

Selected Topics in Business Administration:

The Research Process

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A PROCESSES IN RESEARCH

The processes of research involve the following steps

PLANNING PHASE

- Selecting the topic of investigation
- Checking what sources are available for investigating the chosen topic
- Developing and detailing the research question
- Carrying out a literature review
- Developing a theoretical conjecture
- Establishing an operational conjecture
- Developing hypotheses in relation to the operational conjecture
- Establishing the success criteria for assessing both the research process and the verification of hypotheses
- Identifying population and sample
- Establishing the research strategy
- Establishing the research methodology

IMPLEMENTING PHASE

- Collecting data
- Analysing data
- Drawing first conclusions
- Pre-evaluating research to bring improvements in the conjecture and data collection and analysis processes
- Carrying out improvements
- Drawing final conclusions
- Comparing final conclusions against available literature
- Making recommendations for further research

EVALUATING PHASE

- Assessing the research process in its entirety

A word of caution before detailing each phase: any reporting of the research in the form of a project, thesis, dissertation, will follow a traditional essay structure (in about 10 chapters), where the introduction (chapter 1) will map out the aims (what) and objectives (how) of the report. Thus, the research process here outlined will be integrated in the reporting structure, in the body mainly. The report will be concluded with a critical reflection as to what worked i.e., the findings of research, the lessons from the process and the impact of these. It will also account for what did not, which will serve as source for improvement.

B IDENTIFYING THE TOPIC

PRINCIPLES

As Gill and Johnson put it (1997: 11), 'until a topic of the research is identified the work cannot ... start'. It is quite clear that unless one has a very good idea of the topic, area, nature of the topic to be investigated, the whole process of research will be flawed and will require a number of revisions until it is accurate.

This means that one should formally state the problem and the major questions and then collect data. This however may stifle questions and therefore a more open-ended approach should be adopted.

The ideal, I would suggest, is a combination of both: to be extremely rigorous and precise from the start and allow for cyclical revisions and corrections at critical moments.

ELEMENTS TO TAKE INTO ACCOUNT WHEN SELECTING THE TOPIC

Since selecting a topic involves make choices; the following should be taken into account:

- Management area the topic is concerned with.

One needs to select whether the topic should be involved with investigating people, finance, operations, marketing or strategy while bearing in mind that all the functional areas of management are interlinked.

- Personal interests

Any topic chosen should be treated within the researcher's personal interests (Gill & Johnson, 1997: 15).

- Access of research

Access is an important element to take into consideration as it may happen that an interesting topic gets stalled because of difficult access to the location where data needs to be collected. This may happen because of the unwillingness of organisations to provide researchers with sensitive data, other organisations may be apprehensive that the topic itself may create problems, others may refuse simply because there a number of research projects that are run within their premises (Gill & Johnson, 1997: 13). It is therefore important to identify any accessibility problems beforehand and identify ways to overcome them.

- Time available

Time is another important variable as it sets a limit to the scope of the research itself while affecting the data collection and analyses methods (Gill & Johnson, 1997: 14). This is why any research plan should make explicit the forecasted time schedule.

- Symmetry of potential outcomes

Equally important is to ensure that whatever the findings from the work, the results will be equally valuable in other areas of management (Gill & Johnson, 1997: 14-15), that is, that research findings can be used as a basis for investigating related issues.

- Scope of research

Planning research involves understanding its scope, or put differently, setting the limits of the topic to be investigated. Otherwise, the danger is that treating the topic may require more time than that forecasted or imposed upon – as in formal contexts, let alone that the whole research project may get out of hand.

- Value of the research

A work of research needs to contribute to further the current state of knowledge (Gill & Johnson, 1997: 15).

- The role of the researcher

It is also important to make clear the role of the researcher in relation to the phenomenon observed and determine whether the researcher is completely detached, or part of the phenomenon observed. This has an incidence on the nature of research methodology, either qualitative or quantitative.

