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Research Article

Comparison of Interest in Physics at +2 Level as their Medium of Education up to 10th of students of Maharashtra

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Abstract

The present study aims to compare interest in physics at +2 level as their medium of Education up to 10th students of Maharashtra. At +2 level in science, stream physics is the most important subject. It plays major role in different competitive examinations. Physics is compulsory subject for all examinations. There are different examinations at national level i.e. NEET, JEE (mains and advance). At state level, MHT-CET is held for engineering, agriculture and pharmacy admissions. For students at this stage they feel that physics is challenging subject. To achieve the success in competitive examinations students must obtain good score in physics. Our main aim is to increase the interest of students in physics.

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1. Introduction

At higher secondary level i.e. +2 level the age group of students is very sensitive. They have number of attractions in this age group. Due to that, they not concentrate on their study. As compared to other subjects, i.e. chemistry, mathematics, biology they feels physics is difficult subject. In physics, there are some concepts from chemistry, electronics, mathematics and geography. Students must know the basic things from other subject and they have to utilize the knowledge of other subjects for understanding physics. To measure the interest in Physics researcher developed an interest inventory for Physics, and used it to determine interest.

2. Objectives of the Study

For the present study, following are the objectives of study;

1. To compare the interest of students in Physics as per their medium of education up to 10th of schools.
2. To compare the interest of students in Physics as per their medium of education up to 10th and their Parents income/financial condition.

Sample: For current study researcher selected population from three Tahsils (Wai, Khandala & Koregaon) from Satara disrtrict by random sampling method. From these three Tahsils he visited 11 junior colleges. The XIIth Std. Science students from these colleges were selected randomly.

Taluka	Sr. No.	Name of Jr. College	Number of students	Total Number of students
Wai	1	Kisan Veer Jr. College, Wai	451	545
	2	Kanya shala & Jr. College, Wai	08	
	3	K.B.P. Jr. College, Wai	71	
	4	Mahatma Gandhi Jr. College, Panchwad	11	
	5	Swarajya public school Jr. college, Bhuinj	04	
Khandala	6	Dnyansawardhini Jr. College, Shirval	47	121
	7	Rameshwar Vidyalaya & Jr. College, Wing	12	
	8	Rajendra Jr. College, Khandala	62	
Koregaon	9	M.K. Mane Jr. College, Deur	49	119
	10	V.D.P. Jr. College, Rahimatpur	32	
	11	B.V.M. Jr. College, Wagholi	38	
Total			785	785

