI to classify the points listed into causes and consequences in relation to the phenomena studied.

C/ Ask for a summary of the answers to points A and B.

In any case, it is essential to read the answers carefully in order to formulate your own text by expressing what you have understood. At the risk of endorsing the approximations and inconsistencies of AI.


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### Try it on your own research

**Prompt from scratch**

Write your prompt:

Your identity: .....  
Your professional activities: .....  
Your curiosity/subject/ Your difficulties, your projects  
.....  
Your search intent  
.....  
What you want to know  
1/.....  
2/.....



**You've already worked and produced a text defining your project...**

**Prompt:**

I am..... I work in... I intend to do a DBA thesis and I have written the following text: "full copy of the text you have..... no more than 3000 words"  
1/ What do you think, in terms of form and content?  
2/ Can you summarize the essentials in a few lines?  
3/ What research question should be proposed for a DBA based on this text?


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RESEARCH PROJECT

1. EXPLORATION AND REFLECTION LEADING TO THE CHOICE OF A SPECIFIC SUBJECT(2)

Take a position on the following **7 points**:

- 1) Delimitation of the **field** studied (positioning of the researcher without which one cannot measure its contribution)
- 2) Identification of the **objectives** pursued (with regard to the theoretical gap identified) – and the **research Q**
- 3) Comprehensive perspective on available **literature**:
  - the present state of the theoretical analyses
  - existing studies on the subject
  - available data and documentation.
- 4) Choice of the **method of analysis**



NB: in a thesis in Management, the **field** is compulsory, especially for a **DBA**, where it is **crucial**.

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RESEARCH PROJECT

1. EXPLORATION AND REFLECTION LEADING TO THE CHOICE OF A SPECIFIC SUBJECT(3)

- 5) Options relatives to the **analytical and theoretical contexts**?
- 6) What is the **specificity** of the subject which gives it its own interest?
- 7) What is the expected **contribution for whom**?

→Operational design of a specific subject, the possibilities of dealing with it, and how it will be addressed.

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RESEARCH PROJECT

2. Explication and formulation of the central idea and the major articulations of the demonstration

- Phase 1 should lead to one of the decisive steps in any research: the choice and specification of a central hypothesis or a priori idea on the subject

This hypothesis / idea can not be "abstract": it is the result of a first reflection on the subject


**Fundamental idea: one finds only if one seeks something**




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2. Explication and formulation of the central idea and the major articulations of the demonstration (2)


- The central idea should be explicit from the beginning, to draw a common thread, a demonstration diagram
- It is nor a banality nor an *ex nihilo* proposition


 It must be **falsifiable, refutable and empirically derived from a theoretical corpus.**



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2. Explicitation and formulation of the central idea and the major articulations of the demonstration(3)




**RESEARCH PROJECT**

This working hypothesis is reflected in a central research question

- It is the culmination of a previous double work: choice of subject and brushing (which requires a fairly accurate insight into the existing literature)
- To develop the **main research question** through a constructed set of sub-questions and interrogations based on coherent and rigorous tools, concepts, theoretical elements
- Sub-questions will show the idea development.


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3. Towards the research project

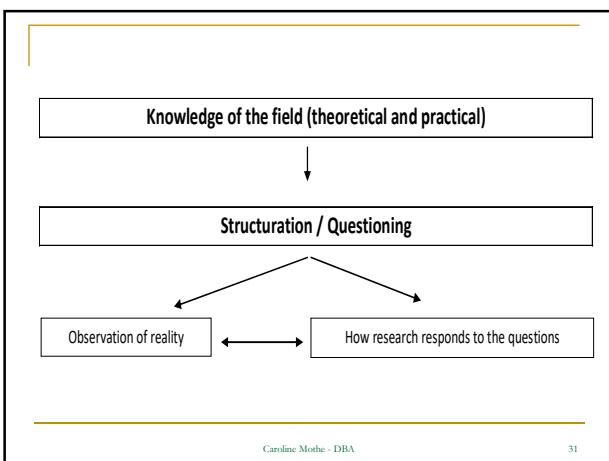


**RESEARCH PROJECT**


- Provide the conditions under which the main hypothesis will be verified, or the way the researcher will answer his/her main research question
- **Methodology**: qualitative vs quantitative? Not really...
- **Epistemology**: constructivist, positivist, interpretativist, critical realist....



