

## **Comparison of Knowledge of Computer Application in Physical Education of M.P.Ed. Students of Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University, Amravati**

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### **Abstract**

This paper represents the Comparison of Knowledge of Computer Application in Physical Education of M.P.Ed. Students of Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University, Amravati. Total Sixty (60) subjects were selected for the present study. The data pertaining to the study was collected by self made questionnaire. In this study data were analysed and interpreted with the help of special statistical technique 't' test and chi-square. The findings of this study shows that there is found significant difference of knowledge of computer application among the students of Sant Gadge Baba Amravati University, Amravati than those of Rashtrasant Tukadoji Maharaj Nagpur University. Also the interest and satisfaction of the students of Sant Gadge Baba Amravati University, Amravati are more than those of Rashtrasant Tukadoji Maharaj Nagpur University. But on the other hand, after the analysis of the collected data it is concluded that the views of knowledge of computer application are good in the students of Rashtrasant Tukadoji Maharaj Nagpur University than those of Sant Gadge Baba Amravati University, Amravati.

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### **Introduction**

Today we live in a world in which everybody has to use new technologies. It is not an option but a must, and even more for the teachers. Who is supposed to have a close relationship with any innovation that occurs in his/ her specific field of work or in general areas that have a direct relation with them. The 21<sup>st</sup> century is the century of information. Nowadays, teaching is becoming one of the most challenging profession in India where knowledge is expanding rapidly and much of it is available to students as well teachers at anytime and anywhere. In recent years there has been a groundswell of interest in how computers and the interest can best be harnessed to improve the efficiency and effectiveness of physical education at all levels and both formal and non formal settings.

Computers, today, have an overwhelming impact on nearly every aspect of our life. Now-a-days, we don't post a letter when we wish to communicate with someone. We send an email! Gone are the days when we used to go to the neighbourhood library to look up good books. These days, we simply sit at home and browse through a document on the internet. In school report cards are no longer prepared manually. In all probability school has a computer program that produces report cards. All in all, we rely on computers to do a lot of our work for us.

### **Computer Application in Physical Education:**

During the last decades, computer science has become an important interdisciplinary partner for sport. This is due to the fact that the uses of data and media, the design of models, the analysis of systems etc. increasingly require the support of suitable tools and concepts which are developed and available in computer science. Research activities in this field are strongly affected by current developments in computer science. In particular, progress in hardware (processor speed, storage capacity, and communication technology), software (tools) information management concepts and methods (data bases, data mining) and media (internet, eLearning, multimedia) are of great importance.

### **Computer Technology in Physical Education and Sports:**

In Physical Education and Sports field, Computer application helps physical education teachers/ coaches/ trainer to enhance the learning process in academics and sports performance by employing innovative techniques/ methods. Computer application as an effective tool to enhance the authenticity of the decision and results.

### **Using Computers to do Research in Physical Education:**

The age of computers is upon us. Children in elementary schools are becoming computer literature. In some schools, such as Carnegie-Mellon institute, computers are a necessary tool for coursework. And computer prices have been dropping dramatically: a stripped-down microcomputer can be had for what a sophisticated calculator cost a few years ago-\$100 or less.

Unfortunately, manufactures claims to the contrary, the average person cannot take a computer home, plug it in, and be up and running within the hour. Learning to use a computer takes time. It is not the purpose of this what computers can do, using some programs as illustration, and to explore the potential for computing in research in physical education. This includes action research (the daily data collection and summarization that is part of every teacher's job) as well as experimental research, literature search, data analysis, report writing, and interfacing with a mainframe computer in order to use more powerful statistical packages like SPSS, BMDP, and SAS. In addition, some terminology will be introduced to ease your transition into the computer age.

### **METHODOLOGY**

Every researcher wants to be systematic during his whole research work. So the researcher divides each chapter of his work systematically in order to face less difficulty in the conductance of the problem. In the present chapter, the design of the study has been presented under the following headings:

#### **Source of Data:**

For the present study the source of subjects were selected from non-grantable as well as grantable physical education colleges affiliated to Rashtrasant Tukadoji

Maharaj Nagpur University as well as Sant Gadge Baba Amravati University, Amravati where M.P.Ed. Courses are running.