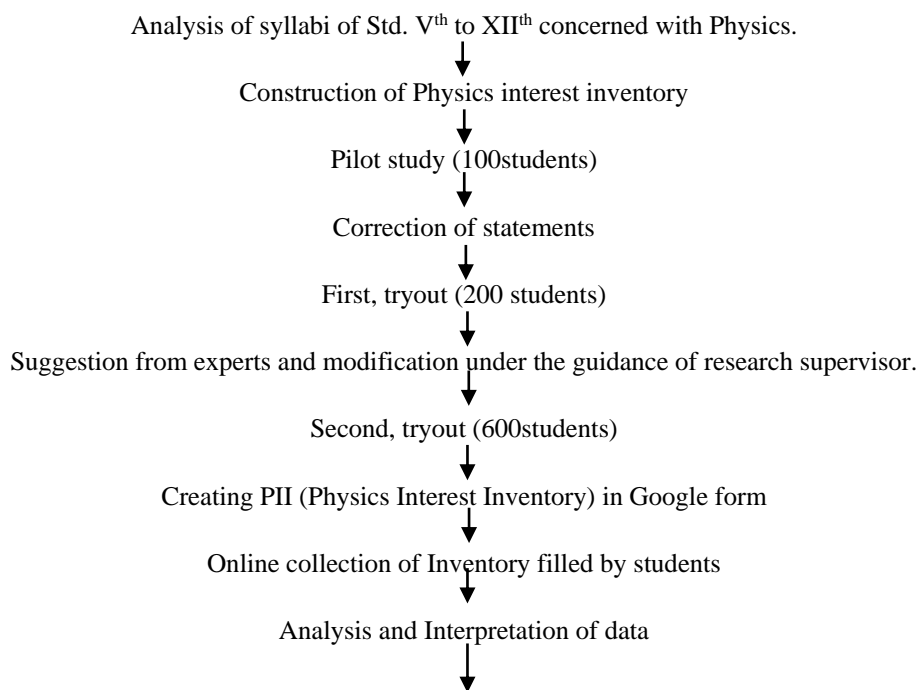
Table 1: Number of students

Out of these total 785 students 635 students are from rural background and 150 students are from urban background .The number of male and female students is 350 and 435 respectively. From the students total 147 English medium, 205 Marathi medium , 431 Semi-English and 2 Urdu medium have their Medium of study up to 10th level. As per financial

condition is concerned the annual income of parents is as below. Rs. 0 – 1,00,000 , 683 students, Rs. 1,00,001 -2,50,000 , 49 students , Rs. 2,50,001 – 8,00,000, 39 students and above Rs. 8,00,000, 14 students. 388 students have their 10th percentage 80 and below 80% and 397 students have their 10th percentage above 80 %.

3. Data collection procedure

For measuring the interest in Physics researcher adopted the following procedure.



As per above flow chart initially researcher studied all syllabus from std Vth to XIIth related with physics. Researcher himself is working in Kisan Veer Jr. College, Wai at +2 level as an assistant teacher in physics. Then he constructed Physics Interest Inventory (PII) containing 145 statements. The option for the statements are Like (L), Indifferent (I) and Dislike (D). Then he conducted pilot study of PII on 100 students. After discussion with experts & students researcher made some corrections. Then he conducted the first try out on 200 students from Shirval, Tal- Khandala & Wai, and Tal- Wai of Satara district. He analysed the result and by taking opinion of students, teachers and experts, he modified the interest inventory. Then he developed the Google form of it. Then from three Tahsils namely Wai, Khandala and Koregaon of Satara

district he conducted the survey in 11 Junior colleges. Total 785 students participated. Then in analysis, he allotted 1 mark for Like (L), 0 mark for Indifferent (I) and -1 mark for Dislike (D). After that, he calculated the physics interest scores of all students by using Microsoft Excel. Then for analysis of data by using Microsoft Excel researcher compared the scores- of all Rural & Urban students by considering following norms.

- i) As per their medium of education up to 10th.
- ii) Financial condition of the parents.

4. Analysis of data

Researcher used average scores of students with above attributes. In addition to that He prepared Graphs i.e. Pie diagram, Bar Graphs & Histograms.

Taluka	Sr. No.	Name of Jr. College	Number of Students from medium				Average Score of students from medium			
			Eng	Mar.	Semi	Urdu	Eng	Mar	Semi	Urdu
Wai	1	Kisan Veer Jr. College, Wai	104	130	215	2	74.52	75.99	76.12	67.5
	2	Kanya shala & Jr. College, Wai	-	2	6	-	-	25.5	122	-
	3	K.B.P. Jr. College, Wai	14	11	46	-	63.14	62.18	70.83	-
	4	Mahatma Gandhi Jr. College, Panchwad	-	3	8	-	-	122.6	66.25	-
	5	Swarajya public school Jr. college, Bhuinj	-	1	3	-	-	19	88.67	-
Khandala	7	Dnyansawardhini Jr. College, Shirval	9	5	33	-	83.67	82.2	86.12	-
	8	Rameshwar Vidyalaya & Jr. College, Wing	1	3	8	-	145	62	78.13	-
	9	Rajendra Jr. College, Khandala	9	11	42	-	58.33	94.91	75.81	-
Koregaon	10	M.K. Mane Jr. College, Deur	6	19	24	-	58.5	75.63	102.8	-
	11	V.D.P. Jr. College, Rahimatpur	1	15	16	-	97	67.53	91.56	-
	12	B.V.M. Jr. College, Wagholi	3	5	30	-	71.67	62.8	82.4	-
Total			147	205	431	2	72.93	75.15	79.37	67.5

Table 2: No. of Rural and Urban students & Avg. score of Interest in Physics for Rural and Urban Students as per their schools

