

RESEARCH METHODS

UDAY CHATTERJEE

GEOGRAPHY CBCS HONOURS

SEMESTER: IV

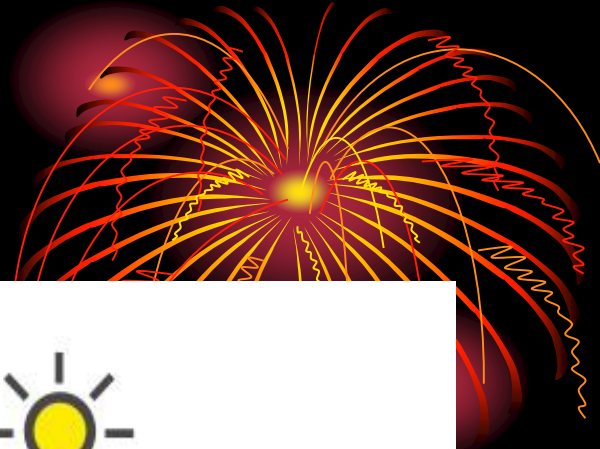
UNIT-II

SEC - 2T

POINT : 2 & 4.



Aims & Objectives of research





Objectives of research



- • Find out truth which is hidden and which has not been discovered yet
- • Gain familiarity with a phenomenon or to achieve new insights into it
- • Portray accurately the characteristics of a particular individual, situation or a group
- • Determine the frequency with which something occurs or with which it is associated with something else
- • Test a hypothesis of a casual relationship between variables



RESEARCH OBJECTIVES

- Research objectives should be **clear** , **achievable** and **verifiable** - as they directly assist in answering the research questions / problem .
- Objectives may be specified in the **form of actions** (verbs) to answer the posed questions- generally objectives begin with to :
discover ... , determine ... , establish ...access..... , identify..... , compare , analyze , evaluate..... , ...etc.



TYPES OF RESEARCH



Descriptive Research:-

Means description of the state of affairs as it exists at present. Researcher only reports only what has happened or what is happening

Applied Research:-

Aims at finding solution for an immediate problem facing a society or an industry/business organizations .



**BASIS FOR
COMPARISON****BASIC RESEARCH****APPLIED RESEARCH****Meaning**

Basic Research refers to the study that is aimed at expanding the existing base of scientific knowledge.

Applied Research is the research that is designed to solve specific practical problems or answer certain questions.

Nature

Theoretical

Practical

Utility

Universal

Limited

Concerned with

Developing scientific knowledge and predictions

Development of technology and technique

Goal

To add some knowledge to the existing one.

To find out solution for the problem at hand.



Fundamental Research: -

Mainly concerned with generalizations and with the formulation of a generalizations and with the formulation of a theory. theory.



Analytical Research: -

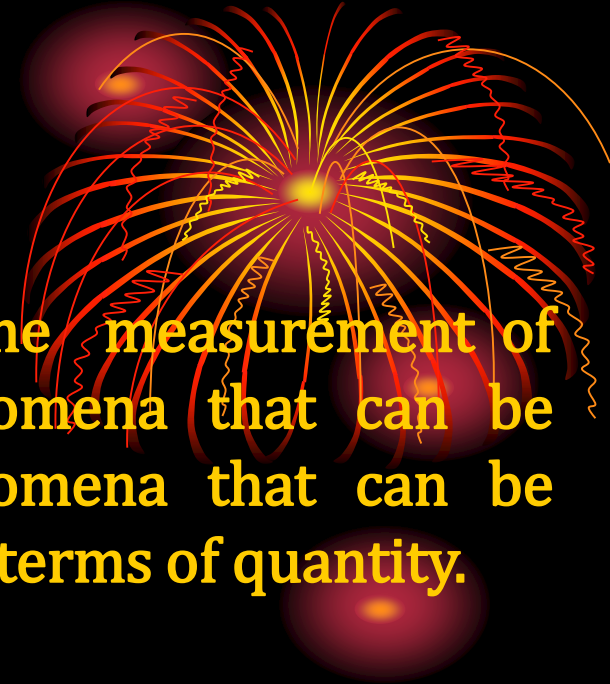
Researcher has to use facts on information already available and analyze these to make a critical evaluation of the material.





