# Content Analysis

# Important:

At the end of this presentation there is a link to a Microsoft Forms quiz. It is recommended that you score a 80% or higher.

Please take your time viewing and studying this material before you proceed with the quiz.

# Objectives

- Understand what content analysis is

- Delve into the aspects of content analysis

- Employ content analysis tactics effectively

# Content Analysis Defined:

Content analysis is a method for analysing the content of a variety of data, such as visual and verbal data. It enables the reduction of phenomena or events into defined categories so as to better analyse and interpret them.

The technique was first used more than 200 years ago to analyse textual material from newspaper and magazine articles, advertisements, political speeches, hymns, folktales and riddles. In recent times, technological developments facilitate the means for further and deeper analysis of the vast amounts of data that may be generated through research techniques such as interviews and discussion group recordings.
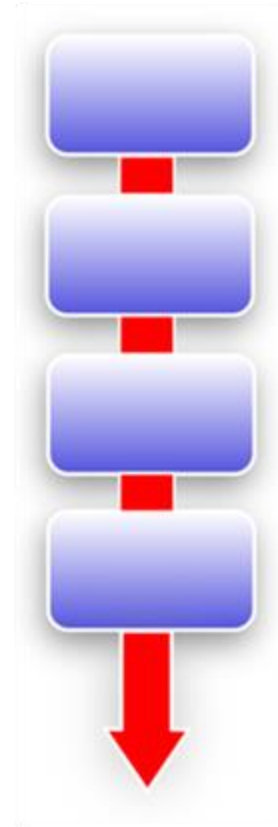
# Uses of Content Analysis

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It may be used as a technique in both qualitative and quantitative studies (Robson 1993; Neuendorf 2002; Collis and Hussey 2003) and is usually described as being qualitative in the development stages of research and quantitative where it is applied to determine frequency of phenomena of interest. Consequently, it has numerous potential uses that may include (Berelson 1952; Carson et al. 2001):

- auditing content against objectives;
- constructing and applying communication standards;
- identifying the characteristics of communicators;
- determining psychological states of individuals or groups;

- identifying features of style;
- identifying international differences in communications;
- determining cultural patterns (attitudes, interests, values);
- revealing the focus of attention; and
- describing communication responses (attitude and behaviour).

# Content Analysis Classifications

Various levels of classifying the content of communications have evolved (Janis 1965) where the meanings of words are inferred from the context in which they have occurred relative to accompanying behaviours:

- **Pragmatic content analysis:** Analysing likely cause and effect, ie., frequency of an utterance producing a desired effect on an audience eg., the number of times something is said which is likely to have the effect of producing favourable attitudes towards a business proposal in a negotiation process;

- **Semantic content analysis:** Analysing meanings, ie., frequency of utterances used to describe a particular phenomenon, irrespective of words used eg., counting the number of times a business proposal is referred to.

# Content Analysis Classifications Cont.

- **Designation analysis:** frequency of reference to objects (persons, things, groups or concepts);

- **Attribution analysis:** frequency of characteristics (eg., references to trust);

- **Assertions analysis:** frequency of characteristics to certain objects ie., thematic analysis (eg., references to trust in the business proposal);

- **Sign-vehicle analysis:** the frequency of an actual utterance.

# Systems

Krippendorff (1980) defines a system as a conceptual device describing a portion of reality. Broader descriptions are "an entity that maintains its existence and functions as a whole through the interaction of its parts" (O'Connor 1996, p 1); "a boundary-maintaining set of interdependent particles or sub-units... viewed as occupying one level of a multi-level hierarchy of systems" (North et al. 1963, p 5). The essential constituents may be summarised as follows:

- **Components**: of variable states, eg., functional departments within an organisation such as sales, finance, human resources management, etc;

- **Relations**: constraints on the co-occurrences of states across components eg., the Memorandum of Articles of Association specifying the legal operational environment of a private limited company;

- **Transformations**: the interaction of components (states) within the system constraints (relations), either spatially or temporally.

# Standards

**Standards** allow comparison of objects through relative measurement by identifying, evaluating and auditing the content of communication. Evaluation is somewhat subjective since many studies have lacked defensible criteria for measurement against some standard (Krippendorff 1980). Audits are also subject to judgment although the standard may be intertwined with legal or professional directives, eg., the Advertising Standards Association, against whose guidelines of 'legal, decent, honest and truthful' advertisements for non-broadcast media are deemed fit for public consumption (www.asa.org.uk/).

