

A Survey study on

***Use of Excel and Power Point by teachers
working in Computer Aided Learning
(C.A.L) Supported Upper Primary
Schools of Nainital District***

Submitted by

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Various studies have corroborated that the use of technology in the classroom has made the teaching-learning process more effective, joyful and receptive for the students. It has paved the paths of creativity and exploration for scholars. Looking at the importance of technology in the field of Education, an effort was done in this direction to study the use of Excel and Power Point in C.A.L (Computer Aided Learning) supported Upper Primary Schools of Nainital district, which seems to have significant social & academic relevance as well as national importance.

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PREFACE

Technology has immediate effective interventions and far reaching implications in the field of education. As a matter of fact, our classrooms and educational institutions can't ignore and avoid the use and importance of different aspects, facets, programs and features of technology if they want to achieve and ensure the ambitious goal of quality education. The utilization of technology in education has recently started to appeal the potential and significant progress in learning. It has become major issue in education world and has been used from pre-school to university level that could facilitate students and teachers in teaching learning process.

Technology has been publicized as potentially powerful enabling tools for educational change and reform. The need of technological innovation has brought the communication revolution and rapid development of technological application in teaching and learning. This technology has made contribution in all aspects of communication in India. Many schools have used the technology to facilitate the teacher to teach the students in the classrooms. Many kind of application that they use has improved and enhanced better teaching learning environment in class.

In the present research work we have focussed on two important software programs like Power point (P.PT.) and Excel. Power point can be an effective tool to present teaching material in the classroom and encourage student learning. Power point is especially useful when we want to involve the participation of each and every student and to enhance their achievement. In the similar manner Excel is an effective way of disseminating information among students. Excel can be used to promote visual learning .Using this application teachers can prepare a graphic presentation of any content. It can also be used for calculative works and preparing progress cards of students.

Looking at the above mentioned importance of Power point and Excel in the field of teaching and learning the present study is an effort to see the use of power point and excel by the teachers working in C.A.L supported upper primary schools of District Nainital.

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THE PROBLEM: NEED AND SIGNIFICANCE

INTRODUCTION

Education has always been a great matter of concern for all the people belonging to different occupations and professions. Whether one is an educationist, a teacher, a doctor, a politician or a businessman everybody is concerned for the education system to some extent. Education is directly proportionate or associated with the quality of life one visualises or assumes for himself.

We have been residing in a rapidly changing world. Globalisation and liberalisation have brought many changes in the life of people. The world has become a global village and we have become more like global citizens. This has provided and felicitated many new opportunities to the people. Any economic swing or turmoil in any part of the world affects the economy and trade of other countries as well sooner or later.

The fast means of transport and advancement of science and technology have made the life of people so convenient and comfortable. It would not be wrong and irrelevant to call the present age the age of technology. Needless to say that the same is universally and by and large applicable to schools because school is the miniature of society. Technology has entirely changed the concept of schools and learning.

Learning is essential not only for the survival of man, but also for individual and social maturity. It is necessary for individual development and adaptation to the rapid social changes being brought about by the explosion in knowledge and technology that our age is witnessing. These changes ushered in by the explosion of knowledge and technologies have put heavy demands on the developed countries as well, which now regard education as a continuing life long process.

Efforts are made in every country for a sound system of education which can cater to the educational needs of all citizens. When the problem of quantity of education is being tackled, there is an urge for raising the quality of life, which is possible only when there is raise in the quantity of education. The quality of life and the quality of education go together. Educationists are of the opinion that educational problems relating to quantity and quality could be tackled by the development of an educational technology. Therefore there has

been a rapid development all over the world in recent years in the development of educational technology in education at all levels with a purpose of extending educational facilities and upgrading instruction.

NEED AND ORIGIN OF THE STUDY

The use of teaching aids has become more technology oriented with the introduction of computers. Information and Technology (ICT) refers to all technology, in particular computers, used in the field of education. The technology is exciting and has opened up possibilities not dreamed of by teachers, but it still requires skills to make it work.

Presentation skills, that have a wide range of applications in our lives today, are becoming a very important part of the curriculum even at the school level. If we compare today's classrooms to those of older days, we would find a drastic change in the activities being conducted, methodology being adopted and applied and technology being used during teaching learning process. In older days, chalk and talk was the only popular method and aid of teaching. Today there is a revolution in this entire teaching learning process. We can call it technological revolution. Technology has greatly impacted the classrooms and the teaching learning style of teachers as well as of students. The use of technology has made the classrooms vibrant and learning friendly.

Now the learning is not monotonous and dull for students. On the other hand it has become more and more interesting and joyful on the part of students. Technological advancement has reduced the burden of teachers. Now they are not supposed to make several efforts like making of notes, T.L.M etc. to make their classrooms effective and impressive. The features of Microsoft office like power point presentation and excel has entirely changed the work culture of the schools and yielded desirable results as regards to the productivity of teachers. Using these two features, teachers are able to deliver the subject matter and content effectively within a short span of time. Their classroom transaction and performance have swung up like never before.

Where on the one hand the use of power point presentation in the classroom has contributed a lot to enhance the participation and learning achievement of students, on the another hand excel has made the evaluation process more objective and reliable. Now the teachers are able to do mathematical calculations through excel and can easily maintain their report

cards in no time. It has saved their manual labour and time to a great extent which they can use for pre-classrooms preparations. Therefore the present study is an attempt to determine the Use of Excel and Power Point in Computer Aided Learning (C.A.L) Supported Upper Primary Schools of Nainital District.

STATEMENT OF THE PROBLEM

“Use of Excel and Power Point by teachers working in Computer Aided Learning (C.A.L) supported Upper Primary Schools of Nainital District.”

OPERATIONAL DEFINITION OF THE TECHNICAL TERMS

The operational definitions of the variables undertaken in the study are given below:-

EXCEL:

Excel is a spreadsheet program that is used to record and analyse numerical data. Think of a spreadsheet as a collection of columns and rows that form a table. A software program created by Microsoft that uses spreadsheets to organize numbers and data with formulas and functions. Excel analysis is ubiquitous around the world and used by businesses of all sizes to perform financial analysis. The main uses of Excel include:

- Data entry
- Data management
- Accounting
- Financial analysis
- Charting and graphing
- Programming
- Time management
- Task management
- Financial modeling
- Customer relationship management (CRM)
- Almost anything that needs to be organized.

