Social Competence Analysis of Science Teachers During the Covid-19 Pandemic

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Abstract: The purpose of this study was to analyze the social competence of science teachers. It was conducted in 22 SMP Negeri Dumai City with a population of 86 science teachers in public junior high schools. The research sample was 71 science teachers calculated using the Slovin formula at an error rate of 0.05%. The instrument used in data collection was a questionnaire that was pre-tested to 30 science teachers (15 science teachers at SMPN Dumai City and 15 science teachers at SMPN Duri). From the 30 items of the questionnaire statement that were tested, the validity of each item was calculated with the product moment correlation with the help of the SPSS version 23, 29 valid items were obtained. Calculation of instrument reliability using the Cronbach Alpha formula was obtained 0.931 very reliable category. Furthermore, the social competence questionnaire instrument for science teachers who had met the validity and reliability requirements was used to collect data for the research sample of 71 science teachers at public junior high schools in the city of Dumai. The results of descriptive data analysis showed that the social competence of science teachers at the Dumai City Junior High School was 54.90% (39 science teachers) in the medium category, 25.30% (18 science teachers) who had high category competence and 19.70% (14 science teachers) out of 71 science teachers in the low category. Thus, the social competence of science teachers in Dumai City Junior High School is mostly in the medium category.

Keywords: Analysis; Social competence; Science teachers

Introduction

The teacher is the main agent of the educational process This is because teachers have the greatest responsibility for imparting knowledge to students. Therefore, teachers must be competent in imparting this knowledge. According to Law No. 14 of the Republic of Indonesia 2005, which describes teachers and instructors, competence is a set of knowledge, skills, and behaviors that a teacher or instructor must possess, acquire and control when performing their professional duties. This is confirmed in Article 10 of the Law of the Republic of Indonesia. The competence of teachers referred to in Article 8 in relation to teachers and instructors of 14 14th 2005 includes: personal competence, pedagogical competence, social competence, and professional competence as a result of vocational education (Azhar, 2013). This claim is also supported by Article 28(3) of the Government Decree on National Education Standards of 2008. Four competencies (Julianti et al., 2020), (Azhar, Melita, et al., 2022), (Azhar, Lathifah, et al., 2022),(Azhar, Fuadi, et al., 2022).

Educational Psychology Expert Gardner, quoted Azhar, mentions social competence as social intelligence or social intelligence. Social intelligence is one of the nine intelligences (logic, language, music, body, space, personal, natural, and culinary) that Gardner has identified. Everyone has this intelligence. It's just that, maybe some of them stand out, while others are ordinary or even less. This social competence is not limited to learning at school but also to education that

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occurs and takes place in society in general (Azhar, 2008; Azhar et al., 2021; Julianti et al., 2020; Van der Wilt et al., 2022).

In addition, Azhar (2018) said that social skills require teachers to be able to socially demonstrate or interact with students, other teachers, school leaders, and even the wider community. I said that it means that. Teachers and students from the perspective of the community are emulated role models and role models in everyday life. Teachers need to have social skills to support the effects of implementing the learning process. These abilities allow the school to synergize with the community. Social skills must be built with communication, collaboration, compassionate socializing, and the ability of teachers to have a soothing soul (Susanti et al., 2020; Zulkifli et al., 2022; Merkaš et al., 2021).

Teacher social competence in its concrete form can be shown by the teacher and the teacher greeting each other, tolerance and empathy for students and colleagues, willing to participate in school programs as well, guiding students in extracurricular activities, a sense of responsibility for all things related to their students, being willing hear the complaints of fellow teachers, students and parents of students, on time in starting learning and ending learning in the teaching and learning process at school (Isjoni et al., 2019; Azhar et al., 2022; Angriani et al., 2021).

In addition, Think City High School's science teachers' social competence with students, colleagues, bosses, and society still does not meet expectations. It is based on observations and interviews conducted by researchers. The result is that science teacher still has problems communicating with both students and peers, teachers are not optimal for communicating with parents about student development, and teachers are still struggling to realize their respective main tasks as professional teachers. It shows that you put yourself first (Arista et al., 2013; Herfana et al., 2019).