Quantitative Research

Based on the measurement of quantity or amount. Applicable to phenomena that can be expressed in terms of quantity.



Conceptual Research

Related to some abstract ideas or theory. Used by philosophers and thinkers to develop new theory. Used by philosophers and thinkers to develop new concepts or re-interpret existing ones.





Empirical Research: -

Relies on experience or observations alone, often without due regard for system and theory. Relies on experience or observations alone, often without due regard for system and theory.



(Example: An experimental research that may not be or will be helpful in human progress). It is used to solve a problem by adding to the field of application of discipline.

Qualitative Research: -

Concerned with qualitative phenomenon, i.e. phenomenon relating to or involving quality or kind. Concerned with qualitative phenomenon, i.e. phenomenon relating to or involving quality or kind.





Action Research



- ✓ It is application of fact findings to practical problem solving in a social situation with a view to improve quality of action within it, involving collaboration and cooperation of researchers, practitioners and laymen. •
- ✓ It can be situational (diagnose a problem and attempts to solve it), collaborative, participatory (researcher take part in implementation of findings) and self evaluation (it involves constant evaluation and adjustment of research and practice)





Research Methods:

May be understood as all those methods or techniques that are used by a researcher for conducting a Research depending upon the methods.



(1) Library Research: analysis of historical records and documents. Statistical compilation, references, abstracts, guides manipulation (handle with skill)

(2) Field Research: Observation, questionnaires, personal, Group or telephonic interviews, case study.

(3) Laboratory Research: Group (team) study, use of audio visual tools.



RESEARCH METHODS Vs. RESEARCH METHODOLOGY



Research Methods:-

Refers to the methods/ techniques researchers use in performing techniques researchers use in performing research operations. research operations.