POWER POINT (P.PT.):

PowerPoint is a presentation program developed by Microsoft. It is included in the standard Office suite along with Microsoft Word and Excel. The software allows users to create anything from basic slide shows to complex presentations.

PowerPoint is often used to create business presentations, but can also be used for educational or informal purposes. The presentations are comprised of slides, which may contain text, images, and other media, such as audio clips and movies. Sound effects and animated transitions can also be included to add extra appeal to the presentation. PowerPoint presentations are often displayed using a projector.

COMPUTER ASSISTED LEARNING (C.A.L):

According to Wikipedia “Computer-aided learning or computer-assisted learning is an adjectival phrase that hints of the use of a computer as an indispensable tool in a certain field, usually derived from more traditional fields of science and engineering. Instead of the phrase computer-aided or computer-assisted, in some cases the suffix management system is used.” □

Pratham is an education-oriented Indian NGO, which was founded in 1994 with the assistance of UNICEF. It has focused much of its attention on “a remedial education program, called the Balsakhi Program (balsakhi means ‘the child’s friend’). It provides government schools with a teacher ... to work with children in the third and fourth grades who have been identified as falling behind their peers.” The Balsakhi typically meets with a group of 15 to 20 children for two hours a day during school hours with the teaching focused on basic numeracy and literacy skills. Pratham launched the Balsakhi programme in 2001-02.

One of its more recent projects was a **Computer-Assisted Learning (CAL) Programme** based in primary schools in Mumbai and in Vadodara (formerly Baroda), a city in the western Indian state of Gujarat. In the latter case it benefited from an IT policy put in place by the state government. “In 2000, the government delivered four computers to each of the 100 municipal government-run primary schools in the city of Vadodara (80 percent of the schools).”

The programme was constructed so that classroom instruction was supplemented with CAL by placing four computers in each of the primary

schools that took part (fifty-five schools were randomly assigned to receive the intervention).

OBJECTIVES OF STUDY

The proposed study aims at the following objectives:

- (i) To identify the present status of the teachers who are using Excel and Power-point in CAL supported Government upper primary schools of district Nainital of Uttarakhand.
- (ii) To identify the attitude of teachers belonging to CAL supported Government upper primary schools of district Nainital regarding the usability and conduciveness of using Power-point and Excel.
- (iii) To explain the advantages and benefits of using Power-point and Excel in CAL supported Government upper primary schools of district Nainital.
- (iv) To investigate the impact of the use of Power-point and Excel in the participation and learning of the students in CAL supported Government upper primary schools of district Nainital.
- (v) To give suggestions regarding the appropriate use of Power-Point and Excel in the CAL supported Government Upper primary schools of district Nainital.

HYPOTHESIS

1. There exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Microsoft Power-point and Excel with respect to their sex i.e. Male or Female.
2. There exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Microsoft Power-point and Excel with respect to their locality i.e. Urban or Rural.
3. Sex wise there exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of

Microsoft Power-point and Excel with respect to their locality i.e. Urban or Rural.

4. No significant difference exists in the attitude of overall teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Microsoft Power-point and Excel.

DELIMITATION OF THE STUDY:

The proposed study will be delimited only to the C.A.L (Computer Aided Learning) supported Government Upper primary schools of district Nainital of Uttarakhand.

SIGNIFICANCE OF THE STUDY:

We can notice a great paradigm shift in the process of learning and knowledge. Earlier it was considered that the mind of child is like an empty vessel and everything related to knowledge comes from outside. These theories were based on the principles of structuralism and behaviourism. These behaviourist theories of Pavlov and Skinner had larger implications in the classroom as they shaped the pedagogical process and methodology of teaching and learning. Different researches have contradicted however not out rightly rejected these implications.

Modern cognitive and constructivist theories believe that the role of learner is more important in the process of learning. Constructivist learning is based on the active participation of learners in problem solving and critical thinking given real and authentic problems. The teacher's role in a constructivist classroom isn't so much to lecture at students but to act as an expert learner who can guide students into adopting cognitive strategies such as self testing, articulating, understanding, asking probing questions and reflection. The role of the teacher in constructivist classroom is to organise information around big ideas that engage the students' interest, to assist students in developing new insights, and to connect them with the previous learning.

In this ever-changing scenario it is important to adopt new methodology of teaching and in this way technology can be the best solution for this. As per the needs of modern classroom, teachers have been using two key features of Microsoft office- power-point and excel for the effective transaction of the

content. The use of power-point and Excel in education will be beneficial for both teachers and learner.

Keeping it as focal issue, this study deals with determining the use of Excel and Power Point in Computer Aided Learning (C.A.L) supported Upper Primary Schools of Nainital District.

REVIEW OF RELATED LITERATURE:

Taking into consideration the importance of various audio-visual materials and their use by teachers and to know the existing situation regarding availability of these A/V aids at various teaching institutions, the following research findings may serve as the related literature.

Anthony, (1987) examined and determined whether there were significant relationships between teachers' computer literacy backgrounds and their use of computers in the classroom. This study also examined the relationship between teachers' attitudes as related to the use of computers in education. Findings of the study indicated that teachers in the sample had positive attitudes towards computers. Teachers who were computer literate and who had a better understanding of computers were more likely to use computers in their classrooms. Findings also indicated that teachers who had previous experience on computer were more likely to utilize a computer in their program.

Sylvester, (1997) examined the use of technology in teacher preparation technology courses to determine the technology course professor's own level of competency with technology. The overall results of the study were positive. Most faculty members were perceived competent in delivering technology instruction. This was largely due to the advanced skill level and the number of years most have been working with technology in education. Resources at most institutions were adequate and were employed by most faculty members.

Golani (1982) in his study entitled "The use of Audio-Visual Aids in the secondary schools of District Thane" found that the teaching aids were essential and useful in developing clear concepts and in stimulating learning, but being expensive, the schools could not afford to purchase them. Sophisticated aids, like tape-recorder, radio, T.V. set and projectors were out of the question in many of the schools as they were exorbitantly costly. However, the use of A/V materials could be increased if teachers were allowed some free time for the location and preparation of requisite materials, because they had to

perform many other duties in addition to teaching they did not usually find time. Some schools had projectors but few films and due to non-availability of technicians, the projectors were lying unused.