### **Selection of the Subjects:**

Sixty (60) subjects were selected for this study. Thirty (30) subjects were taken from Rashtrasant Tukadoji Maharaj Nagpur University and thirty (30) subjects were taken from Sant Gadge Baba Amravati University, Amravati.

### **Sampling Method:**

The subjects were selected by using simple random sampling method.

### **Equipments used for collection of data:**

The self made questionnaire was used for the collection of data.

### **Administration of Questionnaire:**

Before the collection of data the administration of questionnaire is very important. In administration of any kind of test (questionnaire) three things are very much effective to be taken into consideration.

1. What is to be done before the application of any kind of test.
2. What is done during the application of any kind of test.
3. What things are to keep into the mind before the fulfilment of any kind of test.

So first of all, the researcher made self made questionnaire consists of 60 questions in which four sections are included namely Knowledge, Interest, Satisfaction, and Views. The knowledge section of the questionnaire consists of 15 questions and the second and third section the questionnaire also consists of 15 questions. The last section (views) is made up of 15 opinions in the form of 5 point scale by taking the help of my guide, experts and different computer known teachers. After that the questionnaire is distributed among the students of Rashtrasant Tukadoji Maharaj Nagpur University as well as Sant Gadge Baba Amravati University, Amravati in order to fulfil the questionnaire. Then the statistical analysis will be done with the help of statistical technique 't' test and chi-square for testing of hypothesis.

### **STATISTICAL ANALYSIS AND INTERPRETATION OF DATA**

The data was collected from the subjects by using self development questionnaire developed by the researcher under the guidance of experts and analysis and interpretation is done on the basis of special statistical technique 't' test and chi-square.

These findings of the present study also help to know the level of knowledge of computer among the physical education students of Sant Gadge Baba Amravati University, Amravati and Rashtrasant Tukadoji Maharaj Nagpur University. These findings are shown in tabular form as well as in graphical form as below:

**Table No. 1**  
**Showing Comparison of Knowledge of Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**

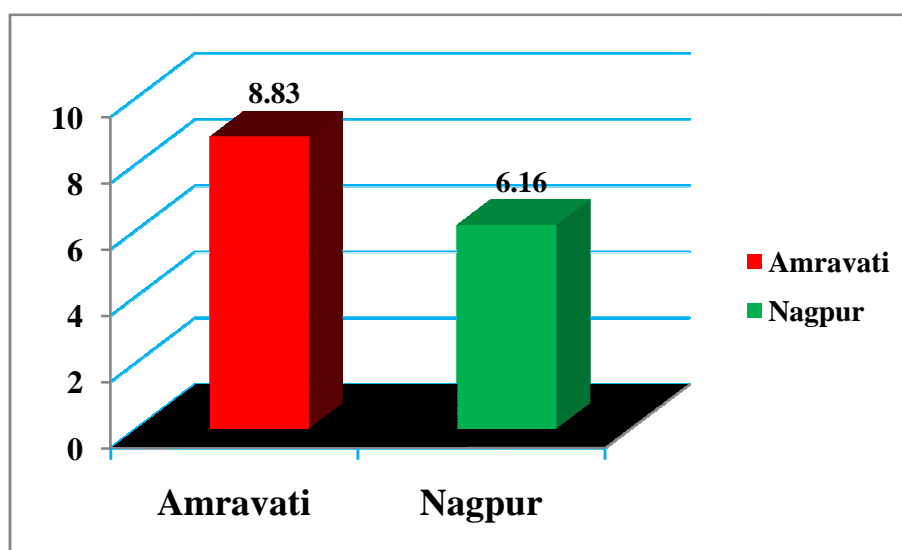
Group	Mean	S.D	M.D	D.F.	O.T.	T.T
Amravati	8.83	1.57	2.66	58	6.54	2.00
Nagpur	6.16	1.57				

Level of Significance = 0.05

Tabulated 't' 0.05 (58) = 2.00

The mean value of Amravati University is 8.83 as shown in the table and the mean value of Nagpur University is 6.16 and their mean difference is 2.66. The S.D. of Knowledge of Computer Application in Physical Education of M.P.Ed. Students of Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University, Amravati are 1.57 and 1.57 respectively. After this the collected data is analyzed by using 't' test. Also the tabulated 't' is drawn at level of significance 0.05 and at degree of freedom 58. In the above table the value of calculated 't' is greater than tabulated 't', hence the hypothesis which is given by the researcher that there is found significant difference in the knowledge of computer application among the students of Sant Gadge Baba Amravati University, Amravati than those of in the students of Rashtrasant Tukadoji Maharaj Nagpur is accepted.