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3. Towards the research project (2)



**RESEARCH PROJECT**

"This project consists usually of **about 10 pages** with :


- The **title of your thesis project** as precise as possible.
- The **importance** of the theme, its topicality.
- Its **academic interest**.
- Its **managerial interest**.
- The **literature** review based on what you read.
- Possibly, the **anticipated research model or framework**.
- The suggested **data collection methodology**.
- The research **agenda**, its main stages.
- The **bibliography**, including the professor's read references.
- The CV in Appendix (Kalika, 2017: 52-53)

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### 4. Documentation and literature review

THE RESEARCH ITSELF



1) **Main rules**

- Very precise references
- Multiply "explorations" from possible sources


2) **Basic references** (seminal – establish hierarchy)  
 Few and central  
 Knowledge of recent work and current controversies. (which helps to identify the theoretical gap)  
 Never use 2nd or 3rd hand sources  
 Distinguish fundamental from less important sources  
 Level of reviews (hierarchy of references)

Periodically, make assessment (acquired / to be done.... Set deadlines!!!)

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### The literature review

- Know how to distinguish different types of information
- Academic literature / different levels
- "Extension" works
- Press articles...
- Bibliographic searches
- On electronic databases (EBSCO, ...)
- Management Encyclopedias
- Use bibliographies given in books / articles
  - Zotero or Mendeley? Or manual?



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### The literature review according to ChatGPT



1. Establish a theoretical foundation
2. Demonstrate knowledge of the subject matter
3. Identify gaps
4. Avoid redundancy
5. Stand Your Case
6. Follow academic standards
7. Provide methodological support

Pay attention to the version used!  
 Plugin or not plugin  
 Everything is changing very quickly

Read → React → Decide → Synthesize → Quote

Write like an author

Identify **debates** and **controversies** and **situate** oneself in relation to them.  
 Decide what you want to bring to the table and **name it**.

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### Situate your project in relation to literature

**Prompt:**

For my DBA, I am undertaking a thesis on the following research question: ".....?"  
 In order to better frame my topic, can you:

- 1/ Help me take stock of the knowledge in the academic and professional publications with the main references;
- 2/ Write a synthesis of the knowledge on which there is consensus;
- 3/ Tell me the points that remain controversial and the main debates.

- 1/ Situate
- 2/ Recall the research question
- 3/ Find the academic references to which it refers
- 4/ Identify **consensus** and **controversies**



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### Scopes and Limitations of ChatGPT for bibliographic and documentary research

NB: plugin **Scholarly** in the paid version (ChatGPT plus: 20€ / month)



"Can you give me the keywords and the corresponding query for a bibliographic search in Google Scholar?"

A pretty good search engine

A superficial copywriter


Real opportunities for interaction

A valuable time-saving assistant and widening the field of view

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### 5 steps for a literature review




Several steps are necessary to write a good literature review:

1. Synthesize and evaluate information
2. Identify the main ideas of the literature
3. Identify the central idea of the literature review
4. Organize the main ideas of the literature review
5. Write the literature review

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### What is an academic review?




- Publication of research articles
- Articles are evaluated, selected, revised...
- Examples:
  - RFG, MI, RAM, RGRH, FCS, Finance
  - Academy of Management Review/ AM Journal, JPIM, Research Policy
  - Journal of Marketing
  - Organization Science, Organization Studies....
- See list produced of reviews by the French CNRS

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### And Internet?



- **Very useful...**
  - Databases of scientific articles: research articles
  - References of works / availability in library
  - Some open access academic texts (conference proceedings, working papers, "classic" books)
  - Empirical information ...
- but insufficient ...**

Lack of overview Information often partial ... even dangerous  
 Quality of information collected?  
 Attention to sources  
 Do not be tempted by the "copy and paste" ...

