LANDSCAPE ARCHITECTURE & RESEARCH

GUIDELINES FOR WRITING A DISSERTATION RESEARCH PLAN

(AALTO UNIVERSITY_School of ARTS, FINLAND)

1. APPLYING FOR A DOCTORAL POSITION IN AALTO UNIVERSITY_ARTS

https://into.aalto.fi/display/endoctoralarts/Research+plan

Please remember that the structure of the research plan is free. Here are some suggestions intending to help you but you are not obliged to follow them. You will find other instructions on the internet, for example by following this link http://www2.uiah.fi/~ikoskine/doctoral_studies/tips/index.html

The average length of the research plan is 5-8 pages.

1. Title and abstract (0,5 pages)
2. Introduction to the research topic and literature review (1,5-2 pages)
3. Objectives and methods (2 pages)
4. Results and ethical questions (0,5 pages)
5. Schedule (1 page)
6. References (1-1,5 pages)

2. BASIC REQUIREMENTS:

Basic requirements for a competitive DA application are actually pretty simple. You need a competitive research plan. Minimally, it has to do the following things:

- Present the topic of the research and its research question
- Justify why the topic is important/relevant
- Possibly, describe the main hypothesis
- Tell in detail how the problem is researched, and why the answer produces a valid answer that the reader can trust
- Explain if you want to develop a MONOGRAPH or an ARTICLE-BASED (COMPILATION) Doctoral Dissertation
- in addition, you may need to think about ethical issues, esp. when studying children, seniors, or patients
- Technical parts of the plan are like in any project plan: schedule (plan for 4 full-time years), budget, etc.

SOME QUESTIONS:

- Why are universities promoting the development of Article-Based Dissertations?
- Which advantages and disadvantages do you foresee in developing a MONOGRAPH or an ARTICLE-BASED Doctoral Dissertation
- What can be the “compiling chapter” in an Article Based Doctoral Dissertation?

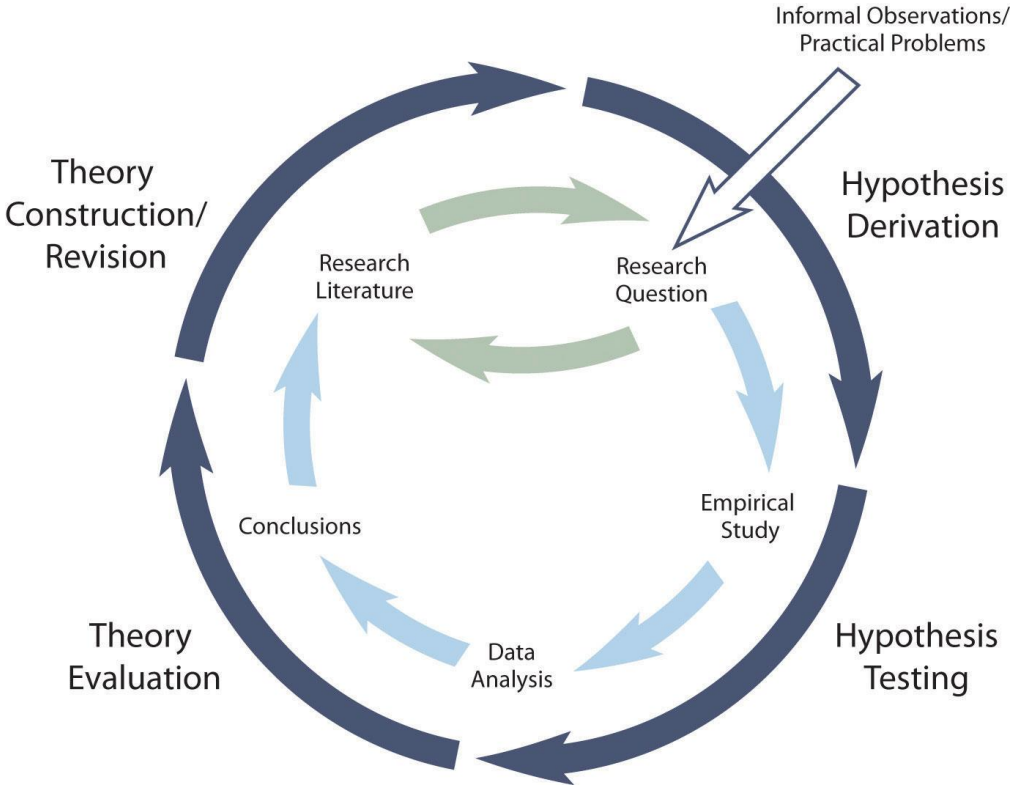
3. TYPES OF RESEARCH ((c) Ilpo Koskinen, May 2008)