Jois (1982) in his study of the educational radio users in Karnataka laid emphases to find out the strengths and weaknesses of the educational media and to study the attitude of teachers towards school broadcast. The major findings were that. In all, 65.6 percent of the institutions possessed radio sets and were using them for educational purposes about 3 percent institutions were having radio-sets not in working condition. Reasons for non-utilization were:

- a) The head master was not allowing them to use.
- b) There was no separate time-table for this and
- c) There was lack of accommodation. The use of this medium was helpful to a classroom teacher. Teachers using the educational radio programmes agreed that the knowledge of the pupils had improved as a result of their listening to the radio broadcast.

Kaur (1981) aimed to develop educational materials for the skills of probing, questioning, explaining, and illustrating with examples and to examine the effect of self-educational audio-cassettes on the general teaching competence of teachers. The findings concluded that the self educational audio cassettes were effective for developing different teaching skills and the immediate, pin-pointed and self feed back through audio cassettes was an effective way of improving the performance of teachers in the use of different teaching skills.

Phutela (1980) investigated to determine the extent of utilization of school television (STV) programmes by the school and also to study the factors responsible for under utilization of the programmes. At the same emphasis was also laid to study teacher's attitude towards the school telecasts. The findings concluded that many teachers did not STV programmes useful as they were not different from classroom teaching or were not presented in such a manner as to sustain student's motivation. About 38 percent schools in the sample possessing T.V. sets were utilizing STV programmes. The reasons for not viewing were: T.V. sets being out of order, functions in the schools, exams etc. Most of the teachers from these schools accepted T.V. as a welcome help and agreed to the positive statements like teachers too learn about better methods of teaching.

Jagdish Singh and Shukla (1980) aimed to examine the extent of radio utilization in Delhi schools and to study teachers' attitude towards school

broadcasts. The findings revealed that, of the schools having radio sets 14 percent did not utilize the radio programmes. 40 percent of the radio programmes were not related to the syllabus. Non availability of programme chart and lack of awareness of radio programmes were some of the difficulties in the utilization of school programmes.

Jeyachandram (1980) in his experimental study of the efficacy of programmed film strips as a method of teaching found that, programmed learning material (PLM) could be integrated with audio-visual materials and the teacher had an important role when self-learning techniques were employed. Higher cognitive abilities could be developed through PLM. It was also found that retention of learning was more in the case of programmed film strips with teacher and programmed film strip without teacher in comparison with the conventional method.

The major objectives of the study ,on use of visual aids by teachers of university of agricultural sciences conducted by Ramachandra (1982)were (i) Evaluating the current use of visual aids by the teacher of a Agricultural University (ii) Identifying the factors governing the use of Visual aids. The major findings of the study revealed that the visual aids use level index values were low in basic science and humanities and were high in other agricultural colleges, veterinary colleges and fisheries colleges. The association between the visual aids use indices and teacher's qualification, experience, training status was significant. Other factors like the number of students per class, training on visual aids, attitude towards visual aids, budget allotment on visual aids, did not have significant association with the visual aids use level.

However, knowledge of visual aids, availability of material resources to develop and use them inside the classroom, administrative encouragement and follow up evaluation were highly significant in their association with visual aid use.

A question that constantly plagues teacher educators and others who work with teachers in service training programmes is whether the training actually produces changes in the classroom behaviour. In a survey questionnaire study conducted by C. Edward streeter (1968) was concerned with the question whether specific media competencies (and which other) can be demonstrated to have a significant positive correlation to actual use of media in the classroom. The sample used for the study consisted of 436 teachers working in two schools

in which equipment, materials and supporting personnel were available to facilitate the teacher's use of a variety of educational media. Questionnaire data provided the basis for media competency scores; a total media frequency of use-score was derived for each teacher. Correlation coefficients were then computed in an attempt to test whether or not a positive relationship existed between this media competency scores and a teacher's quantitative use of media in the classroom. A positive correlation of 0.41 was found between the teachers total media competency and their frequency of use scores.

Ramsey (1961) concluded that the population attitudes towards audio-visual instruction were not influenced by the amounts of audio-visual equipment which their schools owned, as long as that equipment was accessible when it was needed. On the other hand, the population attached great significance to the amount of audio-visual materials their schools owned as well as to the accessibility of those materials.

Grant and White (1970) studied a population of secondary school teachers who had experienced a specific audio-visual education demonstration unit and related various personality characteristics to changes in attitude toward newer media.

Teacher perceptions of environment conditions within schools which influence utilization of educational media were investigated by Miller (1970) who concluded that organized audio-visual programs supervised by audio-visual coordinators were related to significantly superior audio-visual educational climates.

Lewis (1970) tested 15 questions in an effort to determine teacher perceptions relative to educational media. Among his findings were conclusions that teachers perceive educational media as being readily available and that they perceive formal training in the area of audio-visual instruction as being necessary.

Davis, (1988) examined the attitudes of early childhood teachers toward the instructional use of computers in their classrooms. Results of this study indicated that 95.80% of the early childhood teachers participating in the study held positive attitudes toward the instructional use of computers in their classrooms.

Grasty, (1985) research was to study attitudes toward computers, 318 public school teachers in urban and suburban school districts respondent to a twenty-one item questionnaire about computers. Findings indicate that age, sex, teaching experience, grade level, and community type were not factors in their association with attitudes toward computers. However, type of secondary teacher was a significant factor indicating that business education, foreign language and mathematics teachers have different and more positive attitudes toward computers than the other six categories of secondary teachers. Teachers, in general, report positive attitudes towards computers, but indicate that they lack the computer knowledge and experience to use them effectively in the classroom. Furthermore, teachers appear willing to take computer instruction via in-service training from school districts or through “released” time.

Tobias (1966.1968) investigated educational media factors and terminology which threaten teachers and concluded that threats of automation influence teacher attitudes towards educational media.

Finch, Gustilo and Wiersteiner (1970) reported findings indicating that availability of educational resources leads to increased utilization of such media, but that teacher attitudes have little influence upon availability use relationship.

