KOM 5113: Communication Research Methods
(First Face-to-Face Meeting)

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Second Semester (January), 2011/2012
What is research?

- Research is a common activity in our live
- We conduct research in many ways
- Human’s instinct to inquiry – to know, to know more, to explore, to find out, to explain, to overcome a problem etc
- It is an on-going process
Is a form of disciplined inquiry that involves studying in a planned manner and reporting it so that other inquirers can potentially replicate the process if they choose to do so.

It is a systematic procedures conducted to find answers to specific questions about a problem that has been identified.
Why study research methods?

- There are many approaches and types of conducting research – many to choose from.
- To know the most appropriate method to answer the research problems and objectives.
- To suit the resources available – time, money, personnel, facilities etc.
- To suit the data sources – respondents, media, interactions etc.
Why we do research?

- A requirement for ...
- Someone asked to do so
- To know, identify, determine, test, find out, assess, get, explain, understand ...
- There is a problem
- Research does not solve the problem, but it helps in finding the cause(s) of the problem and way(s) to solve it
The importance of research

- Helps us to understand something better
- Helps us to identify the root of a problem
- Helps us to find ways and solutions to solve problem
- Provides data for decision making and policy formation
- Helps us generate new information and knowledge
Common methods of acquiring knowledge

- **Tenacity** – willingness to accept idea as valid knowledge because that idea has been accepted for a long period of time
- **Intuition** – knowledge is received directly without any intellectual effort or any involvement of sensory process
- **Authority** – willingness to accept idea as valid knowledge because some respected source claims it is valid
- **Rationalism** – willingness to accept that knowledge is developed through reasoning process alone

- **Empiricism** – knowledge is gained through observation of real event, through personal experiences and our senses
Science – knowledge is generated through the elements of rationalism and empiricism. It employs rational logic and check each step with empirical observation. It involves the continuous systematic interplay of facts and rational though
Scientific method

- A process through which we attempt to achieve systematically and with the support of data, the answer to a question, the resolution of a problem, or a greater understanding of a phenomenon

- Denotes systematic and orderly stages of acquiring knowledge
- Objective procedures and free form value judgment
- Based on facts and rational thought
- There is control on problem, definition, observation and analysis
- Open for examination or evaluation
Repeatable stages
Most reliable of all knowledge method
Without method, we are left with chance – is this what we want?
Without method, we are prone to errors and mistakes
Methods improve our problem solving ability
Research approaches

- **Behaviorism** – based on belief that objective knowledge is obtained through the careful and systematic observation and measurement of what people do. Abstract concepts are operationalized and transformed into behaviors that can be precisely quantified. The goal of behavioral research is to identify and test theories that can explain, predict and lead to the control of behavior.
Phenomenology - based on belief that people depend on what they perceive and think in doing things. This approach focuses on how internal or psychological meaning guides behavior and give priority to the subjective aspect of human life. The goal of phenomenological research is to describe how people understand their life experience.
**Integrated** – combination of both behavioral and phenomenological approach as full explanation of human actions demands accounting for both behavior and meaning. This approach enables researchers to understand, describe and predict the physical, objective world as well as the subjective world of the individual.
Types of research

- **Experimental or laboratory research**
  - there are treatments/manipulations and control of subject
  - conducted in a controlled-setting
  - to examine cause and effect

- **Non-experimental or field research**
  - no treatment/manipulation of subject – as is
  - conducted on natural setting
  - to understand something, get explanation
- Exploratory research
  - done on something new, had little idea
  - to get as much preliminary data
- Basic or fundamental research
  - conducted to test or refine theory
- Applied research
  - conducted to solve a practical problem
- **Scholarly research**
  - conducted for academic requirement: Bachelor, Master and Ph.D
  - to further expand the knowledge horizon

- **Case studies**
  - to study events within their real-life context

- **Cross-sectional research**
  - study done at one point of time
- **Longitudinal research**
  - to study phenomena over time
  - examine change or pattern

- **Research and Development (R & D)**
  - conducted to create or develop something as part of on-going research
  - involve a lot of time, money and personnel
Quantitative vs. Qualitative

- Two complementary approaches
- Getting more meaning or understanding from numbers
- Use to answer appropriate research question: how, why, what, who, where, when (H5W)
- Appropriate data collection methodology
- Sample size and data analysis procedures
Major steps in conducting research

- Selection and formulation of research problem
- Review of literature
- Formulation of research questions and objectives
- Preparation of research design
- Development of research instrument – measurement and operationalisation
Major steps...

- Identification of population frame and respondents selection (source of data)
- Pre-testing of research instrument
- Data collection
- Data processing and analysis
- Interpretation of findings
- Report writing and dissemination
Selection and formulation of research problem

- Generally problem is defined as a gap between what is and what it should be.
- Problems can be identified through experience at work, daily activities or through observations and interactions.
- A good source of problems is research articles as they normally suggest future research.
A problem which is researchable, worthwhile, manageable and current – not only give yes and no answer

A problem statement provides a clear and concise problem ‘picture’ with some background information or scenario

A problem that generates other questions that are termed as research questions (RQs)
Some says research questions are summary of the problem stated in question form

Research questions provide research with the width, depth and boundary of the problem

Research questions are normally used to formulate the specific objectives of the study
Review of literature

- It is on-going process from the start of research idea till end of writing report
- To find out what is already known about the ‘topic’ we want to study
- What research had been done
- How related variables had been defined or operationalised
- How the research was conducted, where and when
• Who were the respondents of research
• What results were generated
• To make research more focused
• To make research topic more exact
• To refine research problem and questions
• To refine research techniques and design
• To formulate valid research hypotheses
Sources of literature review

- Scholarly journals published by professional associations, societies, universities etc.
- Scholarly (texts) books, yearbook series
- Scholarly conference papers, proceedings
- Dissertations, theses, academic projects
- Reports of governments, NGOs, society etc.
- Indexes and abstracts – hard copy, on-line
- Periodicals such as trade magazines, newspapers
What to look for in literature review?

