Lec5

**Qualitative vs quantitative research (designs)**

**Quantitative research:**

*Quantitative research prioritises the use of measurement and statistics. Because “the goal of quantitative methods is to determine whether the predictive generalisations of a theory hold true”, the logic followed is mainly deductive. This type of research is often concerned with testing hypotheses and examining relationships between variables. Generalizability and replication are important elements in quantitative research. In addition, the operationalization of definitions is of high importance to measurement and quantification. The use of structured data gathering tools is another feature distinguishing this type of research. For the sake of generalizability, the samples are often selected using probability procedures.*

**Important notions:**

**Generalizability:** *Generalizability refers to the degree to which the results of a study can be extended to a larger population.*

**Replication:** *Replication means the action of repeating the same experiment with different participants, settings, or experimenter to confirm the results.*

**Operational definition:** the specification of how abstract constructs like motivation, creativity, or interest can be measured to facilitate the quantification of data.

**Structured data gathering tools**/ instruments: these are tools that allow for collecting data through close-ended questions with predetermined answers such as in questionnaires and interviews. In structured observations, the researcher knows in advance the nature of data he/she is going to record, so some preselected categories are established. Unstructured instruments, on the other hand, make use of open-ended questions in interviews and questionnaires. Unstructured observations are conducted in a more flexible way, that is to say with no preselected categories.

**Examples of quantitative research:**

**Surveys:** they include questionnaires and structured interviews intending to describe a sample in terms of its attitudes, behaviours, and characteristics.

**Experimental research:** in the simplest form of an experimental study, two groups having the same characteristics are chosen to form the sample. An intervention (experiment, variable manipulation) is then conducted on the experimental group while the control group is not exposed to any variable manipulation. To test the causal link, a comparison is made between the control group and the experimental group before and after the manipulation of the variable. The differences noticed, if any, are associated to the experiment and more precisely to the manipulated variable.

**Causal-comparative research:** also called ex post facto research, is conducted to confirm causal relationships between variables. What distinguishes this type from experimental research is that no manipulation of the variable is established because it is simply impossible, inappropriate or unethical. Thus, no random assignment of the group members is done.

**Correlational research:** a correlational study focusses more on the association between two or more variables than on the impact of a variable on another. A correlational research describes and measures such type of association without relating it to causal relationships. A positive correlation

A negative correlation

**Qualitative research:**

*This design involves in-depth investigation of what people think or do. The researcher studies closely phenomena and attempts to understand the words, actions, and records of the individuals. Following an inductive approach, the researcher starts from particular cases in order to find some general themes and patterns. This design yields verbal data; it is not concerned with quantifying results through percentages or statistical analysis though it may include varying degrees of numerical measurements. One major feature of qualitative research is that it generates hypotheses that can subsequently be tested through quantitative research. Purposeful sampling is favoured over probability procedures in qualitative research.*

**Examples:**

**Interview:** the researcher engages in a conversation with participants to elicit data about their characteristics, thoughts, opinions, attitudes, or experiences.

**Observation:** a detailed description is provided on how participants act in particular environments. **Participant observation** refers to the observational study wherethe researcher takes part of the same activities performed by the participants.In **non-participant** observation, the researcher collects fields notes without taking part in the activities of the participants.

**Document analysis:** by document it is meant any audio or written record, artefacts, or physical materials. A researcher can choose for materials of analysis a book, a diary, a collection of newspapers, videos, photographs, websites or email-messages.

**Grounded theory:** starting from descriptive data about a given phenomenon, a theory is formulated in an inductive way.