3.1. Traditional hypothetic-deductive research

This is the most typical research format. Basically, your job is to read all relevant existing literature, find problems in it (i.e. identify your claim), develop a hypothesis that you test in your study, and devise a research design that makes it possible for you to test whether your hypothesis is right of wrong. "Hypothesis" is your theoretical answer to the research question; you do not know whether it is true or not before you gather data and analyze it.

This tradition comes from the natural sciences, but is the mainstream in most other field of research. Typically, the proof takes a statistical form.

If this is your choice, read methods literature from this tradition, go to library, study literature carefully to see whether it does answer your question, and only then sit down to write a hypothesis (or a series of hypotheses). After this work, you can get to methodology: how to gather data (statistically or through controlled experiments or quasi-experiments), whether you want to construct something, which method to use to analyze data (tip: post-it notes won't do, you need statistics), and what is the crucial test for your hypothesis.



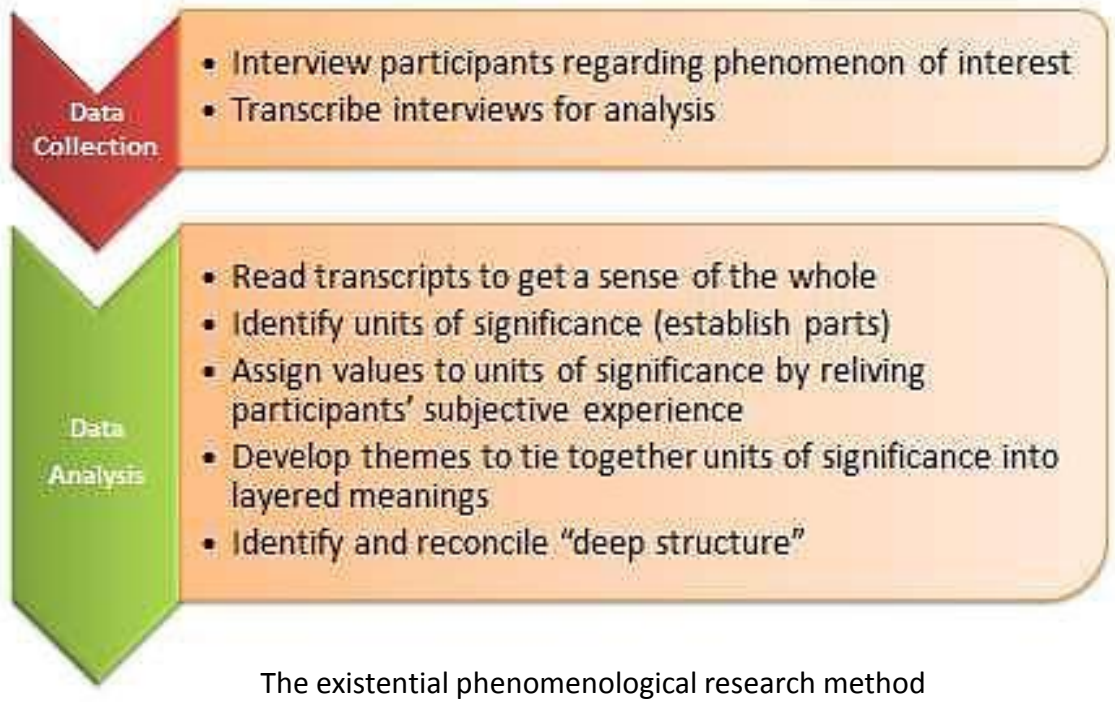
SOURCE: Jennifer Minnich

3. TYPES OF RESEARCH ((c) Ilpo Koskinen, May 2008)

3.2. Interpretive research

In particular when studying people, this is an alternative. Under various names, most research in 20thC humanities, the social sciences and philosophy is interpretive in nature. Briefly, you do not try to theorize how people behave and use obscure theoretical language to write down your hypothesis, but begin with people: their language, their terms, their behaviors, and so forth, and try to explicate data you have gathered.