**Graph No. 1**  
**Graphical Representation of Knowledge of Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**



**Table No. 2**  
**Showing Comparison of Interest Towards Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**

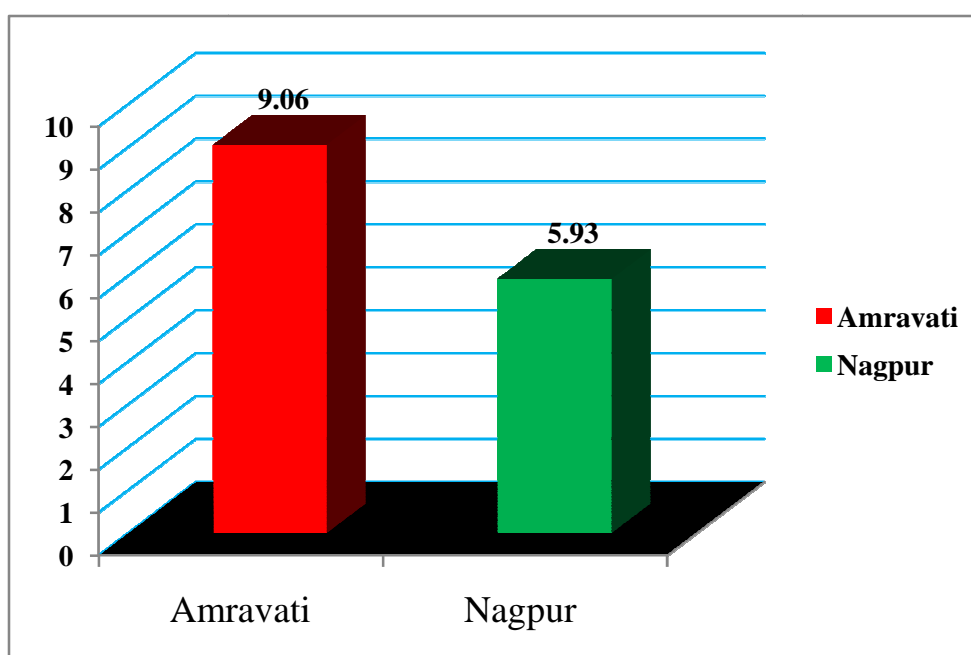
Group	Mean	S.D	M.D	D.F.	O.T.	T.T
Amravati	9.06	2.51	3.13	58	4.81	2.00
Nagpur	5.93	2.51				

Level of Significance = 0.05

Tabulated 't' 0.05 (58) = 2.00

The mean value of Amravati University is 9.06 as shown in the table and the mean value of Nagpur University is 5.93 and their mean difference is 3.13. The S.D. of Knowledge of Computer Application in Physical Education of M.P.Ed. Students of Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University, Amravati are 2.51 and 2.51 respectively. After this the collected data is analyzed by using 't' test. Also the tabulated 't' is drawn at level of significance 0.05 and at degree of freedom 58. In the above table the value of calculated 't' is greater than tabulated 't'. Hence the interest of the students of Sant Gadge Baba Amravati University, Amravati towards the knowledge of computer application is more than the students of Rashtrasant Tukadoji Maharaj Nagpur.