The learning system during the current Covid-19 pandemic has made the workload and demands of teachers increasingly heavy. This is what triggers the emergence of a less caring, emotional, less honest and clean attitude in behaving towards fellow colleagues, students and the community. Based on the results of research conducted by Azhar (Arsyad, 2011) shows that the online learning method in the midst of the Covid-19 outbreak specifically for the Science Physics subject causes its own problems that are felt by both subject teachers and students, even parents of students (the community) (Luo et al., 2022). This is due to the difficulty of explaining formulas and calculation materials without going through face-to-face contact between teachers and students. This is certainly a form of social interaction between teachers, students and

colleagues that is no longer running normally (Widodo et al., 2019; Irawan et al., 2022).

Based on the description above, the authors are interested in conducting a study with the title "Analysis of social competence of science teachers in Junior High Schools during the Covid_19 Pandemic".

Method

This study uses a quantitative research approach, namely research that focuses on the study of objective phenomena to be studied quantitatively. The method in this study is the survey method. This research was carried out at the Dumai City State Junior High School. The time of the research was carried out from November 2020 to February 2021 (Tati et al., 2017; Teevasuthonsakul et al., 2017; Ziaeefard et al., 2017) . the research procedure can be seen in the Figure 1.
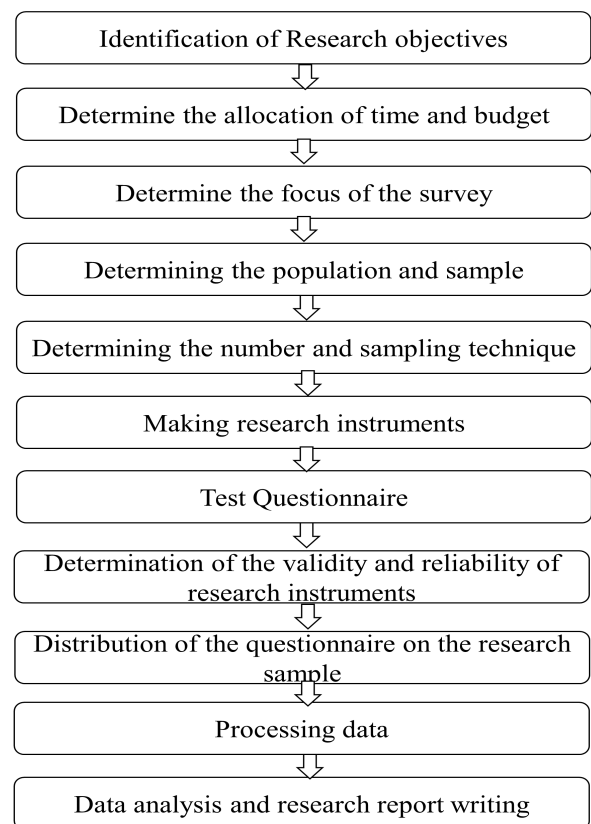

Figure 1. The Research Procedure

The population in this study were all science teachers at the Dumai City Public Middle School, as many as 86 science teachers consisting of 22 public junior high schools in Dumai. The research documentation can be seen in Figure 2. Furthermore, according to the sample is part of the number and characteristics possessed by the population must be truly representative. The sample in this study were science teachers who teach at SMP in Dumai City. Sampling in

this study was carried out by proportional random sampling. The number of samples is calculated by the Slovin formula (Riduwan, 2012) at a precision of 5% the error is $n = \frac{N}{N.d^2+1} = \frac{86}{86 \times 0.05^2+1} = 71$ person from 86 science teachers. Which consisting of 8 male teacher (11.27 %) dan 63 famale (88.73%) (Inriani et al., 2021).

The data collection technique in this study was data collection by distributing questionnaires containing questions related to the social competence of science teachers. The questionnaire given is a closed type of questionnaire or by providing answers with a Likert scale (Sugiyono, 2012). To obtain data on the social competence of science teachers, research instruments are arranged in stages, namely: reviewing theories related to the variables to be studied, compiling indicators, c) compiling instrument grids, compiling questions and setting measurement scales, implementing instrument trials to test item validity and calculating reliability of research instruments.