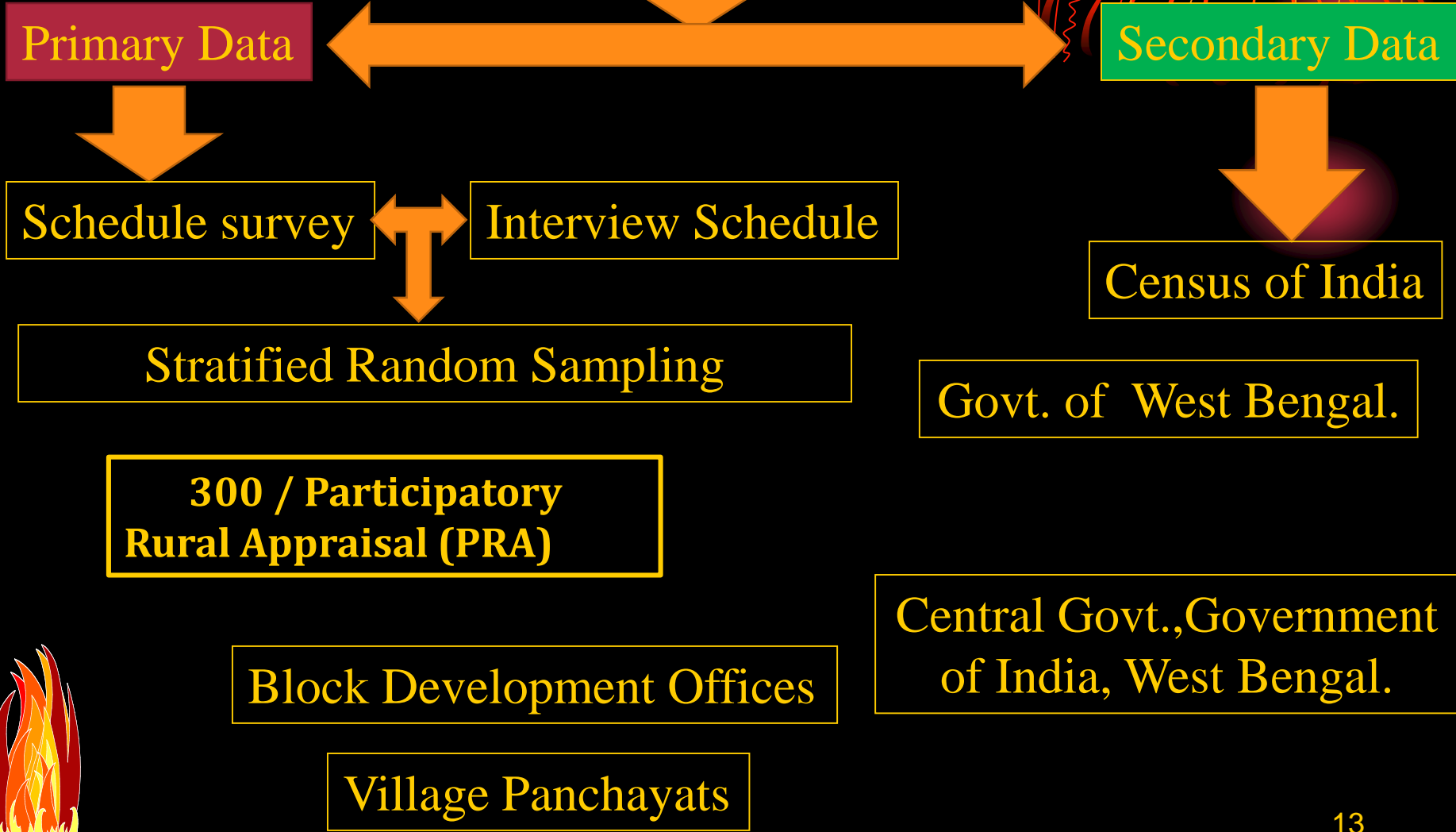
Research Methodology:-

It may be understood as a science of studying how research is done scientifically. In it we study the various steps scientifically. In it we study the various steps that are generally adopted by researcher in that are generally adopted by researcher in studying his research problem along with the studying his research problem along with the logic behind them.

