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CHAPTER-III

P L A N A N D P R O C E D U R E

I. INTRODUCTION

Shivaji University, Kolhapur established in 1962 is a leading University of South Maharashtra. At present there are 205 affiliated colleges providing education, research and training facility in various faculties. Education institutes in general and professional institutes in particular plays an important role in framing the socio-economic and cultural development of the region. At present there are 70 professional colleges affiliated to the University. These professional colleges includes 7 Law colleges, 34 B.Ed. colleges, 12 Medical colleges and 12 Engineering colleges. From these 70 professional colleges only 19 colleges are aided colleges (which receive grant by the government) and 91 colleges are non-aided or run on no grant basis.

In the present study a total of 6 professional colleges have been selected of which three were aided colleges and three were non-aided colleges. Further 3 each professional colleges of education, engineering and medical

faculty have been selected. While selecting the colleges purposive stratified technique was adopted. From aided group one Medical college, one Engineering college and one Education college have been selected. For non-aided group the same process was repeated.

II. RESEARCH DESIGN

The present study is survey type in nature. Present study dealt with the attitude and knowledge of professional teachers working in engineering, medical and education colleges. It is to be seen here that whether the attitude of professional teachers is positive or negative and how it changes from sex to sex, from one faculty to another faculty and the type of institute it means aided or non-aided. Similarly the knowledge level of these professional teachers and the variation in the level of knowledge is also assessed.

III. SAMPLE PROFILE

(a) Name of the institutes studied.

(i) Walchand College of Engineering, Sangli, Dist . Sangli, Tal. Miraj.

(ii) J.J. Magdum Engineering College Jaysingpur, Tal. Shirol, Dist. Jaysingpur.

(iii) Miraj Medical College, Miraj, Tal. Miraj, Dist. Sangli.

(iv) J.J. Magdum Homoeopathic College, Jaysingpur, Tal. Shiril, Dist. Kolhapur.

(v) Shri Maharani Tarabai College of Education, Kolhapur, Tal. Karvir, Dist. Kolhapur.

(vi) Shri Shivaji College of Education, Rukadi, Tal. Hatkanangle, Dist.Kolhapur.

We have selected 165 respondents from Engineering, Medical and Education colleges. From these 165 respondents 150 respondents had given information. The distribution of these 150 respondents is shown in the following table.

TABLE NO. 1

SAMPLE PROFILE

	Engineering			Medical			Education			Total
	A	NA	Total	A	NA	Total	A	NA	Total	
Male (%)	22	21	43 (66.15)	21	16	37 (52.86)	4	2	6 (40.00)	86 (57.33)
Female (%)	12	10	22 (33.85)	19	14	33 (47.41)	4	5	9 (60.00)	64 (42.67)
Total (%)	34	31	65 (100.00)	40	30	70 (100.00)	8	7	15 (100.00)	150 (100.00)

NOTE : A = Aided Colleges
NA = Non-Aided Colleges.

From the above table it is clear that 65 respondents from engineering colleges, 70 from medical college and 15 from college of education participated in this study. From these 150 respondents, 86 or 57.33% respondents were male and 64 or 42.67% respondents were female. The number of respondents from aided institutes was 82 and from non-aided institutes 68 (55% and 45% respectively).

IV. TOOLS USED

Attitude towards and knowledge of computer education questionnaire (AKCQ) prepared by the investigator consisted of 3 sections. Section A dealt with the preliminary data about the respondents. It contains information regarding name, age, qualification, sex, name of the institute, length of service and the source of information about computers. In Section B the questions test the attitude of the respondent and in Section C the knowledge is assessed with the help of questions.

For assessing the attitude and the level of knowledge following tools were prepared and used.

1) A pilot questionnaire was prepared by the researcher having twenty questions in Section-B and Section-C. This questionnaire was circulated to five experts in

the field of computer education. These experts were told about the purpose of the questionnaire. Bearing the purpose in mind the experts choose 10 questions from the total set. The common questions of the experts were compiled and the final questionnair was prepared. It was circulated to the respondents.

2) For measuring the attitude the five-point attitude scale has been prepared. These points were disagree, slightly disagree, uncertain, slightly agree and agree. For computing the attitude the researcher had converted the attitude scale into attitude score by giving one score to those who slightly agree or slightly disagree and score two to those who agree or disagree. Those who had selected the response of uncertain were given zero score. This helped to understand the nature of attitude. Depending on the question and the score the attitude was assessed as positive or negative.

3) On the basis of the score the investigator prepared participant score ratio to measure the strongness of the attitude. The PS-ratio is the ratio of number of participants to their score. The PS-ratio will

change from 1 to 2. If the computed ratio is near to 1, it indicates weak attitude and if it is near to 2, it indicates strong attitude.

4) For measuring knowledge level the marks obtained by the respondents have been considered. In the questionnaire there were 10 questions. Out of these 10 questions, question number 1, 2, 3, 5 and 6 carried one mark separately. Question number 4 carried 5 marks, question number 7 carried 4 marks, question number 8 carried 3 marks, question 9 carried 4 marks and question 10 carried 8 marks. The total marks of the questionnaire were 29. The correct answers of the respondents carried full marks. These marks were used as an indicator of the knowledge level of the respondents.

QUESTIONNAIRE

ATTITUDE TOWARDS AND KNOWLEDGE OF COMPUTER EDUCATION QUESTIONNAIRE (AKCO)

ABOUT THE QUESTIONNAIRE

This AKC questionnaire has 3 sections A, B and C. Section 'A' gathers information about the respondent. Section 'B' and 'C' related to the Attitude towards Computer Education and theoretical knowledge of the computers respectively of the respondent.