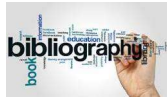
**Plagiarism severely punished**

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## Bibliographical research

Two complementary ways:



→ **Ascent** of the bibliographical paths, starting from the recent works / articles

→ **Systematic search** of files from keywords.

- Each note must immediately be followed by an identification of the source
- Each source must be the subject of a **complete form**, with the reference, edition or date of the person interviewed ...
- Otherwise, plenty of notes without sources...

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## Taking notes



- Note the complete bibliographic reference
- Note the plan / chapters / methodology ...
- Rate the page
- Note whether it is a quote or not
- A bibliographic reference includes ...
  - The names and surnames of the authors
  - The year of publication
  - The title of the book / article
  - Book: City and Publishing House
  - Journal: Title and number of the journal, pages of the article
  - Collective work: Names publishers, title book, city, editions, pages ...
  - Internet: link (www.link.com), date

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## Selecting information



- Understand the internal logic of each document
  - What is the author for?
  - What is its purpose?
- Sort information
  - The general theoretical framework
  - Theoretical concepts specific to the subject
  - The empirical studies that helped to construct / validate these concepts
  - Examples of illustrative nature
  - "New" data, specific to the object of study ...

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## 5. Data collection, coding, treatment and analysis



### Critical phase of all research...

- 1) It is necessary to classify and sort the data, prioritize (and justify)
- 2) Do not accept any data, discuss the reliability of the information
- 3) Formulate the problem well: What are we trying to demonstrate?

**Focus on managerial significance (especially for a DBA) and interpretation of results.**

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## How to elaborate a design?



- **Reverse process** by projecting the type of expected result
- Evaluation of the **different possible methods** of obtaining the expected result: wide variety (quantitative or qualitative):
  - Does the method(s) allow to answer the problem?
  - Does it make it possible to get the expected result?
  - What are the conditions of use of this method(s)?
  - What are the limitations or weaknesses of this method(s)?
  - Is the weakness of one compensated by the other? Are the methods compatible?
  - Is one method superior to the other? Why?
  - Do I have the skills to acquire them?
- Which mode of **data collection** (nature of the data, methods of collection, nature of the field of observation, data sources)?

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## Expected results



- Going **back and forth** to elaborate the design
  - At the end of this phase, the elements (methods, techniques and expected results) can be coherent among themselves but may not answer exactly the RQ
    - If divergence, rephrase the original questioning (and readjust the literature review?) Rather than elaborate a new design
  - Need at this stage to verify the **expected contribution** of the research in the field concerned
    - Do the expected results address the issue?
    - Are these results properly related to the literature review?
- Importance of discussing these findings
- What is the contribution of research in the field to which I wish to contribute?
  - What is the degree of generalization of the results?

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## 6. Result discussion and implications



- Whether the idea, proposition, or a priori / starting hypothesis is **corroborated or not**, what consequences? (See Kuhn / Popper)
- **Implications and consequences?**
- At this stage, the phases of the research can be considered as completed ...

Remaining: dissemination and communication

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## 7. Synthesis and writing



- Time needed for this phase: more time consuming than you think!
- **Different ways:** either you write a little bit every day, or a lot every week end...
- **Problem** with writing the theoretical part over time... it may have to be changed according to the research design's results...
- **Solution:** during the first phases, be as concise and clear as possible and elaborate a well-designed research design!

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## 7. Synthesis and writing (2)

**IMPORTANCE of the INTRODUCTION**

- Written at the end of the work
- Presenting research, situating it
- Discuss all issues related to the topic, but not addressed (for various reasons)
- Introduce the framework
- Relatively long (10-15p)

## 7. Synthesis and writing (3): INTRODUCTION IN 7 POINTS

1. **Attack Phrase/hook** that puts the reader "into the theme" by a somewhat "shock" approach
2. **Progression** from theme to subject
3. **Questions** that arise in relation to the specified topic (theoretical projections)
4. **Practical, theoretical, methodological and even personal interest**
5. **Problems** posed by the terms used to treat the subject
6. **Thesis defended**
7. **Plan** selected/justified: concretization of the defended thesis



