

What is research? An Introduction

COM 432

Dr Yeoh Kok Cheow

What is research?

Research is the systematic collection and interpretation of information.

Research, more precisely, preliminary research, sheds light on the problem. It helps to explain the current situation.

It is intellectual inquiry or examination, experiments aimed at the discovery and interpretations of facts.

Research must always be complemented by analysis and judgment.

Research is hard work combined frustration, confusion, and confidence.

What is research?

- Data is evidence to support a claim.
- Research that helps to explain the current situation is called **preliminary research**. It is used to plan and aid in a campaign.
- **Evaluative research** is to determine the success or failure of a campaign.
- Both forms use the same basic methods and tools but the difference is the focus.

The benefits of research

- Our world changes because of research.
- It changes the way you think by giving you more solutions to a puzzle.
- It offers the satisfaction of discovering something new.
- It contributes to the wealth of human knowledge and understanding.

Can you think of a research you did recently?

As a researcher...

- Adopt the role of someone who knows what others need to know and to cast your reader as someone who doesn't know but needs to.
- Ask journalistic questions of...
- WHO
- WHAT
- WHEN
- WHERE but focus on
- **HOW** and **WHY**

Step 1

- Name your topic

I'm trying to learn about (working on, studying) _____.

Step 2

Add a question

- I'm trying to learn about X because I want to find out who/what/when/where/whether/why/how _____.

Step 3

Motivate your question by adding a second question

- I'm trying to learn about X because I want to find out who/what/when/where/whether/why/how _____ in order to help my reader understand how _____.

From broad to a focused one.

Narrow your topic down.

Pushy passengers on public transportation in Singapore.



I am studying passengers on public transportation in Singapore **because** I want to find out why they are being pushy **in order to** help transportation companies create a much more pleasant riding experience for all of us.

The 3 categories of campaigns

Campaigns usually aim at changes in

THE COGNITIVE SPHERE (awareness, knowledge)

- Examples include campaigns to provide information about AIDS, the dangers of smoking and alcohol.

THE ATTITUDES OR VALUES

- Examples include: improving attitudes towards children, the elderly, foreigners, or minority groups, accepting women in leadership positions, etc.

THE BEHAVIOR

- Examples of these include: changing one's eating habits, encouraging safer and more courteous driving habits, giving up allocated seats in the MRT, encouraging more environmentally aware behavior, etc.

Categories of research

- Theoretical and Applied
- Primary and Secondary
- Informal/Qualitative
- Formal/Quantitative

Qualitative or Quantitative?

QUALITATIVE	QUANTITATIVE
<ul style="list-style-type: none">• Used for exploration (hypothesis-generating)• To understand how and why (intention)• Non-numerical data collection • The researcher's role on neutrality and his/her interpretation are debatable • Researchers need to carefully code data as the focus is on language, signs and meaning• Approaches analysis holistically and contextually	

Theoretical and Applied Research

- Theoretical research seeks to test theories or parts of theories whether the theory holds true.
- The goal is to develop and to advance theory
- Applied research seeks solutions to everyday problems. The goal is to solve practical problems
- At times, research can be both theoretical and applied.

Primary and Secondary Research

- Primary and secondary differentiate research based on whether or not the information collected is original or was collected by some other person or org.
- Secondary research involves examining studies that are already published or data that were collected for some other project but could be useful to you.
- You can find secondary data at govt websites, some corp websites, libraries and online databases.

Secondary Research Data Sources

Industry trade journals

Government

Informal contacts

Published company accounts

Business libraries

Professional institutes and organizations

Omnibus surveys

Census data

Public records

Online databases

Online resources such as Claritas; [survey-monkey.com](https://www.surveymonkey.com); Google.

Primary and Secondary Research

- Primary and secondary research share the same methods but the difference is whether the data are original or preexisting.
- You might reanalyze the data or use summaries of the data provided by the original researcher in secondary research.
- The advantage of secondary research is that someone has spent the time and money to collect the data.
- *What is the disadvantage of secondary research?*

Secondary Research

NTU Library Databases

Factiva (by source, company, subject, industry, region, etc.)

LexisNexis (search the news or get company info.)

