

# Teachers Attitudes towards the Use of General Graphic Aids in Teaching of Mathematics: The Influence of Gender in Secondary Schools of Narsipatnam Mandal of Visakhapatnam District

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**Abstract:** The aim of the present study is to determine the teacher's attitudes towards the Use of General Graphic Aids in Teaching of Mathematics: The Influence of Gender in Secondary Schools of Narsipatnam Mandal of Visakhapatnam District. A total of 100 prospective secondary school teachers were examined in order to investigate the effect of gender on the Use of General Graphic Aids in Teaching of Mathematics. In the study, the questionnaire "Teaching Mathematics" was used to collect the data from prospective teachers. There is no significant difference between male and female teachers with respect to General Graphic Aids towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District.

**Keywords:** Teaching Aids, Secondary Schools, Teachers attitudes.

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## Introduction

Recently policy makers, playing a very significant role in the educational systems; governments and education organizations, have begun to show a growing interest in teacher qualifications in order to improve school quality and student outcomes (OECD, 2016). The most crucial indicator of teacher quality is the pedagogical knowledge of teachers (Guerriero, 2014).

However, it is necessary not only to consider the teachers' pedagogical content knowledge but it has also been accepted that the teachers' attitudes are important determinant for the teacher qualification (McLeod, 1992). Rashmi Sharma and Naresh Chandra Srivastava (2015) studied Attitude of Higher Secondary Schools' Teachers. In this study, researcher has undertaken survey of male and female teachers of higher secondary schools in Raebareli district of Uttar Pradesh.

Bulut and Dogar (2006) investigated that the gender factor is not effective on the attitude and types of program and class level are effective. Osunde and Izevbigie (2006) examined the 400 Nigerian post primary school teachers' attitude towards teaching profession and found that because of inadequate financial remuneration and delay in payment teachers have low attitude towards the teaching profession. They also found that poor conditions of service, wider negative influence and teachers' negative personal and professional behavior are the other factors of the teachers' low attitudes towards teaching profession.

Hussain *et al.*, (2011) studied attitude of secondary school teachers towards teaching profession. An Attitude Scale towards Teaching Profession (ASTTP) developed by Hussain (2004), having sixty-six items and four components was administered to the respondents to determine the subjects' attitude towards teaching profession.

## Method

### Study Design

The present study is a quantitative study conducted using the survey method. Survey design enables the quantitative or numerical description of tendencies, attitudes or views in a population by studying a sample selected within the population (Creswell, 2014).

### Objective of the Study

To know the attitudes of male and female teachers towards the use of Teaching Aids in teaching of mathematics

### Hypothesis

There is no significant difference between male and female teacher's attitudes towards the use of Teaching Aids in teaching of mathematics.

## Results and Discussion

**Table 1. Significant difference between male and female teacher's attitudes with respect to General Graphic Aids towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District**

Area	Gender	N	Mean	Std. Dev.	t-value	p-value
General Graphic Aids	Male	50	42.1	4.96	2.32*	0.02
	Female	50	44.4	3.83		

Table 1 showing the mean scores of female teachers with respect to General Graphic Aids (44.40) is slightly higher than the mean score of male teachers (42.10). The 't'-value is found to be 2.32 and the p-value is 0.02 which is significant at 0.05 level.

This shows that there is a significant difference between male and female teachers with respect to General Graphic Aids towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District. Hence, the null hypothesis is rejected.

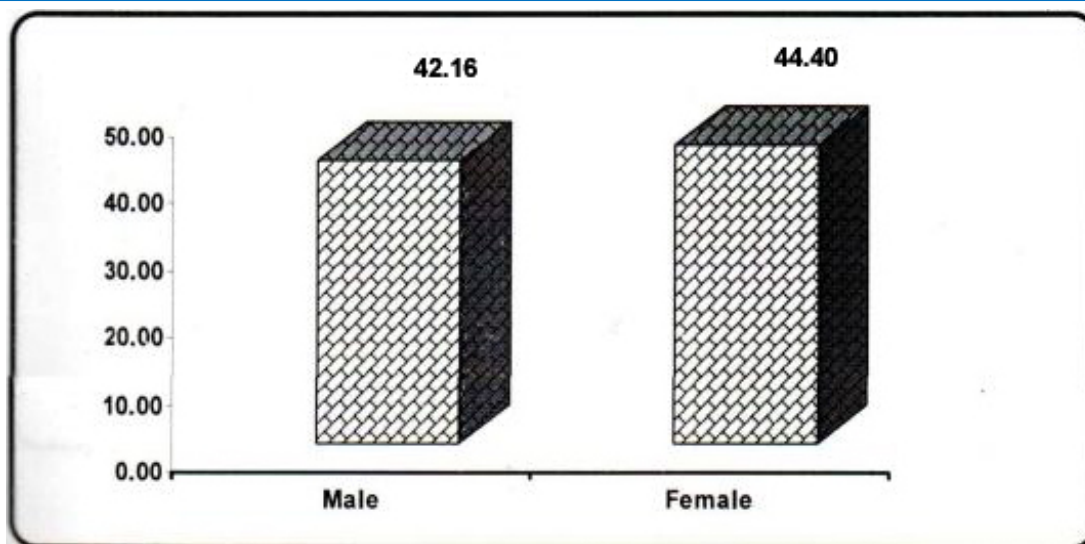


Figure 1. Mean comparison between male and female teachers attitude with respect to General Graphic Aids towards Use of Teaching Aids in Teaching of Mathematics

