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COMPARISON OF INTEREST IN PHYSICS AT +2 LEVEL IN RURAL AND URBAN STUDENTS OF MAHARASHTRA

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Abstract

The present study aims to compare interest in physics at +2 level in Rural and Urban 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.

Keywords: *Interest, Physics, Rural and Urban students*

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.

Objectives of the Study

For the present study following are the objectives of study.

1) To compare the interest of Rural and Urban students in Physics as per their schools.
2) To compare the interest of Rural and Urban students in Physics as per their Parents income/ financial condition.

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

Table No. 1 (Number of Students)

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**

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 upto 10 th 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 10 th percentage 80 and below 80 % and 397 students have their 10 th percentage above 80 %.

Data Collection Procedure

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

Analysis of syllabi of Std. V to XII concerned with Physics.

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Construction of Physics interest inventory

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Pilot study (100 students)

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Correction of statements

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First Try out (200 students)

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Suggestion from experts and modification under the guidance of research supervisor.

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Second Try out (600 students)

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Creating PII(Physics Interest Inventory) in Google form

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Online collection of Inventory filled by students

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Analysis and Interpretation of data

↓

Conclusions

As per above flow chart initially researcher studied all syllabus from std V th to XII th 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, 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.

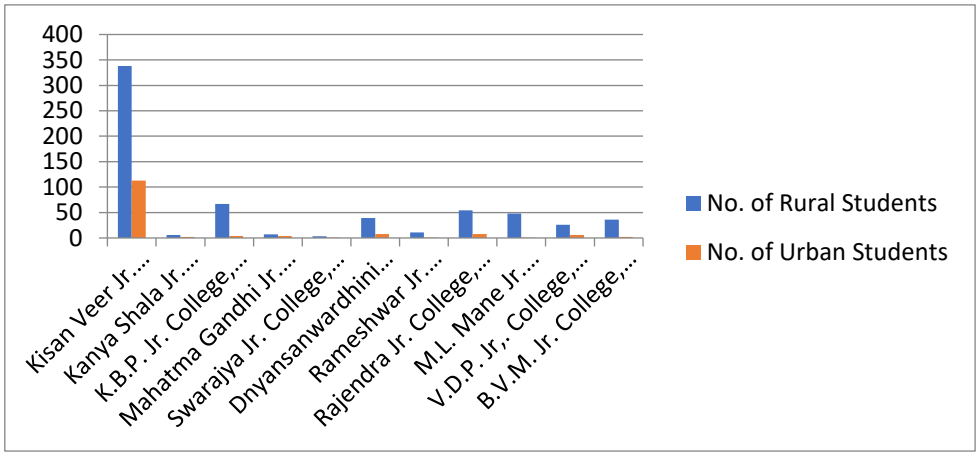
i) Schools of the students
ii) Financial condition of the parents.