## 8. Defense and jury



- Administrative constraints
- Jury composition
- Duration of thesis defense

*Very important moment....*

*Preparation of slides to be careful done*

*The reviewers will have done their job and give their opinion: you need to prepare the answers to their questions and provide a presentation that makes it clear that you have taken some time to digest....*

## As a conclusion...

- A research does not put an end to the question being addressed
- It is a step for the researcher and for the knowledge of the field ...that requires modesty (awareness of limitations of the research)

**Well done! A Fascinating Adventure!**



*Recommended books:*

Kalika, M. et Beaulieu, P. 2017. *The DBA thesis project*, EMS, BSI.

de Vaus, D. 2001. *Research Design in Social Research*, Sage.

1. Which problems? What is the managerial problem/question? Tensions?
2. What does the literature say about it?
3. Can you find a gap in the literature linked to it? What are the theoretical lenses used?
4. How do you formulate your research question?
5. How do you want to respond to your RQ (Research design)?
  - a. Sub questions
  - b. How to respond (methodology, field, etc.): who, when, how
6. What are the expected results?
7. What contributions do you expect (theoretical but above all, managerial) and for whom? Which thesis do you want to defend?

<b>Data type</b>	<i>qualitative</i>	<i>quantitative</i>
<b>Treatment/analysis</b>		
<i>qualitative</i>	Qualitative (methodology)	Quantitative
<i>quantitative</i>	Qualitative	Quantitative methodology

Authors (X & Y, 2008)	Title	Research Q	Theory	Methodology	Results	Link to my research

# Writing introductions

SMS 2017

JAY B. BARNEY

EDITOR IN CHIEF, ACADEMY OF MANAGEMENT REVIEW

PRESIDENTIAL PROFESSOR OF STRATEGIC MANAGEMENT LASSONDE CHAIR OF SOCIAL ENTREPRENEURSHIP ECCLES SCHOOL  
OF BUSINESS, THE UNIVERSITY OF UTAH

# Introductions: Writing as joining a conversation

- ▶ Introduce yourself
- ▶ Make it clear you've been listening
- ▶ Identify the next story
- ▶ Make it clear why the next story adds to the conversation

All in 1.5 pages



## A simple framework

- ▶ First sentence: "This is the conversation I want to join"
- ▶ Rest of first paragraph: "I have been listening to this conversation, and these are its main elements."
- ▶ First word of second paragraph: "However"
- ▶ Rest of second paragraph: "This is the next topic in this conversation, and this is why this topic is important."
- ▶ First sentence of third paragraph: "The purpose of this paper is . . ."
- ▶ Rest of third paragraph: "Preview critical conclusion/finding; preview unusual sample/unusual method; preview the structure of the paper."

## A simple framework: Example—"Diversification and the Value of Individual Firms," with Ty Mackey and Jeff Dotson, SMJ, 2017

- ▶ First sentence: "This is the conversation I want to join"

"It is probably the case that more has been written about the relationship between corporate strategy and firm performance than any other topic in the field of strategic management."

## A simple framework: Example

- ▶ First sentence: "This is the conversation I want to join"
- ▶ Rest of first paragraph: "I have been listening to this conversation, and these are its main elements."

"Theoretically, some scholars have focused on the performance effects of different types of diversification (e.g., related vs. unrelated), while others have focused on when firms can enhance their performance by engaging in diversification instead of remaining focused. Taken as a whole, prior theory suggests that the ability of a diversification strategy to create value depends on the specific resources and capabilities controlled by a firm and the context within which it is operating."

"Of course, this theoretical literature has given rise to a large empirical literature. Some of this work has examined the average impact of different types of diversification (e.g., related vs. unrelated) on firm value, while other work has examined the average impact of diversification on a firm's value relative to a portfolio of focused firms. Overall, this empirical work seems to suggest that, on average, related diversified firms outperform unrelated diversified firms and that, controlling for the propensity to diversify, diversified firms do not, on average, trade at a discount compared to focused firms."