Stats Sources

Statistics in Singapore

<http://www.singstat.gov.sg/>

Health-related data in Singapore

<http://www.moh.gov.sg/mohcorp/statistics.aspx>

Statistics in Asia and the Pacific (ESCAP)

<http://www.unescap.org/stat/>

NTU library databases

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ask NTU SEARCH

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- ▶ **Membership**
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- ▶ **Instruction & Learning**
Programme Objectives, Schedule & Booking ...
- ▶ **Services & Outreach**
Research Assistance, Exhibitions Book Recommendations ...
- ▶ **Loans & Circulation Services**
For Staff, For Students, For Associate Members ...
- ▶ **Scholarly Communication**
- ▶ **NTU Museum**
- ▶ **Donations**
Monetary Donations, Book Donations, Book Donation Guidelines

Springer Materials
The Landolt Börnstein Database
Click to Access

3D Molecule Structure

FINDING INFORMATION

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Books & videos
Detailed search by author, title, subject, etc

DR-NTU
Access NTU publications & submit your works

E-Books
List and guide to finding e-books

Exam Papers
Find past-year papers from most schools

E-Journals
A-Z list for accessing & browsing journal titles

ezSearch
Search multiple databases at one go

Databases
Detailed search & access to full-text, images, etc

Subject Rooms
Information resources organised by subject

NEWS & UPDATES

- ▶ Celestial Shaw Movies are now available at NTU Libraries. ... [more]
- ▶ Library has job vacancies for Support Staff - Executive Officers. ... [more]
- ▶ Date due slips ... [more]
- ▶ NTU Library goes mobile! ... [more]
- ▶ more News

Research Methods: Survey

- Surveys are designed to reveal attitudes and opinions.
- Surveys come in 2 types:
 - Descriptive surveys** which offer a snapshot of a current situation. A public opinion poll is a prime example
 - Explanatory surveys** which are concerned with cause and effect. To explain why a current situation exists and to offer explanations.

Research Methods: Survey

- Surveys generally consist of 4 elements:
 - (1) sample
 - (2) questionnaire
 - (3) interview
 - (4) analysis of results.

Source: The Practice of Public Relations. 10th edition. Fraser P. Seitel Publisher: Pearson Prentice Hall. (p. 153)

Sampling methods

Probability Samples

(Random selection of people in the sample)

- Simple Random Sampling
- Systematic Sampling
- Stratified Random Sampling

Non-probability Samples

(Random selection of people in the sample)

- Convenience Sampling
- Purposive Sampling
- Snowball Sampling

The Questionnaire

- (1) **Keep it short and simple.** Anything within 5 minutes is terrific.
- (2) **Use structured rather than open-ended questions.** Checking a box or circling a number is better than writing an essay. Leave room at the bottom for general comments or “Other”.
- (3) **Measure intensity of feelings** such as “very satisfied,” “satisfied,” “dissatisfied,” , “very dissatisfied,” rather than “yes” or “no”.
- (4) **Don’t use fancy words or words with more than one meaning.**
- (5) **Don’t ask loaded questions.** “Is the management doing all it can to communicate with you?” Expect “no” for an answer.
- (6) **Don’t ask double barreled questions.** “Would you like management meetings once a month, or are bimonthly meetings enough?”

The Questionnaire

- (7) **Pretest.** Send your questionnaire to a few colleagues and listen to their suggestions.
- (8) **Attached a letter explaining how important the respondents' answers are, and let them know that they will remain anonymous.** Also, specify how and where the data will be used.
- (9) **Randomize the order of related questions** to avoid people from thinking of the question while they answer a later question.
- (10) **Follow a logical or natural order.** Always present agree-disagree or positive to negative and excellent to poor. When using numeric, rating the scales higher should mean more positively.

The Questionnaire

- (11) **Habituation** happens when you have all the same answer choices.
- (12) **Avoid technical terms and acronyms** unless your respondents know what they mean.
- (13) **Avoid biased words or terms:** Do you like the despicable marketing tactics used by McDonald's?"
- (14) **Enclose a reward if possible.** There's nothing like a token gift of merchandise.

Source:

The Practice of Public Relations. 10th edition. Fraser P. Seitel Publisher: Pearson Prentice Hall. (p. 157-158)
Today's Public Relations: An Introduction. Robert L. Heath & W. Timothy Coombs. Publisher: Sage. (p. 114)
<http://www.surveysystem.com/sdesign.htm#design>

Questionnaire Design

Multiple Choice

1. Where do you live?

- North
 - South
 - East
 - West
-

Numeric Open End

2. How much did you spend on groceries this week? _____

Text Open End

3. How can our company improve its working conditions?

Researchers use three basic types of questions: multiple choice, numeric open end and text open end (sometimes called "verbatim").

