7. Use and Applications of Computer in Social Research

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Abstract:

Nowadays, computers are playing a very important role everywhere as a technology savior, the same is seen in research. In this paper the authors would like to focus on the use and application of computers for social research. It has been observed that computers play a very important role in research from literature review, data collection to data analysis and presentation. This paper will describe the increasing role, importance and use of computers in research for better outcomes. Computer technology has given new wings to the researcher in the present scenario. It has not only made possible the accessibility of large amounts of data information within no time but made its analysis much easier.

Keywords: Social Research, Use of Computer, Data Collection.

7.1 Introduction:

Nowadays, Technology is playing a very important role in every field of life and research is also not an exception to it. Researches are highly benefited with the advent of technological advancement like computers. The reason is not confined to the fact that it has made the researchers work more simpler and less expensive but also less time consuming too. With the advent of the computer the calculation and analysis part being made more easier and more representable. Computers are indispensable tools in the field of research. It not only provides space to store huge data but helps in retrieving the same stored data time and again with the same ease and convenience.

It can e-transfer the data from computer to drive, to desktop or to Pen drive and hard disk for use. Computers play an important role in research because of its multiple usages and comfort it provides as mentioned below:

a. **Speed:** It can compile, access and analyse a huge amount of data within no time. You can use the data for the purpose of literature review of the paper, data collection, analysis and compilation of the result within no time.

b. **Large Storage Capacity:** Computer is a device that not only provides you a huge storage for the purpose of collection of a large number of research papers and data storage for analytical purposes.

c. **Error free access:** The basic concept of any research relies on the accuracy of the data. Computers play a very important role to attend this accuracy by reducing the chances of human error to the largest possible extent. This not only signifies the importance of computers in research but can also lead to conduct of the same in a relevant proper manner.

d. **Automation:** Most of the computer programs are automatic in nature and are self-updated with time. There are so many softwares such as mendeley and others which can automatically lead to the retrieval of research papers available online. but it can also lead to automation of the result based on the secondary sources of data to make the research more relevant and with time.

e. **Cost Reduction:** The cost of data collection has reduced to a higher extent as now it becomes easier to collect data through online survey questionnaires, recorded interviews and available videos with less cost within no time with the advancement of Technology.

f. **Flexibility:** The flexibility provided to the data at the time of analysis to use Different techniques is very high as compared to the one in case of doing it manually.

g. **Communication:** Computer is a device is very helpful in research communication. we can send mail to bulk of respondents you can receive information. it can also help in searching the platforms through which we can connect two different social network purchase link to them Facebook Google Scholars you have more Asus to the field of experts and gathering information.

h. **Analytical Ease:** computers can have access to different analytical tools which can make a work easier in terms of calculation whether it's a mathematical calculation or to predict a model based on social connect Using SPSS, AMOS or LISREL etc.

7.2 Use of Computer Tools:

a. **MS Word:** With the help of MS Word in computers you can easily type your thesis by using the keyboard or the voice recording tools. The task becomes easier related to font size adjustments, setting heading and subheading etc. at just a click of a button. It can also help you in arranging the format on the basis of a design document. In word, you can easily save, copy and transfer your data to either hard drive, pen drive or share it with your supervisor easy. You can easily add or delete the information in the word document.
The headers and footers are also adjusted in one go as compared to the typewriters where we have to type the whole page even for changing the page number or any word from the document. It also provides a facility for inserting the tables, line alignment, paragraph phrasing and so on. Tools like voice recorders are of high importance for the purpose of data collection in focus group interviews. In all the writing work would have not been that much easier without the access of computers.

b. **Excel:** The other facility provided by the computer is using an Excel sheet which can calculate huge amounts of data in no time. It can also help in comparing different data

used for social research purposes. It also provides access to the pivot tables to represent data through relevant charts, graphs, diagrams or by using different statistical techniques such as mean, median, mode and frequency distribution by using tables. Excel can also help in calculating more complex problems by applying formulas and using selective databases for particular purposes.

