

Importance of Computer in Research Area: A Review

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Abstract: The development of technology has made problem solving activity easy. Problems can be solved with the help of computer sharply. In modern Era computer is used in every person's of life. It is more used in education also. Researchers are using it for driving their research effectively. Computer is very useful and vital when large scale sample in used. It saves researcher time and gives more accurate and quick results. This present paper focuses on what is computer? How does it help in research? How does it function?

Key Words: Computer, Research, Research Process etc.

I Introduction

Computer has always helped in serving the difficulties faced by human beings. By the passing of time, computers have been reduced from a size of room to six of palm of human. Computer performs many functions very smoothly and does variety of job with speed and perfection. Now a day's, life has become impossible without computer. They are used in Schools, Colleges, and Universities and have become essential part of every profession and business. Research is also an area where computer are playing a main role.

Computer is comprised of an input device, a Central Processing Unit (CPU) and an output device. It has the following features:-

- A. **Speedy Device** – Computer is known for its speed and takes fraction of seconds to perform any function.
- B. **Storage Device** – Computer can store and retrieve big data. It can be used when needed. There is no risk of forgetting and losing data.
- C. **Accurate Device** – Computer is known for its accuracy. Sometimes it can be inaccurate due to some

D. technological weaknesses and poorly designed system.

E. **Diligent Device** – Computer works without tired and does not suffer with lack of concentration. Large number of calculations can be done with accuracy and speed with the help of computer.

F. **Automatic Device** – The programs which are run on computer are automatic. They can be operated through some instructions.

II. Computer in Research

Computers are used in scientific research more and it is vital tool of research. Research process can also be done through computers. Computers are very important and useful when large number of sample in used. It has many storage devices like DVD, CD, floppy discs, and auxiliary memories. Data can be used from these storage devices and retrieved later on. There are various steps necessary to effectively carry out research and the desired sequencing of these steps in the research process. This data can be used for different phases of research process.

III. Computer and phases of Research

Research process has five major phases, Computer can be used in these following phases.

A. Conceptual Phase and Computer

In this phase, formulation of research problem, review of related literature, theoretical frame work and formulation of hypothesis design. Computer helps in searching the existing literature. It helps in finding the relevant existing research papers so that researcher can find out the gap from the existing literature. Bibliographic references may also be stored through World Wide Web (WWW). In the

latest computers, references can be written automatically in different styles like, MLA APA etc. This saves time of researcher. He needs not to visit libraries and wastes his time. It helps researchers to know how theoretical framework can be built.

B. Design and Planning Phase and Computer

Computer can be used for, deciding population sample, questionnaire designing and data collection. These are different internet sites which help to design questionnaire. Several software's can be used to calculate the sample size. It makes pilot studies of the research possible. In pilot studies, sample size calculation, standard deviation is required. Computer helps in doing all these activities.

C. Empirical Phase and Computer

Computer helps in collecting data and in data analysis. After collecting data, it is stored in computers in word files or excels sheets. The important applications used in scientific research are data storage, data analysis, scientific simulations, instrumentation control and knowledge sharing [2]. Necessary corrections are made or edited whenever it is required. Otherwise it will be a time consuming process. Computers help in referring, editing and managing of data. Computer allows for greater flexibility in recording the data and made the analysis of data easy.

In research, preparation and inputting data is the most labour intensive. It consumes much time Data is being converted in a form which is suitable for the computer. It can be coded on the excel sheet. These excel spread sheets can be directly opened with the statistics software for analysis.

D. Data Analysis and Computer

Data analysis and interpretation can be done with the help of computers. For data analysis, software's are available. These software's help in using the techniques for analysis like average, percentage and correlation etc. This software's are SPSS, STATA, etc.

These can also be used for checking the reliability of data, establishing and testing hypothesis etc. Computers are used in interpretation also.

They can check the accuracy and authenticity of data. It helps is drafting tables by which a researcher can interpret the results easily. These tables give a clear proof of the interpretation made by researcher.

E. Research Dissemination and Computer

After interpretation, computer helps is converting the

results into a research article or report which can be published. It can be written in a word format or in a PDF format. Article can be stored or published on website.

F. References and computer

After completing the word document, a researcher need to give source of the literature studied and discussed in references. Computers help in preparing references. References can be written in different styles like APA/MLA etc. All the details of authors journals, publication volume. Books can be filled in the options „reference“ given in computer and it automatically change the information into the required style. Some software's like 'Medley' are also used to manage the references. A researcher needs not to worry about remembering all the articles from where literature in taken, it can be easily managed with the help of 'Medley'.

IV. Conclusion

Computers can be used for making research more effective. It saves the time of researcher and gives more accurate and fast results. Researchers should also takes the precautions for using computer for better results.

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