



IMPACT OF ICT ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

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Abstract:

The main aim of this study was impact of ICT on academic achievement of secondary school students. For the survey, the researcher selected stratified random sample of 200 students studying in School students, giving representation to sex, type of management, type of family and size of family, out of 200 students 100 boys and 100 girls are taken for the academic year 2019-20. tools were used for the collection of data are a) Mass-Media Scale (MMS) developed by Dr. M. Narayanaswamy and Dr. Haseen Taj was used for measuring level of ICT. Academic Achievement (Scores) of students were collected from office records. ICT impact on academic achievement of male, female, Urban, rural, Govt., Private and aided School students.

Key words: *Academic achievement, ICT, School students*

1. Introduction:

Education is slightly regarded as the key to national prosperity and welfare and it is one of the most important forms of National investment. The skill that it generates is not only highly valued by the society but is indispensable for various occupations. Faced with the problem of limited resources it is essential that whatever is available for education should be fully utilized.

If the student fails or is unable to achieve adequate grades it means that the meager resources of the country have been wasted. Failure in education is costly. Therefore an effort to unravel and understand the factors that underlie the success or failure of students in education does not simply amount to an academic exercise. It has its practical bearing in the sense of that it makes possible the proper utilization. A measure, which would ensure maximum academic achievement, is needed for the large number.

It is a well accepted fact now that academic achievement is a complex behaviour and a resultant of a host of factors different kinds intellectual and non intellectual, psychologists have been engaged in researches exploring all such factors, because in the present era special premium is placed on talent and brain power, and scholastic performance lagging behind of intellectual ability of a student's represents a serious loss to society in terms of his potential contributions.

A classroom is a heterogeneous group in the sense that it is made up of students with different backgrounds and with varied abilities. They come from different cultural backgrounds different ethnic groups and having different mental intellectual capacities. The scholastic achievement is affected by these factors of individual difference.

It is very logical to assume that high academic achievement is not possible in the absence of intellectual abilities. The more favorable such characteristics are the higher could be the academic achievement, in the words of Stern, Stein and Bloom (1956) once the question of minimal intellectual competence had been resolved, critical importance could then be attached to such matters as the manner in which a student could get along with his classmates the extent to which he was accepted or rejected and the significance with which he attaches to such responses from others.

Every child when it is admitted to the School is expected to achieve to the normal standards of the grade. The children through various experiences learn to adjust to its peer group teacher and to the School situation. Academic achievement is closely related to the child is able to make up with in the School where a number of learning experiences are provided. Academic achievement denotes the way in which the child is able to adjust and achieve in School situation in terms of various activities that are provided in the School to a normal degree of expectations. It is the resultant of need its satisfaction which is measured through various learning experiences including curricular and co-curricular activities. Achievement in the School subjects is a way for a child to maintain their personal worth; there must be a strong drive for achievement, Academic achievement can also perform the willingness to achieve skill and ability of the students with the help of ICT.

2. Meaning of Academic Achievement:

Academic achievement depends upon the background of the student. It is said that the type of home, type of teaching and the learning aspects for the learner will play a very important role in the achievement. Students with high as intelligence obtain higher achievement studies reveal that intelligence is the product of heredity. Heredity factors and social environment will play very important role in the individual's achievement.

Academic achievement has been operationally defined as the sum total of achievement made in all subjects. This is obtained by adding the achievement scores obtained by the students in all subjects in the final examination.

The term academic achievement is closely related to the type of adjustment the child is able to make up with, in the School where a number of learning experiences are provided, A. Achievement denotes the way in which the child is able to adjust and achieve in School situation in term of various activities that are provided in the School to a normal degree of expectation. It is the resultant of need satisfaction, which is measured through various learning experiences including curricular and co-curricular activities. Achievement in the School subjects is away for adults to maintain their personal worth. There must be a strong drive for Achievement dare to resist them pressure "provocative" and "bolshie" where he feels strong enough to resist the requirements to achieve.

3. Factors Affects Academic Achievement:

Academic achievement is helps the all round development of skills through co-curricular activities. It affects some factors viz.