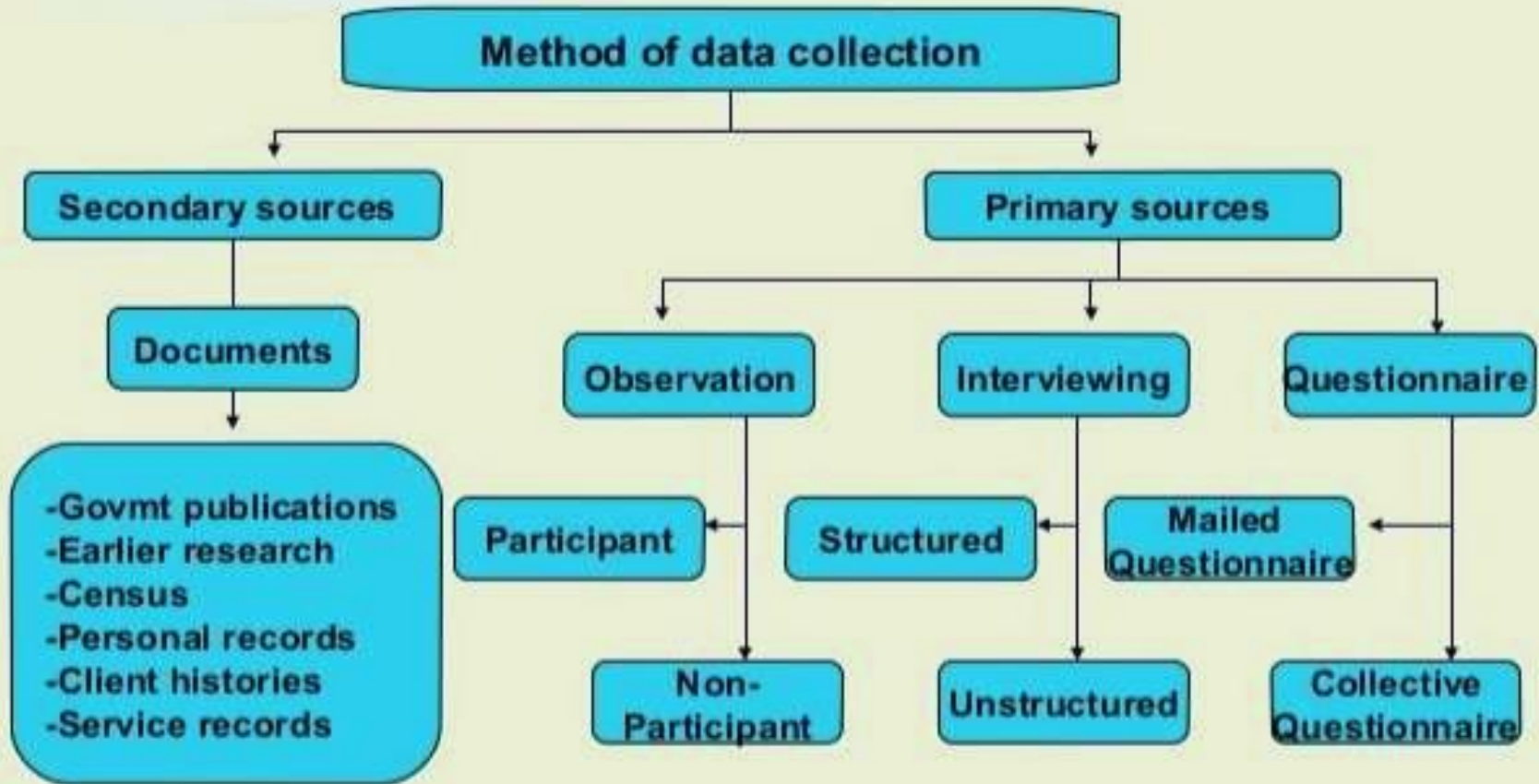




Methodology (EXAMPLE)



Method of data collection



Methods of data collection

Observation



Interview



Questionnaire



Database





Question Response Format (1)



1. Open-ended questions

- participant responds in own words
- open response option (a)

a) Why is brand X better?

○ Close-ended questions

- participants required to choose from a pre-determined list of answers
- Dichotomous (b)
- Multichotomous c)

b) Have you used the Internet today?

H Yes

Y No

c) Which best represents your age?

a) Under 17

d) 36-50

b) 18-25

e) 51-65

c) 26-35

f) 66+


○ Partially open-ended (d)

d) What is your preferred brand of car?

BMW Mercedes e Ford Other (please specify) _____



Primary Data



Advantage

- Tailored according to research needs
- The researcher can determine exactly what data will be collected and can identify the specific tools that will be used.
- Defined and consistent protocol
- Completeness of data is ensured.

Disadvantage

- Time consuming
- Rely on subjects recall and communication abilities
- Bias may occur due to various factors.
- Need to check reliability of raters.



Secondary Data

- **Secondary data are those that have already been collected by others.**
- **These are usually in journals, periodicals, research publication ,official record etc.**
- **Secondary data may be available in the published or unpublished form. When it is not possible to collect the data by primary method , the investigator go for secondary method.**



Secondary Sources

Secondary source research documents are description of studies prepared by someone other than the original researcher.