## A simple framework: Example

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"However"

## A simple framework: Example

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"despite this voluminous work, there is a fundamental mismatch between the theoretical diversification literature—which examines the relationship between diversification and firm performance for individual firms—and the empirical diversification literature—which examines the average relationship between diversification and firm performance for a sample of firms. Such a mismatch would not be problematic if it was possible to infer the firm specific relationship between diversification and performance from the average relationship between diversification and firm performance in a sample of firms. However, this will rarely be the case. In particular, knowing that—on average—firms pursuing related diversification strategies outperform firms pursuing unrelated diversification strategies does not necessarily imply anything about the relationship between the type of diversification strategy chosen and performance for a particular firm."

## A simple framework: Example

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"The purpose of this paper is . . ."

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- ▶ First sentence: "This is the conversation I want to join"
- ▶ Rest of first paragraph: "I have been listening to this conversation, and these are its main elements."
- ▶ First word of second paragraph: "However"
- ▶ Rest of second paragraph: "This is the next topic in this conversation, and this is why this topic is important."
- ▶ First sentence of third paragraph: "The purpose of this paper is . . ."
- ▶ Rest of third paragraph: "Preview critical conclusion/finding; preview unusual sample/unusual method; preview the structure of the paper."

## A simple framework: Example

- ▶ Rest of third paragraph: "Preview critical conclusion/finding; preview unusual sample/unusual method; preview the structure of the paper."

"The purpose of this paper is to re-examine the relationship between a firm's diversification strategy and its performance using a method—hierarchical Bayesian modeling—that enables the estimation of this relationship at the firm level. Consistent with prior theory, the empirical results in this paper show that all forms of diversification strategy—related diversification, unrelated diversification, and remaining focused—can create value for different firms. Indeed, most firms in the sample studied in this paper choose a value creating diversification strategy."

## Common errors in writing introductions

- ▶ Putting the entire lit review in the first paragraph
- ▶ Trying to summarize entire theory in second paragraph
- ▶ Trying to make the paper about more than one thing
- ▶ List of contributions
- ▶ Describing, in detail, your unique methods or data
- ▶ Starting with specific phenomena
- ▶ Letting the introduction go over 2 pages: Bad writing = bad thinking

# DISCUSSING FINDINGS

CAROLINE MOTHE  
PROFESSEURE DES UNIVERSITÉS

1

# INTRODUCTION

- Discussing results includes **two types of activity**:
  - a) considering both sides of an issue, or question before reaching a conclusion
  - b) considering the results of research and the implications of these.

"Many students reach this stage having been focused for several years on the 'trees'. The discussion provides an opportunity to revisit the 'forest'

Source: Brian Scholl, Yale Univ.

# **THE MOST IMPORTANT AND DIFFICULT SECTION OF YOUR RESEARCH**

- Demonstrates your ability to think critically about an issue, to develop creative solutions to problems based upon a logical synthesis of the findings, and to formulate a deeper, more profound understanding of the research problem;
- Presents the underlying meaning of your research, notes possible implications in other areas of study, and explores possible improvements that can be made;
- Highlights the importance of your study and how it can contribute to understanding the research problem within the field of study;
- Presents how the findings revealed and helped fill gaps in the literature that had not been previously exposed or described;
- Engages the reader in thinking critically about issues based on an evidence-based interpretation of findings; it is not governed strictly by objective reporting of information.



## **PROVIDING BACKGROUND INFORMATION: REFERENCE TO THE LITERATURE**

- Several reports have shown that ...  
As mentioned in the literature review, ...  
Prior studies that have noted the importance of ...  
Very little was found in the literature on the question of ...  
Previous studies evaluating X observed inconsistent results on whether ...  
A strong relationship between X and Y has been reported in the literature.

## **PROVIDING BACKGROUND INFORMATION: REFERENCE TO THE QUESTION**

- The first question in this research was ...  
An initial objective of the project was to identify ...  
The second question in this study sought to determine ...  
It was hypothesized that ...  
The present study was designed to determine the effect of ...  
With respect to the first research question, it was found that ...  
This study set out with the aim of assessing the importance of X in ...