Esin, (1988) studied the relationship between teachers’ knowledge/experience and their apprehension about the use of microcomputers in public schools. The result of the analyses indicated that there were neither relationships nor significant differences in apprehension about the use of microcomputers in the educational environment due to gender of the teachers, or their levels of education. However, increases in teachers’ ages and years of teaching experience were accompanied by parallel increases in their levels of apprehension about the use of microcomputers in educational settings as communications and problem-solving tools. Finally, the results of the analyses indicated that regardless of gender, levels of education, age, and years of teaching experience two thirds of the teachers who had not taken computer literacy education courses were apprehensive about the use of microcomputers in the learning environment. On the basis of the research findings, there seemed to be a correlation between teachers’ knowledge /experience and apprehension about the use of microcomputers in schools.

Kindel, (1995) selected randomly the secondary teachers in Kentucky public schools to participate in a survey about their attitudes concerning computers and their use of computer technology. From the population of 10,000 Kentucky public school secondary teachers, a sample of 500 was randomly selected to receive surveys mailed during the spring of 1993. With a return rate of 61.28, the teachers answered questions on two questionnaires: the computer use survey and the computer attitude scale. The computer use survey contained 18 questions pertaining to the respondents' knowledge of both the technology component of KERA and of their school's technology initiative in addition to questions related to the respondents' computer usage and demographic characteristics. The second questionnaire, the Computer Attitude Scale, was taken from the "Survey of Attitudes towards Learning about and Working with Computers" by Brenda H. Loyd and Clarice P. Gressard. In this questionnaire the respondents were asked to answer questions designed to identify their attitudes towards computers. In comparing mean scores for teachers using computers in the classroom, no statistically significant differences were found for gender or educational level. In the area of number of years of teaching experience, the differences existing were not statistically significant, but they came quite close to being so. Furthermore, teachers who used computers in the classroom, for record keeping and at home had mean scores indicating more positive attitudes about computers. Finally, the majority of teachers surveyed agree that technology can increase student achievement.

Chi (1993) designed to assess teachers' current computer knowledge, computer uses, attitudes concerning computers, and the factors that affect the integration and application of the computer in the classroom in two teachers' universities in the People's Republic of China. This study employed survey research methodology. The instrument for the present study was designed after a thorough review of related studies in America on faculty computer knowledge, uses, and attitudes. The data analysis reveals that Chinese teacher interests in and attitudes toward computers are much like those of American teachers. The majority of teachers show very positive computer attitudes, and there is potential to increase computer use among them. The high cost of computers in China and the lack of time to learn and use the computer seem to be the two most significant factors that prevent them from using or learning more about computers. Given their limited access to computers, the Chinese

teachers seem to do rather well, but the use of computers in instruction appears weak, leaving the most room for improvement.

Guba and Snyder (1964) found users of media within their population to possess more favourable attitudes towards newer media than did not users of those media.

Increased utilization of audio-visual material was identified by Eboch (1966) as being related to increased availability of such material.

Godfrey(1965) reporting upon availability of educational media in schools, identified teacher requests as being among the more influential channels for having school authorities provide greater amounts of A/V equipment and materials.

Knowlton and Hawes (1962, 1963) concluded that negative teacher attitudes toward educational media are related to utilization barriers, and that increased utilization of educational media by teachers following their participation in an A/V education course is the result of improved information rather than improved attitudes.

Tu, Rex Jii-che (1991) proposed to study; (a) analyze the perceived microcomputer literacy of Tennessee technical-education instructors in their use of microcomputers. (b) investigate their attitudes toward using microcomputers in instruction. The study examined how the factors of (a) gender, (b) age, (c) service area, (d) teaching experience, and (e) educational level may have influenced the instructors' perceived microcomputer literacy and attitudes toward using microcomputers in technical education. The findings and conclusions of the study revealed that (i) Most of the technical-education instructors in the institutions were moderate to highly literate and were supportive of implementing the use of microcomputers. (ii) Over 80 per cent of male or female technical instructors had high to moderate levels of perceived microcomputer literacy. (iii) Technical-education instructors with a master's degree or beyond had a better knowledge of microcomputers and were likely to show more support for implementing the use of microcomputers than those technical education instructors with a bachelor's degree or less. (iv) Technical-education instructors serving in allied health areas in technical education showed a weak perceived microcomputer literacy and needed help to better understand how to use micro computer literacy and

needed help to better understand how to use microcomputers in their instructional programs. (v) Technical instructors who had more than 10 years' teaching experience with a master's or above educational degree showed a more positive attitude toward using microcomputers.

Okinaka, (1991) in his study "Computer teachers: A study of background characteristics, preparation in educational technology, and attitudes" observed that Computer teachers tended to perceive their male and female students as having similar levels of interests and ability in using the computer. Statistics showed that computer teachers had considerable knowledge of current developments in the field of educational technology, but that there were areas where improvement might be recommended. Finally, the data showed that the teachers in this study had high levels of job satisfaction and positive attitude towards the teaching of computer use.

Thus from the corpus of aforesaid studies it can be deduced that though much work have been done at the primary and secondary level teaching institutes, but still there are very less studies done regarding status of hardware educational technologies in government upper primary schools and perception of teachers about their use.

Therefore the present investigation is an effort to fulfil the gap of knowledge in this significant area of Education Technology.

RESEARCH DESIGN:

(a) Population: All the teachers of CAL supported Government Upper Primary Schools of district Nainital of Uttarakhand will constitute as the population of the present study.

(b) Sample and Sampling technique: In the present study keeping in view the adequacy and representative qualities of the sample, 50 teachers will be selected for the study from the different C.A.L. supported government upper primary schools of district Nainital of Uttarakhand.

(c) Tools: To achieve the objectives of the study, the following measurements will be used:-

- (i) Personal data schedule.
 - (ii) Questionnaire on use of Excel and power-point for teaching.
- (d) **Statistical treatment:** Analysis of data will be carried out with the help of percentile and other appropriate statistical devices.