They are written by people other than the individuals who developed the theory or conducted the research. The secondary sources may be used when primary sources are not available or if researchers want external opinions on an issue or problem or





FOCUS GROUP DISCUSSION





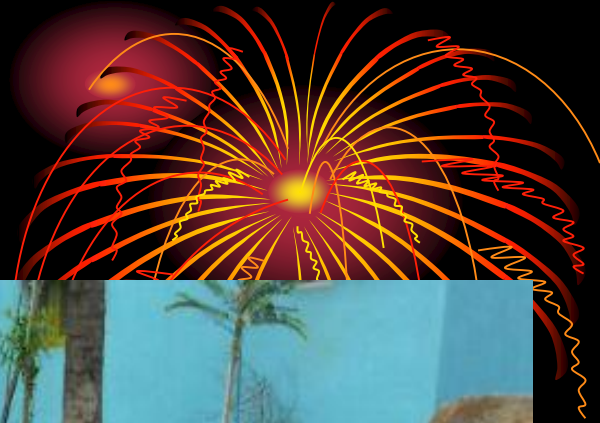
PARTICIPATORY RURAL APPRAISAL

- **Appraisal** – The finding out of information about problems, needs, and potential in a village. It is the first stage in any project.
- **Participatory** – Means that people are involved in the process – a “bottom-up” approach that requires good communication skills and attitude of project staff.
- **Rural** – The techniques can be used in any situation, urban or rural, with both literate and illiterate people.





PARTICIPATORY RURAL APPRAISAL





PUA

means

Participatory Urban Appraisal

by [acronymsandslang.com](https://www.acronymsandslang.com)





TYPES OF SCHEDULES (examples)

Following are the different types of schedules used by social scientists and anthropologists.

- **Village or community schedule**: It is used by census researchers who collect general information on populations, occupations, etc.
- **Family or Household schedule**: It gives full demographic details of households, the status of individuals, data on education, age, family relations etc.
- **Opinion or attitude schedule**: To schedule the views of population regarding an issue.





Difference between questionnaire and schedule

Questionnaire	Schedules
Non response is high Many may not return-may return without answering all the questions Bias due to non response	Low Gets answer for all Bias and cheating is there
Not always clear who replies	Respondent is known
Method is slow-do not return the questionnaire in time	Data is collected well in time





Research is not



Accidental discovery :

- 1. Accidental discovery may occur in structured research process**
- 2. Usually takes the form of a phenomenon not previously noticed**
- 3. May lead to a structured research process to verify or understand the observation**

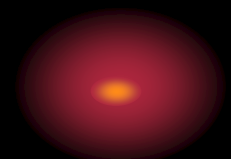




PRESENTATION OF REPORT

- **Preliminary pages**

- Title page**
- Certificate of supervisor**
- Acknowledgement**
- Declaration**
- Preface**
- Table of contents**
- Listing of tables**
- Listing of figures**
- Abbreviations**



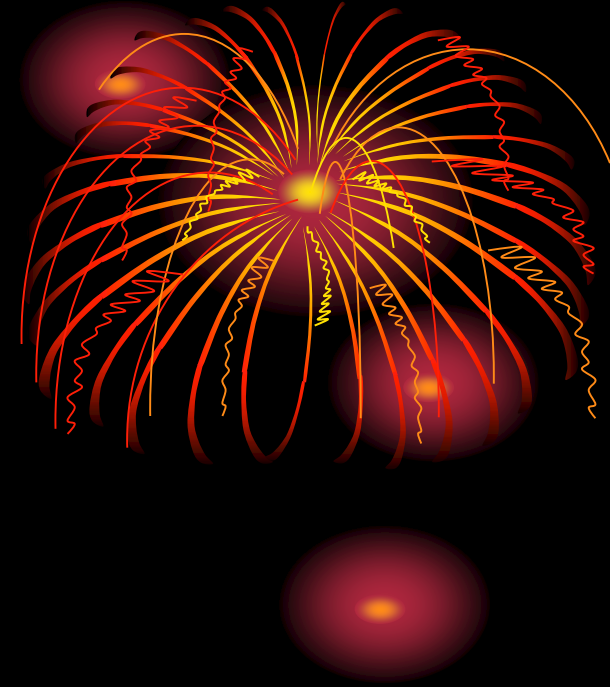


Main text Main text

- Introduction
- Problem
- Objectives
- Methodology
- Findings
- Limitations
- Conclusions and recommendations