**Graph No. 2**  
**Graphical Representation of Interest Towards Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**



**Table No. 3**  
**Showing Comparison of Satisfaction Towards Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**

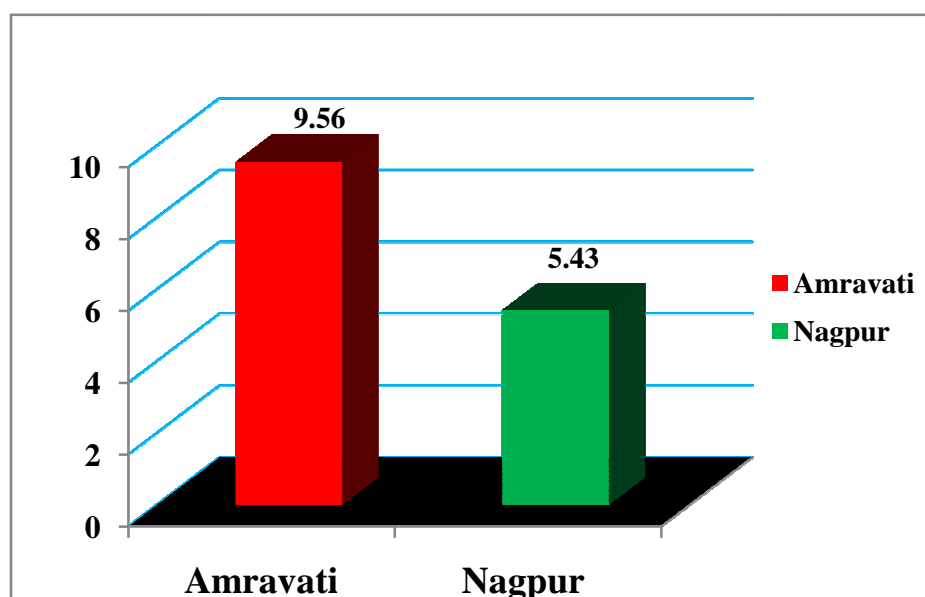
Group	Mean	S.D	M.D	D.F.	O.T.	T.T
Amravati	9.56	1.94	4.13	58	8.24	2.00
Nagpur	5.43	1.94				

Level of Significance = 0.05

Tabulated 't' 0.05 (58) = 2.00

The mean value of Amravati University is 9.56 as shown in the table and the mean value of Nagpur University is 5.43 and their mean difference is 4.13. The S.D. of Knowledge of Computer Application in Physical Education of M.P.Ed. Students of Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University, Amravati are 1.94 and 1.94 respectively. After this the collected data is analyzed by using 't' test. Also the tabulated 't' is drawn at level of significance 0.05 and at degree of freedom 58. In the above table the value of calculated 't' is greater than tabulated 't'. Hence the students of Sant Gadge Baba Amravati University, Amravati are more satisfied towards the knowledge of computer application than the students of Rashtrasant Tukadoji Maharaj Nagpur.

**Graph No. 3**  
**Graphical Representation of Satisfaction Towards Computer Application between**  
**M.P.Ed. Students of Sant Gadge Baba Amravati**  
**University, Amravati and Rashtrasant Tukadoji**  
**Maharaj Nagpur University.**



**Table No. 4**  
**Showing Views about Computer Application of Sant Gadge Baba**  
**Amravati University, Amravati Students.**

	S.A	A	U	D.A	S.D
Fo	26.66	24.66	11.11	23.33	14.44
Fe	20	20	20	20	20
Fo-fe	6.66	4.66	-8.89	3.33	-5.56
(Fo-fe) <sup>2</sup>	44.35	21.71	79.03	11.08	30.91
(Fo-fe) <sup>2</sup> /fe	2.21	1.08	3.95	0.55	1.54