1. Effective Teaching,
2. ICT,
3. Socioeconomic Status,
4. Intelligence,
5. Aptitude,
6. School.

4. Objectives of the Study:

The present study was undertaken with the following major objectives:

- To find out the relationship between academic achievement and impact of ICT on secondary School students.
- To find out whether there is any significant effect of background variables of students such as sex, type of management, type of family, size of family, and level of impact of ICT of School students.

5. Hypotheses:

1. H₀₁: There is no significant difference between the academic achievement of School male students used more and less ICT.
2. H₀₂: There is no significant difference between the academic achievement of School female students used more and less ICT.
3. H₀₃: There is no significant difference between the academic achievement of School urban students used more and less ICT.
4. H₀₄: There is no significant difference between the academic achievement of rural School students used more and less ICT.
5. H₀₅: There is no significant difference between the academic achievement of Govt. School students used more and less ICT.
6. H₀₆: There is no significant difference between the academic achievement of private School students used more and less ICT.
7. H₀₇: There is no significant difference between the academic achievement of all school students used more and less ICT.

6. Variables of the Study:

In the present study an attempt is made to know "Impact of Mass-media on academic achievement of School students in Kalburgi District". The variables of this study are classified under three types which are as follows:

1. Dependent Variables:

Academic Achievement

2. Independent Variables:

ICT

3. Background Variables

- a. Sex (Male\Female)
- b. Type of School Management (Government\ Private Aided\Private Unaided)

7. Design of the study:

7.1. Sample for the Study:

For the survey design, the researcher selected stratified random sample of 200 students studying in School students, giving representation to sex, type of management, type of family and size of family, out of 200 students 100 boys and 100 girls are taken for the academic year 2019-20.

7.2. Tools of the study:

According to Best (1963), like the tools in a carpenter's Box, each research tool is appropriate in a given situation to accomplish a particular purpose. The selection of suitable instruments or tools is of vital importance for any successful research in the light of this, the following tools were used for the collection of data.

- a. Mass-Media Scale (MMS) developed by Dr. M. Narayanaswamy and Dr. Haseen Taj was used for measuring level of Mass-Media.

b. Academic Achievement (Scores) of students were collected from office records.

7.3. Collection of Data:

The researcher himself administered the various tools used in the present study on School students of Kalaburgi District. Before administering the tools, a good rapport was established with the students. Adequate care was taken for the seating arrangement and proper supervision was done so that no copying took place during the testing sessions, students were instructed to follow the instructions that were given on each questionnaire before answering them.

7.4. Statistical Techniques used for Data Analysis:

Statistical Techniques plays a very important role in any research because they are the means to analyze, interpret and draw inferences. The statistical techniques mean, Standard Deviation and 't' test ratio were used to analyze the data was used to find out the significant difference in academic achievement of individuals exposed to different ICT.

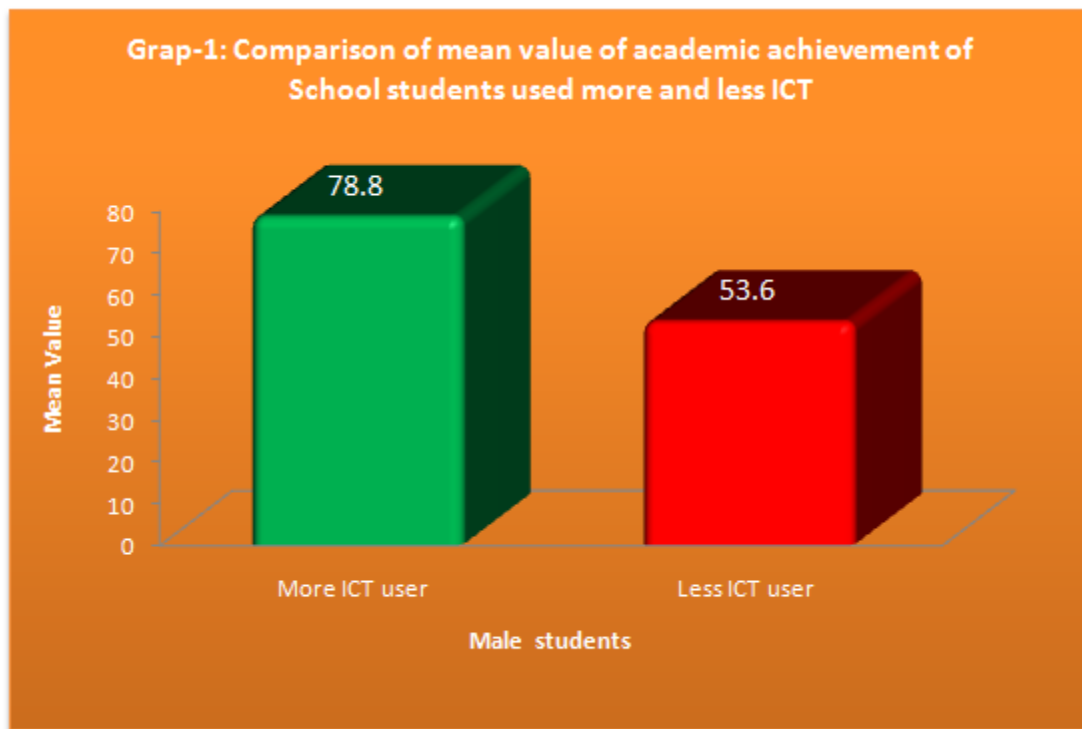
8. Objective wise Analysis of the data:

Objective-1: To find out whether there is any significant impact of ICT on achievement of School male students.

Table-1: Comparison of mean, standard deviation and 't'-test value of academic achievement of School students used more and less ICT.

Variable		N	Mean	S.D.	't' value
Male School students	More ICT user	50	78.8	6.98	18.53
	Less ICT user	50	53.6	8.81	

From the Table-1, it can be seen that the obtained 't' value of 18.53 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-1 "there is no significant difference between the academic achievement of School male students used more and less ICT" was rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of School students used more and less ICT. The more ICT used male students secure more percentage than that of less media used male students. From this we can conclude that ICT impact on academic achievement of School students.

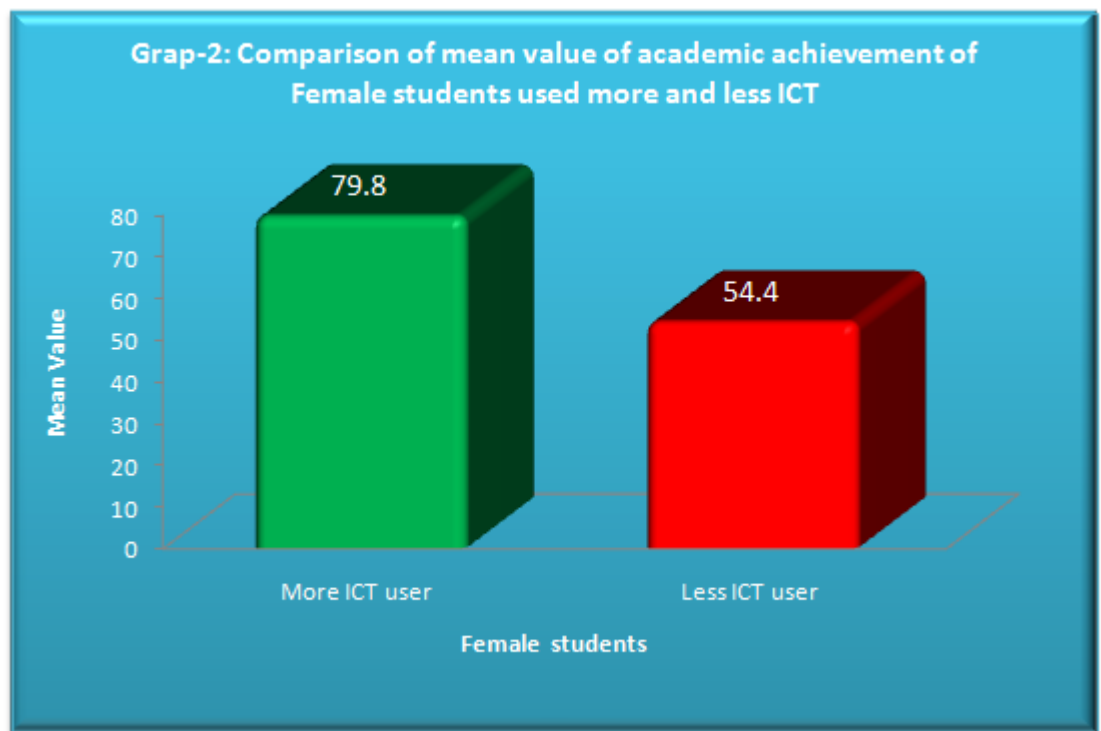


Objective-2: To find out whether there is any significant impact of ICT on achievement of School female students.