ANALYSIS AND INTERPRETATION OF DATA

This part of the study deals with the analysis and interpretation of the collected data obtained to assess the use of Excel and power point in C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand and the attitude of teachers teaching out there. For the sake of convenience, data analysis for each aspect has been carried out separately. In the first phase Use of excel and power point was seen whereas in the second phase the opinion or attitude of teachers was carried out for the study. In the analysis variables like type of schools i.e Rural or Urban, Sex i.e male or female etc were controlled individually to obtain more meaningful conclusions and findings.

Table-01

Scores of Male and Female teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel

Sr.No.	Dimensions/ Statement No.	Male (N=25)		Female (N=25)	
		Score	%	Score	%
1.	Use of Power point / Statement no. 1, 2, 6	274	73.06%	291	77.6%
2.	Implementation of Power point /Statement 3, 4, 5	274	73.06%	287	76.5%
3.	Use of Excel / Statement no. 7, 9	133	53.20%	136	54.4%
4.	Implementation of Excel / Statement no. 8, 10	156	62.40%	134	53.6%

The data shown in Table-01 depicts the Scores of Male and Female teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel. It is clear from the above data that the female teachers were having better scores on all the dimensions of use of power point and excel in comparison to their male counterparts. As far as the dimensions of implementation of power point and excel were concerned, the female teachers were found to be having better scores on the implementation of power point and the male teachers on the implementation of excel. It is therefore clear from the scores that the female teachers were having more favourable attitude on the use of power point and excel in comparison to their male counterparts, whereas on the implementational level the female teachers found power point and the male teachers found excel to be more implicable in their respective classrooms.

Table-02

Graphical representation of Scores of Male and Female teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel

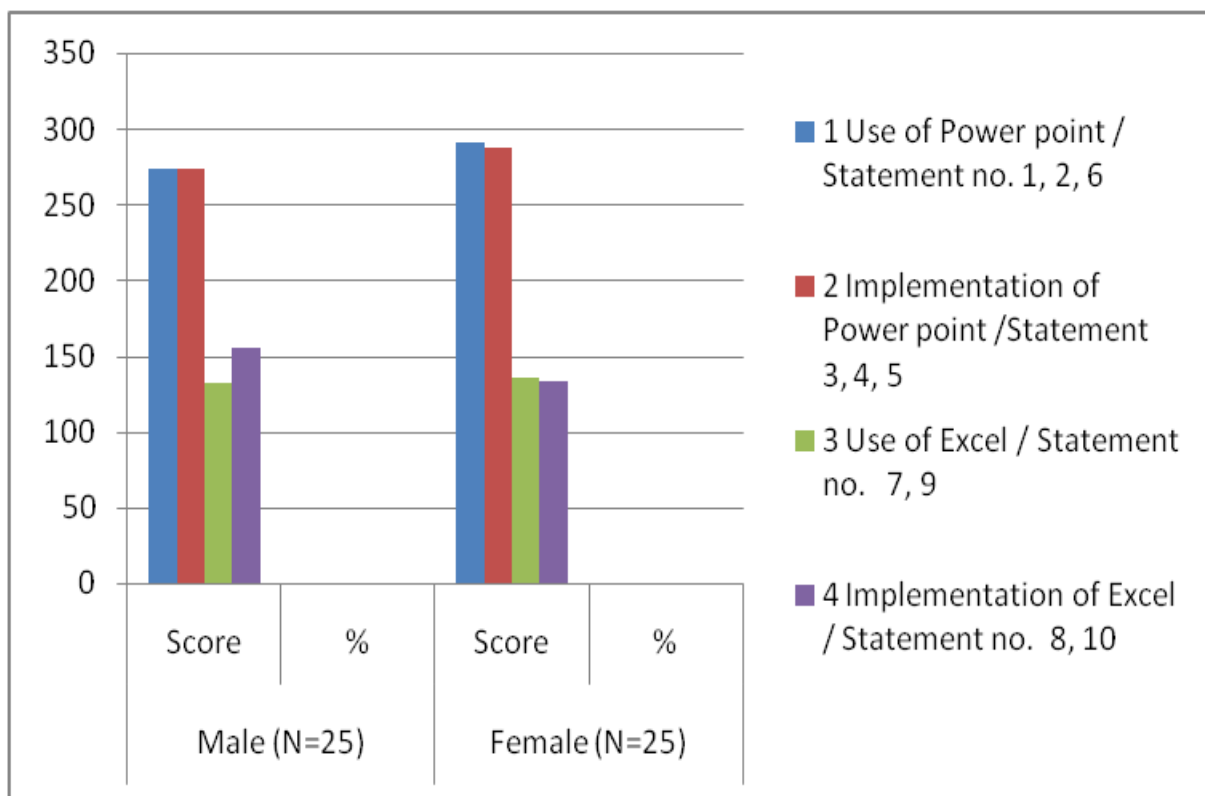


Table-03

Scores of Urban and Rural teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel

Sr.No.	Dimensions/ Statement No.	Urban (N=18)		Rural (N=32)	
		Score	%	Score	%
1.	Use of Power point / Statement no. 1, 2, 6	186	68.8 %	347	72.2%
2.	Implementation of Power point /Statement 3, 4, 5	197	73.0 %	352	73.3%
3.	Use of Excel / Statement no. 7, 9	107	59.4 %	169	52.8%
4.	Implementation of Excel / Statement no. 8, 10	101	56.0 %	186	58.0%

Table-03 reveals the Scores of Urban and Rural teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel. It is clear from the data that the teachers belonging to the rural areas were having better scores on use and implementation of power point than their counterparts belonging to the urban areas. Further it was seen that the teachers belonging to the urban areas were found to be having better scores on use of excel and the rural teachers on the implementation of excel than their respective counterparts. It can therefore be concluded from the above data that the teachers belonging rural areas carry more favourable attitude towards use and implementation of power point in comparison to their urban counterparts whereas the teachers belonging to urban areas were found to be having more favourable attitude towards use of excel and the rural ones having more favourable attitude towards implementation of excel.