Don't be fooled. Is this sounds like an easy alternative, it is not. You need to know exactly what you are doing. You need to read yourself into some interpretive tradition - like interactionism - and its methodology, write down a claim to justify your research, plan data gathering carefully and in detail, and describe your analytic plan carefully. I have given several doctoral level classes about qualitative research, and even written books about them. Check them - or anything else - to get the basics right.



The existential phenomenological research method
SOURCE: Lumen Learning (open educational resources (OER)).

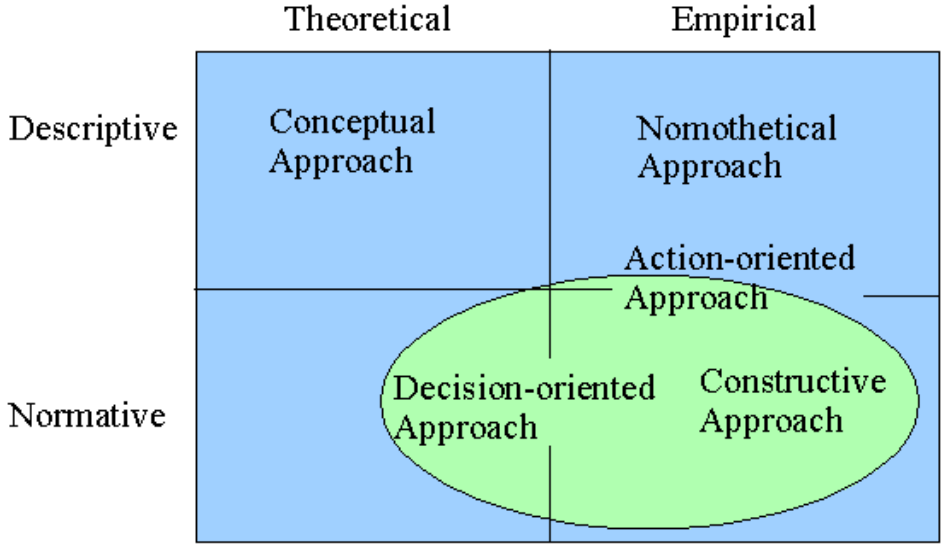
3. TYPES OF RESEARCH ((c) Ilpo Koskinen, May 2008)

3. 3. Constructive Research

Under various guises - most misleading - many designers think that they need to do something "new" outside the traditional sciences. Typically, they want to construct something and integrate it into their research. Actually, there is nothing complex here. This is how most sciences proceed. What, after all, is the difference between constructing an interactive table and a vaccine, and testing it with people? Most work in engineering proceeds exactly like this.

There are all kinds of ways to conduct constructive research. Software engineers and business studies talk about constructive research; social scientists about quasi-experimental research, policy research, or action research; medical researchers about clinical research; artists about practice-based research; and so forth. The question is really what kinds of new knowledge the construction helps to gain: it is new knowledge that justifies time and effort put into construction. Also, what is important to decide is how the construct is integrated into your study: is it like a "treatment" in medical research, a "breaching experiment" like in ethnomethodological sociology. Also, you need to decide how you gather data, and how you analyze it to test your hypothesis, or to create an interpretation.

Figure 4*
The Location of the Constructive Approach into the Established Accounting Research Approaches



* Adapted from Kasanen, Lukka and Siitonen Figure 4, page 257.

4. STRUCTURE OF A RESEARCH PLAN

4. 1. TITLE AND ABSTRACT (0,5 pages)

- Name and contact information of the researcher.

- Title of the project. The title should capture the essential of the research in just a few words.
  Doctoral thesis titles usually include an explanatory subtitle in addition to the main part.

- Abstract should describe the main points regarding the project and its objectives. Abstract is a public document, other parts of the research plan are treated as confidential.

SOME QUESTIONS:
- When to write the title and the abstract??

4. STRUCTURE OF A RESEARCH PLAN

4.2. INTRODUCTION TO THE RESEARCH TOPIC AND LITERATURE REVIEW (1,5-2 pages)

Introduction describes the topic of the study, its general **OBJECTIVES, AND THE MAIN RESEARCH QUESTION**. It also contains a literature review of previous research and experience pertaining to the topic including most important publications relevant to the topic.

Literature review should show that you have already done some work on your topic, and know the framework. It should also describe your theoretical background or at least your perspective to the research question.

You should also tell about eventual links with other research projects and cooperation with other researchers.