Table-2: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of School students used more and less ICT.

Variable		N	Mean	S.D.	't' value
Female School students	More ICT user	50	79.8	4.83	27.55
	Less ICT user	50	54.4	6.88	

From the Table-2, it can be seen that the obtained 't' value of 27.55 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-2, i.e. there is no significant difference between the academic achievement of School female students used more and less ICT is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of School female students used more and less ICT. The more ICT used male students secure more percentage than that of less media used female students. From this we can conclude that ICT impact on academic achievement of School female students.

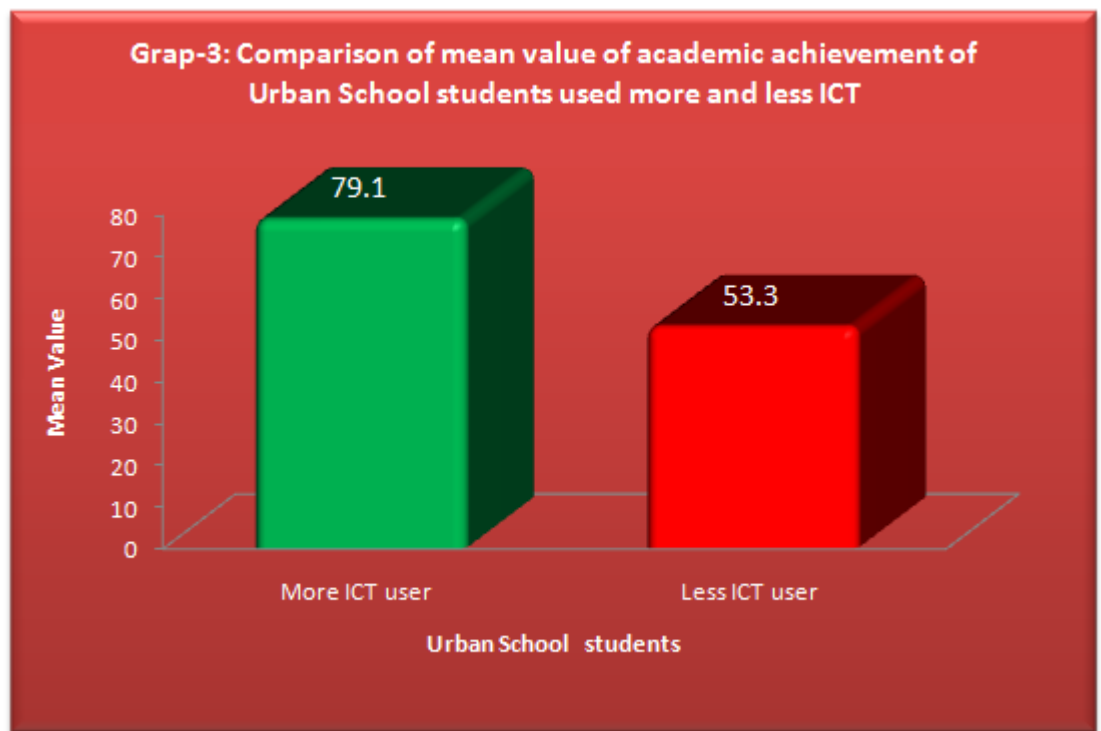


Objective-3: To find out whether there is any significant impact of ICT on achievement of School urban students.

Table-3: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of urban School students used more and less ICT.