Conceptual definition social competence

Teacher social competence is the process of teachers in communicating and interacting effectively with the school environment and outside the school environment.
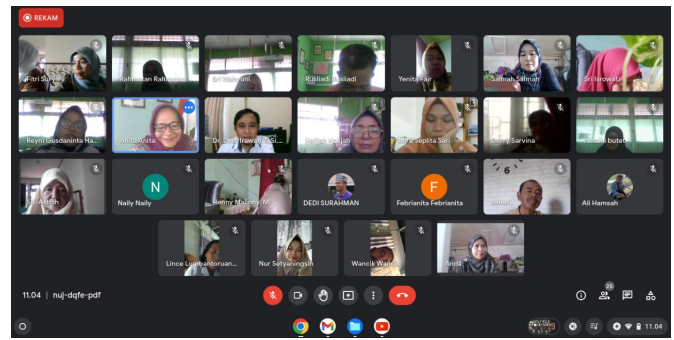

Figure 2. The Research documentation

Operational definition of social competence

Teacher social competence is the teacher's process of adapting to the demands of work and the surrounding environment when carrying out his duties as a science teacher at Dumai City Junior High School. To determine the teacher's social competence score, researchers compiled a questionnaire with alternative answers in 5 categories, namely Very Often (VO), Often (O), Sometimes (S), Never (N), Never (VN), with a score scale of 5, 4, 3, 2, 1 for positive questions and a score scale of 1, 2, 3, 4, 5 for negative questions. The typical of the Science Teacher Social Competence Instruments is as shown in Table 1.

Table 1. Grid of Teacher Social Competency Variable Instruments (Permendiknas Nomor 16 Tahun 2007)

Indicator	Item Number	
	Positive	Negative
We act inclusively and objectively and do not discriminate on the basis of gender, religion, race, physical condition, family background or socioeconomic status.	1,2,3,4,5,6,8	7
Communicate effectively, empathically, and respectfully with fellow educators, staff, parents, and the community.	9,10,11,12,13,14,15,16.18	17
Adapt to work locations across the territory of the Republic of Indonesia, characterized by socio-cultural diversity.	19,20,21,22,24,25	23, 26
Communicate verbally, in writing or otherwise with members of your professional community and other professions.	27,28, 30	29

Before the instrument was used, a trial was conducted on 30 science teachers (15 science teachers at the public junior high school in Dumai city and 15 science teachers at the Duri city state junior high school whose teacher characteristics were almost the same). Subsequently, the validity of each item was tested using the SPSS version 23 program. The calculation of the validity of the items was carried out using the product moment formula (Sugiyono, 2012).

To determine whether the item is valid or not is to compare the value of rcount with rtable with the following conditions: If rcount > rtable then the item is declared valid and if rcount < rtable then the item is declared invalid at a significant level = 0.05 (Purnomo (2016). After the data from the test results were collected, the data was processed with the help of the SPSS version 23 program, analyzed on the value through Pearson's product moment rtable with df (degree of freedom) 30,

with a significance level of 5.00%, then obtained r table = 0.361. Analysis of test output validity obtained 29 valid items and 1 invalid item (item 3) with r_{count} 0.339 < r_{table} 0.361.

Furthermore, from 29 valid items, the reliability of the Science Teacher Social competence instrument was calculated based on the Cronbach Alpha value with the help of the SPSS version 23 program, the reliability value was 0.931. Thus, the social competence instrument has a Cronbach Alpha value above 0.60, it can be concluded that the instrument is reliable. This is reinforced by the opinion of Purnomo (2016) stating that the reliability calculation is as follows: (1) If Cronbach's Alpha value is > 0.60 then the questionnaire or questionnaire is declared reliable and (2) If Cronbach's Alpha value is < 0.60 then the questionnaire or questionnaire is declared not reliable (Sariyatun et al., 2021).

Data analysis techniques in quantitative research use statistics. The statistics used in this study are descriptive analysis techniques (Sugiyono, 2012). Processing of data for descriptive statistical analysis in this study using Microsoft Excel and SPSS version 23.

Result and Discussion

In this section the author will describe the results of research and discussion related to the Social Competence of Science Teachers. The results and discussion of the research are presented successively: (1) Description of the Social Competency Data for Science Teachers at Dumai City Public Middle Schools, (2) Frequency Distribution of Social Competency Scores and Social Competency Graphs for Science Teachers in Public Junior High Schools in Dumai City during the Covid_19 Pandemic.