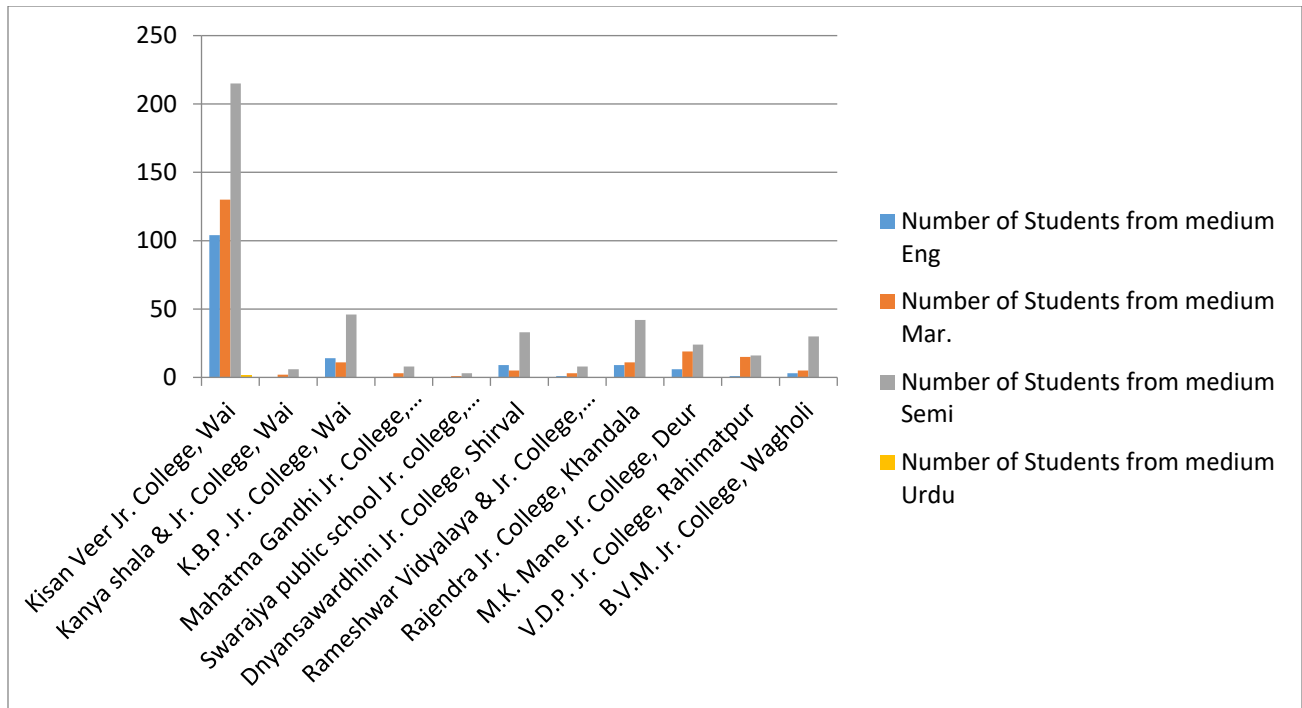


Fig 1: Number of students from various Jr. Colleges

By observing or calculating the averages, he observed following scores;

-	English	Marathi	Semi-Eng.	Urdu	Total
No. of students	147	205	431	2	785
Average Score	72.93	75.15	79.37	67.50	-

Table 3: The average scores of students as per their medium of education up to 10th are as below.