C SOURCES OF RESEARCH TOPICS

Research topics may arise in a number of ways (Gill & Johnson, 1997: 12-13):

- Absence of data in a working context

Example: consumer satisfaction database

- Unsupported or unconvincing claims

Example: that individuals are rational in the choices

- Areas where little research has been done

Example: the impact of security and safety in strategic processes

- Commissions by professional or other official bodies
Example: the impact of management education on the industry by an association

- Consultancy
Example: identifying the weaknesses of a strategy

- Recommendations of existing projects
Example: inquiring into the antagonistic nature of employer-employee relationships

D DETAILING THE RESEARCH QUESTION

Following Black (1999: 31-32) research questions can be divided into the following categories:

- Descriptive: inquiring into outcomes
Example: what do customers use as criteria for choosing which restaurant to use?
- Explorative: inquiring into the features of observed phenomena
Example: is there any relationship between age and perception of quality in service provision?
- Evaluative: assessing into the effectiveness of procedures
Example: which marketing strategy brought about the best results?
- Predictive: forecasting outcomes when one or a number of variables change
Example: at which times of the year do people of different age groups prefer to take overseas holidays?
- Explanatory: identifying the causes of observed outcomes
Example: does the perceived threat of unemployment reduce spending among those employed?
- Control: what happens if one of the two variables underlying a phenomenon changes
Example: if the organisation changes to flexitime – unspecified timetable – will productivity increase?

It is therefore important to identify the research question in the above category or categories as this will have implications for the choice of research strategy and methodology.

E LITERATURE REVIEW

PURPOSES

Once the topic question is thought through, the next step is to carry out a literature review (Gill & Johnson, 1997: 20-21). The purposes of this review are to:

- Select the sources in relation to the selected topic
- Understand what has already been written and discovered around the selected topic
- Critically assess the claims made by others on the selected topic
- Refine one's own theoretical and operational conjecture

This means that a literature review is not a discrete process. Rather, it accompanies research throughout the whole process and involves a number of phases

SELECTING SOURCES FOR REVIEW

To select appropriate sources, I would suggest the following:

- Identify the types of literary sources available
- Run over the contents list of each selected source
- Select those that seem relevant to the topic chosen

SELECTING CONCEPTS

Selecting sources is not enough. One needs to select concepts and other information that is relevant to the topic investigated. To carry out this effectively, I would suggest the following:

- Identify the concepts you want to read more about
- Check the index of the selected sources to identify the concepts
- Directly read the relevant pages and take notes (see appendix 1). During this process one should be cautious about getting submerged by others' ideas and losing sight of one's own, or using literary sources uncritically, attempting to read everything that has been written. These will certainly slow the research process with the danger of upsetting the established plans.

F DEVELOPING A THEORETICAL CONJECTURE

The purpose of developing one's own theoretical conjecture is to set the theoretical basis of the research. It is a difficult but rewarding process and not always feasible as it depends on the type of topic under investigation and the degree of critical stance one adopts to what already has been written about. There are three ways of arriving at developing one's own theoretical conjecture:

- Working on from an existing theory
- Synthesising a number of existing theories
- Reconceptualising an existing theory in a new context
- Working out a new theory from observation

A theoretical conjecture is not sufficient in itself: it needs to be translated into a framework and a methodology that will enable to test the degree to which the theory is valid.

G DEVELOPING AN OPERATIONAL CONJECTURE

The translation of constructs into a framework for research is the creation of operational conjectures. It involves a number of developments:

CONSTRUCTS

Constructs are the translation of abstract concepts and theories into observable actions (Black: 1999: 35).

OPERATIONAL DEFINITIONS

Operational definitions are the rules and instruments that will produce an acceptable way of measuring constructs. For Kerlinger (Black, 1999: 37) one should distinguish between measured and experimental operational definitions, which Black (ibid.) redefines as observed and manipulated. The former are concerned with features that can be directly measured (such as frequency, achievement) and the latter are used for phenomena that happen to subjects as a result of the researcher's decision.

VARIABLES

Variables are the changing and causal elements of a phenomenon. They are usually expressed as being dependent, having a direct impact, and independent, as having an indirect effect (Black: 1999: 39)

HYPOTHESES

Hypotheses are statements of expected outcomes or expected relationships between variables to be verified or falsified.

H RESEARCH SUCCESS CRITERIA

WHAT ARE SUCCESS CRITERIA?

Generally speaking, success criteria are a number of standards representing an ideal performance against which we can compare or pass a judgement on actual performance.