Variable		N	Mean	S.D.	't' value
Urban School students	More ICT user	50	79.1	6.76	21.68
	Less ICT user	50	53.3	7.76	

From the Table-3, it can be seen that the obtained 't' value of 21.68 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-3 i.e. "there is no significant difference between the academic achievement of urban School students used more and less ICT" is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of urban School students used more and less ICT. The more ICT used students secure more urban percentage than that of less media used female students. From this we can conclude that ICT impact on academic achievement of urban School students.

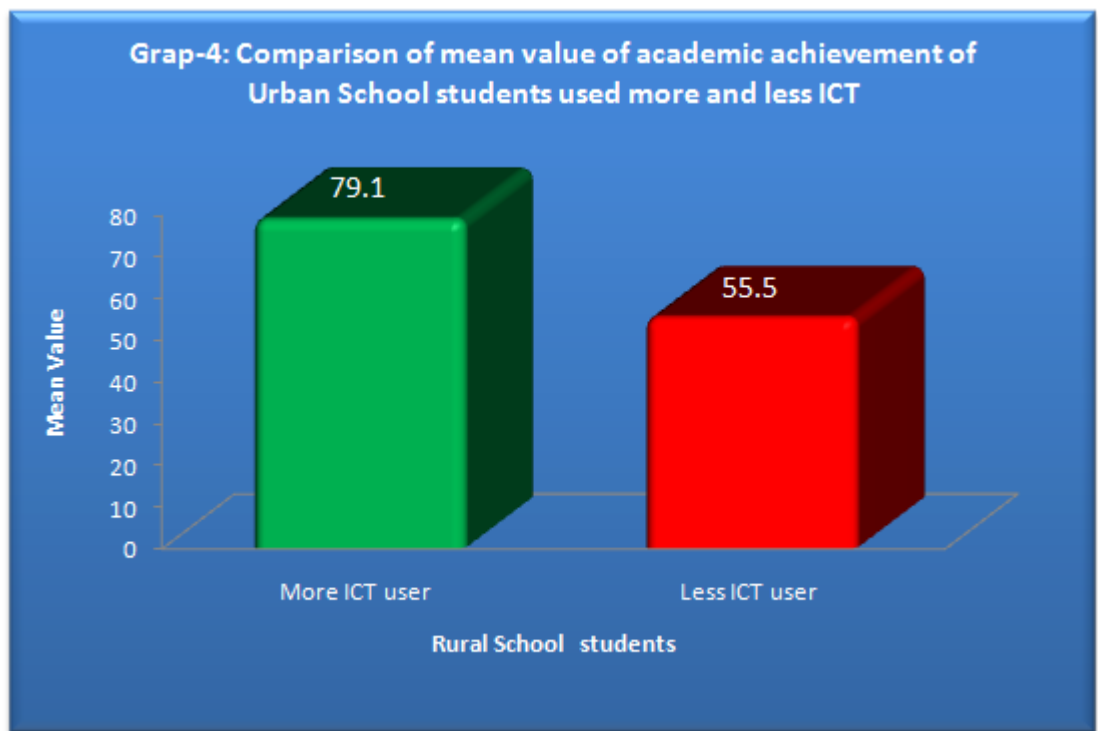


Objective-4: To find out whether there is any significant impact of ICT on achievement of School rural students.

Table-4: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of rural School students used more and less ICT.

Variable		N	Mean	S.D.	't' value
Rural School students	More ICT user	50	79.1	5.04	25.60
	Less ICT user	50	55.5	6.09	

From the Table-4, it can be seen that the obtained 't' value of 25.60 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-4 i.e. "there is no significant difference between the academic achievement of Rural School students used more and less ICT" is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of Rural School students used more and less ICT. The more ICT used students secure more rural percentage than that of less media used female students. From this we can conclude that ICT impact on academic achievement of rural School students.