**Level of significance = 0.05**

Chi-square =  $\sum \{(fo-fe)^2/fe\}$

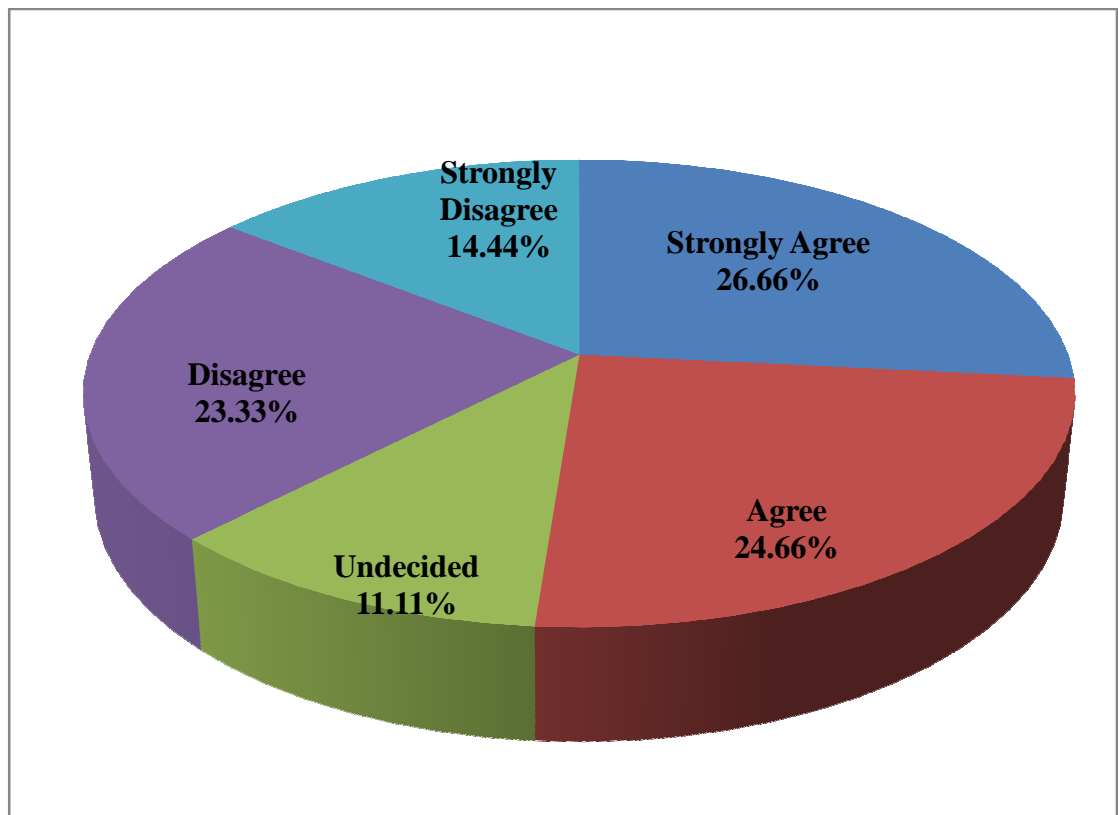
Chi-square =  $2.21 + 1.08 + 3.95 + 0.55 + 1.54$

Chi-square = 9.33

From the above table it is observed that the frequency observed for Strongly Agree is 26.66, for Agree it is 24.66, for Undecided it is 11.11, for Disagree it is 23.33, and for Strongly Disagree it is 14.44. Near about 51.32% students have good views about the knowledge of computer application that it is used in different applied fields where as about 37.77% students are those who believed that the knowledge of computer application is not as beneficial as it is. After that the researcher uses a statistical technique 'chi-square' for the justification of the collected data.

The  $\chi^2$  for above given statement is 9.33. The table value of  $\chi^2$  at 4 degree of freedom and 0.05 level of significance is 9.49. Because the obtained  $\chi^2$  is less than the table value of  $\chi^2$ , it is concluded that the views of the students about computer knowledge are not significant.

**Graph No. 4**  
**Graphical Representation of the Views about Computer Application of Sant**  
**Gadge Baba Amravati University, Amravati Students.**



**Table No. 5**  
**Showing Views about Computer Application of Rashtrasant Tukadoji Maharaj**  
**Nagpur University Students.**

	S.A	A	U	D.A	S.D
Fo	22.22	17.77	8.88	28.88	22.22
Fe	20	20	20	20	20
Fo-fe	2.20	-2.23	-11.12	8.88	2.22
(Fo-fe) <sup>2</sup>	4.92	4.97	123.65	78.85	4.92
(Fo-fe) <sup>2</sup> /fe	0.24	0.24	6.18	3.94	0.24