Success criteria are used to assess two aspects of the research process, namely,

- Hypotheses, to determine the validity of the developed theoretical and operational conjectures - this takes place at the end of the implementation phase
- Research, to determine the degree to which the research process was effective – this takes place during the evaluation phase

Note that each of these can be divided into a number of performance areas.

WHAT TYPES OF SUCCESS CRITERIA ARE THERE?

For each performance area considered corresponds a set of particular success criteria. We can distinguish among:

- Input criteria, indicators used for judging the elements brought to a process
Example: the type of management competencies necessary for a position
- Process criteria, indicators for judging the effectiveness of a process
Example: benchmarking HRM training programmes
- Output criteria, indicators for judging the immediate or short-term results of a process
Example: the number of meals served in a period of time
- Outcomes criteria, indicators for judging the long-term results of a process
Example: the use of management competencies during employment

Now the question is to set success criteria.

HOW DO WE ESTABLISH SUCCESS CRITERIA?

To ensure that success criteria are used to their maximum benefit, I would suggest that the following guidelines be used:

Determining the focus of the criteria, that is, making clear and explicit the elements of research that the criteria will apply to. Depending on whether we are assessing hypotheses, or any stage of the research process, the criteria are different.

Determining the appropriateness of criteria, that is, understanding and rendering explicit the type of criteria used in relation to the area of concern. Criteria can be personally set, imposed by professional or official bodies, adapted from the latter or be area-specific. Therefore, certain types of criteria will best fit a certain area of concern.

Determining the nature of data to judge performance, that is, understand and render explicit the elements we need to have at hand to be able to make a comparative judgement between that which we intended to achieve and that

which we have actually achieved. In short, different types of criteria need data of a different nature, furthermore if we are judging hypotheses or the research process itself.

Determining the usefulness of criteria, that is, evaluating the degree to which the criteria themselves have enabled us to make valid and reasoned judgements. Put differently, and considering the above definition of success criteria, it is about judging the process of judgement.

I POPULATION AND SAMPLES

POPULATION

Following Black (1999: 111), the main idea behind identifying a population upon which the theoretical and operational conjectures will be tested, is that this population or a sample of it should, to a large extent, be representative of the study.

There are hard and fast rules for identifying a population, so long as it is consistent with the variables being investigated. What is important though, is to clearly define the population in sufficient detail that it is possible to place all the members we intend to study.

Given however the impossibility of studying an entire population, we select samples of it and make inferences about the whole population - which is the domain of inferential statistics.

SAMPLING

Sampling is about identifying and specifying a number of elements that belong to a population. This, following Black (1999: 116) has two important implications one should closely consider:

- That the research findings in the sample be applicable to the whole of the population; otherwise, the research process that applied to the sample will be irrelevant to the population.
- That the definition of a sample does not introduce different variables and features from those defining the population; otherwise, the validity of the findings will be weak.

To ensure that the above are met, one should consider random sampling, that is, drawing a portion of a population so that all possible samples of fixed size n have the same probability of being chosen (Black, 1999: 117).

YET, DOES RANDOMNESS OF THE SAMPLE GUARANTEE POPULATION REPRESENTATION?

It does not, this is why one needs to take into account sampling errors, that is, deviations from what we expect would happen in the population.

J RESEARCH STRATEGIES

WHAT IS UNDERSTOOD BY RESEARCH STRATEGY?

It is the way research is approached so as to yield the expected findings.

WHAT TYPES OF RESEARCH STRATEGIES ARE THERE?

In terms of the samples and phenomena examined, I would suggest the following:

- Evaluation, that is, examining a number of phenomena within a small sample.
- Survey, that is, examining a phenomenon whose sample is large.

- Case study, that is, examining a single phenomenon within a small sample.
- Action analysis, that is, examining our own self as a phenomenon and sample

Note that these strategies are not mutually exclusive.

K DATA COLLECTION AND ANALYSIS

DATA COLLECTION

Data collection involves gathering information that can be examined to establish whether the theoretical and operational conjectures are true.