SOME QUESTIONS:

- How many goals, aims and objectives?
- What is a Research Question (RQ)? How many RQs can you include? How do they relate to each other (Horizontal versus Vertical structures?)
- When to write the Introduction? Linear or Iterative process??
- How can the Article-Based Doctoral Dissertations affect the definition of Research Questions and the Literature Review?

4. STRUCTURE OF A RESEARCH PLAN

4.3.a OBJECTIVES AND METHODS (2 pages)

You should specify the objectives of the research and **the most important research questions**. Typically, the objectives decompose your research question into subtasks.

The methods you plan to use specify how you will answer your question. You should tell which METHODS you are going to use to answer your Research Questions and How (for example, participatory observation, for how long, where, and when; or interviews, how many people, how you choose them, when and where, a prototype or a model, etc); how you control for errors and biases; how you gather and process data; how you analyze it; how you plan for validity and reliability, including generalization; and how you tackle ethical problems.

If you want to include your own art productions or design projects to your dissertation you should specify them and tell how your plan to exhibit them.

SOME QUESTIONS:

- How many Research Methods Do you know? Can you put some examples?
- What is quantitative and qualitative research? Can you put some examples?
- What is the difference between induction and deduction? Can you put some examples?
- Can you use different Methods for different Research Questions?

Deductive reasoning, or deduction, starts out with a general statement, or hypothesis, and examines the possibilities to reach a specific, logical conclusion, according to California State University. The scientific method uses deduction to test hypotheses and theories. "In deductive inference, we hold a theory and based on it we make a prediction of its consequences. That is, we predict what the observations should be if the theory were correct. We go from the general — the theory — to the specific — the observations," said Dr. Sylvia Wassertheil-Smoller, a researcher and professor emerita at Albert Einstein College of Medicine

Inductive reasoning makes broad generalizations from specific observations. Basically, there is data, then conclusions are drawn from the data. This is called inductive logic, according to Utah State University.
"In inductive inference, we go from the specific to the general. We make many observations, discern a pattern, make a generalization, and infer an explanation or a theory," Wassertheil-Smoller told Live Science. "In science, there is a constant interplay between inductive inference (based on observations) and deductive inference (based on theory), until we get closer and closer to the 'truth,' which we can only approach but not ascertain with complete certainty."

4. STRUCTURE OF A RESEARCH PLAN

4.3.a OBJECTIVES AND METHODS (2 pages)

Differences Between Qualitative and Quantitative Research Methods

Qualitative Methods	Quantitative Methods
Methods include focus groups, in-depth interviews, and reviews of documents for types of themes	Surveys, structured interviews & observations, and reviews of records or documents for numeric information
Primarily inductive process used to formulate theory or hypotheses	Primarily deductive process used to test pre-specified concepts, constructs, and hypotheses that make up a theory
More subjective: describes a problem or condition from the point of view of those experiencing it	More objective: provides observed effects (interpreted by researchers) of a program on a problem or condition
Text-based	Number-based
More in-depth information on a few cases	Less in-depth but more breadth of information across a large number of cases
Unstructured or semi-structured response options	Fixed response options
No statistical tests	Statistical tests are used for analysis
Can be valid and reliable: largely depends on skill and rigor of the researcher	Can be valid and reliable: largely depends on the measurement device or instrument used
Time expenditure lighter on the planning end and heavier during the analysis phase	Time expenditure heavier on the planning phase and lighter on the analysis phase
Less generalizable	More generalizable

SOURCE: https://www.orau.gov/cdcynergy/soc2web/content/phase05/phase05_step03_deeper_qualitative_and_quantitative.htm

More info on QUALITATIVE vs QUANTITATIVE Research: https://www.mcgill.ca/mqhrg/resources/what-difference-between-qualitative-and-quantitative-research

4. STRUCTURE OF A RESEARCH PLAN

4.3.b OBJECTIVES AND METHODS (2 pages)

1. Hypothetic-deductive research

- If you plan experiments or gathering quantitative data, you must describe your research design. How many experiments you plan; what are your independent, dependent, control and intervening variables; how many people you study; how you randomize them; what is your null hypothesis and also alternative hypotheses; what kinds of laboratory procedures you follow; which methods of analysis you use (typically ANOVA, ANCOVA, but usually even t-tests will do), and so forth.
- In statistical studies, you need to tell where you get your data - secondary sources, or questionnaires -; what are their main sources of errors; which kind of model you aim to test (again, you need to specify independent, dependent, and so forth variables); which method you use (typically some form or regression analysis or logistical regression); sample size; sample selection; analysis of bias; etc.