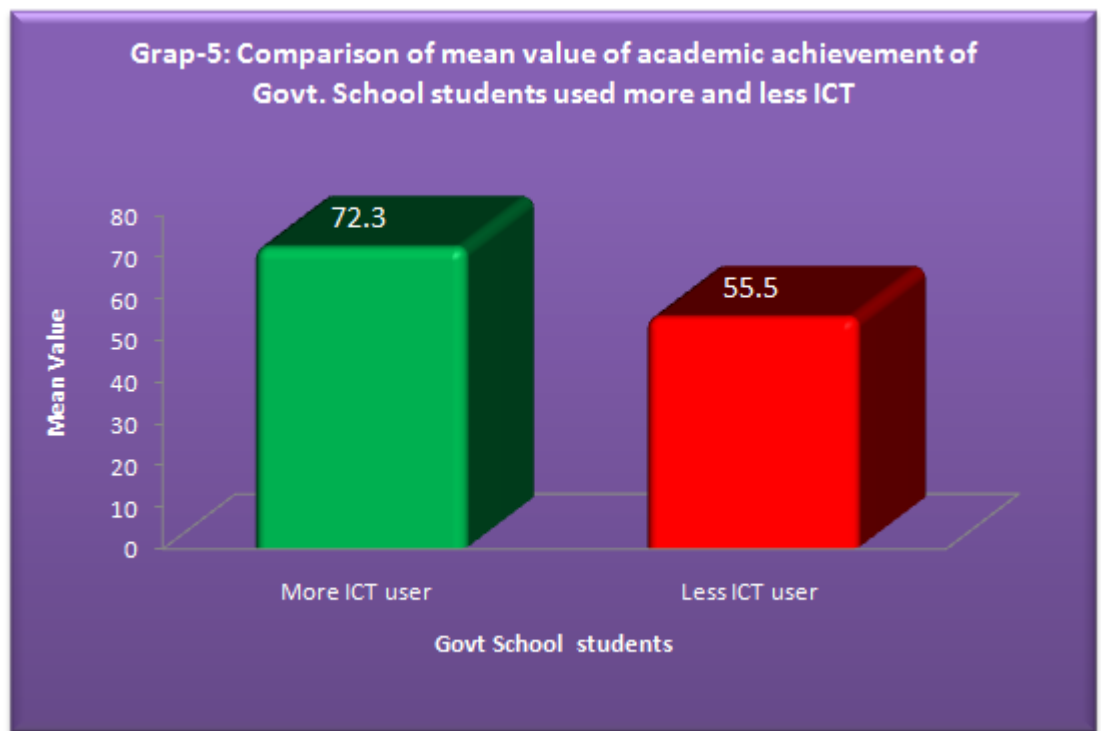


Objective-5: To find out whether there is any significant impact of ICT on achievement of Govt. School students.

Table-5: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of Govt. School students used more and less ICT

Variable		N	Mean	S.D.	't' value
Govt. School students	More ICT user	50	72.3	14.66	9.76
	Less ICT user	50	55.5	6.09	

From the Table-5, it can be seen that the obtained 't' value of 9.76 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-5, i.e. "there is no significant difference between the academic achievement of Govt. School students used more and less ICT" is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of Govt. School students used more and less ICT. The more ICT used students secure more percentage than that of less media used female students. From this we can conclude that ICT impact on academic achievement of Govt. School students.