Software for Analysis and Interpretation:

Different softwares are available for different purposes of research in computers such as voice recognition software is used in automatically transcribing dictation, field notes and interviews into computer text files. The softwares can also help in changing the transcripts into different languages.

Why to use Computers in Social Research?

The use of computers is very important in social research in the present scenario because of the ease and help to the researcher from a literature review to data analysis and interpretation. Even though the computer is only the tool and not a resource, the importance of computers is very high in every part of the research. It is involved in such a manner as if no search is possible without it. It can be considered as the lifeblood of the researcher from the beginning of the research process to the publication of that research. it can be best understood from the use of computers at different phases of research as follows:

Problem Identification and Literature Review Phase:

This is one of the most important phases of any research where the researcher has to identify the problem statement of research by scanning the previous research data. It can be conducted in a very precise manner with the help of different searching tools available online. The computer is not only helpful in searching Predator but provides an online library storage facility too. The research scholar can also update the required online literature through google scholar alerts and world wide webs and different databases such as Ebsco, Jstor, scopus etc. and arrange it with the help of softwares like mendeley.

Softwares like NVIVO can helps in conducting bibliometric analysis by organising the results of different studies and provide the publication details related to expert in that area, number of research published, recent area of research, good journals in that field etc. Computer also helps in proper citation of the data in the desired format with the help of tools like bibliometriy and Citation in word document which is equally important for arranging references, grammar and punctuation check.

Research Design:

In this phase of research design the whole layout is laid down for the conduct of research. It includes the type of research, universe of the study, population of the research, sample unit and sample size. Computers help in sample size determination of the data and pilot survey using statistical tools in excel for calculation of standard deviation, mean etc. in excel for more accurate and precise calculation of the survey data. Different types of studies like longitudinal studies and systematic research or meta-analysis are conducted using computer software only.

In longitudinal studies, researchers have to maintain the connection of events for a long time about an individual, object or situation which is only for with the help of a computer.

If we take an example of the medical history of an individual regarding some symptoms reflected over a period of time, then there is no other way to keep a record and connect other than a computer. For systematic literature review and meta-analysis, it gives first hand information which is really helpful in any research at the beginning.

Data Collection:

This is the most important step of any kind of research. Computers are required at each step, most especially in the case of huge data collection. At this stage, computers are useful in designing the questionnaire in the google form so that data can be easily imported in excel sheets and then to SPSS for coding the data collected through different sources. It can be helpful in editing the data by doing proper treatment to the missing data with more accuracy as compared to manual process. it provides more flexibility in recording of the data due to audio visual tools of data collection.

Data Analysis and Interpretation:

Computer is the only device which provides flexibility for coding of the data and all sorts of calculation at the click of button with precision, accuracy and completeness. This is helpful in testing the hypothesis developed during the process of research and calculating the power of the study with the help of tools like SPSS, STATA, Minitab, Stat craft, Eviews etc. as per the desirability of the research topic in more presentable form. It indicates the result with more accuracy and signifies the result of hypothesis and helps in interpretation of the result based on scientific reasoning.

Report Writing:

report writing is the most important aspect of any research. Computers are very useful in report writing and it is the only device which not only gives you a space to represent the results in the best possible manner with the help of tools and techniques of citation, proper approach for publication in a social and scientific manner. It represents the result with justification and supportive literature in the report by reducing the chances of human error by arranging the facts and figures systematically in the report.

7.3 Conclusion:

Social research has a vast area of coverage and it has to go through all sorts of data collection from primary surveys to in-depth interviews and recording of group data. No other data collection technique can be helpful without use of a computer as it provides different ways of coding, editing, treatment of missing data to tabulation of data in more representable form.

With the advent of technological advancement and updation, usage of computers has increased because of more precise and accurate calculation. But at the end, a computer is the machine, it requires human interference at all stages of research due to the intellectual capacity of the human being.

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