2. Interpretive research

- If you build on some interpretive tradition, description has to be extensive as well. You have to tell: which methods are you going to use and how (for example, participant observation for how long, where, and when); how you control for errors and biases; how you gather and process data; how you analyze it; how you plan for validity and reliability, including generalization; and how you tackle ethical problems. You also need to tell how you plan to relate you interpretation to previous literature.

3. Constructive research

- When doing constructive research, this section needs to specify your construct; how you aim to embed into your research; how you gather data; analyze it; what is your "test" or criteria for deciding whether the construct actually does what you indented; etc.
- What is particularly important it to decide which scientific tradition you want to follow when doing constructive work. You can experiment (hypothetico-deductive model), but can also be interpretive.

4. STRUCTURE OF A RESEARCH PLAN

4.4. RESULTS AND ETHICAL QUESTIONS (0,5 pages)

- Expected results and their significance.
- Practical applicability of research results.
- Publication and other dissemination of research results.
- It is also obligatory to consider the ethical questions the project may rise.

4. STRUCTURE OF A RESEARCH PLAN

4.5. SCHEDULE (1 page)

You should plan you work for four years. Be realistic, the evaluators evaluate whether the proposal is realistic and can be carried out.

- Doctoral studies
- Studies abroad or in other universities
- Funding for the studies (4 years if full time study or 4-8 years if part time study)
- Budget for the materials, productions etc. in case there is an artistic production/product development plan included in the dissertation (in the field of art and design)
- Research environment (including equipment) and cooperation with other researchers

In most cases, the first year ought to be reserved for reading, studies, and specifying the research proposal; the second and the third for research; and the final year for writing.

SOME QUESTIONS:

- Which kind of articles would you define for an Article-Based Dissertation? Would they be qualitatively different? How would you organize then in your overall schedule?
- How would you display in an effective way the OVERALL GOAL, GENERAL RESEARCH QUESTION, PARTIAL OBJECTIVES, SPECIFIC RESEARCH QUESTIONS, METHODS, EXPECTED RESULTS AND PLANNED ARTICLES in an Article-Based Doctoral Dissertation?
- What do you think that might be the main risk in accomplishing your “schedule”
- Are you familiar with Gantt-Charts?

4. STRUCTURE OF A RESEARCH PLAN

4.6. REFERENCES (1-1,5 pages)

List of the most important research literature. ONLY SOURCES USED IN THE RESEARCH PLAN should be listed.

The idea of a research plan is to express your research idea, to communicate it to outsiders, and to help you to plan it in sufficient detail. Be selective and strategic when choosing your readings and make sure you have read and understood the most important pieces of literature in your field of research, and have placed them into proper use.

References are important in evaluation. One of the things any experienced evaluator does is to check through the references section to see whether the applicant is able to think through his or her problem in relation to existing knowledge.

Use some commonly used style in formatting the references. Choose a widely accepted style

PRODUCING a JOURNAL ARTICLE?

(AALTO UNIVERSITY_School of ARTS, FINLAND)

IMRAD structure for SCIENTIFIC JOURNAL ARTICLES

INTRODUCTION
- Earlier research findings (literature review)