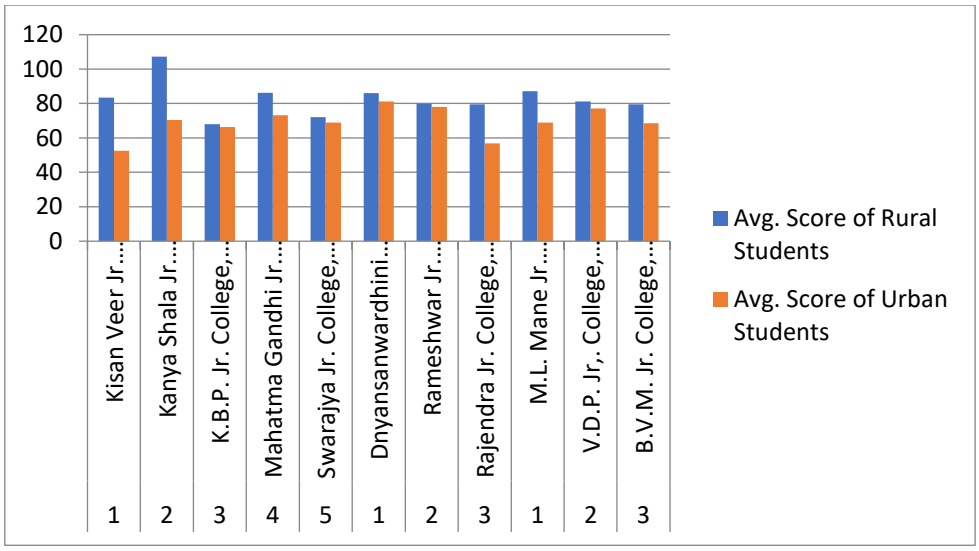
Analysis of Data

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

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

Taluka	Sr.No.	Name of Jr. College	No. of Rural Students	No. of Urban Students	Avg.Score of Rural Students	Avg.Score of Urban Students
Wai	1	Kisan Veer Jr. College, Wai	338	113	83.39	52.59
	2	Kanya shala & Jr. College, Wai	6	2	107.33	70.50
	3	K.B.P. Jr. College, Wai	67	4	68.07	66.25
	4	Mahatma Gandhi Jr. College, Panchwad	7	4	86.14	73.25
	5	Swarajya public school Jr. college, Bhuinj	3	1	72.00	69.00
Khandala	7	Dnyansawardhini Jr. College, Shirval	39	8	86.05	81.25
	8	Rameshwar Vidyalaya & Jr. College, Wing	11	1	79.82	78.00
	9	Rajendra Jr. College, Khandala	54	08	79.61	56.75
Koregaon	10	M.K. Mane Jr. College, Deur	48	01	87.23	69.00
	11	V.D.P. Jr. College, Rahimatpur	26	6	81.23	77.17
	12	B.V.M. Jr. College, Wagholi	36	2	79.56	68.50
Total			**302**	**356**	**81.74**	**57.09**

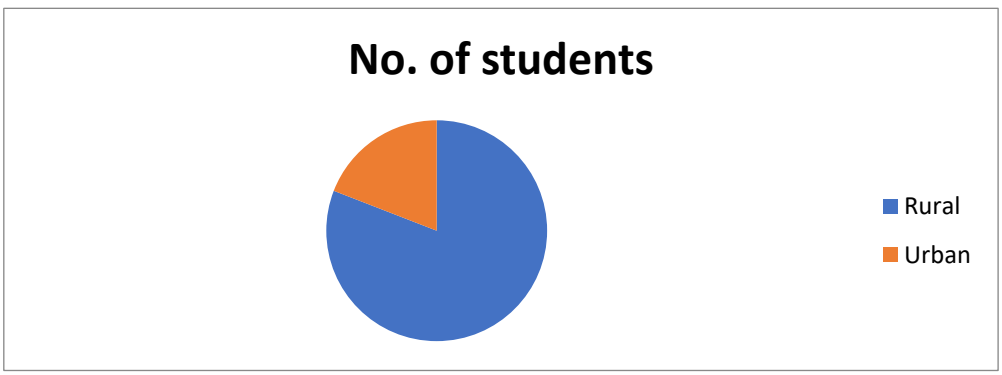




By observing or calculating the averages he observed following scores.

Table No. 3
The average scores of Rural and Urban students are as below.

-	Rural	Urban	Total
No. of students	635	150	785
Average Score	81.74	57.09	-



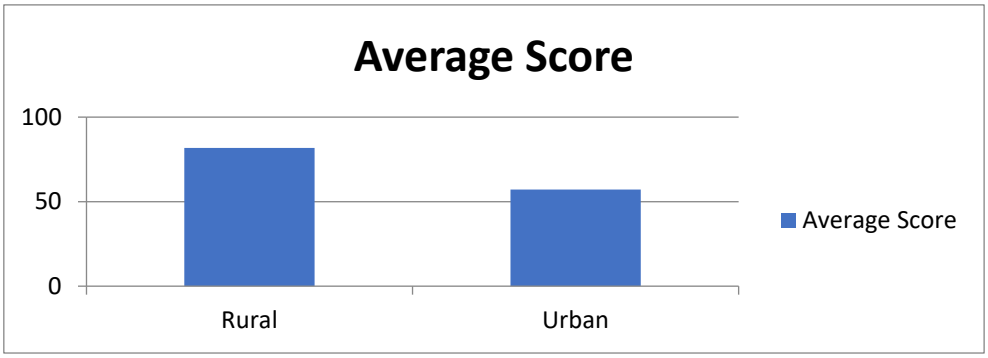
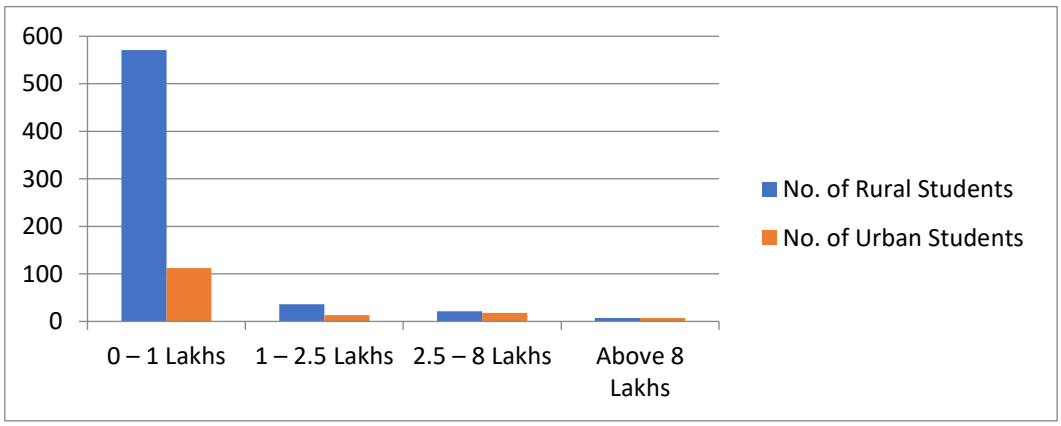