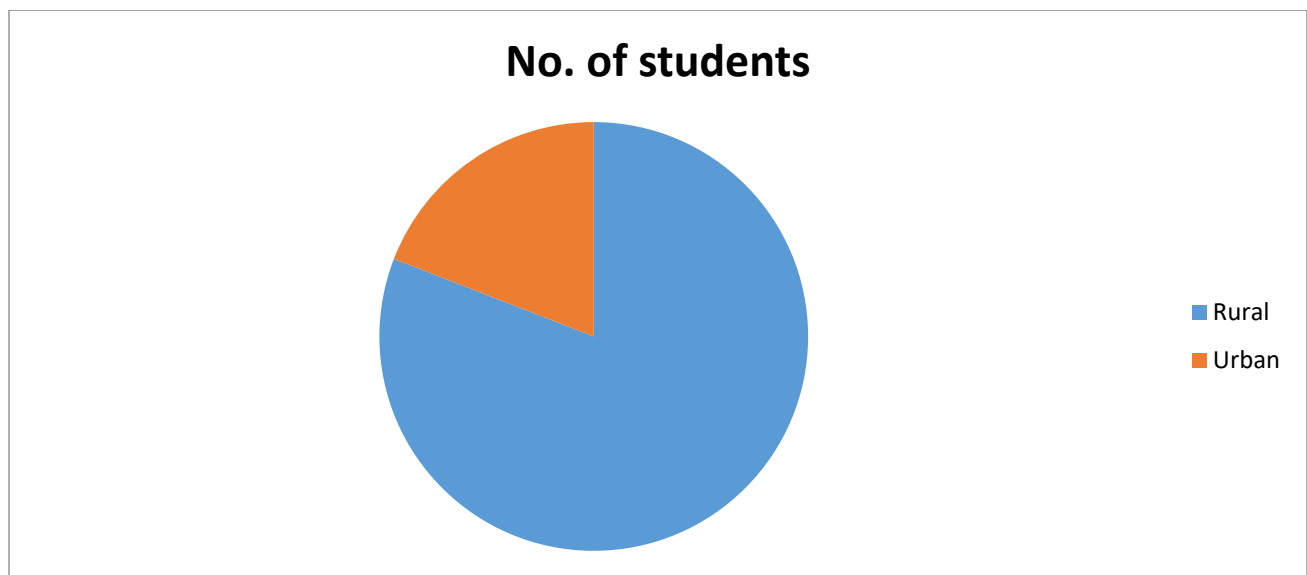


Fig 2: Number of students from Rural and Urban Area

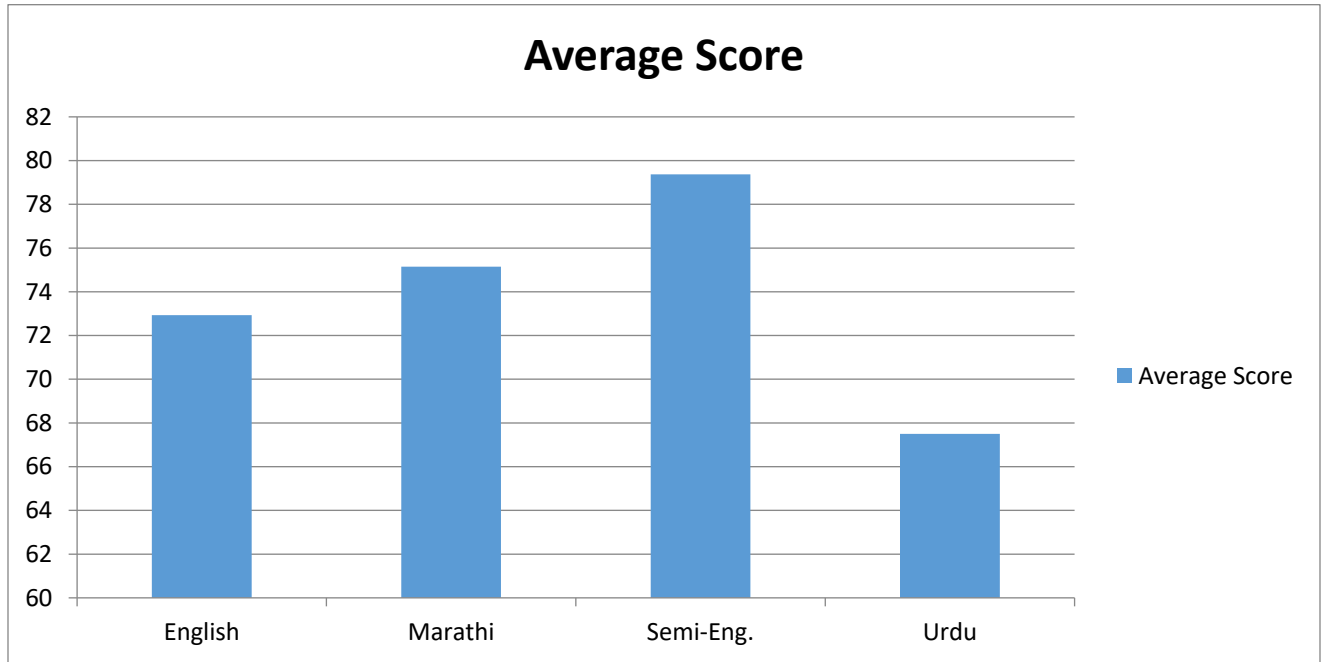


Fig 3: Graph showing Average score of students.