Table-04

Graphical representation of Scores of Urban and Rural teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel

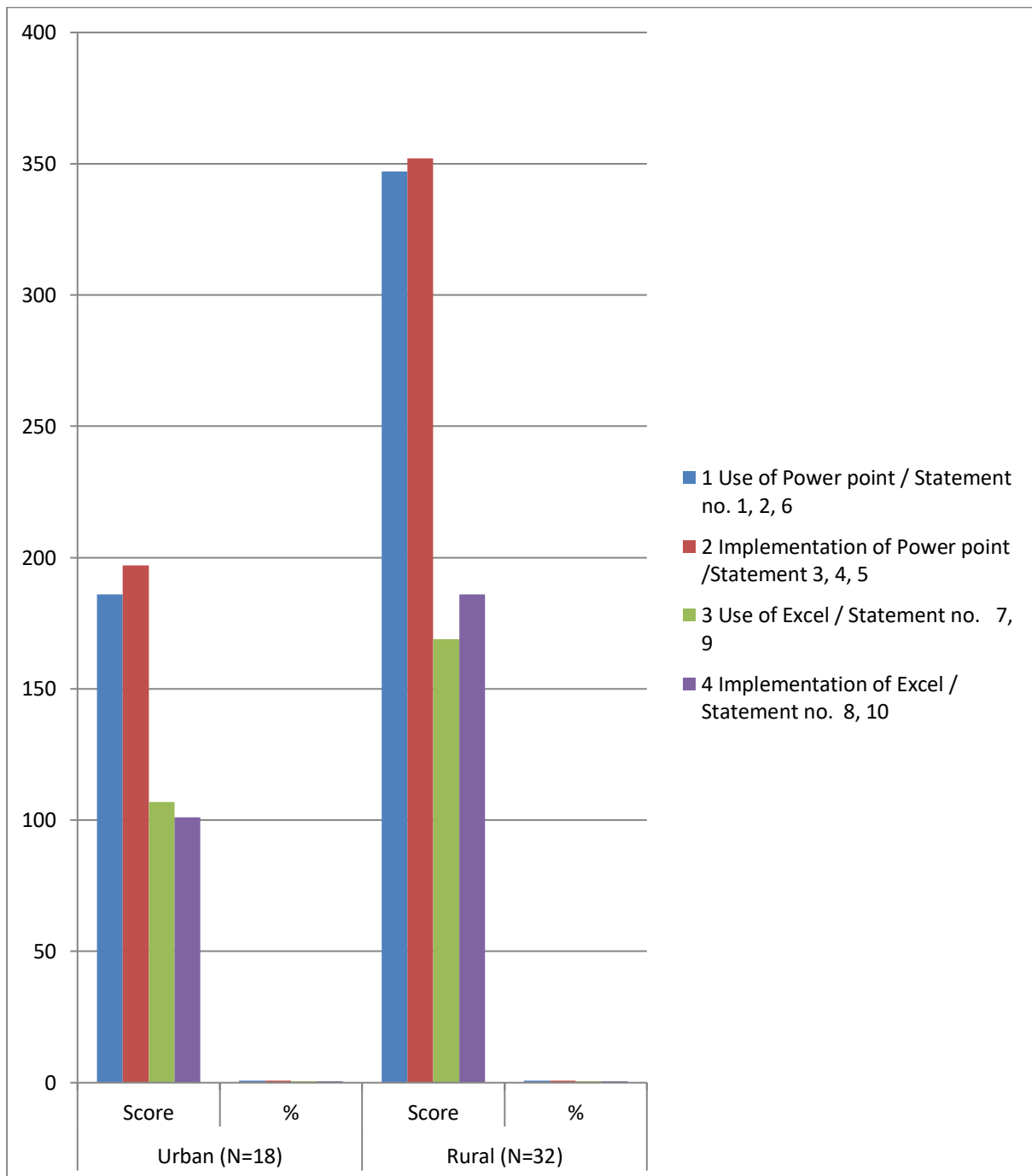


Table-05

Sex wise Scores of Urban and Rural teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel

Sr. No.	Dimensions/ Statement No.	Urban (N=18)				Rural (N=32)			
		Male (N=6)		Female (N=12)		Male (N=19)		Female (N=13)	
		score	%	score	%	score	%	score	%
1.	Use of Power point / Statement no. 1, 2, 6	68	75.6%	136	77.5%	214	75.1%	145	74.3%
2.	Implementation of Power point / Statement no. 3, 4, 5	61	67.7%	129	71.6%	221	77.5%	192	98.4%
3.	Use of Excel / Statement no. 7, 9	31	51.6%	72	60.0%	106	55.7%	66	50.7%
4.	Implementation of Excel / Statement no. 8, 10	34	56.6%	61	50.8%	117	61.5%	74	56.9%

The data reflected in Table-05 shows the Sex wise Scores of Urban and Rural teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital on different dimensions of Use regarding Microsoft Power point and Excel. It is clear from the perusal of the table that the urban female teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their male counterparts except in the dimension of implementation of excel where the urban male teachers were found to be having better scores than their female counterparts. Whereas the teachers belonging to the rural areas showed that the male teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their female counterparts but were lagging far behind in the dimension of implementation of power point in comparison to their female counterparts. It can therefore be said that the urban female teachers possess a more favourable attitude towards the use of power point and excel in their classrooms in comparison to their male counterparts whereas when compared on the implementational ground the urban male possessed better attitude on the implementation of excel and the urban female on the implementation of power point. Further comparison of the rural

teachers reflected that the attitude of rural male teachers is more favourable in all the dimensions of use of power point and excel than their female counterparts except at the implementation of power point where the female teachers of rural areas were having more favourable attitude than their male counterparts.