Description of Social Competence Data

The results of the research data on the social competence of science teachers at SMPN in the city of Dumai with a total sample of 71 science teachers. Based on the calculation of 29 statement items using SPSS Version 23, the results obtained from the description of the Social Competence data of science teachers at SMP Negeri Dumai City, can be seen in Table 2.

Table 2. Statistical description of social competence

Variable	Items	Statistical results
Social	N	71
Competence	Mean	116.35
	Median	115.0
	Mode	112
	Std. Deviation	10.89
	Range	51
	Minimum	90
	Maximum	141

Based on Table 2 the descriptive statistics of social competence, it can be explained that the mean value of all data on the social competence variable of science teachers is 116.35, with the median value of the social competence variable of science teachers of 115.00 and the value that occurs frequently (mode of social competence of the social competence variable of science teachers of 112 and the standard deviation of the variables of social competence of science teachers of 10,890. This can be seen from the mean median and mode values which are almost the same, so it can be assumed that the curve formed is a symmetrical curve with a maximum value of 141 and a minimum value of 90.

Frequency Distribution of Science Teacher Social Competence Score

Furthermore, the distribution of the social competence scores of science teachers at the Dumai City Public Junior High School is presented with a frequency distribution list with the number of grade 3, the length of the class interval (P) is determined by the Formula 1.

$$v = \frac{TotalScoreMax - TotalScoreMin}{3} = \frac{141 - 90}{3} = 17 \qquad (1)$$

Thus, the distribution of the frequency distribution of the social competence data for the Science Teachers of SMPN in the city of Dumai can be seen in Table 3:

Table 3. Frequency Distribution of Science Teacher Social Competence Score

Class	Class interval	Absolut Frequency	Percentage (%)
High	124-141	18	25.30
Medium	107-123	39	54.90
Low	90 - 106	14	19.70
Total		71	100.00

Based on Table 3, the frequency distribution shows that the social competence of science teachers at SMP Negeri Dumai City, most of the samples/respondents are in the medium category 54.90%. Only 25.30% have competence in the High category (18 teachers) out of 71 science teachers. in the city of Dumai, and 19.70% in the low category. Thus, the social competence of science teachers in Dumai City Junior High School is mostly in the medium category. For more details can be seen in Figure 2.
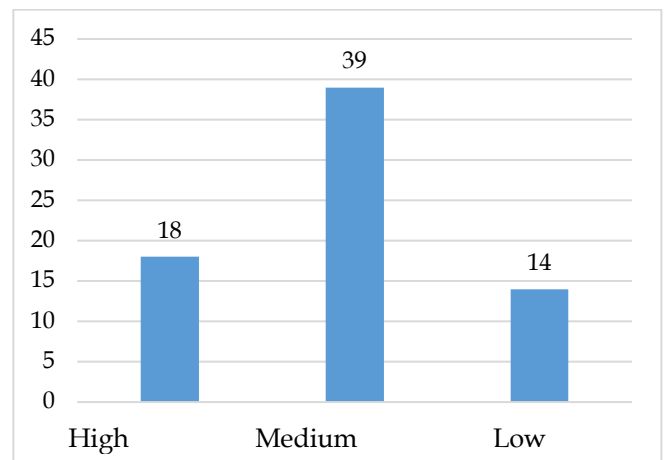

Figure 2. Graph of Social Competence of Science Teachers at State Junior High Schools in Dumai City.

Thus, it can be said that the social competence of the science teacher at the Dumai City State Junior High School is in the medium category, so it is necessary to increase the social competence of the science teacher. This is due to various factors in the school environment, one of which is organizational culture. Organizational culture contributes positively to social competence (Azhar et al., 2021). The results of Azhar said that organizational culture has a contribution to the social

competence of teachers by 33.90% with a low interpretation indicating that organizational culture in schools has not been implemented properly and can affect the social competence of science teachers in schools.

Conclusion

Based on the research that has been done on the analysis of the social competence of science teachers in Dumai city public junior high schools, it can be concluded that the majority of science teacher competencies in Dumai city public junior high schools are in the medium category (54.90%) and 18 science teachers (25.30%) in the high category, and there is still a low category of 19.70% of the 71 science teachers in the city of Dumai

Acknowledgements

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