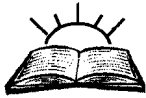


Unit 32

Tabulation and Graphic Presentation - Case Studies

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Learning Objectives

- ❖ The general structure for presentation of research findings
- ❖ Role of ICTs in presentation of research findings
- ❖ The application of ICT tools through case studies
- ❖ The various steps for report presentation.

32.1 Introduction

In Unit 31 we have discussed the salient features of SPSS in report writing, creating and editing graphs and analysed data by using univariate, bivariate and multivariate statistics. In Unit 32, we will discuss the structure of report presentation with the help of information and communication technology (ICT).

We will also introduce you to some cases of the presentation of research findings with the help of audio and software for qualitative data analysis and presentation. The cases will help you understand the process of applying the ICT tools. For this reason, this unit does not carry any boxes with supplementary information. It does not also require you to complete Reflection and Action exercises as long as you are trying to follow each case study to master the art of applying new tools for presenting your research findings.

32.2 Structure for Presentation of Research Findings

It is important to look carefully at the existing publications of the kind you are trying to write - style, length, and format - for your writing. The following structure shown on the next page will apprise you how to present your findings through computer.

Structure for a research report presentation

a) Abstract	b) Background of research	c) Review of related literature
d) Research methods	e) Findings	f) Analysis
g) Discussion	h) Conclusion	i) Summary and Suggestions
j) References	k) Glossary	l) Appendix

Figure 32.1 Structure for Presentation of Research Project Report

Before presenting your research findings, you need to check the following:

- ❖ Availability and suitability of the computer
- ❖ Availability of the electrical point
- ❖ Familiarity with software and hardware
- ❖ You can obtain technical support, if necessary
- ❖ Test the data-collection instrument
- ❖ To see, there is clear storage and retrieval system for data collection, etc.

Presentation of your research findings depends on your intended target group. For example, papers or articles for journals and magazines will be presented in different format than book chapters or final research report. Therefore, you have to decide yourself about the format for the presentation of your research findings. You may visit <http://www.sociology.org.uk/rrocr1.pdf> for the structure of research report on your subject area.

32.3 Data Presentation: Editing, Coding and Transcribing

The processes of editing, coding and transcribing are extremely important for the presentation of accurate research findings. If the study is conducted through primary base data (i.e., through questionnaire), the following steps are very important:

- ❖ Responses should be scrutinised for completeness and for errors.
- ❖ Response validation is obtained by recontacting individuals whose answers appear inconsistent or unusual.
- ❖ Open-ended questions should be properly classified or scored, while responses to both qualitative and quantitative questions are coded for data entry.

For a detailed treatment of these aspects, see the units in Block 6 on Survey Research.

Editing primary data[®] is a fairly complex task. In fact, it requires great skill and experience, while editing. The data should be complete, consistent, accurate and homogenous. Quite a few steps have been presented below for presenting primary data.

- a) **Complete data:** You should see that the answer to each and every question has been given. If a few questions remain unanswered, then you should mark them as 'Not reported' (NR).
- b) **Consistent data:** You should see that the answers to questions are not contradictory. If there are mutually contradictory answers, you should try to obtain the correct answers either by referring back the questionnaire or by contacting the respondent.
- c) **Accurate data:** If the data is inaccurate, it can easily be corrected. But, in some case, it is very difficult to correct it, for example, income and age group informed by the respondents. In this case, we have to accept whichever the respondent gives us.
- d) **Homogenous data:** You should see that information supplied by the respondents is homogenous. If it is not, it cannot be comparable.

Now, after making you aware of how data is edited and collected, in the forthcoming sections we are presenting some cases and illustration of the presentation of research findings. In some cases, it has been presented with the help of the computer along with Internet and digital media.

32.4 Case Studies

Here are four case studies for you to carefully study and then taking them as examples, you may also attempt to present your research findings in the same manner.

Case 1: Questionnaire Coding

The following figure (32.1) represents the responses to the questionnaire* which was designed to conduct a study on "the socio-economic profile of rural people of Haryana". The questionnaire code identification number is 0412. To facilitate data entry, each selected individual's four-digit number is presented. The first number (04) indicates it is the district code i.e. Kurukshetra. The next two digits, i.e., 1 and 2, indicate Tehsil and Village codes. The digits within brackets indicate along with the questionnaire the coding of the questions. This questionnaire is designed for you to give a broad idea of coding. This is only for part of the questionnaire.

