

Comparative Study

Comparison of Interest in Physics of Male and Female Students

A. Jadhav^{1*}, V. Nalawade²

ABSTRACT

The present study aims to compare interest in physics of Male and Female Students. Physics is an important subject in science. It has vital importance in all fields. In Maharashtra State at +2 level in science Physics is compulsory subject for board examination and also for all types of CET examinations. Students feel this subject difficult one. In the examinations at state level that is MHT-CET and also in examinations at national level i.e., JEE, JEE-advance, NEET, etc. Physics is compulsory subject. If we increase the interest of students in Physics then it is possible for students to face all the examinations confidently and achieve the success in it.

Keywords: *Interest, Physics, Male and Female Students*

At higher secondary level or at +2 level the age group of students is between 15-18 years. This is very sensitive age group. These students face difficulties concentrating on their study because of hormonal changes. In science stream as compared with Chemistry, Biology, Mathematics & other subjects Physics is harder subject. Many students get failure in this subject. In Physics Mathematics plays important role in solving numerical & also experimental calculations. For understanding the basic principles of Physics, Mathematics is needed. For Physics students needs to understand some simple and basic things or concepts, utilize the knowledge of Physics, to do some necessary calculations in mind, to imagine some ideas, etc.

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.

- To compare the interest of male and female students in Physics as per their schools.
- To compare the interest of male and female students in Physics as per their Parents income.

Sample

For the current study researcher selected population from three Tahsils (Wai, Khandala & Koregaon) from Satara district by random sampling method. From these three Tahsils he

¹Ph.d. Student at Azad College of Education through Shivaji University Kolhapur

²Ph.d. Student at Azad College of Education through Shivaji University Kolhapur

*Corresponding Author

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used 12 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	332	415
	2	Kanya shala & Jr. College, Wai	03	
	3	K.B.P. Jr. College, Wai	70	
	4	Mahatma Gandhi Jr. College, Panchwad	07	
	5	Swarajya public school Jr. college, Bhujinj	01	
	6	TLJV Jr. College, Wai	02	
Khandala	7	Dnyansawardhini Jr. College, Shirval	48	124
	8	Rameshwar Vidyalaya & Jr. College, Wing	12	
	9	Rajendra Jr. College, Khandala	64	
Koregaon	10	M.K. Mane Jr. College, Deur	48	119
	11	V.D.P. Jr. College, Rahimatpur	32	
	12	B.V.M. Jr. College, Wagholi	39	
Total			658	658

Out of these total 658 students 546 students are from rural background and 112 students are from urban background. The number of male and female students is 356 and 302 respectively. From the students total 122 English medium, 167 Marathi medium, 368 Semi-English and 1 Urdu medium have their medium of study upto 10th level. As per financial condition is concerned the annual income of parents is as below. Rs 0 – 1,00,000, 573 students, Rs 1,00,001 -2,50,000, 39 students, Rs 2,50,001 – 8,00,000, 34 students and above Rs 8,00,000, 12 students. Also 327 students have their 10th percentage 80 and below 80 % and 331 students have their 10th 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.

