

# Science Teacher Attitudes Towards Inclusive Education in Malang City: A Cross-Sectional Analysis with their Gender

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## ABSTRACT

In measuring teacher attitudes towards inclusive education, gender is an indicator that is often used. Meanwhile, science subjects or other subjects have never been used as independent variables. So this study aims to measure teachers' attitudes towards inclusive education based on gender and the subjects they teach. The choice of location is due to the fact that Malang City has implemented inclusive education. A total of 163 teachers have been measured using the ITAIE scale. The result is that there is no significant difference in teacher attitudes towards inclusive education based on their gender and material subject. In addition, their attitudes were also not significantly different based on their kind of school, school level, and teacher education. As a follow-up, it is necessary to strengthen teachers' attitudes based on their material subject. The way that can be done is to take measurements in other cities or increase the number of samples.

**Keywords:** *Teacher Attitudes, Inclusive Education, Science Teacher, Gender.*

## 1. INTRODUCTION

Gender is the indicator most often used in research on measuring teacher attitudes towards inclusive education. However, in another study, the strong finding was that there was a significant gender gap. For example, men tend to have higher levels of self-esteem than women [1] - [8]. Meanwhile, the measurement of teacher attitudes towards inclusive education was reported by Thaver and Lim [9] Alharti and Evans [10] Ediyanto et al [11]; there is no difference in attitude between men and women. However, there are differences in the results above, indicating that there is still a debate on the influence of gender in research, so it needs to be strengthened by conducting further research.

In connection with research in Indonesia, several studies measuring teacher attitudes towards inclusive education have been carried out. However, these measurements are still on a relatively large scale. For example, the research that measured teacher attitudes on a regional scale in Indonesia [11] [12] [13]. One study measured 184 teachers in Yogyakarta [11], another one measured 208 teachers in Jakarta [12], and the last one measured the attitudes of 77 teachers

towards inclusive education in East Java province [13]. However, the number of samples used may not be able to describe all regions. Based on this, it is necessary to measure that covers a smaller area, for example, at the district or city level.

Another thing has never been explicitly done on measuring teacher attitudes towards inclusive education with comparisons of certain subjects. The subjects taught by teachers may affect their attitudes towards inclusive education. For example, science or social studies teachers may have a more positive attitude towards inclusive education. So in this study, it is essential to measure teachers' attitudes towards inclusive education based on gender and the subjects they teach. As for the regional selection, the city of Malang was used as the research location.

## 2. METHODS

Survey research is used as a method in this research. The sample of this research is teachers who work in Malang City, East Java Province, Indonesia. The teachers included are teachers who teach in inclusive and extraordinary schools. In total, 163 teachers (shown in table 1) were sampled, and they all completed the

survey well. The measurement of teacher attitudes uses the ITAIE scale [14]. Twenty-two items on the ITAIE scale have been tested properly on the expert assessment and are valid ( $PCA > 0.540$ ) and reliable ( $\alpha = 0.821$ ) in 1705 Indonesian teachers. The data generated from the ITAIE can describe teachers'

attitude scores, which are then analyzed based on their demographic information. Gender and Subject Science are the main components compared using Two Ways Anova. In addition, differences in teachers' attitudes were measured based on their type of school, school level, and last education.

**Table 1.** Descriptive Statistics for the Teacher Demographic Information.

Demographic Information	N	%	M	SD
<i>Gender</i>			1.67	0.470
Male	53	32.5		
Female	110	67.5		
<i>Kind of School</i>			1.53	0.500
Inclusive School	76	46.6		
Special School	87	53.4		
<i>Level of School</i>			1.87	0.810
Elementary School	65	39.9		
Junior High School	54	33.1		
Senior High School	44	27.0		
<i>Level of Education</i>			1.21	0.490
Bachelor's degree	135	91.6		
Master's degree	28	8.4		
<i>Subject</i>			1.74	0.442
Sciences	43	59.4		
Other than sciences	120	27.0		

Note: N = sample size (163 participant), M = mean, SD = standard deviation

### 3. RESULTS

The measurement results using Two Way Anova show that there is no significant difference in teacher attitudes towards inclusive education based on two demographic data simultaneously (Gender (D1) and Subject Material (D6)). The measurement data showed

that in D1 the F value = 0.444 ( $p > 0.05$ ), D6 the F value = 0.457 ( $p > 0.05$ ), and D1\*D6 the F value = 2.592 ( $p > 0.05$ ). Meanwhile, based on Table 2, it is known that there is also no significant difference in teacher attitudes towards inclusive education based on their gender, kind of school, level of the school, level of education, and the subject of study.

**Table 2.** Teachers' Attitudes toward Inclusive Education based on Demographic Information.

Demographic Information	M	SD	F	P
<i>Gender</i>			0.022	0.883
Male	69.17	9.715		
Female	68.95	8.813		
<i>Kind of School</i>			1.893	0.171
Inclusive School	67.97	8.896		
Special School	69.93	9.203		
<i>Level of School</i>			1.595	0.206
Elementary School	69.83	11.550		
Junior High School	67.22	7.049		
Senior High School	70.02	7.722		
<i>Level of Education</i>			0.141	0.709
Bachelor's degree	68.90	9.406		
Master's degree	69.61	7.475		
<i>Subject</i>			0.005	0.941
Sciences	68.93	9.823		
Other than sciences	69.05	8.851		

Note: M = mean, SD = standard deviation, F=Variant score, p=significance

### 4. DISCUSSION

The measurement of teachers' attitudes towards inclusive education, which are not significantly different, indicates that they view inclusive education

as the same. This same view is a positive value for inclusive education. A common view can be used as a benchmark for implementing training and sustainable implementation of inclusive education in schools.

Perhaps, the cause of the similarity of attitudes is because Indonesia has implemented inclusive education for more than 20 years [11]. Another reason could be the government's success in wisely regulating and implementing inclusive education, or even Malang City already has a positive attitude towards inclusive education.

On attitudes based on gender, the results of this study are the same as research conducted in other areas [9] [10] [15]. For example, Alharti and Evans [10] measured attitude at a middle school in Saudi Arabia. Meanwhile, [9] measured teacher attitudes towards people with disabilities and inclusive education in Singapore. In addition, Dapudong [15] conducted a study with similar results in Thailand.

In the attitude of teachers based on the subject material, there is no discussion of research that uses science teachers as subjects. The research results in this science or other than science subject need to be proven by doing repetition. Measurement of the attitude of science teachers towards inclusive education is critical because students with special needs have the same rights in getting a proper education. A good teacher's attitude towards children with special needs will also bring a good learning atmosphere.

## 5. CONCLUSION

This study concludes that there is no difference in teacher attitudes towards inclusive education based on their gender, kind of school, school level, level of education, and subject material. These results will clearly show that the training program or curriculum implementation will not be a problem. However, it is necessary to know whether their attitude is more likely to be positive or negative in future studies. In addition, in the future, it is necessary to measure the attitudes of science teachers or other than science teachers towards inclusive education to strengthen the results of this study.

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