Sr. No.	Financial condition of Parents	Number of Students from medium				Average Score of students from medium			
		Eng.	Mar.	Semi	Urdu	Eng.	Mar.	Semi	Urdu
1	0 – 1 Lakhs	104	195	382	2	69.17	76.10	80.18	67.50
2	1 – 2.5 Lakhs	18	7	24	-	77.56	59.86	86.42	-
3	2.5 – 8 Lakhs	18	1	20	-	90.78	60.00	55.70	-
4	Above 8 Lakhs	7	2	5	-	70.86	43.50	78.20	-
Total		147	205	431	2	72.93	375.15	79.30	67.50

Table 4: No of Rural and Urban students & Avg. score of Interest in Physics for Rural and Urban Students as per their parent’s income level

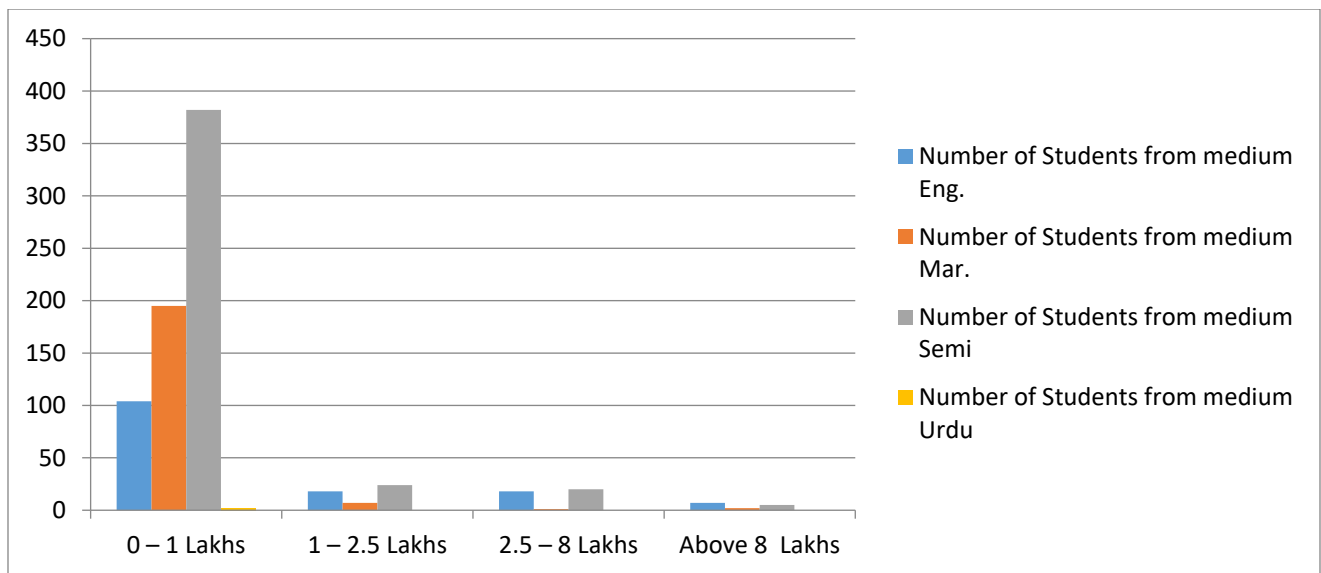


Fig 4: Number of students from medium of education up to 10th

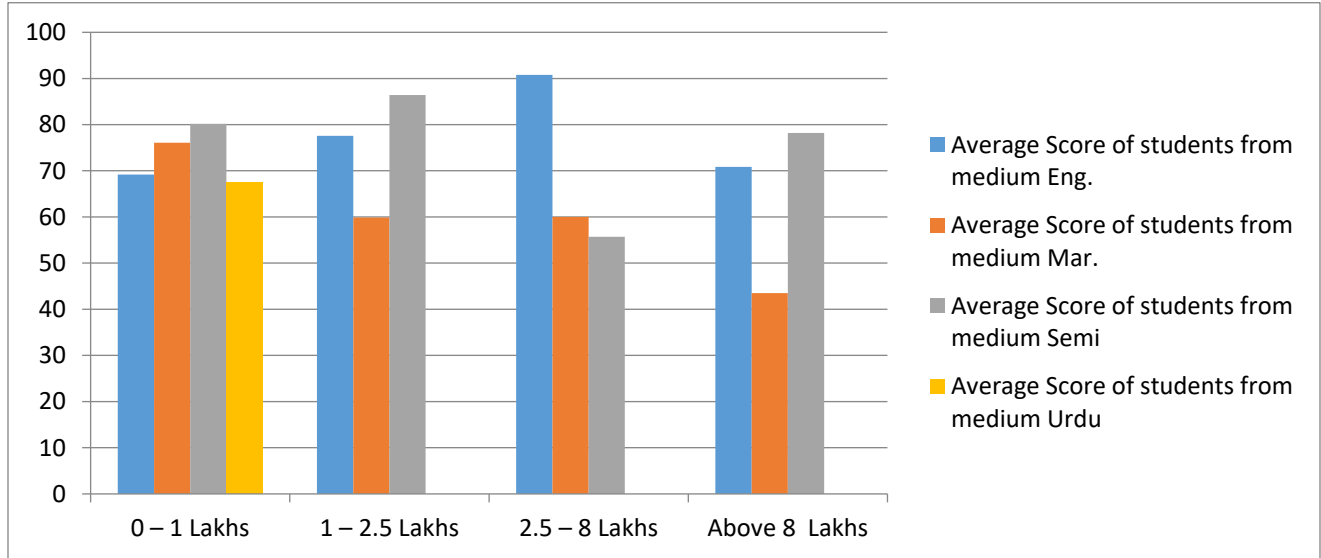


Fig 5: Graph showing average score of the students from various income groups with medium of education up to 10th.

-	0-1 Lakhs	1-2.5 Lakhs	2.5 – 8 Lakhs	Above 8 Lakhs	Total
No. of students	683	49	39	14	785
Average Score	77.30	79.37	72.00	69.57	-

Table 5: The average scores for students considering the income level of parents
*i.e. 0 – 1 Lakh, 1 – 2.5 Lakh, 2.5 – 8 Lakh & above 8 Lakh