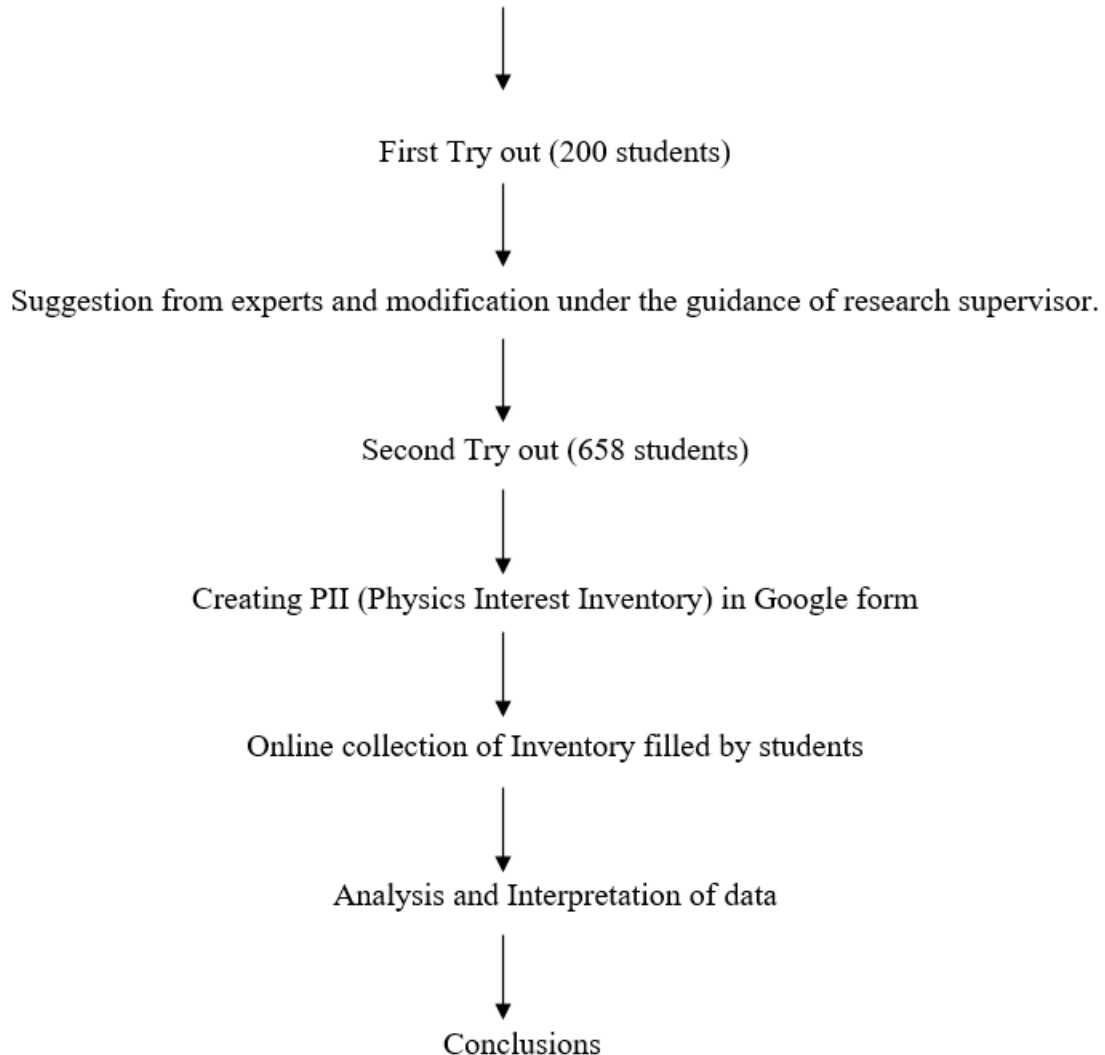
Analysis of syllabi of Std. V to XII concerned with Physics.

Construction of Physics interest inventory

Pilot study (100 students)

Correction of statements

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As per above flow chart initially researcher studied all syllabus from std Vth to XIIth concerned 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, Khandal and Koregaon of Satara district he conducted the survey in 12 Junior colleges. Total 658 students are 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 Male & Female students by considering following norms.

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

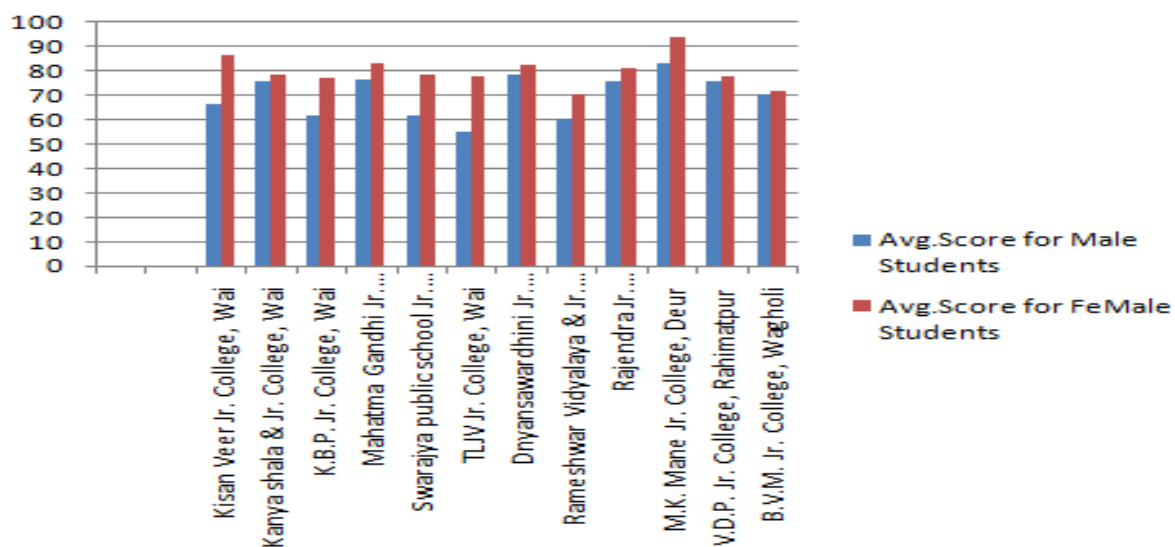
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Analysis of data

Researcher used average scores of students with above attributes. Also, he prepared Graphs i.e., Pie diagram, Bar Graphs & Histograms.