## **RESTATING THE RESULT OR ONE OF SEVERAL RESULTS**

- One interesting finding is ...  
The current study found that ...  
Another important finding was that ...  
The most interesting finding was that ...
- This experiment did not detect any evidence for ...  
The most important clinically relevant finding was ...  
The most obvious finding to emerge from the analysis is that ...  
In the current study, comparing X with Y showed that the mean degree of ...  
The results of this study did not show that .../did not show any significant increase in ...

## INDICATING AN UNEXPECTED OUTCOME

- Surprisingly, X was found to ....  
What is surprising is that ....  
One unanticipated finding was that ....  
Surprisingly, no differences were found in ....  
This finding was unexpected and suggests that ....  
It is somewhat surprising that no X was noted in this condition ....  
Contrary to expectations, this study did not find a significant difference between ....  
However, the observed difference between X and Y in this study was not significant.  
However, the ANOVA (one way) showed that these results were not statistically significant.

## **COMPARING THE RESULT: SUPPORTING PREVIOUS FINDINGS**

This finding is consistent with that of X(2000) who ...

Comparison of the findings with those of other studies confirms ...

This also accords with our earlier observations, which showed that ...

These results corroborate the findings of a great deal of the previous work in ...

Consistent with the literature, this research found that participants who reported using X also ...

This study supports evidence from previous research (e.g. ...)



## COMPARING THE RESULT: CONTRADICTING PREVIOUS FINDINGS

- This study has been unable to demonstrate that ...  
However, this result has not previously been described.  
This outcome is contrary to that of X et al. (2001) who found ...  
This finding is contrary to previous studies which have suggested that ...  
In contrast to earlier findings, however, no evidence of X was detected.  
However, the findings of the current study do not support the previous research.  
Smith et al. (1999) showed that ... This differs from the findings presented here ...  
It has been suggested that ... (XY, 2002). This does not appear to be the case.

## OFFERING AN EXPLANATION FOR THE FINDINGS

- A possible explanation for this might be that ...  
Another possible explanation for this is that ...  
This result may be explained by the fact that ...  
There are, however, other possible explanations.  
These factors may explain the relatively good correlation between X and Y.
- This inconsistency may be due to ...  
These results are likely to be related to ...  
This discrepancy could be attributed to ...  
It seems possible that these results are due to ...  
This rather contradictory result may be due to ...  
The observed increase in X could be attributed to ...

## ADVISING CAUTIOUS INTERPRETATION OF THE FINDINGS

- These results should be interpreted with caution...
- A source of uncertainty is ...  
A note of caution is due here since ...  
These findings may be somewhat limited by ...  
These findings cannot be extrapolated to ...  
These data must be interpreted with caution because ...  
These results therefore need to be interpreted with caution.  
It is important to bear in mind the possible bias in these responses.



## NOTING IMPLICATIONS OF THE FINDINGS

- It can therefore be assumed that the ...  
An implication of this is the possibility that ...  
The present study raises the possibility that ...  
One of the issues that emerges from these findings is ...  
Some of the issues emerging from this finding relate to...
- These findings may help us to understand ...  
This finding, while preliminary, suggests that ....  
This finding has important implications for developing ...  
This observational study suggests that a diet rich in X may help prevent ...  
These findings raise intriguing questions regarding the nature and extent of ...  
This combination of findings provides some support for the conceptual (or theoretical) premise that ...

## COMMENTING ON THE FINDINGS

- The test was successful as it was able to identify students who ...  
The present results are significant in at least two major respects.  
The results of this study do not explain the occurrence of these adverse events.  
These findings will doubtless be much scrutinized, but there are some immediately dependable conclusions for ...
- These findings are rather disappointing.  
However, these results were not very encouraging.

## **GIVING AVENUES FOR FUTURE RESEARCH**

- This is an important issue for future research.  
Research questions that could be asked include ...  
There are still many unanswered questions about ...  
Several questions remain unanswered at present.  
Despite these promising results, questions remain.  
Further work is required to establish the viability of...  
Further research should be undertaken to  
investigate the ...  
There is abundant room for further progress in  
determining ...

# DO AND DO NOT

- **DO**: Provide context and explain why people should care.  
→ **DON'T**: Simply rehash your results.
- **DO**: Emphasize the positive.  
→ **DON'T**: Exaggerate.
- **DO**: Look toward the future.  
→ **DON'T**: End with it.