Table No. 4
(Table showing No of Rural and Urban students & Avg. score of Interest in Physics for Rural and Urban Students as per their parents income level)

Sr.No.	Financial condition of Parents	No. of Rural Students	No. of Urban Students	Avg.Score of Rural Students	Avg.Score of Urban Students
1	0 – 1 Lakhs	571	112	81.49	55.97
2	1 – 2.5 Lakhs	36	13	88.75	53.38
3	2.5 – 8 Lakhs	21	18	80.29	62.33
4	Above 8 Lakhs	7	7	70.71	68.43
Total		**635**	**150**	**81.74**	**57.09**



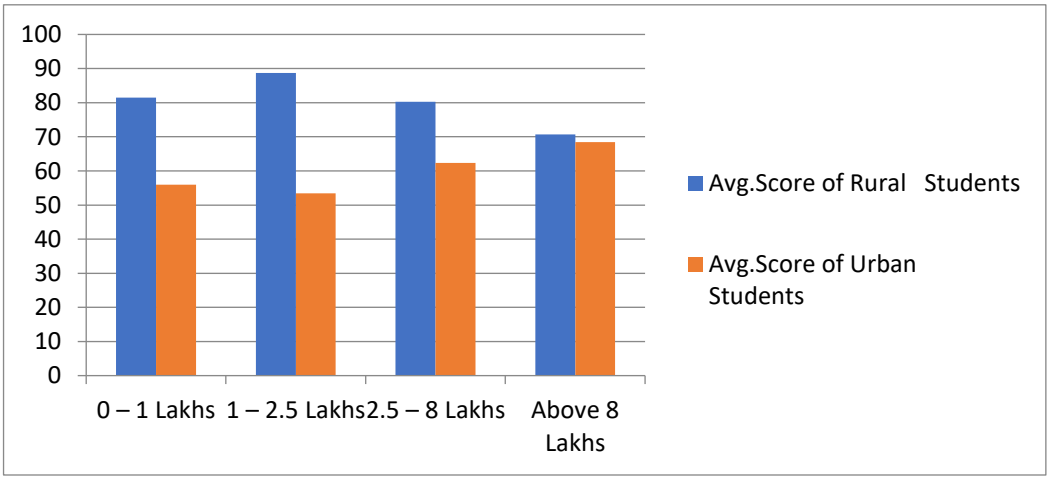
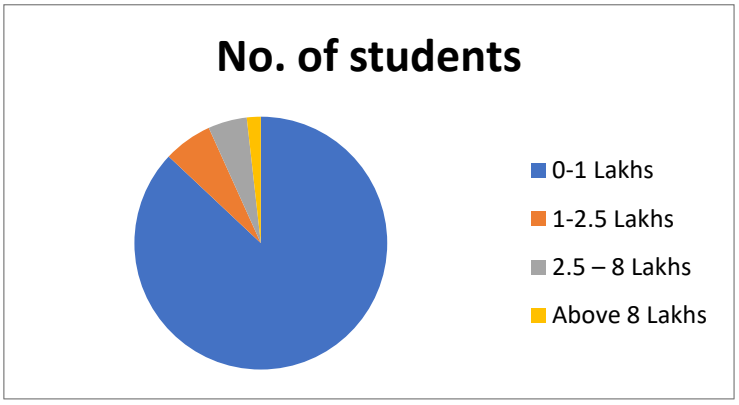
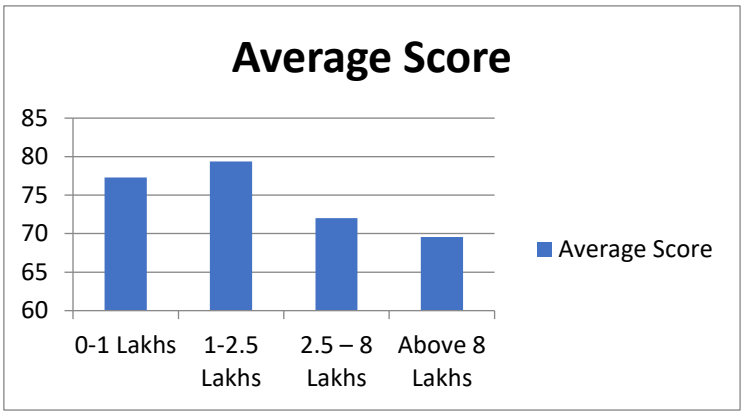


Table No. 5
(Table showing the average scores for students considering the income level of parents i.e. 0 – 1 Lakh, 1 – 2.5 Lakh, 2.5 – 8 Lakh & above 8 Lakh .)

-	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	-





Conclusions

- The Rural students (Avg. 81.74) have more interest in Physics as compared to Urban students (Avg 57.09).
- The students whose parents income is in between 1 Lakh to 2.5 Lakh (Avg.79.37) have more interest in physics.
- The students whose parents income is above 8 Lakh (Avg.69.57) have less interest in physics.

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