QUESTIONNAIRE			
Q. Code	0	4	1 2
A Study of Socio-economic profile of rural people of Haryana			
Q.1 Family members:	(a) 3-4 (1)	(b) 5-6 (2)	(c) 7-8 (3)
	(d) 9-10 (4)	(e) >10 (5).	
Q.2 Age profile:	(a) below 20(1)	(b) 20-25 (2)	(c) 26-30 (3)
	(d) 31-35 (4),	(e) 36-40 (5)	(f) 41-50 (6) (g) > 50 (7)
Q.3 Gender	(a) Male (1)	(b) Female (2)	

Figure 32.2 Questionnaire Coding

After coding this data, you can present it in table (see Table 33.1) and graphic format. You can put this data into spreadsheet and by pressing a few buttons (see Figure 32.3), it is possible to produce what looks like the most wondrous variety of charts and graphs. For example, with excel column, bar, line, pie and others are all possible to make and use in the report presentation.

Q. Code	Q1.	Q2	Q3
0412	2	4	1
0413	3	3	0
0414	4	3	2
0415	1	3	1
0416	1	1	2
0417	3	3	1
0418	4	3	1
0420	5	0	2
0421	4	3	0
0422	3	3	2
0423	2	3	1
.	1	4	2
.	4	4	1
.	3	3	1
.	1	4	1
.	1	1	2
.	.	.	.
n=(230)	230	230	230

Figure 32.3 Coding of Questionnaire Data

Let us now look at the coded data in tabular form. See Table 32.1 on Gender Distribution of the Respondents.

Table 32.1 : Gender Distribution of the Respondents

Gender	Frequency	Percent
0	4	1.73
1	82	35.49
2	144	64.01
Total	230	100.00

You can now convert coding into words and your final table (see Table 32.2) would look as below.

Table 32.2 : Gender Distribution of the Respondents

Gender	Frequency	Percent
No Reply	4	1.73
Male	82	35.49
Female	144	64.01
Total	230	100.00

Similarly, you can present the above findings into pie diagram as presented in the following figure (Figure 32.4).

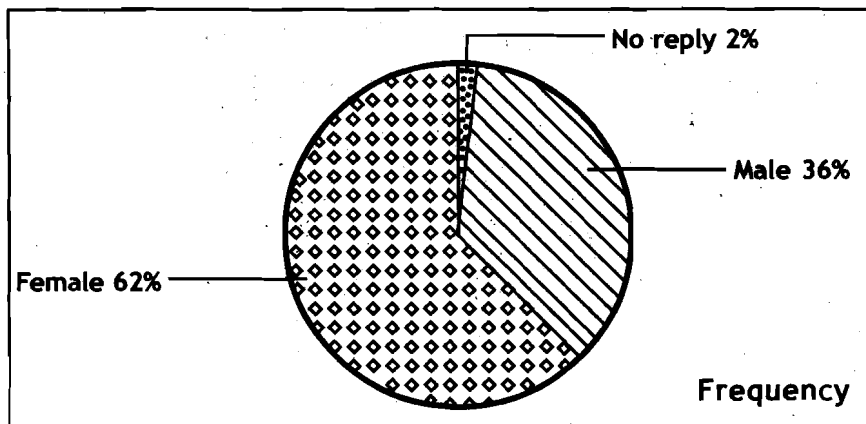


Figure 32.4 Gender distribution of the respondents.

Data from the Windows can be transferred to the report on your word processor through clipboard. If you are transferring the data from Excel to Word, the data will be imported already formatted as a basic Word table, which you can then visually increase or decrease its size. Graphs from Excel can also be transferred to your report through clipboard, using cut and paste.

Case II: Data collection and presentation through Audio

We are presenting here our own experience on data collection and presentation through audio. We interviewed sixty students for our research study on drop out. Respondents' phone numbers were located and they were contacted to take part in a face-to-face recorded interview at their respective home. On confirmation, we visited their homes as per their convenience, and recorded their responses to a structured interview schedule.

We recorded thorough tape recorder and translated into about fifty pages. One interview was about one page of transcription. We were faced with an enormous pile of interview transcriptions each of which covered the issue of any interview schedule, but in no particular order.

Once data transcribed, we found that we rarely returned to the tapes. Hesitation, coughing and personal and irrelevant discussion were indicated in the original transcriptions. Although these were not used in the final presentation of findings, we listened to the tape again, it sounded different. For a micro study (or dissertation for master programme), it is worth thinking carefully about whether it is necessary to complete the full transcriptions of taped material or not. In fact, transcriptions could be reserved for sections, which are particularly relevant to the study. The printed version and recorded version were matched for accuracy, consistency and prioritization. The recorded data was further categorized into four areas and presented in Table 32.3.