Table 2. Significant difference between male and female teachers attitude with respect to Charts towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District

Area	Gender	N	Mean	Std. Dev.	t-value	p-value
Charts	Male	50	42.15	3.43	1.81 <sup>ns</sup>	0.07
	Female	50	43.8	4.65		

Table 2 showing the mean scores of female teachers with respect to Charts (43.80) is slightly higher than the mean score of male teachers (42.15). The ‘f-value is found to be 1.81 and the p-value is 0.07 which is not significant. This shows that there is no significant difference between male and female teachers with respect to Charts towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District. Hence, the null hypothesis is accepted.

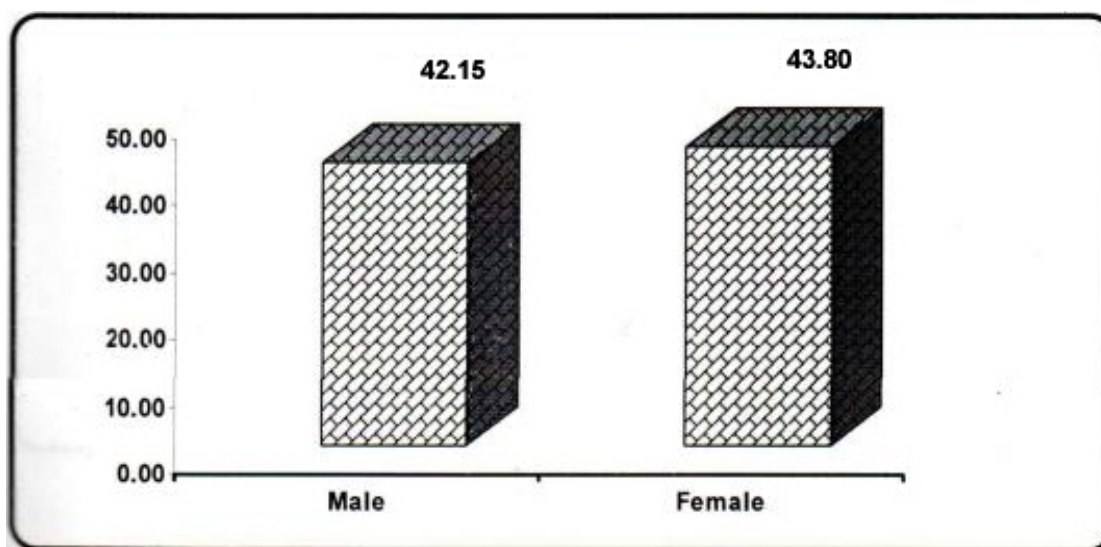
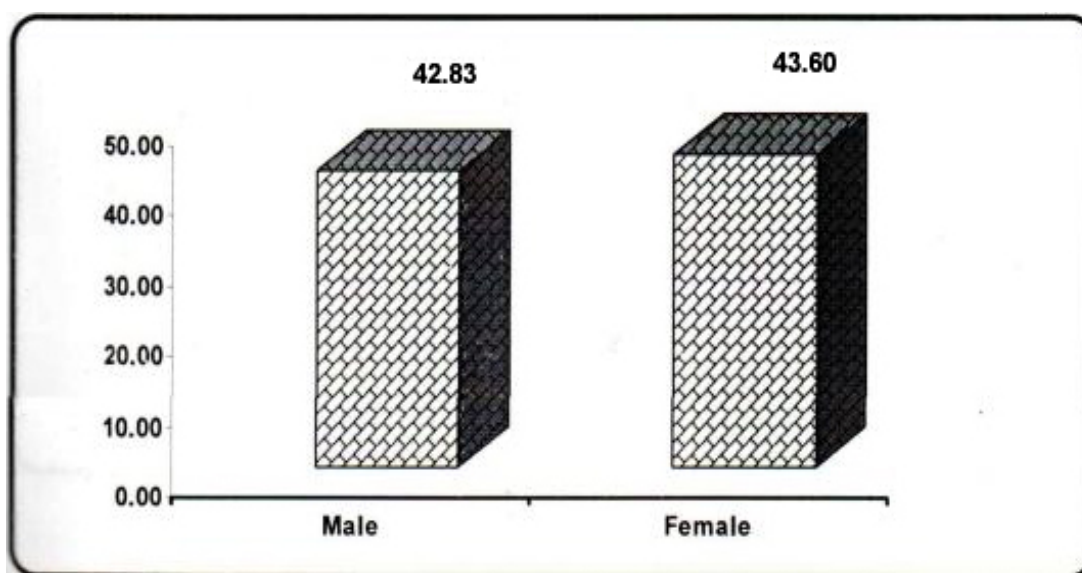