Table-06

Overall Score on likert Scale Questionnaire regarding Use of Power point and Excel by teachers belonging to Various C.A.L. Supported Government Upper Primary School of District Nainital (N=50)

Sr.No.	S.A.	A	U	D	S.D.
1.	13 26%	33 66%	03 06%	01 02%	-
2.	03 06%	21 42%	11 22%	13 26%	02 04%
3.	04 08%	36 72%	07 14%	03 06%	-
4.	04 08%	30 60%	12 24%	04 08%	-
5.	03 06%	31 62%	09 18%	06 12%	01 02%
6.	10 20%	30 60%	06 12%	04 08%	-
7.	02 04%	08 16%	08 16%	30 60%	02 04%
8.	04 08%	15 30%	07 14%	23 46%	01 02%
9.	02 04%	15 30%	17 34%	16 32%	-
10.	-	11 22%	16 32%	23 46%	-

The perusal of Table-06 reveals the Overall Score on likert Scale Questionnaire regarding Use of Power point and Excel by teachers belonging to various C.A.L. Supported Government Upper Primary School of District Nainital. It is clear from the study of the table that the teachers' perception was found to be high on the positive statements (1, 3, 4 & 5) and low on the negative

statements (7, 8 & 10) regarding use and implementation of power point and excel. As far as statement no. 2, 6 & 9 were concerned they dealt with the perception of teachers regarding practically applying power point and excel by them in their classrooms, where on statement no. 2 & 6, regarding feeling difficulty and waste of time and money on use of power point in the classroom, 42% & 60% teachers out of the total sampled teachers were found to be agreeing and on this negative statement respectably. Whereas on statement no.9, 34% teachers out of the total sampled teachers felt undecided regarding preferring using excel for teaching in the class. This infers the lack of skill among the teachers regarding using these software programmes by them in their respective classrooms. It is therefore felt that proper skill based training on the use of these two software's is being hardly needed.

SUMMARY OF FINDINGS, EDUCATIONAL IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCHES

In this study an attempt was made to study the perception of teachers belonging to various C.A.L. Supported Government Upper Primary Schools of Nainital district regarding Use of Microsoft power point and Excel. To fulfil this purpose data from the teachers was collected with the help of various data collecting tools. The main data collecting tools were (i) Personal data schedule and (ii) Questionnaire on Use of Excel and power-point in teaching. The data obtained from these tools was analysed with the help of appropriate statistical techniques.

The present section deals with the findings got through the application of these tools and their educational implications. Further it is also emphasised to draw suggestions for the future researches in this field.

MAJOR FINDINGS

1. The first null hypothesis that there exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Microsoft Power-point and Excel with respect to their sex i.e. Male or Female is totally rejected. The data shown in Table-01 clearly shows that the female teachers were having better scores on all the dimensions of use of power point

and excel in comparison to their male counterparts. As far as the dimensions of implementation of power point and excel were concerned, the female teachers were found to be having better scores on the implementation of power point and the male teachers on the implementation of excel. It is therefore clear from the scores that the female teachers were having more favourable attitude on the use of power point and excel in comparison to their male counterparts, whereas on the implementational level the female teachers found power point and the male teachers found excel to be more implicable in their respective classrooms.

2. The second null hypothesis that there exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Microsoft Power-point and Excel with respect to their locality i.e. Urban or Rural is also rejected. The data shown on Table-03 clearly depicts that the teachers belonging to the rural areas were having better scores on use and implementation of power point than their counterparts belonging to the urban areas. Further it was seen that the teachers belonging to the urban areas were found to be having better scores on use of excel and the rural teachers on the implementation of excel than their respective counterparts. It can therefore be concluded from the above data that the teachers belonging rural areas carry more favourable attitude towards use and implementation of power point in comparison to their urban counterparts whereas the teachers belonging to urban areas were found to be having more favourable attitude towards use of excel and the rural ones having more favourable attitude towards implementation of excel.

3. The third null hypothesis that sex wise there exists no significant difference in the attitude of teachers belonging to C.A.L. Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Power-point and Excel with respect to their locality i.e. Urban or Rural is also rejected. The data revealed in Table-05 clearly shows that the urban female teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their male counterparts except in the dimension of implementation of excel where the urban male teachers were found to be having better scores than their female counterparts. Whereas the teachers belonging to the rural areas showed that the male teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their female counterparts but were lagging far behind in the dimension of implementation of power point in comparison to their female counterparts. It can therefore be said that the urban female teachers possess a

more favourable attitude towards the use of power point and excel in their classrooms in comparison to their male counterparts whereas when compared on the implementational ground the urban male possessed better attitude on the implementation of excel and the urban female on the implementation of power point. Further comparison of the rural teachers reflected that the attitude of rural male teachers is more favourable in all the dimensions of use of power point and excel than their female counterparts except at the implementation of power point where the female teachers of rural areas were having more favourable attitude than their male counterparts.

4. The fourth null hypothesis that no significant difference exists in the attitude of overall teachers belonging to C.A.L Supported Government Upper Primary Schools of district Nainital of Uttarakhand regarding their perception on Use of Power-point and Excel is also rejected. The data presented in Table-06 shows that that the teachers' perception was found to be high on the positive statements (1, 3, 4 & 5) and low on the negative statements (7, 8 & 10) regarding use and implementation of power point and excel. As far as statement no. 2, 6 & 9 were concerned they dealt with the perception of teachers regarding practically applying power point and excel by them in their classrooms, where on statement no. 2 & 6, regarding feeling difficulty and waste of time and money on use of power point in the classroom, 42% & 60% teachers out of the total sampled teachers were found to be agreeing and on this negative statement respectably. Whereas on statement no.9, 34% teachers out of the total sampled teachers felt undecided regarding preferring using excel for teaching in the class. This infers the lack of skill among the teachers regarding using these software programmes by them in their respective classrooms. It is therefore badly felt that proper skill based training on the use of these two software's is being hardly needed.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The present study was conducted to know the attitude or perception of teachers belonging to C.A.L. Supported Government Upper Primary Schools of Nainital district in Uttarakhand regarding Use of Microsoft power point and Excel in the process of teaching and learning. It was found that the perception of teachers varied a lot according to their sex and area of service. Further it was also tried to find out the reasons behind their varied perceptions. Therefore on the basis of the result obtained from the present study, the following recommendations and educational implications can be made:-

1. It was found from the analysis of data that the teachers' perception was found to be high on the positive statements (1, 3, 4 & 5) and low on the negative statements (7, 8 & 10) regarding use and implementation of power point and excel. As far as statement no. 2, 6 & 9 were concerned they dealt with the perception of teachers regarding practically applying power point and excel by them in their classrooms, where on statement no. 2 & 6, regarding feeling difficulty and waste of time and money on use of power point in the classroom, 42% & 60% teachers out of the total sampled teachers were found to be agreeing and on this negative statement respectably. Whereas on statement no.9, 34% teachers out of the total sampled teachers felt undecided regarding preferring using excel for teaching in the class. This clearly infers the lack of skill among the teachers regarding using these software programmes by them in their respective classrooms and day to day activities. From the above data we can easily interpret that the teachers badly requires training on workshop mode instead of theoretical mode. It is therefore recommended to make policies and arrangements in such a manner that the teacher should get maximum workshop based and skill based trainings to use these types of technologies.