Table 32.3: Factors for dropout

Situational factor	Dispositional factor
<ul style="list-style-type: none"> ❖ Office work pressure (5) ❖ Family responsibility (3) ❖ Timing for practical classes were not suitable (2) ❖ Got married (3) ❖ Exam date clashed (9) ❖ Not doing well during exams (1) ❖ Admission in other programme (4) ❖ Husband got transferred (1) ❖ Due to extended family (1) 	<ul style="list-style-type: none"> ❖ 2nd preference to CIC programme (1) ❖ Felt inferiority complex during classes when junior was taking classes (1) ❖ Not aware about the exam date sheet (1)
Institutional factor	Course related factor
<ul style="list-style-type: none"> ❖ Not received hall ticket (1) ❖ Study centre changed (5) ❖ No information from regional centre for classes (4) 	<ul style="list-style-type: none"> ❖ Course was easy (1) ❖ Course was difficult (1) ❖ Language was difficult (1)

Source: Panda et al. (2004) *Study on Programme Completion, and Learner Persistence and Dropout in Distance Education*, IGNOU, New Delhi

Case III: Online case study

Research through virtual mode can be conducted through one to one e-mail or by hosting the questionnaire on a web page. This method provides quick feedback and access to geographically dispersed respondents. In addition, the online interviews and e-mail messages provided automatic text transcripts of all the interviews and communications. You can see from the following illustrations how research data is presented with virtual or digital mode®.

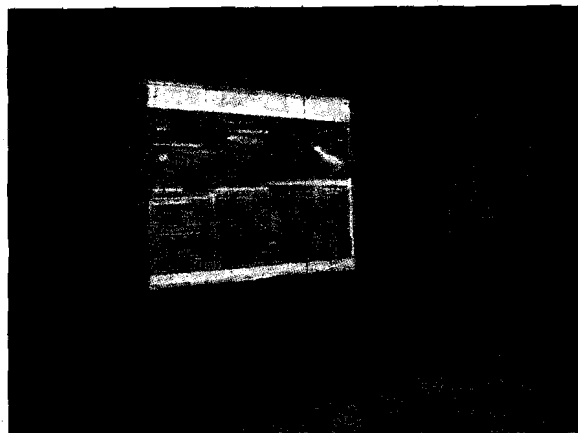


Figure 32.5: Presentation of Research Findings through Virtual Mode

Figure 32.6
Researcher editing
data through the
internet.

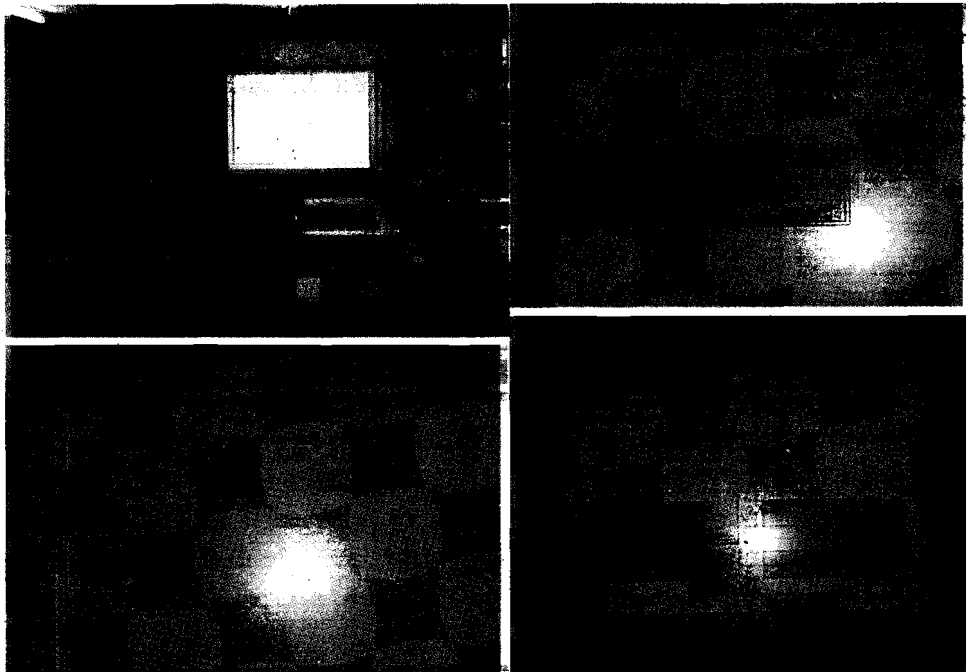


Figure 32.7 Presentation of research findings through multimedia.

In addition to the above mode of research presentation, you can also use self-paced learning and self-assessment using software/CD-Rom.

Case IV: Presentation of Research Findings in CD-Rom

We have presented a case study of data analysis and presentation in CD Rom. We are giving you a CD with this unit in which you can see how the actual data is coded, analysed and presented in the CD. The researcher conducted a study on "Pre-Testing Self-Instructional Material". The researcher collected feedbacks from ten respondents through face to face, analysed and presented his data research findings.