Figure 2. Mean comparison between male and female teachers attitude with respect to Charts towards Use of Teaching Aids in Teaching of Mathematics

**Table 3. Significant difference between male and female teachers attitude with respect to Diagrams towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District**

Area	Gender	N	Mean	Std. Dev.	t-value	p-value
Diagrams	Male	50	42.83	4.06	0.86 <sup>NS</sup>	0.39
	Female	50	43.6	4.02		

Table 3 showing the mean scores of female teachers with respect to Diagrams (43.60) is slightly higher than the mean score of male teachers (42.83). The ‘t’-value is found to be 0.86 and the p-value is 0.39 which is not significant. This shows that there is no significant difference between male and female teachers with respect to Diagrams towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District. Hence, the null hypothesis is accepted.

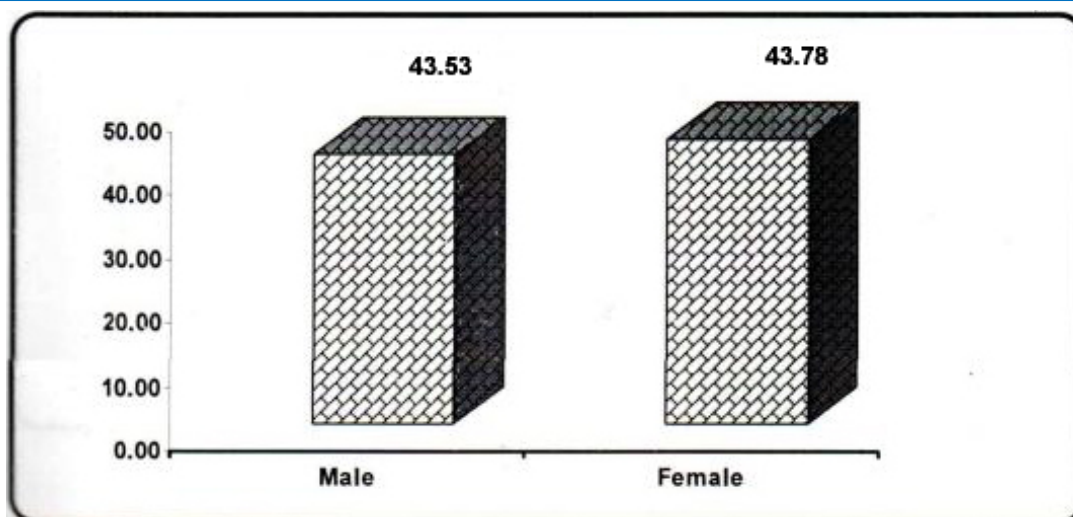


**Figure 3. Mean comparison between male and female teachers attitude with respect to Diagrams towards Use of Teaching Aids in Teaching of Mathematics**

**Table 4. Significant difference between male and female teachers attitude with respect to Pictures and Photographs towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District**

Area	Gender	N	Mean	Std. Dev.	t-value	p-value
Diagrams	Male	50	43.53	3.94	0.27 <sup>NS</sup>	0.79
	Female	50	43.78	4.42		

Table 4 showing the mean scores of female teachers with respect to Pictures and Photographs (43.78) is slightly higher than the mean score of male teachers (43.53). The ‘t’-value is found to be 0.27 and the p-value is 0.79 which is not significant. This shows that there is no significant difference between male and female teachers with respect to Pictures and Photographs towards Use of Teaching Aids in Teaching of Mathematics in secondary schools of Narsipatnam Mandal of Visakhapatnam District. Hence, the null hypothesis is accepted.



**Figure 4. Mean comparison between male and female teachers attitude with respect to Pictures and Photographs towards Use of Teaching Aids in Teaching of Mathematics**

### Conclusions

The study reveals that there exists a positive attitude of teachers towards use of teaching aids. Teachers are always getting the added advantage of these visual aids in their classrooms along with their instruction, readings and writings by the teachers and students. All subject teachers are equally interested towards using them in the classroom as they enhance the comprehensibility of the lesson to a greater extent. Female teachers are showing higher attitude towards all these teaching aids under study than their male counterparts. This is indeed a natural phenomenon that their female teachers have natural ability presenting the things artistically which is seen in these visual aids in the form of graphics, charts, diagrams, photos and pictures.

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