The information that will be gathered through this questionnaire will be kept strictly confidential and will be used only for the purpose of research to draw out conclusions from the results of the different groups studied. Hence, you are requested to fill-in the questionnaire freely and frankly.

As computers have great applicability in all fields of life, they have crept in the field of education, Medicine and Engineering too. Hence, there is on urgent need to access the Attitude and Knowledge of teachers in the above professional courses. You, as a respondent, are requested to fill-in the questionnaire completely and contribute to this research endeavour.

VI. METHOD OF ANALYSIS OF DATA

For analysing the data we have used following methods :

1) To find out the nature of attitude i.e. positive or negative, the percentage of respondents who agree or disagree with the statement were used.

2) To find out the magnitude of attitude PS-ratio was used. The higher PS-ratio indicates strongness of the attitude and vice-versa.

3) The mean and SD is used to find out and to compare the attitude.

4) For assessing the knowledge level again Mean and SD is used.

5) To find out the relation between attitude and knowledge persons 'r' was used.

6) The summary table of the primary is given in Appendix 'A'.

SECTION-A

1. Name of the respondent

2. Name of the Institution

3. Age

4. Sex : Male/Female

5. Educational qualification :

   i) Basic Degree :

   ii) Degree/Diploma/Certificate in Computers Science

7. Length of Service :

   i) Less than 5 years.

   ii) More than 5 to 10 years.

   iii) More than 10 years.

   iv) 20 years and above.

8. Specify the source of information about Computers :

   i) Newspapers/Magazines/Advertisement

   ii) Books

   iii) Friends/Other individuals.

   iv) Part of the course (College Degree/Diploma etc.)

SECTION-B

In this Section ten statements are given below alongwith the degree of agreement and disagreement. Please choose which you feel is most appropriate and tick mark (∠) in the column against the statement.

Statement	Slightly agree	Agree	Un-certain	Dis-agree	Slightly Disagree
1) Computer is a luxury					
2) Computer education should be made compulsory					
3) The Computer Education helps to improve quality of education					
4) The Computer Education increases the professional Skill					
5) In the institutions Computer aided administration will improve the quality of its administration					
6) Computer should be used wherever possible to improve professional knowledge					
7) The cost of Computer Education is very high					

Statement	Slightly agree	Agree	Un-certain	Dis-agree	Slightly Disagree
8) Computer Education makes a person more versatile.					
9) Administrators would prefer to select candidates who has Computer knowledge in addition to his professional knowledge.					
10) Computer increases job opportunity					

SECTION-C

In this Section ten statements are given below. Please select correct answer from the alternatives and complete the statement.

1) A slide rule is -

(a) Analog Computer (b) Digital Computer

(c) Hybrid Computer (d) None of the above.

2) The first machine which could be called the phototype of modern computer was -

(a) Weaving loom (b) Slide rule

(c) Abacus (d) Difference engine

(e) Analytical Engine

3) Which of the following were developed by Charles Babbage ?

(a) Difference engine (b) Calculating bones

(c) Numerical Cogwheels (d) Hollerith

4) Match the following -

(A)	Input device	(i)	Directs the other units
(B)	Output device	(ii)	Performs the arithematic/logical operations.
(C)	Memory Unit	(iii)	Feeds data into the memory.
(D)	ALU	(iv)	Retrieves the data from CPU
(E)	Control Unit	(v)	Stores the Computer Programme and data which are to be immediately to be processed.

5) The control unit of the Computer -

(a) Performs logical operations of data

(b) is a device for manually operating the computer

(c) Directs the other units of a computer

(d) All of the above.

6) The two possible states of a position in the memory of a computer are normally represented by -

(a) the words right and left depending upon the polarity of the core.

(b) the words on and off

(c) the digits 0 and F

(d) all of the above.

7) Match the following -

(A)	Time sharing	i)	The processing of several programmes simultaneously by use of more than one processing unit.
(B)	Multi-processing	ii)	Processing several programs concurrently by giving 'Slices of time' for each program.
(C)	Batch processing	iii)	Processing data items the moment they are received.
(D)	Real time processing	iv)	Processing data in groups collected over periods of time.

8) Match the following -

(A) FORTRAN	i)	Used primarily for business applications.
(B) COBOL	ii)	It is a general purpose language which is usually interpreted rather than compiled.
(C) BASIC	iii)	It is designed primarily for scientific purposes.

9) Match the following -

(A) Sources Code	i)	Pictorial representation of a method of solving a problem.
10) (B) Object Code	ii)	a verbal description of the steps of solution which resembles a high level language but do not follow the syntax of any language.
(C) Flow Chart	iii)	Program written in a high level language.
D) Pseudo Code	iv)	The machine language code corresponding to a course code.

10) Match each item in A-H with the corresponding description in (i) - (viii) -

(A)	Sound generation Computer	i)	Characterised by the use of vacuum tubes.
(B)	Microprocessor	ii)	Requires the use of sequential processing method.
(C)	Magnetic Disk	iii)	Consists of the arithematic/logic and control units of a computer.
(D)	Third-Generation Computer	iv)	Marked by wide acceptance of higher-level languages.
(E)	Magnetic Core	v)	Provides fast access to large data files.
(F)	Magnetic Tape	vi)	Used for internal storage in Computer.
(G)	First Generation Computer	vii)	is virtually a computer on a chip.
(H)	Central Processing Unit	viii)	Hardware designed for use with operating systems.