# Communication

**Communication** takes place in the context of an existing relationship among subjects and, in so doing, may alter that relationship. Although rarely used in content analysis, this technique has been utilised to analyse response and cue elements of interactions by Donohue et al. (1984) within the context of small groups. A more common methodology for analysis of communication, however, is interaction analysis (Bales 1950; Krippendorff 1980).
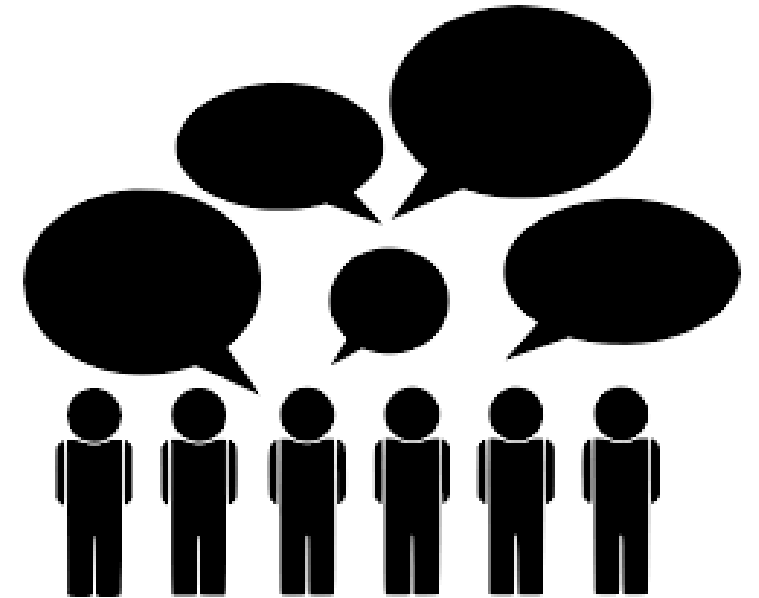
# Reliability

Reliability takes three forms in content analysis: **stability, reproducibility and accuracy** (Krippendorff 1980).

# Reliability

- **Stability:** the extent to which the analysis is immutable, referring to the re-coding of data by the same coder or 'judge' at different points in time. Such intra-judge consistency is the weakest form of reliability in content analysis since accurate re-coding of data may be subject to cognitive dissonance, interpretation of coding rules, data or the context of the communication (Krippendorff 1980). Furthermore, a common phenomenon is that of 'instrument decay' (Johnson and Bolstad 1973), in this context used to describe post-training coding of further data. This is particularly problematic when data is collected and coded 'live' as in naturalistic situations but may be at least partially overcome by continuous training (Johnson and Bolstad 1973).

# Reliability

- **Reproducibility:** the duplication of coding under different circumstances eg., different judges or situations. Lack of consensus encoding may, therefore, result from inconsistencies between judges ie., inter-judge.
- **Accuracy:** refers to the process of conforming to a known standard. This involves comparison of one judge's coding performance to the correct measure. Differences represent inconsistencies in intra- or inter-judge reliability, ie., within or between judges, and deviations from the standard. It is the strongest measure of reliability but it does assume the underlying standard is valid. As a training aid for judges, accuracy is particularly useful since it enables performance to be monitored.

# Validity

Validity is the extent to which the research may be generalised to the population. Two types of validity exist in relation to content analysis (Weber 1990):

- **internal validity:** referring to the classification scheme or categories as being representative of the research hypotheses. Such 'face' validity is the weakest form;

- **external validity:** there are various types of external validity which refer to the extent the research results correspond with previous and future findings.

# External Validity

The most commonly used external validities are:

- **construct validity:** relating to the underlying theoretical rationale of the data measured. Construct validity increases where there is a high predictive correlation in the construct of interest and other related constructs from previous research (Kinnear and Taylor 1991);

- **hypothesis validity:** pertaining to the consistency of the data with expected relationships and theoretical argument;

# External Validity Cont.

The most commonly used external validities are:

- **predictive validity:** is the verification of the inferences made from content analysis by observing actual events, whether these are past, present or future phenomena (Krippendorff 1980);

- **semantic validity:** relating to judge reliability but specifically refers to agreement on meanings or connotations of units being analysed by persons familiar with contextual language. This is particularly relevant, for example, in analysis of cross-cultural marketing where important differences may be overlooked (Holsti et al. 1973).

# Benefits and Limitations

Benefits:

- flexibility of research design ie., types of inferences
- supplements multi-method analyses
- wide variety of analytical application
- may be qualitative and/or quantitative
- may be automated – improves, reliability, reduces cost/time

Limitations:

- analyses the communication (message) only
- findings may be questionable alone, therefore, verification using another method may be required
- underlying premise must be frequency related
- validity – construct, hypothesis, predictive and semantic

# Benefits and Limitations Cont.

Benefits:
- range of computer software developed
- copes  with large quantities of data
- unobtrusive, unstructured, context sensitive
- development of standards applicable to specific research, eg., negotiations

Limitations:
- reliability – stability, reproducibility, accuracy of judges
- less opportunity to pre-test, discuss mechanism with independent judges
- undue bias if only part data is analysed, possibly abstracting from context of communication
- lack of reliability and validity measures reported, raising questions of credibility

# Conclusion

Content analysis is useful for many elements of investigation and writing. It also helps analyze data of experiments, reports and other sources of information. Some key elements of this concept are its uses, validity, and reliability.

# References

Harwood, T. G., & Garry, T. (2003). An Overview of Content Analysis.*Marketing Review, 3*(4), 479–498.https://doi.org/10.1362/146934703771910080

After completing the module, click on the following link to take the quiz and send the report to your professor:

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