You can also present your experiment data or research findings by using power point and interactive whiteboard. You can collect and disseminate research data by using the devices of the web. But you should have Internet and research skills for the your presentation of research findings through the Internet.

32.5 Qualitative Data Analysis and Presentation through Computer Software

In addition to Excel, SPSS and SAS, other software packages are also available which are being used for qualitative data analysis and presentation, for example computer-aided methods for qualitative data analysis (CAQDAS). CAQDAS have two programmes like NUD-IST (non-numerical, unstructured data indexing-searching theorizing) and innovative and imaginative computer software application (ATLAS.ti). The purpose of these programmes is to show that even at micro research study, where the number of interview data is limited, these programmes may be used. You can download this software free from <http://www.scolari.co.uk>

NUD-IST: This programme has more complex features, which can be learned or ignored as the user develops familiarity with the software. Textual data are imported into NUD-IST as separate documents. These data can be coded which makes sense of the data. All the data under this category (or code) can be retrieved and then turned into a separate document. For detail you can study an introductory tutorial of this software.

WinMax: Some packages allow direct entry into the system while others will operate only with imported files. Some allow external files incorporating video and other material to be indexed. This makes the programme more complex. A much more user friendly programme is WinMax. It is easy to learn. It can be used for straightforward code-and-retrieve operations on text files as well as for the more difficult approaches of grounded theory and case oriented quantification. It also help you to work with qualitative and quantitative data simultaneously.

ATLAS.ti: It is an innovative and imaginative computer software application that allows you to study and analyse text. The text can be interview transcripts. You have to add additional coding so that it is easy to categorize or code short or long text segments for comparative study. For details, you may visit www.atlasti.de/demo.shtml, You can also present your findings of the interview data which have been recorded on tape. You can analyse the audio transcripts with this software.

CAQDAS programme makes you analyse a vast amount of data to be handled, while coding and retrieving can now be accomplished with remarkable speed and efficiency.

32.6 Types of ICT used for Research

In the previous units of Block 8, you have studied the application of ICT in social science research. In the present section, you will study the different types of ICT being used in research activities. These are:

- ❖ Online surveys
- ❖ Open ended or structured text-based interviews conducted via email or computer-mediated conferencing
- ❖ Focus groups using real time Net-based video, audio conferencing or asynchronous computer conferencing
- ❖ Net-based telephone interviews
- ❖ Analysis of text transcripts* of learning or social activities
- ❖ Analysis of social behavior in virtual reality environments
- ❖ Online assessment and/or evaluation of performance or knowledge, web cams.

A researcher can submit his ideas through different types of ICT and develop his ideas to become full resources for use in research activities. ICT also helps the researcher to join a discussion from where he or she can exchange views and join in collaborative research activities. For example DEOS-L@LISTS.PSU.EDU. You can present your research findings in a suitable medium of ICT in which audience can access a full text on the Internet in a choice of formats.

There is no ready-made programme/software available for the analysis and presentation of your research findings. There are various considerations to bear in mind when matching the kind of research study and database to the most suitable software.

The selection of the right programme depends upon the size of the database. If you have interviewed just four to five individuals and transcribed the text, CAQDAS may not be useful. This package handles large quantities of data in different files much faster than you could do it by your own hand. You should have a minimum of fifteen cases to use this software. If data is obtained from several sources like documents, observation, questionnaires and audio and video, some software can handle the diversity of data types and others not. In some packages it is easy to revise the text database, but in others revising takes much time. For example, a file imported into CAQDAS cannot be changed. It would be necessary to make the changes in Word and then re-import the file.

Therefore, the selection of the software depends upon the size of the database, nature of data (i.e. structured or unstructured), technical knowledge of the researcher, time and cost.

Similarly, the selection of the ICT for the presentation of your research findings depends upon these factors and the availability of the particular technology to the audience.

Adobe Reader software can help you view, print, and share your research document more securely by using a variety of platforms and devices. For details you may visit <http://www.adobe.com>. There are various Web

pages available which provide free space to share your research findings. See, for example, www.yahoo.com.

32.7 Conclusion

The foregoing details apprise you of the cases of presentation of your research findings with different types of ICT sources. This discussion and information was based on the assumption that you have a basic awareness of the writing skill and statistical package. We have focused in this unit on the presentation and dissemination of your research findings through ICT. How to code, edit and present research data has been presented in this unit. In addition to this, how data is collected through tape recorder and transcribed into text are also presented.

Further Reading

Gentleman, Jane F. 2004. *The National Health Interview Survey*. In National Health Interview Survey Presentations of the 2004 Listing of Selected Presentations at http://www.cdc.gov/nchs/howto/events/duc2004/ducpresentations_2004.htm