A. End matter

- Appendix
- Bibliography





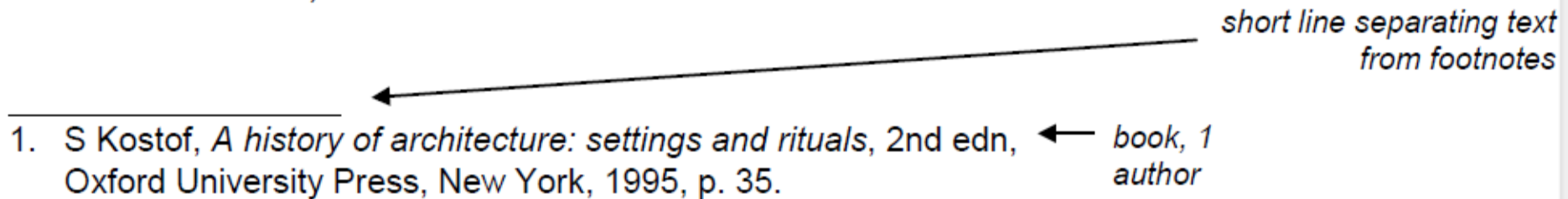
Footnotes/endnotes



At the bottom of the page you would have a short line separating the body of the text from the footnotes relating to the superscript numbers. (Many word processing programs have an automatic footnoting facility.)

The first time a source is cited, the footnote must provide full bibliographic details. The footnotes for subsequent references to the same source do not repeat all the details again but use a shortened form. See the section that follows on repeat citations.

Examples of first citations of common footnote types are shown below. (Endnotes have the same format as footnotes.)





Bibliography



A *bibliography* consists of sources cited in text, sources consulted in preparing a paper, as well as other sources thought to be of use or interest to the reader.

A *reference list* consists of only the sources cited in a paper. Note, however, that the term 'bibliography' is sometimes used for what would more accurately be called a reference list.

In compiling entries for a bibliography (and for a reference list) according to the documentary-note style, note that the order of elements, the punctuation and capitalisation are the same as for footnotes/endnotes.



- 
- 
- 
2. H Fraser & R Joyce, *The Federation house: Australia's own style*, Lansdowne Press, Sydney, 1986. ← book, 2 authors
 3. FS Kleiner, CJ Mamiya & RG Tansey, *Gardner's art through the ages*, 11th edn, Harcourt College Publishers, Fort Worth, 2001. ← book, 3 authors
 4. EH Gombrich, 'The early Medici as patrons of art', in EF Jacob (ed.), *Italian Renaissance studies*, Faber and Faber, London, 1960, pp. 279–311. ← chapter in edited book
 5. Parliamentary Standing Committee on Public Works, *Proposed common use infrastructure on Christmas Island*, Parliament of the Commonwealth of Australia, Canberra, 2002. ← report, group author
 6. RA Goldthwaite, 'The Florentine palace as domestic architecture', *American Historical Review*, vol. 77, no. 4, 1972, pp. 977–1012. ← journal article
 7. P Lawther, 'Cost planning: is it sustainable income?', *The Building Economist*, June 2003, pp. 4–12. ← journal article
 8. 'Federation Square: A tribute to the skill of the construction industry', *Construct in Steel*, vol. 15, no. 2, 2002, pp. 12–14. ← journal article, no author
 9. S. Crafti, 'Winning design moored in Spain', *The Age*, 25 August 2010, Business Day, p. 16. ← newspaper article,



1. S Kostof, *A history of architecture: settings and rituals*, 2nd edn, Oxford University Press, New York, 1995, p. 35.
2. M Levey, *Rococo to revolution: major trends in eighteenth-century painting*, Thames and Hudson, London, 1966, p.14.
3. Kostof, p. 63.
4. M Levey, *Painting in eighteenth-century Venice*, 2nd edn, Phaidon, Oxford, 1980.
5. Levey, *Rococo to revolution*, p. 26.