Source:
<http://www.surveysystem.com/sdesign.htm#design>

Questionnaire Design

Rating Scales

4. How would you rate this product?

- Excellent
- Good
- Fair
- Poor

5. On a scale where "10" means you have a great amount of interest in a subject and "1" means you have none at all, how would you rate your interest in each of the following topics?

Domestic politics ..	—
Foreign Affairs	—
Science & Health ..	—
Business	—

Agreement Scale

6. How much do you agree with each of the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
My manager provides constructive criticism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our medical plan provides adequate coverage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would prefer to work longer hours on fewer days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rating Scales and Agreement Scales are two common types of questions that some researchers treat as multiple choice questions and others treat as numeric open end questions.

Source:
<http://www.surveysystem.com/sdesign.htm#design>

Questionnaire Design

Make sure your questions accept all the possible answers.

Does a question like "Do you use regular or premium gas in your car?" cover all possible answers?

- Regular gasoline
- Premium gasoline
- Diesel
- Other
- Do not have a car

Questionnaire Design

The owner may alternate between both types. The question also ignores the possibility of diesel or electric-powered cars.

A better way of asking this question would be
"Which type(s) of fuel do you use in your cars?"

- Regular gasoline
- Premium gasoline
- Diesel
- Other
- Do not have a car

Questionnaire Design

Always consider the layout of your questionnaire especially on paper, computer direct and Internet surveys. Make it attractive, easy to understand and easy to complete. If you are creating a paper survey, you also want to make it easy for data entry.

Do you agree, disagree or have no opinion that this company has:

A good vacation policy - agree/not sure/disagree.

Good management feedback - agree/not sure/disagree.

Good medical insurance - agree/not sure/disagree.

High wages - agree/not sure/disagree.

Do you agree, disagree or have no opinion that this company has:

	Agree	Not Sure	Disagree
A good vacation policy	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Good management feedback	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Good medical insurance	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
High wages	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

Questionnaire Design

The range of answer choices you give when asking for a quantity or a frequency can affect the results. For example if you ask people how many hours of television they watch in a day and you offer the choices:

- ½ hour or less
- 1 hour
- 1½ hours
- 2 hours
- 3 hours
- 4 hours or more

- 1 hour or less
- 2 hours
- 3 hours
- 4 hours
- 5-6 hours
- 7 hours or more

Questionnaire Design

- Leave your demographic questions (age, gender, income, education, etc.) until the end of the questionnaire.
- Paper questionnaires requiring text answers, should always leave sufficient space for handwritten answers. Lines should be about $\frac{1}{2}$ " apart (one cm). The number of lines you should have depends on the question. 3 - 5 lines are average.
- Always specify a background color for web surveys, even if it is white (usually a good choice). Some browsers may show a background color you do not expect, if you do not specify one.
- Background images usually make text harder to read, even when they make a page more attractive at first glance.

Comparison of survey techniques

	ADVANTAGES	DISADVANTAGES
Postal Mail	<ul style="list-style-type: none">• Covers large geographic area• Reasonable cost• Selective sampling• Anonymity for respondents	<ul style="list-style-type: none">• Lower response rate• Slow return time• Cannot clarify items• Respondents are unknown
Telephone	<ul style="list-style-type: none">• Covers large geographic area• Random-digit dialing sampling• Can clarify items• Moderate response rate	
Face-to-face	<ul style="list-style-type: none">• Can collect observable data• Can develop rapport• High response rate	<ul style="list-style-type: none">• High staffing costs• Research may influence responses• Liability if interviewers are injured while collecting data
Online	<ul style="list-style-type: none">• Data are entered directly into the computer• Somewhat novel	<ul style="list-style-type: none">• Technology costs• Technology competence

For how to create
Google survey go to
<http://www.youtube.com/watch?v=h0IKbLxasSU&feature=related>

Focus Group

- Usually a 90- to 120-minute discussion among 8 to 10 individuals selected based upon predetermined common characteristics such as buying behavior, age, income, family composition, etc.
- A well-drilled moderator leads a group through a discussion of opinions on a particular product, org or idea.
- Focus groups are paid for their efforts.
- The sessions are videotaped and analyzed.
- <http://www.youtube.com/watch?v=pcj7QT0Abk8&feature=related>
- <http://www.youtube.com/watch?v=MuiI7BFhQl4>

Evaluation

- Evaluation is designed to determine what happened and why by measuring results against established objectives.
- Success or failure is determined by whether or not we achieved the objective(s).
- A good objective is measurable. If we can't measure an objective, we can't engage in evaluation.
- Evaluative research (sometimes called summative research) is conducted to determine whether a program has accomplished its goals and objectives.