**Level of significance = 0.05**

Chi-square =  $\sum \{(fo-fe)^2/fe\}$

Chi-square =  $0.24 + 0.24 + 6.18 + 3.94 + 0.24$

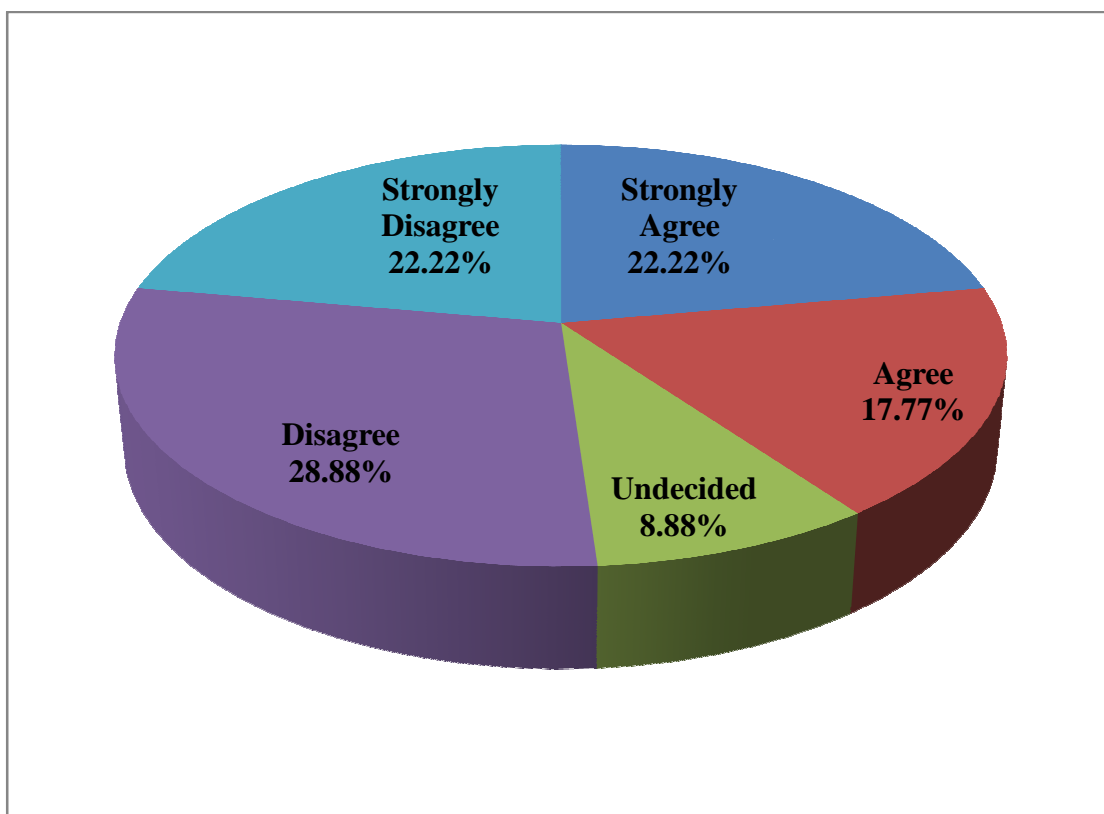
Chi-square = 10.84



From the above table it is observed that the frequency observed for Strongly Agree is 22.22, for Agree it is 17.77, for Undecided it is 8.88, for Disagree it is 28.88, and for Strongly Disagree it is 22.22. Near about 39.99% students have good views about the knowledge of computer application that it is used in different applied fields where as about 51.1% students are those who believed that the knowledge of computer application is not as beneficial as it is. After that the researcher uses a statistical technique 'chi-square' for the justification of the collected data.

The  $\chi^2$  for above given statement is 10.84. The table value of  $\chi^2$  at 4 degree of freedom and 0.05 level of significance is 9.49. Because the obtained  $\chi^2$  is greater than the table value of  $\chi^2$ , it is concluded that the views of the students about computer knowledge are significant.

**Graph No. 5**  
**Graphical Representation of the Views about Computer Application of**  
**Rashtrasant Tukadoji Maharaj Nagpur University Students.**



### Conclusion:

With in the limitations of the study and from statistical analysis the following conclusion is drawn.

There is found significant difference of knowledge of computer application among the students of Sant Gadge Baba Amravati University, Amravati than those of Rashtrasant Tukadoji Maharaj Nagpur University. Also the interest and satisfaction of the students of Sant Gadge Baba Amravati University, Amravati are more than those

of Rashtrasant Tukadoji Maharaj Nagpur University. But on the other hand, after the analysis of the collected data it is concluded that the views of knowledge of computer application are good in the students of Rashtrasant Tukadoji Maharaj Nagpur University than those of Sant Gadge Baba Amravati University, Amravati.

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