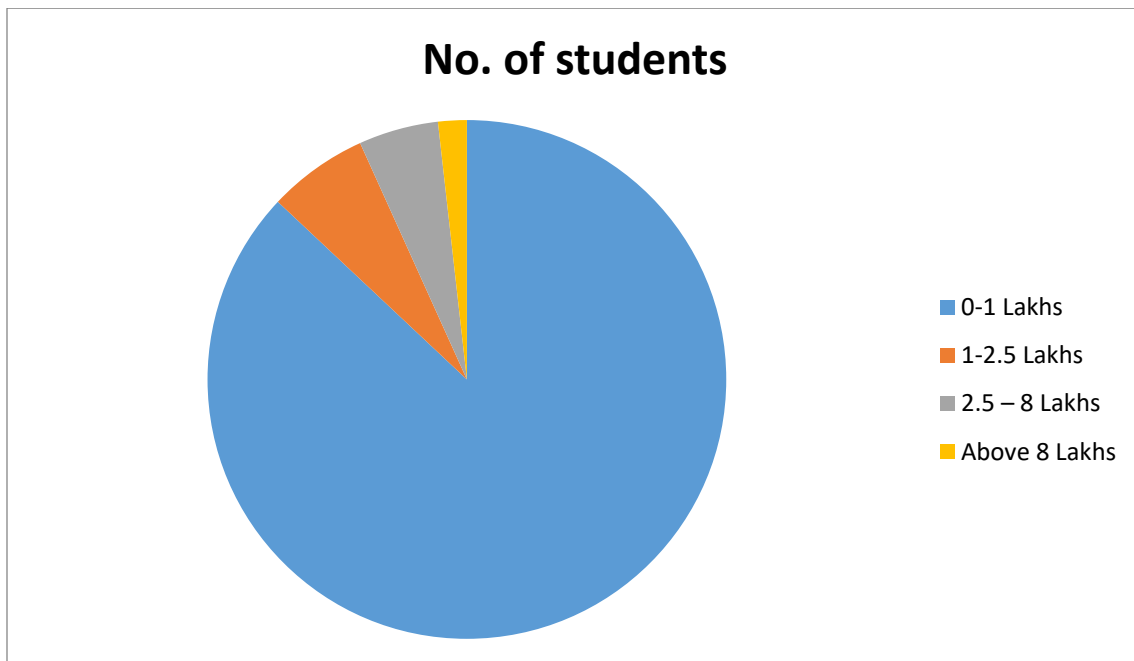


Fig 6: Number of students from various income groups.

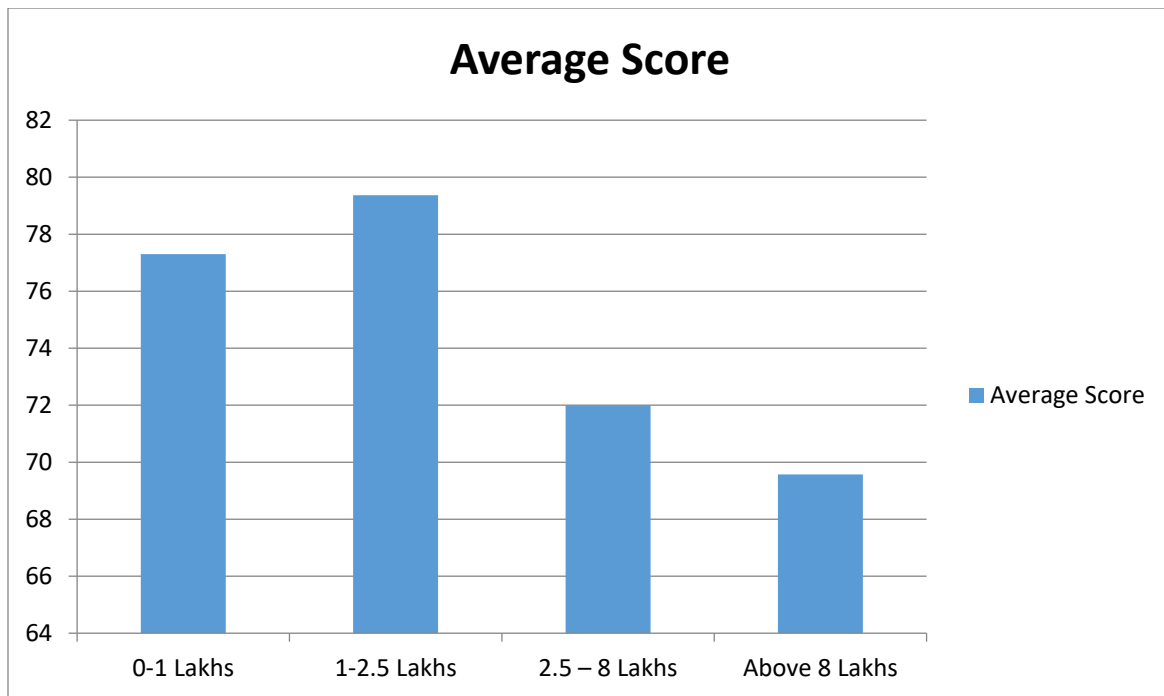


Fig 7: Graph showing average score of the students from various income groups.

5. Conclusions

- i) The Semi-English Medium students (Avg. 79.37) have more interest in Physics as compared to other students i.e. English, Marathi and Urdu Medium Students
- ii) The Marathi Medium students (Avg. 75.15) have interest in between Semi-English (Avg. 79.37) And English (Avg. 72.93) in Physics .
- iii) The Urdu Medium students (Avg. 67.50) have Low interest in physics as compared to other students i.e. English, Marathi and Semi-English Medium Students.
- iv) The Students whose parent income in-between 1 – 2.5 Lakh have more interest (Avg. 79.37) in physics as compared to others.
- v) The Students whose parent income above 8 Lakh have less interest (Avg. 69.57) in physics as compared to others.

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