- Statement of research problem, research questions, objectives and hypotheses
- Operational definitions of variables and measurements used
- Respondents of study, sample size, unit of analysis and data collection method
- Research findings and suggestions
- Author, title of article, name of publication, page numbers, publisher and year
- Recency – is the information the most recent available? Less than 10 years, better within the last 5 years
- Relevancy – is the information suitable and directly related to research? In what manner – methodology, theory, variables?
- Comparative quality – is it scholarly or meant for general public?
- Follow quotation and referencing requirements or styles for academic writing
The key to useful research is careful definition of the major concepts in the study.

Explication is the process that provides linkages between the terms we use in discourse and the measure we create empirically.

Conceptualization is the process through which we specify precisely what we will mean when we use a particular term.
Conceptualization is the process of specifying observations and measurements that give concepts definite meaning for the purpose of a research study. It includes specifying the indicators of a concept and describing its dimensions.

Operational definitions specify how variables relevant to a concept will be measured.
Operationalization is an extension of conceptualization that specifies the exact procedures that will be used to measure the attributes of variables. It literally means specifying the exact operations involved in measuring a variable. It involves the construction of actual, concrete measurement technique; the process of devising steps or operations for measuring what we want to study.
Operationalisation involves a series of inter-related choices:

- specifying the range of variation that is appropriate for the purpose of a study
- determining how precise to measure variable
- accounting for relevant dimensions of variables
- clearly defining the attributes of variables and their relationship
- deciding on an appropriate level of measurement: nominal, ordinal, interval and ratio

Measurement is deliberate observations of the real world for the purpose of describing objects or events in terms of attributes composing a variables
Concept explication involves:
- preliminary identification of concept
- conduct literature search to find out how the concept had been defined
- develop empirical description
- define concept, review and modify
- define concept operationally
From conceptualization to measurement

- Conceptualization
  - Nominal definition
    - Operational definition
      - Measurement in the real world
Concept: Socio-economic status

Nominal definition: A relative position of an individual or family in a society as compared to other members of the society

Operational definition: An individual’s or family’s position in a society when income, educational level and location of residence, job (etc) are computed to reflect his/her level as compared to other members of a community
Measurement in the real world:

a) income: monthly salary + others
b) educational level: highest educational attainment or years in formal school
c) location of residence: urban, rural, city outskirt; type of housing: semi-d, condo bungalow, no. of rooms
d) job: government, private sector, self-employed, executive, technical support
Concept: Socio-economic status

Variables: a) income, b) educational level, c) location of residence, d) job

Attributes: a) income – low, med. high  b) educ level: no educ, primary, secondary, collage, Bac, Master, Ph.D, Professional  c) loc of res.: ur, rur, bgl, smd, trc apt, condo  d) job: exec, management, middle, support, clerical, front-liner
High socio-economic status =
Middle economic status =
Low economic status =

Set your own or use established set

What the literatures say?
Variables and attributes

- Variables are something that varies or logical groupings of attributes.
- Attributes are characteristics or qualities that describe an object or categories that make up a variable.
- Variables and attributes are derived from the concepts and are part of the operational definition for measurement.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Young, middle-aged, old</td>
</tr>
<tr>
<td>Gender</td>
<td>Female, male</td>
</tr>
<tr>
<td>Occupation</td>
<td>Lecturer, house-wife, clerk</td>
</tr>
<tr>
<td>Race</td>
<td>Chinese, Indian, Malays,</td>
</tr>
<tr>
<td>Social class</td>
<td>Low, middle, high</td>
</tr>
<tr>
<td>Job stress</td>
<td>Low, moderate, high</td>
</tr>
<tr>
<td>ICT skill</td>
<td>Novice, beginner, moderate, expert</td>
</tr>
</tbody>
</table>
The relationship between variables and attributes lies at the heart of both description and explanation in science.

There are many types of variables. In cause and effect term, the independent variable is the cause and the dependent variable is the effect. E.g. Study habits effect grade, frequent traffic jam causes stress; watching TV leads to broader general knowledge.
- Dependent variable – effect
- Independent variable – cause
- Intervening variable – something else presents
- Antecedent variable – prior in time
- Suppressor variable – conceal relationship of two other variables
- Distorter variable – causes an apparent reversal in the relationship btw two other variables
Criteria for causality

- In a causal relationship between two variables, the cause must precede the effect in time.
- The two variables must be empirically correlated with one another.
- The observed empirical correlation between the two variables cannot be explained away as being due to the influence of some third variable that causes both of them.
A necessary cause represents a condition that, by and large must be present for the effect to follow.

A sufficient cause represents a condition that, if it is present, will pretty much guarantee the effect in question.
That's all, see you in second face-to-face