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

Taluka	Sr.No.	Name of Jr. College	No. of Male Students	No. of Female Students	Avg.Score of Male Students	Avg.Score of Female Students
Wai	1	Kisan Veer Jr. College, Wai	54	178	66.69	86.38
	2	Kanya shala & Jr. College, Wai	1	2	76.11	78.29
	3	K.B.P. Jr. College, Wai	28	42	61.82	77.31
	4	Mahatma Gandhi Jr. College, Panchwad	1	6	76.33	83.18
	5	Swarajya public school Jr. college, Bhuinj	1	1	61.82	78.56
	6	TLJV Jr. College, Wai	1	1	55.00	78.12
Khandala	7	Dnyansawardhini Jr. College, Shirval	18	33	78.29	82.71
	8	Rameshwar Vidyalaya & Jr. College, Wing	6	6	60.67	70.64
	9	Rajendra Jr. College, Khandala	42	22	76.05	80.98
Koregaon	10	M.K. Mane Jr. College, Deur	24	20	83.18	93.90
	11	V.D.P. Jr. College, Rahimatpur	9	23	76.11	77.64
	12	B.V.M. Jr. College, Wagholi	17	22	70.64	71.89
Total			302	356	70.23	79.97



By observing or calculating the averages he observed following scores.

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Table No. 3 The average scores of Male and Female students are as below.

-	Male	Female	Total
No. of students	306	358	658
Average Score	70.23	79.97	-

Table No. 4 (Table showing No of Male and Female students & Avg. score of Interest in Physics for Male and Female Students as per their schools)

Sr.No.	Financial condition of Parents	No. of Male Students	No. of Female Students	Avg.Score of Male Students	Avg.Score of Female Students
1	0 – 1 Lakhs	257	316	72.76	83.20
2	1 – 2.5 Lakhs	16	23	80.56	76.04
3	2.5 – 8 Lakhs	18	16	72.28	91.00
4	Above 8 Lakhs	11	1	70.00	90.00
Total		302	356	73.04	83.10

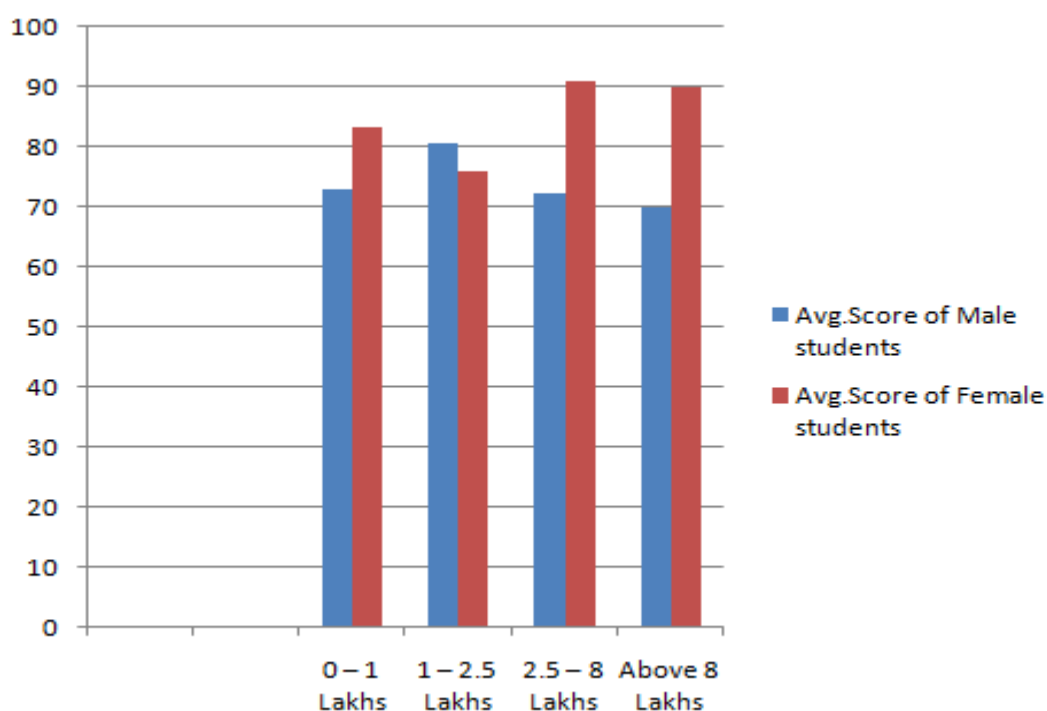


Table No. 5 (Table showing the average scores for students considering the income level of parents

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	573	39	34	12	658
Average Score	78.52	77.89	81.09	71.66	-

CONCLUSIONS

- The female students (Avg. 79.97) have more interest in Physics as compared to male students (Avg 70.23).
- The students whose parents income is in between 2.5 Lakh to 8 Lakh (Avg.81.09) have more interest in physics.
- The students whose parents income is above 8 Lakh (Avg.71.66) have less interest in physics.

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Conflict of Interest

The author(s) declared no conflict of interest.

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