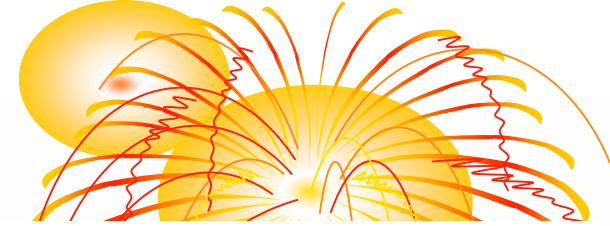
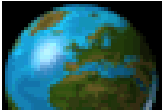


same as 1, but
different page



part of title used
to differentiate
from 4; same as
2, but different
page





Book

Author, A, B Author & C Author, *Title of book*, edition number other than the first, Publisher, City, year.

Kleiner, FS, CJ Mamiya & RG Tansey, *Gardner's art through the ages*, 11th edn, Harcourt College Publishers, Fort Worth, 2001.

Chapter or article in an edited book

Author, A & B Author, 'Title of chapter', in C Editor & D Editor (eds), *Title of book*, Publisher, City, year, pp. x-x.

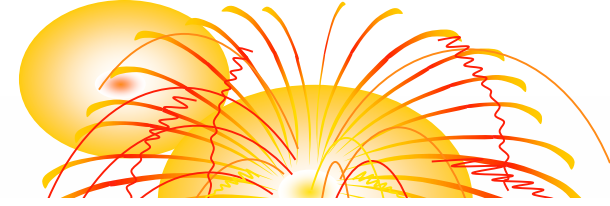
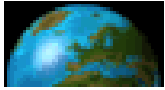
Gombrich, EH, 'The early Medici as patrons of art', in EF Jacob (ed.), *Italian Renaissance studies*, Faber and Faber, London, 1960, pp. 279-311.

Translated work

Author, A & B Author, *Title of work*, trans. C Translator, details of the work as appropriate to its form.

Arakawa, Y, *Zen painting*, trans. J. Bester, Kodansha International, Tokyo, 1970.





Latin abbreviations

If you have to use the Latin abbreviations, make sure that you use them correctly.

- **ibid.** (ibidem, meaning *in the same place*) relates to the *same* work, cited **immediately** before.

(a) *ibid.* can refer to the **same page**:

1. S Kostof, *A history of architecture: settings and rituals*, 2nd edn, Oxford University Press, New York, 1995, p. 35.

2. *ibid.* ←—————

*same as 1,
including page*

(b) *ibid.* can also refer to a **different page**:

1. S Kostof, *A history of architecture: settings and rituals*, 2nd edn, Oxford University Press, New York, 1995, p. 35.

2. *ibid.*, p. 45. ←—————

*same as 1, but
different page*





Journal article

Author, A, & B Author, 'Title of article', *Title of Journal*, vol. xx, no. xx, year, pp. x–x.

Goldthwaite, RA, 'The Florentine palace as domestic architecture', *American Historical Review*, vol. 77, no. 4, 1972, pp. 977–1012.

Newspaper article, authored

Author, A, 'Title of article', *Title of Newspaper*, day month year, Section of Newspaper if applicable, p. x.

Crafti, S, 'Winning design moored in Spain', *The Age*, 25 August 2010, Business Day, p. 16.

Group as author

Organisation name, details of the work as appropriate to its form.

Parliamentary Standing Committee on Public Works, *Proposed common use infrastructure on Christmas Island*, Parliament of the Commonwealth of Australia, Canberra, 2002.



Sample bibliography in documentary-note (Oxford) style

Bibliography

Arakawa, Y, *Zen painting*, trans. J. Bester, Kodansha International, Tokyo, 1970.

Art in our time, video recording, Michael Blackwood Productions, New York, 2001.