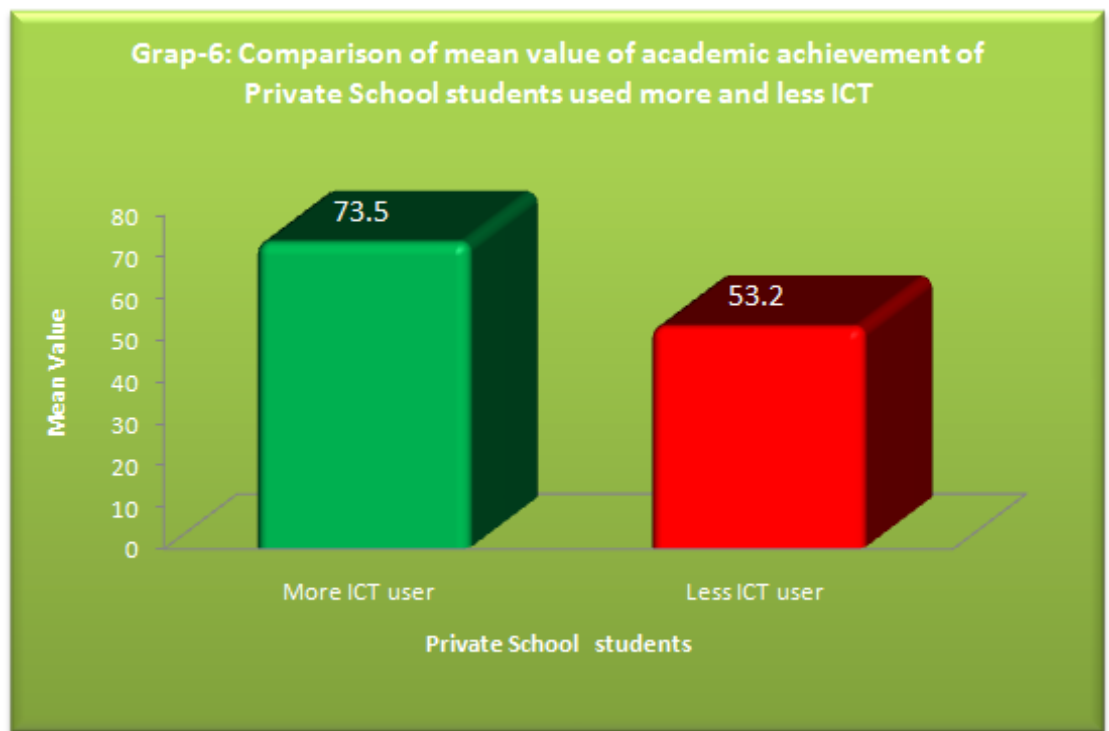


Objective-6: To find out whether there is any significant impact of ICT on achievement of Private School students.

Table-6: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of Private School students used more and less ICT

Variable		N	Mean	S.D.	't' value
Private School students	More ICT user	50	73.5	13.77	8.85
	Less Mass media user	50	53.2	7.01	

From the Table-6, it can be seen that the obtained 't' value of 8.85 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-6 i.e. "there is no significant difference between the academic achievement of private School students used more and less ICT" is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of private School students used more and less ICT. The more ICT used students secure more private percentage than that of less ICT used female students. From this we can conclude that ICT impact on academic achievement of private School students.