Evaluation

- Measurability is vital to an objective.
- Has the target actually received the message directed at them?
- Paid attention to them?
- Understood the messages?
- Retained those messages,
- Acted on them?
- Measuring awareness and comprehension requires “benchmarking”. In other words, both “before” and “after” research should be conducted.
- Quantitative (e.g. surveys and polls) and qualitative (focus groups and interviews) methods should be applied.

Evaluation

1. “To collect 275 pints of blood during the September blood drive.”
2. “To have 50% of potential consumers be aware of ‘Furbies’ the day after the product launch.
3. “To have community perceptions of the organizations community commitment improve from a rating of 3.5 to 4.”
4. “To have 15% of local residents begin using the new home recycling tubs on trash day.”
5. “To increase awareness of Accenture’s consulting services by 20% among potential customers.”
6. “To increase by 7% of those at risk for high blood pressure modifying their salt intake.”

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Which of these are behavioural (try to modify how people act)?

Evaluation

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*The assessment for 1 & 4
is very simple: counting!*

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The assessment 6 is more complicated due to behavioural patterns.

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We must collect information before (bench-marking) and after (posttest).

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Which of these are attitudinal? (try to change how people feel towards something)

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Knowledge Objective: Helps to determine what percentage of potential customers are aware of Accenture.

Comparison of survey techniques

SURVEY	STRUCTURED INTERVIEWS	FOCUS GROUP	IN-DEPTH INTERVIEWS
<ul style="list-style-type: none">• Best to assess attitudes• For evaluation purposes• Relies on quantitative measures	<ul style="list-style-type: none">• Best to assess attitudes• For evaluation purposes• Relies on quantitative measures	<ul style="list-style-type: none">• Suited for exploratory research• For understanding the situation	<ul style="list-style-type: none">• Suited for exploratory research• For understanding the situation

Pre- and post measures are critical to evaluating success when you desire change.

To only way to show change is to compare pre- and post-research data.

The data need to be collected in the same fashion. If you use survey, the same items need to be on the survey you used to collect pre- and post event data.

What is a literature review

- A review of all the literature done on your topic
- It focuses on previous research of your chosen topic
- It highlights how your study fills the gap
- It justifies the necessity for your study
- It sets the boundaries of your study (the limitations)
- Include a summary of existing knowledge and critical evaluation.

A literature review asks...

- What research has been done before?
- What have others said about this topic?
- How is this research relevant to my study?
- What is the difference compared to my study?
- Do the results of the existing research agree/disagree with one or another?
- Are there flaws/gaps in the existing literature?

Where to start?

- Survey university databases
- Abstracts
- Librarian consultation
- Begin with articles in referred, international and national journals.
- Book/chapters in edited books
- Conference papers and research reports
- Dissertations and theses
- Websites/articles in non-refereed journals.

Challenges of research

- Who is the audience? Local, national or international?
- The contexts of campaigns vary significantly, making it difficult to elaborate **general proposition** (Rogers et al., 1987:841 as quoted in The craft of research. Wayne C. Booth, Gregory G. Colomb & Joseph W. Williams. Publisher: The University of Chicago Press. (p. 19)
- Attitude and behavior change is difficult to quantify and track
- Campaign research has been strongly influenced by practical questions: lack of/no theoretical framework – which many scientists consider necessary
- Research can be expensive and time consuming.



Who is more beautiful?



Jennifer



Gertrude

Tutorial due on Sep 8

- Based on your findings from the previous week of situational analysis and SWOT, develop a deeper understanding of your target audience by using one of the two primary research methods below:
 - Survey questionnaire
 - Interview

Present your questionnaire as well as your findings.

Tutorial due on Sep 15

- Develop a campaign idea based on a deepened understanding of the target audience.