Australian Bureau of Statistics, *Building approvals, Australia*, cat. no. 8731.0 ABS Ausstats, 2004, retrieved 3 November 2004, <<http://www.abs.gov.au/Ausstats/abs%40.nsf/mf/8731.0?OpenDocument>>.

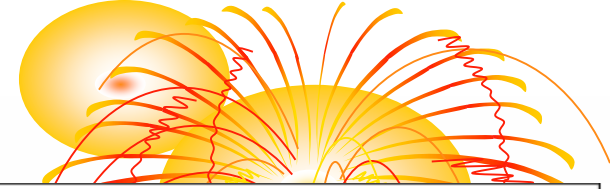
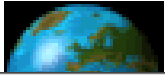
Goldthwaite, RA, 'The Florentine palace as domestic architecture', *American Historical Review*, vol. 77, no. 4, 1972, pp. 977–1012.

Gombrich, EH, 'The early Medici as patrons of art', in EF Jacob (ed.), *Italian Renaissance studies*, Faber and Faber, London, 1960, pp. 279–311.

Kleiner, FS, CJ Mamiya & RG Tansey, *Gardner's art through the ages*, 11th edn, Harcourt College Publishers, Fort Worth, 2001

Lobo, J, 'Latin American construction at a glance', *Construction Review*, vol. 41, no. 1, 1995, pp. iv–vi, retrieved 5 November 2004, Expanded Academic ASAP database.

Parliamentary Standing Committee on Public Works, *Proposed common use infrastructure on Christmas Island*, Parliament of the Commonwealth of Australia, Canberra, 2002.



References

- Atkins, B.R. (2005, June 24). Kiwi exporters lead the way. *New Zealand Herald*, p. C3.
- Blake, D. E., et al. (2005). *Forensic psychology: Case studies*. New York: APA.
- Chickering, A.W., & Smith, L.E. (Eds.). (1997). *The modern American college: Responding to the new realities of diverse students and a changing society*. San Francisco: Jossey-Bass.
- Ewing, I. (2005). *Abortion statistics 2004*. Retrieved June 15 2005 from <http://www.stats.govt.nz/domino/Media+Release+Abortions+Year+ended+December+2004?open>
- Grierson, J. (1998). *Getting it right: Assessment in the classroom*. Auckland: Longmans.
- Macleod, C., Jackson, K. R, & Reardon, M. (2003). *Learning & teaching in Aotearoa/New Zealand*. Dunedin: Otago University Press.
- Nadel, L., & Zola-Morgan, S. (1994). Infantile amnesia: A neurobiological perspective. In M. Moscovitch (Ed.), *Infant memory* (pp. 145-172). New York: Plenum.
- Naval Training Command. (1972). *A navigational compendium* (2nd ed). Washington, DC: Government Printing Office.
- New Zealand economic miracle? (2005, March 15). *DominionPost*, p. B4.
- Thompson, C.K. (2002). E-commerce and the law. *Harvard Business Review*, 51 (2), 83-86.





REFERENCES :

1. Research Methodology Practice – P. Philominathan – Shri A.V.V.M. Pushpam College – Poondi –Thanjavur
2. Research Methodology – Methods & Techniques 2nd ed, Kothari C. R. – Vishwa Prakashan – New Delhi 1990.
3. An Introduction to Research Procedure in Social Sciences – Gopal M. A. – Asia Publishing House - Bombay
- 4 Darlington, Richard B., Sharon Weinberg, and Herbert Walberg (1973). Canonical variate analysis and related techniques. Review of Educational Research, 453-454.
- 5 Gorsuch, Richard L. (1983) Factor Analysis. Hillsdale, NJ: Erlbaum
6. Morrison, Donald F. (1990) Multivariate Statistical Methods. New York: McGraw-Hill.
- 7 Rubenstein, Amy S. (1986). An item-level analysis of questionnaire type measures of intellectual curiosity. Cornell University Ph. D. thesis.



Thanks