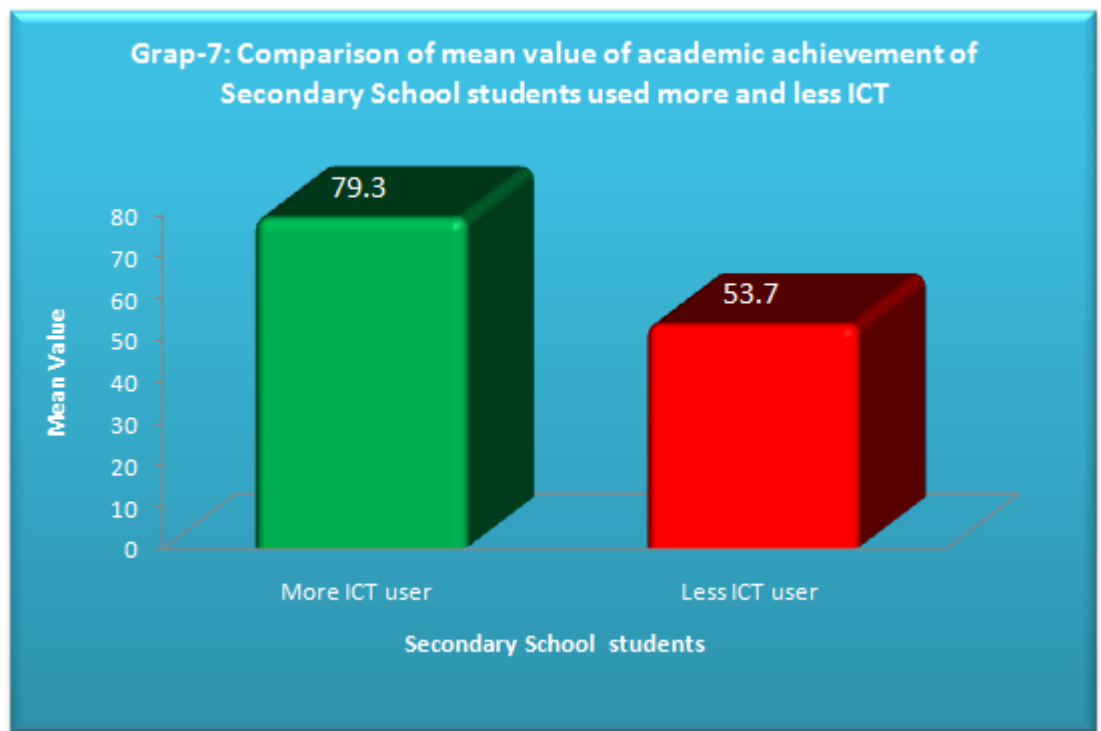


Objective-7: To find out whether there is any significant impact of ICT on achievement of all students.

Table-7: Comparison of mean, standard deviation and 't'-test value of percentage of academic achievement of all students used more and less ICT.

Variable		N	Mean	S.D.	't' value
All students	More ICT user	100	79.3	6.00	34.11
	Less Mass media user	100	53.7	7.48	

From the Table-7, it can be seen that the obtained 't' value of 34.11 is greater than the table value of 1.97 and 2.576 at 0.05 and 0.01 level. Hence, the null hypothesis-7, i.e. there is no significant difference between the academic achievement of School students used more and less ICT is rejected and alternative hypothesis is accepted. There is significant difference in academic achievement of School students used more and less ICT. The more ICT used students secure more percentage than that of less media used students. From this we can conclude that ICT impact on academic achievement of School students.



9. Major Findings:

- a. There is significant difference between the academic achievements of male students used more and less ICT. The more ICT used male students secure more percentage than that of less media used male students. ICT impact on academic achievement of male School students.
- b. There is significant difference between the academic achievements of female students used more and less ICT. The more ICT used female students secure more percentage than that of less media used male students. ICT impact on academic achievement of female School students.
- c. There is significant difference between the academic achievements of urban School students used more and less ICT. The more ICT used students secure more percentage than that of less media used students. ICT impact on academic achievement of urban School students.
- d. There is significant difference between the academic achievements of rural School students used more and less ICT. The more ICT used rural School students secure more percentage than that of less media used students. ICT impact on academic achievement of rural School students.
- e. There is significant difference between the academic achievements of Govt. School students used more and less ICT. The more ICT used Govt. School students secure more percentage than that of less media used students. ICT impact on academic achievement of Govt. School students.
- f. There is significant difference between the academic achievements of private School students used more and less ICT. The more ICT used private School students secure more percentage than that of less media used students. ICT impact on academic achievement of private School students.
- g. There is significant difference in academic achievement of School students used more and less ICT. The more ICT used students secure more percentage than that of less media used students. From this we can conclude that ICT impact on academic achievement of School students.

10. Educational Implications:

There is no significant difference in the academic achievement of boys and girls; there is a slight difference in the mean value of academic achievement of girls. They are having a little higher mean value. Hence Parents and teachers have to understand need and interests and provide conducive environment for children specially girls in enhancing their academic achievement.

The academic achievement of students studying in government, private aided and private unaided Schools there was a difference, but the students studying in private unaided Schools have higher mean value than the students studying in private aided Schools. Hence the private aided School managements should give attention, and must provide favorable environment to the student to reach their accomplishment through enhancing the academic achievement.

The student from low and high level of ICT shows a mean difference in their academic achievements. Students with low ICT level have less mean value when compared to the students from high level ICT. So there is a need for students from low level ICT to have conducive ICT for their high academic achievement. Parents and other family members are accepted to provide favorable impact of ICT for their children to have high academic achievement. It depends on the type of interaction they have with their children.

In conclusion the academic achievement of all the School students studying in different of types of management with different ICT level depends upon the role played by the School management and impact of ICT in shaping the personality of the students as it determines the level of academic achievement.

Many psychologists are the opinion that the family environment, parent performances, behavioral and child varying practices are closely related to a number of factors such as their socioeconomic status etc. All these factors have a bearing on the academic achievement of the child in the family.

ICT like television, radio, newspaper and motion pictures must be used to educate the pupil to understand the forces of nature as a whole and their participation in the process.

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