# 10 MOST COMMON MISTAKES

- Starting with limitations instead of implications.
- Going overboard on limitations, leading readers to wonder why they should read on.
- Failing to acknowledge limitations or dismissing them out of hand.
- Making strong claims about weak results.
- Failing to differentiate between strong and weak results as you make conclusions about them.
- Lapsing into causal language when your data were correlational.
- Repeating the introduction.
- Restating the results without interpretation or links to other research.
- Presenting new results; such data belong in the results section.
- Offering no concluding statements or ending with the limitations.

Source: Susan Nolen-Hoeksema, PhD, Yale University

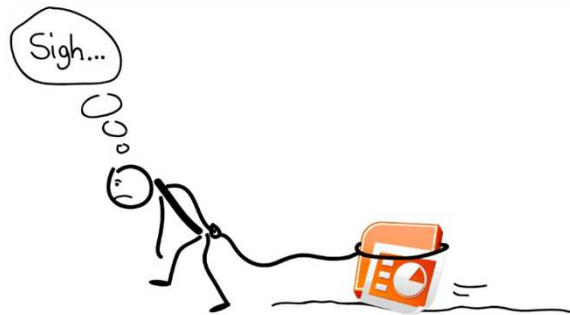


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Presenting **your research**

**November 2022**



# **7** steps to structure your research presentation

2

«A theory cannot be at once,  
precise, general and simple »  
K.E. Weick

## 7 steps to convince

- ① The hook / subject presentation
- ② Upwards rationale: where do we come from?
- ③ Downwards rationale: the gap
- ④ Methodology
- ⑤ Results
- ⑥ Discussion
- ⑦ Limitations and future avenues

4



- 1
- 2
- 3
- 4
- 5
- 6
- 7

# The hook Subject presentation

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## The hook

- 1 Your **first impression**
- 2 Be **clear and precise**
- 3 Take a **remarkable example**  
(news)
- 4 **What is the unsolved problem?**

6

- 1
- 2
- 3
- 4
- 5
- 6
- 7

## Upwards rationale: where do we come from?

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### Intellectual filiation

- ① What do others say ... (literature, data...)
- ② What are the underlying **concepts and theories?**
- ③ The **convictions taken for granted** should be **explicit**
- ④ If the subject is not **typical**, it has to be more **argued much more**

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## Intellectual filiation(2)

- ① The data, concepts and theories used allow to **build your argumentation**
- ② Their articulation may lead to a **research model**
- ③ This model make your **contribution clear**

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1 2 3 4 5 6 7

The hook: what is the unsolved problem?



Upwards rationale: **what do others say?**

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## Downwards rationale: the gap - The contribution

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### The contribution

- ① Should come naturally: **funnel**
- ② How is the contribution key: **what contribution?**
- ③ The contribution should not be **trivial**
- ④ Your contribution **should be the « red string »**
- ⑤ You should **qualify your contribution:** theoretical, managerial, empirical, methodological, to the society... ?

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## The types of contribution

- 1 Respond to new **questions**
- 2 **Respond differently** to old questions
- 3 Provide responses through a new **argumentation**
- 4 **Exploit a « void »** in the literature (if there is a REAL stake)
- 5 **Practical contribution** (new management method, organization, management...)

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## Aims of the contribution

- 1 **Exploratory approach**: study of new phenomena
- 2 **Explanatory**: research of determinants/ explanatory factors of a phenomenon
- 3 **Descriptive / comprehensive**: better understand a phenomenon
- 4 **Engineering**: an innovative solution to an unsolved problem
- 5 **Predictive**: experimentation / simulations to predict behaviors

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- 1
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The hook: what is the unsolved problem?



Upwards rationale: what do others say?



**Your contribution:**

**Original idea to solve the problem**

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- 1
- 2
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# Methodology

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## The empirics

- ① Rationale of your research **ground/ investigation field**
- ② Rationale of the **methodological approach** (qualitative, quantitative, mixed...)
- ③ Rationale for your **data analysis tools**
  - For **each element**, show that they are **relevant** for your subject
  - They are the instruments that **carry your demonstration**

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① ② ③ ④ ⑤ ⑥ ⑦  
The hook: what is the unsolved problem?