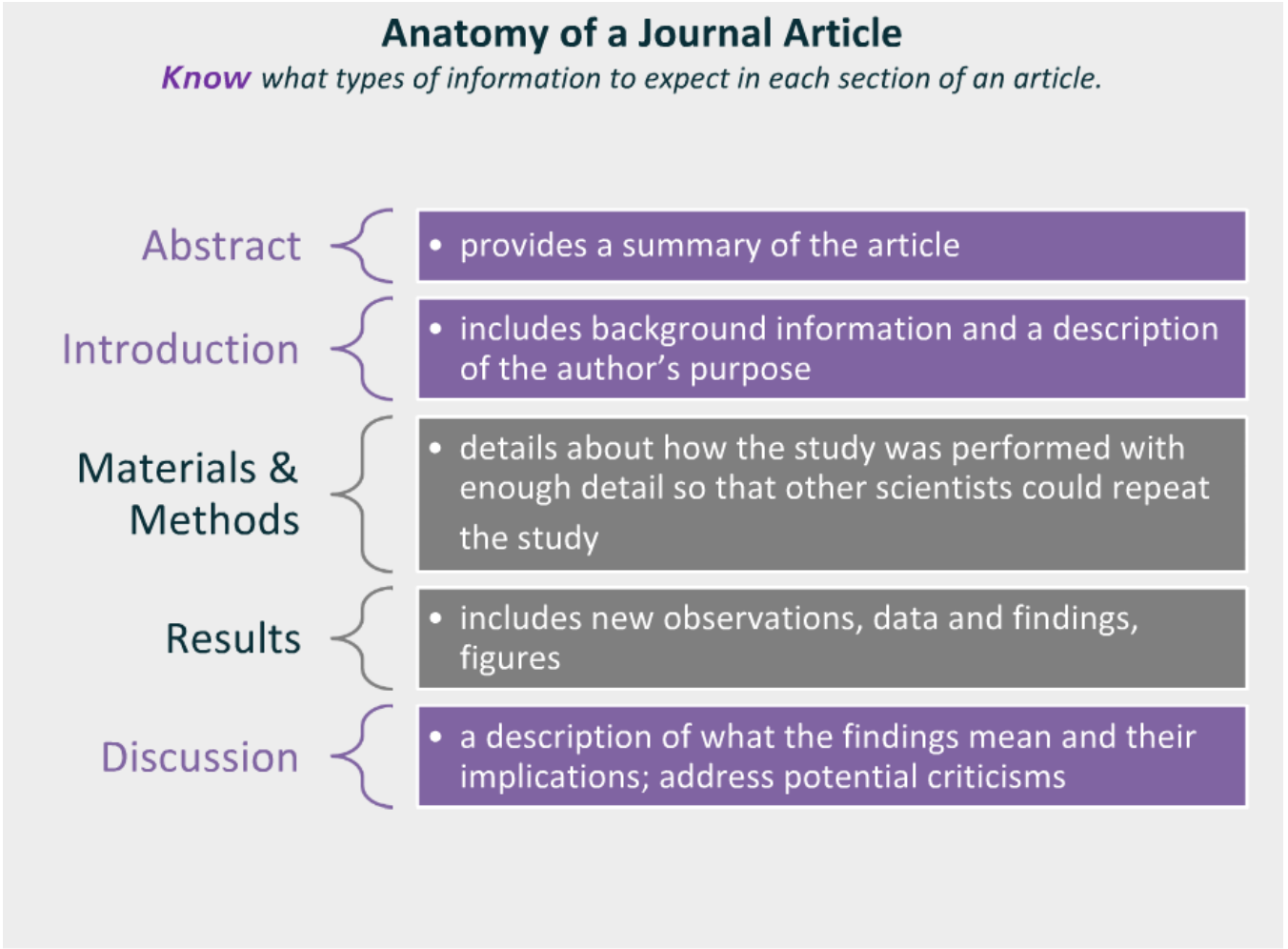
HYPOTHESES
- Often found in the last paragraph of the introduction

METHODS
- Who were the subjects of the research?
- What procedures and instruments were used?

RESULTS
- What were the results?
- Were they statistically significant?

DISCUSSION
- To what extent did the results confirm the authors' hypotheses?
- What did they discuss about the study's limitations?
- What future studies did they suggest?

SOURCE: Review article: “Judgment and Decision Making in Adolescence”



Source: "Anatomy of a Journal Article" by Dominique Turnbow

TYPES of JOURNAL ARTICLES

ORIGINAL RESEARCH: This is the most common type of journal manuscript used to publish full reports of data from research. It may be called an Original Article, Research Article, Research, or just Article, depending on the journal. The Original Research format is suitable for many different fields and different types of studies. It includes full Introduction, Methods, Results, and Discussion sections.

SHORT REPORTS OR LETTERS: These papers communicate brief reports of data from original research that editors believe will be interesting to many researchers, and that will likely stimulate further research in the field. As they are relatively short the format is useful for scientists with results that are time sensitive (for example, those in highly competitive or quickly-changing disciplines). This format often has strict length limits, so some experimental details may not be published until the authors write a full Original Research manuscript. These papers are also sometimes called Brief communications.

REVIEW ARTICLES: Review Articles provide a comprehensive summary of research on a certain topic, and a perspective on the state of the field and where it is heading. They are often written by leaders in a particular discipline after invitation from the editors of a journal. Reviews are often widely read (for example, by researchers looking for a full introduction to a field) and highly cited. Reviews commonly cite approximately 100 primary research articles.