2. It was found that the female teachers were having better scores on all the dimensions of use of power point and excel in comparison to their male counterparts. As far as the dimensions of implementation of power point and excel were concerned, the female teachers were found to be having better scores on the implementation of power point and the male teachers on the implementation of excel. It is therefore clear from the scores that the female teachers were having more favourable attitude on the use of power point and excel in comparison to their male counterparts, whereas on the implementational level the female teachers found power point and the male teachers found excel to be more implicable in their respective classrooms. It is therefore recommended to imply more such type of researches to trace out the reasons lying behind such type of discrepancies and take necessary measures to eradicate it.

3. It was observed that the teachers belonging to different areas viz., urban and rural were having different perceptions regarding use of power point and excel. It is a matter of study that why such type of differences aroused in their perceptions and to eradicate this, there could be a possibility to have the joint training sessions where it should be taken in consideration that the teachers from both the areas could be called together for the trainings and workshops.

4. It was also seen that even having the same location there was sex wise difference found in the perception of male and female teachers regarding the use of technologies. The urban female teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their male counterparts except in the dimension of implementation of excel where the urban male teachers were found to be having better scores than their female counterparts. Whereas the teachers belonging to the rural areas showed that the male teachers were having better scores in almost all the dimensions of use and implementation of power point and excel in comparison to their female counterparts but were lagging far behind in the dimension of implementation of power point in comparison to their female counterparts. It can therefore be said that the urban female teachers possess a more favourable attitude towards the use of power point and excel in their classrooms in comparison to their male counterparts whereas when compared on the implementational ground the urban male possessed better attitude on the implementation of excel and the urban female on the implementation of power point. Further comparison of the rural teachers reflected that the attitude of rural male teachers is more favourable in all the dimensions of use of power point and excel than their female counterparts except at the implementation of power point where the female teachers of rural areas were having more favourable attitude than their male counterparts. It must be seen that what factors lie behind such type of sex wise comparison and necessary arrangements should be taken to counter the problem.

Overall it can be concluded that if proper arrangements of workshop mode trainings could be done, the gap of sex, area and other factors can be minimised and the perception and attitude of teachers can be uplifted regarding the use of such type of technologies. It is also concluded that proper availability of instruments and physical facilities like labs and availability of electricity, trained staff and technical assistance also play a vital role in the perception of teachers regarding use of such type of software technologies. Therefore the government, eminent educators and policy makers should keep an eye on these suggested facts for bringing improvement in the perception of teachers and thus help in bringing quality and efficiency in the teaching-learning process.

SUGGESTIONS FOR FUTURE RESEARCHES

No research work is complete in itself because in between the study, several times the researcher experiences some new ideas and methodologies to be implemented in his study but due to the inability to change set pattern he feels himself unable to do so. For this he can give suggestions for future

researches to be conducted on those lines. As the present study was carried out over the government teachers of district Nainital of Uttarakhand to investigate their perceptions regarding use of software programmes like power point and excel. In the same line it will be useful to conduct further researches on the following pattern.

1. Similar type of researches to assess the perceptions of teachers regarding use of software programmes like power point and excel can be carried out on broader scale/regions, with much larger sample to increase the comprehensibility of the study.
2. This study is limited up to the C.A.L. Supported Government schools. It can be done on other teaching learning institutes like HTC, BTC and other Special School training Centres.
3. Further more studies can be done on some other vocational and professional training institutes with more or less variables on the same pattern.
4. The problem can be studied through better designed experiments using sophisticated plan experiments. As it was an explorative study and data were analyzed with the help of percentage, the later researches can be conducted by using chi-square, t-test and factorial design in which an account of interaction effect of several variables can be studied. This will lead to more meaningful and conclusive findings.
5. A comprehensive study can also be conducted to assess the attitude of parents, students, educationists, policy planners and employers towards different aspects of other hardware educational technologies.

Finally it is hoped that the study may generate more useful follow up work and further research in this area. However, there is not an exhaustive list of research projects possible in this field only those topics have been suggested which are the direct outcomes of the present investigation.



APPENDIX

QUESTIONNAIRE ON USE OF EXCEL AND POWER POINT FOR TEACHING

Sr. No. ()

Code No. ()

Please mark the sign of tick (√) in the bracket relevant to the information related to you.

1. Name of school –
2. Name of Block –
3. Location - (a) Urban () (b) Rural ()
4. Name of the teacher -
(If don't want to disclose then leave vacant)
5. Post-
6. Sex- (a) Male () (b) Female ()
7. Education Qualification-
8. Teaching subject- (a) Science () (b) Humanities () (c) Language ()
9. Teaching Experience in years-
10. Age in years-

Directions

The present Questionnaire consists of information regarding use of excel and power point for teaching. It is expected to provide the correct response in concern to you & your School/Institution. Please fill the Questionnaire carefully by marking the sign of tick (√) in the bracket relevant to the information related to you, providing response on each and every statement is compulsory. Information provided by you will be kept confidential and will only be used for research purpose. We are highly thankful to you for your kind co-operation.

DEPARTMENT OF EDUCATIONAL TECHNOLOGY

DISTRICT INSTITUTE OF EDUCATION AND TRAINING BHIMTAL, NAINITAL

QUESTIONNAIRE ON USE OF EXCEL AND POWER POINT FOR TEACHING

S. No.	Statements	*S.A.	A	U	D	S.D.
1	Use of Power points makes the lesson interesting and long lasting.					
2	It is very difficult to use Power point presentation in Class room teaching.					
3	It helps to utilize class time efficiently.					
4	I prefer to teach using Power point presentation in class room.					
5	It helps to revise the key points of the content taught.					
6	Using Power point presentation is a waste of time and money.					
7	Using Excel for teaching requires great skills.					
8	Excel only helps in the work of Accounting and making calculations.					
9	I hardly prefer using Excel for Teaching in class.					
10	All subjects can't be taught using Excel.					

* S.A. - Strongly Agree

A- Agree

U- Undecided

D- Disagree

S.D. - Strongly Disagree

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