Upwards rationale: what do others say?



Your contribution: original idea



**Methods:** **how to demonstrate your idea?**

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# Results

## Present your results

- ① The result presentation should be **short, synthetic and visual** (graphs, simplified summary tables, diagrams...)
- ② All the **key dimensions** of your model should be **visible**
- ③ You should **respond to** the initial and to the defended thesis: is it **corroborated** ?



1 2 3 4 5 6 7

The hook: what is the unsolved problem?



Upwards rationale: what do others say?



Your contribution: original idea



Methods: how to demonstrate your idea?



**Results:** *is your response satisfactory?*

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1 2 3 4 5 6 7

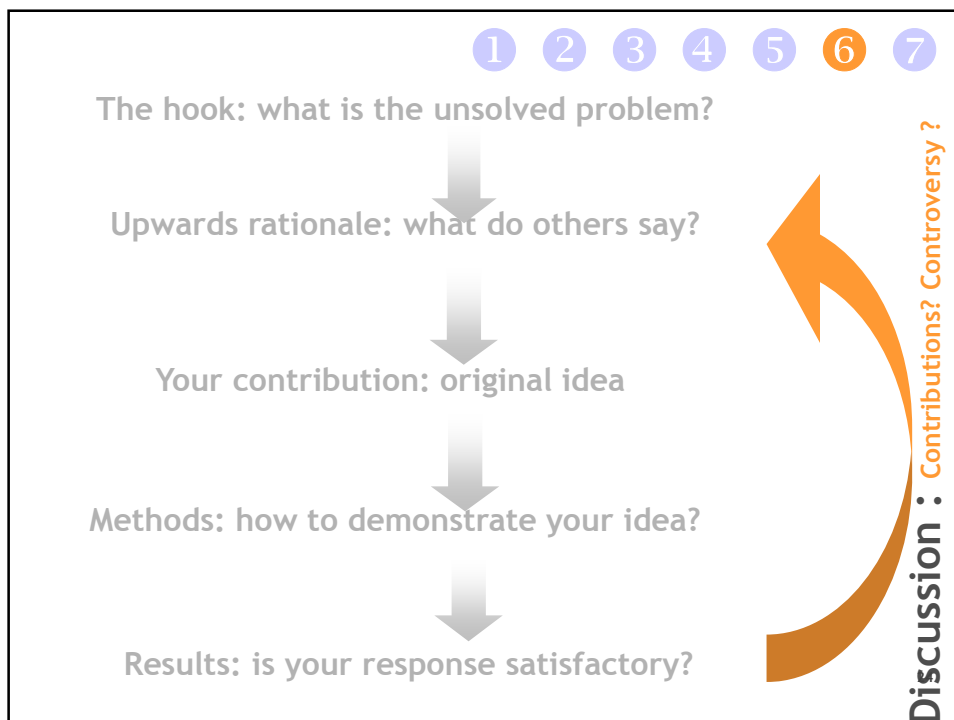
# Discussion

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## Discuss the results

- 1 Is the **objectif** of your research **achieved**?
- 2 State your **contributions by category** (practical, theoretical...)
- 3 For managerial inputs: explain **how to use them**
- 4 Some results are convincing: state the possible **controversy** they raise
- 5 Some results are **counterintuitive**: do other authors have an explanation?

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## Present the limitations

- ① Is the **sample** of your research **representative, and of what?**
- ② State the **limitations by category** (methodological, empirical...)
- ③ For each limitation : **how to overcome them by new research?**
- ④ Some limits are more important and could question the validity of your results? Try to **limit them!**

25  
25

1 2 3 4 5 6 7

## Conclusion

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## How to conclude

- 1 Present the **limits and boundaries** of the contribution without dismantling your argument
  - > limited study, constituting part of a larger and more complex set
  - > limited field of investigation
  - > nature and size of sample...
- 2 Highlight the perspectives of the research: how do **your contributions lead to new research that sounds exciting...**

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