CASE STUDIES: These articles report specific instances of interesting phenomena. A goal of Case Studies is to make other researchers aware of the possibility that a specific phenomenon might occur. This type of study is often used in medicine to report the occurrence of previously unknown or emerging pathologies.

METHODOLOGIES OR METHODS: These articles present a new experimental method, test or procedure. The method described may either be completely new, or may offer a better version of an existing method. The article should describe a demonstrable advance on what is currently available.

SOURCE: https://www.springer.com/gp/authors-editors/authorandreviewertutorials/writing-a-journal-manuscript/types-of-journal-articles/10285504

SOME QUESTIONS:

- Which type of article might be more useful in each phase of an Article-Based Doctoral Dissertation?
- How would you classify the articles that you liked the best from the PAT1 of the Course?
- Which kind of article/paper would you like to draft during the second part of the Course? Why?

LANDSCAPE ARCHITECTURE & RESEARCH

TYPES of JOURNAL ARTICLES

Empirical Studies

Reports of original research, usually results of lab experiments

Have…

- **Introduction**
- **Materials & Methods**
- **Results**
- **Discussion**

Key phrases
"we tested"
"in our study, we measured…"

Literature Review

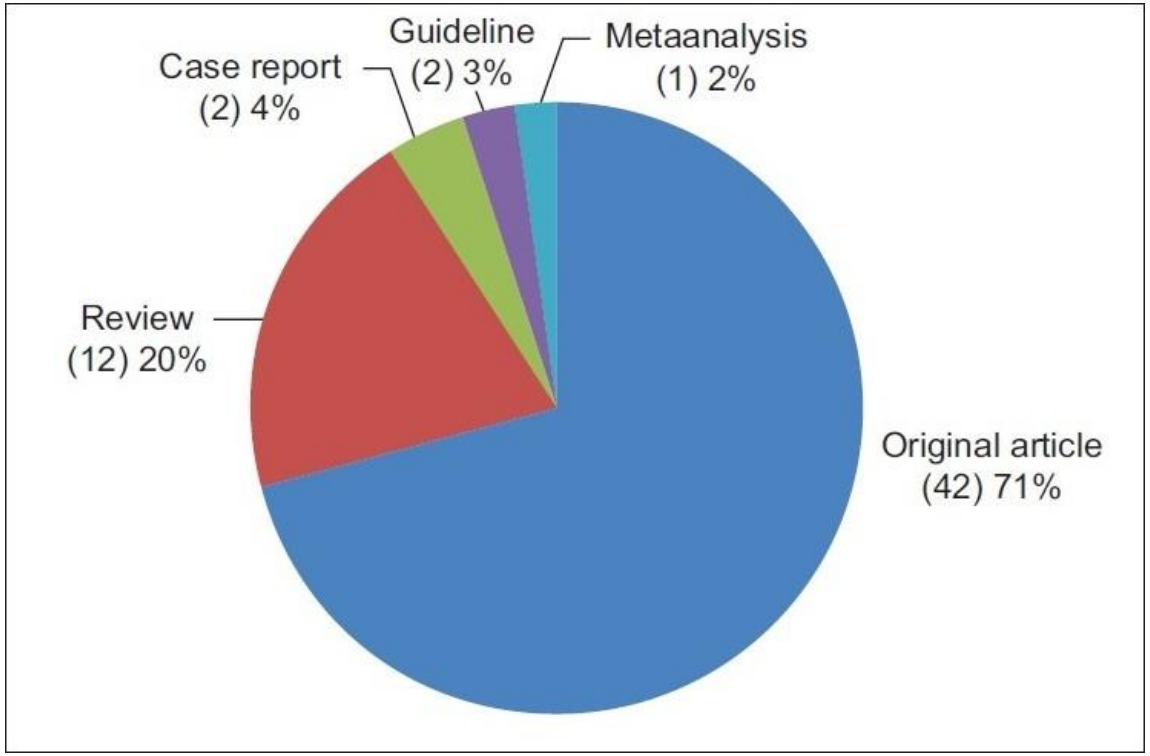
Critical evaluations of material already published.

They...