PRACTICAL ISSUES

Data collection must be systematic to avoid the introduction of extraneous variables. Following Black (1999: 199) one therefore should:

- Validate the research instruments by other experts of the field or benchmark against existing research
- Pilot research strategies to fine tune the design and applicability of data collection instruments
- Code data for translating it and rendering it meaningful
- Record data in a data processing programmes
- Cleanse data to remove any data that is irrelevant

WHAT DATA COLLECTION INSTRUMENTS ARE THERE

Following Black (1999) and Symon and Cassell (1998) we can distinguish among the following:

Documentary analysis, that is, the analysis of produced documents, as these are an important source of information. Documents can reveal a great deal about the history and culture of social institutions such as business organisations. However, as in all documents, there is witting and unwitting evidence requiring a content analysis to achieve to distinguish between these two types of evidence.

Questionnaires, that is, setting out a number of questions to reveal indirectly a feature that is being inquired. Questionnaires are a practical means but do not give the opportunity to the researcher to revisit respondents for further clarifications.

Interviews, that is, setting out a number of questions to be asked directly to individuals whether on a one-to-one or group basis. Being more flexible than questionnaires, they do have a degree of organisation and are therefore distinguished among structured, semi-structured, and unstructured.

Diaries, that is, a contemporary account of events as they have unfolded and kept by both the researcher and respondents. Despite their subjective character, they constitute a valuable source of information as they refer to feelings, perceptions and thoughts that would be made public otherwise.

Observations, that is, recording what researchers see and hear in an unobtrusive manner while focusing on particular aspects of what is being observed. However, there are cases such as meetings, where the unavoidable proximity with the object of research makes it difficult to be completely detached from the study.

L RESEARCH IMPLEMENTATION CYCLE

THE CYCLE

Having collected data is not an end in itself: there is no guarantee that the data at hand are sufficient or appropriate, let alone that time changes the nature and context of research, not to mention that on-going literature review changes the theoretical basis on which the research process is based.

For these reasons, I would suggest to see the implementation phase as a cycle where there are informal elements of evaluation that bring us to re-planning and re-implementing.

Having said this, there are more formal ways of evaluating data.

EVALUATION CRITERIA FOR DATA QUALITY

Following Black (1999: 191-198) and Gill and Johnson (1997: 128-129) the following are used:

A Validity

- Internal validity refers to whether or not the identified cause actually produces what has been interpreted as effect
- External validity refers to the extent to which research findings can be generalised from the sample or setting to another one. A further distinction is that between
 - Population validity referring to the extent to which generalisation of sample findings can apply to the population
 - Ecological validity referring to the extent to which it is possible to generalise from the actual context findings were made to another context

B Reliability

- Reliability refers to the degree of consistency of the way the results were obtained. Put differently it is an indication of consistency between two measures of the same object of research. Any variability or variance will be due to either unobserved phenomena or to imperfections of the research instrument, hence measurable.

M CONCLUDING AND PRESENTING FINDINGS

At this stage researchers need to use one of the sets of success criteria, the ones applying to the hypotheses so as to establish the degree of truth or falsehood of the conjectures.

The presentation of findings needs to be well organised around the re-examination of hypotheses that includes a detailed discussion. It should cover, I would suggest, elements of the theoretical and operational conjectures, elements resulting from the literature review and findings from similar research.

This section is completed when a number of topic dilemmas and questions have been identified and recommendations for resolving them are put forward.

N EVALUATING RESEARCH

The last element in concluding research is to make a judgement over the whole research process to identify areas of improvement especially in relation to the design, construction of theoretical and operational conjectures, strategies and methods.

REFERENCES

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GILL, J. & JOHNSON, P. (1997) *Research Methods for Managers*, 2nd ed. Paul Chapman Publishers.

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APPENDIX 1

Suggested format and sample for taking notes from textbooks, magazines and articles:

Name of author	Davis, Stan & Meyer, Christopher
Title	Blur
Year of publishing	1998
Number of edition	1st
Place of publishing	Oxford
Publisher	Capstone
Concept inquired:	blurred economy

Notes – including of page numbers:

P6 concept: blurred economy: where there is little distinction between consumers and producers

P14 features: 1) the blur of desires: products and services have become an offer 2) the blur of fulfilment: strategies are dissolved into networks nobody really controls 3) the blur of resources: capital is more a liability than asset - to be added: 4) the blur of labour: little distinction between worker and consumer

Etc.