- Define or clarify a problem
- Summarize previous investigations
- Identify problems or gaps in knowledge
- Suggest the next steps

No physical (lab) research done

SOURCE: Tacoma Community College Library - LibGuides



SOURCE: Daniel Library - The Citadel

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- Which type of article might be more useful in each phase of an Article-Based Doctoral Dissertation?
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SOURCES of INFORMATION for JOURNAL ARTICLES

Literature Types

Primary Sources

Publications that present original research in its original form (has not been interpreted or condensed or otherwise "repackaged" by other writers), are considered **primary sources**.

They present new thinking/discoveries/results and unite them with the existing knowledge base.

Are often peer-reviewed.

- Conference Papers
- Monographic Series
- Technical reports
- Thesis
- Dissertations
- Journal Articles
- Patents

Secondary Sources

Publications ABOUT primary literature are considered secondary sources. They generalize, analyze, interpret, evaluate, or otherwise "add value" to the original information, or which simplify the process of finding and evaluating the primary literature.

Can be printed in peer-reviewed publications.

- Review articles
- Indexes
- Bibliographies

Tertiary Sources

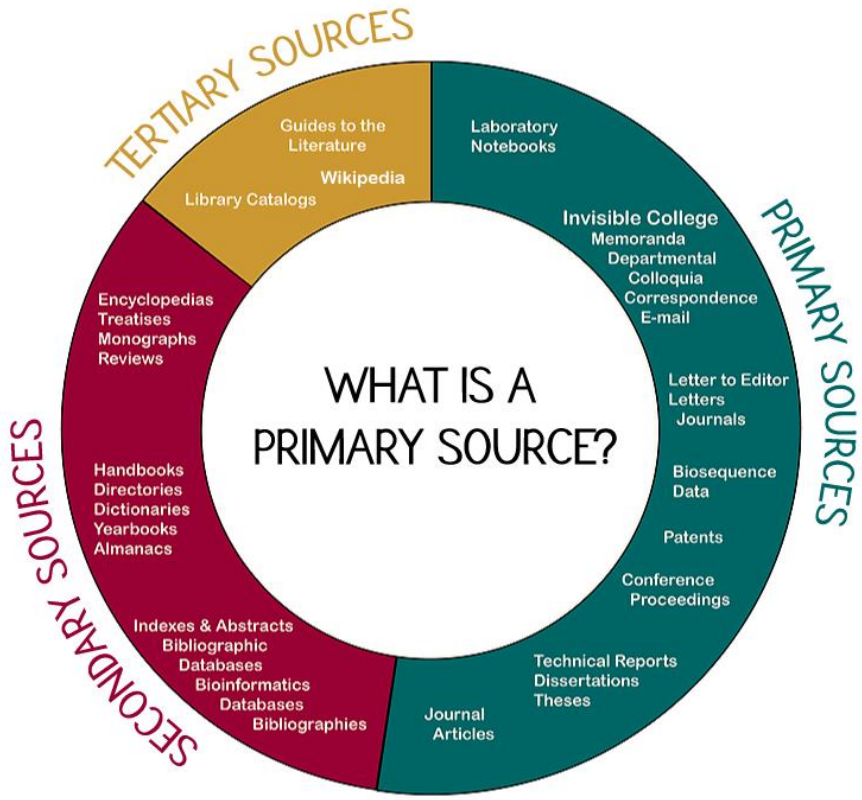
Tertiary sources compile or digest information from primary or secondary sources that become widely accepted.

They provide a broad overview of a topic, or data, already proven facts, and definitions, often presented in a convenient form.

They provide no new information

- Textbooks
- Encyclopedias
- Fact books
- Guides
- Handbooks

SOURCE: Daniel Library - The Citadel



SOURCE: COMM 101 [Kiernan] - Disciplinary Literacies Project: Types of Sources

SOME QUESTIONS:

- Which kind of sources were using the articles that you liked the best from the PAT1 of the Course?
- Which kind of sources would you need to draft your paper/article during the second part of the Course? Why?

Discussion about the book “THE CRAFT OF RESEARCH”?

by Wayne C. Booth (Author), Gregory G. Colomb (Author), Joseph M. Williams (Author)

PREPARING a Discussion about the book "The Craft of Research" (chapter 2)?

by Wayne C., Gregory G. Colomb, Joseph M. Williams (Authors)

- Contents & Structure of the book?
- Things that you remember the most?
- Main challenges for being a researcher?
- Main challenges or problems to develop good research?
- Did you think about any particular research topic when you were reading the book?