



## Implementation of the Guidance and Counseling Services Principles in Mathematics Learning

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**Abstract:** This study aims to provide information about the effect of implementing the principles of guidance and counseling services in mathematics learning as a solution to low mathematics learning outcomes. The instruments used include a written test in the form of multiple choices. The results of the study were strengthened by the results of student interviews and learning observation assessment sheets by mathematics teachers as observers. The results showed that the simple linear regression equation test, namely  $Y = 2.019 + 0.901 X$ , showed a positive direction. Therefore, the treatment has a significant effect on student learning outcomes as indicated by the percentage increase in learning outcomes of 58.48% from the difference between the average pretest and posttest scores.

**Keywords:** principles of guidance and counseling services, mathematics learning, mathematics teachers.

**Abstrak:** Tujuan penelitian ini ingin memberikan informasi tentang pengaruh pembelajaran matematika bernuansa prinsip layanan bimbingan dan konseling sebagai solusi menjawab rendahnya hasil belajar matematika selama ini yang terjadi. Instrumen yang digunakan berupa tes tertulis berbentuk pilihan banyak, dan untuk memperkuat hasil penelitian dihubungkan dengan hasil wawancara dengan peserta didik dan lembar penilaian observasi pembelajaran oleh para guru matematika. Hasil penelitian ini menunjukkan arah positif persamaan regresi linear sederhana, yaitu  $Y = 2,019 + 0,901 X$ . Uji hipotesisnya menghasilkan adanya pengaruh yang signifikan dari perlakuan yang diberikan terhadap hasil belajar siswa yang ditunjukkan dengan adanya persentase kenaikan sebesar 58,48% dari selisih rata-rata nilai pretest dengan posttest.

**Kata kunci:** prinsip layanan bimbingan dan konseling, pembelajaran matematika, guru matematika

### ▪ INTRODUCTION

Learning is an interaction activity between teachers and students in a learning process with the aim of achieving optimal learning, such as knowledge, skills, and attitudes. In this case it can also be said that learning is a learning process built by teachers to develop creative thinking that can improve students' thinking skills and can improve the ability to construct new knowledge. Learning is basically a process of adding new information and abilities. Nowadays there is a change in the learning paradigm from teacher-centered to student-centered. Student-centered or learner-centered learning ensures the implementation of meaningful learning for students, encourage building their own understanding, and the teacher acts as a facilitator. Therefore, in the student-centered, the teacher is not the only source of knowledge for students. There are many sources of knowledge and all of them are in the

surrounding environment. Those conditions demand the students to be more active and creative in learning. However, in almost all parts of the world, learning is still an unsolved problem. Berry (2011) conveyed about teaching that occurred in the United States based on his experience when he was a teacher and empirical observations were stated in the book *Teaching 2030* which had the same problems as teaching in Indonesia, namely learning was still teacher-centered. In this method, there is no opportunity for students to show if they have more knowledge, there is no change in the way of teaching, always thinks negatively, learning is not fun and the teacher does not intend to be an agent of change (Berry, 2011; Sutirna, 2020; Sutirna, 2018; Sutirna, 2013; Sutirna, 2021).

Hill & Ball (2004) conducted in the summer workshop and workshop focus on mathematical analysis, reasoning, and communication predicted teacher's learning. This activity is carried out for the professional development of mathematics teachers in California, increasing wider student participation, helping students' mathematics success, and developing mathematics teacher skills in teaching. By paying attention to the movement towards teaching change in the United States, it gives an idea to us that mathematics teachers in Indonesia must be able to carry out various innovations towards the success of learning mathematics.

The movement towards the success of learning mathematics in Indonesia has also been running, such as YPMI (Yayasan Peduli Matematika Indonesia) which aims to improve the quality of learning and teaching mathematics in Elementary School, Junior High School, and High School in Mathematic at Regency/City level and seminars and workshops of Mathematic learning. Thus, almost all countries continue to carry out activities towards improving mathematics learning, which so far there are still many problems from various aspects, especially the professional aspect of teachers in providing learning, both in-class and outside-class learning. Especially with the situation and condition of the emergence of the Covid-19 pandemic which has many various new variants. This condition makes learning process in Indonesia and even throughout the world, is dominated by online learning systems, which becomes another problem due to geographical location, economic conditions of students, and uneven internet networks. Therefore, creative and innovative education personnel are needed so learning process remains can achieve optimal results (Amalia, 2021).

The low of mathematical ability of students in Indonesia can be seen from the results of comparing the Mathematics and Science achievements of 4th and 8th grade students in several countries. A study has been carried out, namely the Trends in International Mathematics and Science Study (TIMSS). Generally, TIMSS aims to monitor the results of the education system related to student achievement in Mathematics and Science. TIMSS is carried out regularly every 4 years, such as in 1995, 1999, 2003, 2007, 2011 and 2015. Indonesia is one of the countries that became the object of TIMSS in the last four periods. Discussing about mathematics achievement, Indonesia's position is still below the international level, as reported by TIMSS. Based on the results of the 2003 TIMSS study, Indonesia is ranked 35 out of 46 participating countries with an average score of 411, while the international average score is 467. While on the results of the 2007 TIMSS study, Indonesia is ranked 36 out of 49 participating countries with an average score of 397. In addition,

on the results of the 2011 TIMSS study, Indonesia is ranked 38 out of 42 participating countries with an average score of 386, while the international average score is 500 (P4TK, 2011). And on the latest results in TIMSS 2015, Indonesia is ranked 44th out of 49 countries (Hadi & Novaliyosi, 2019).

**Table 1.** Results of timss indonesia (2003-2015)

Year	Rank	Participants	Average Score of Indonesia	Average International Score
2003	35	46 Countries	411	467
2007	36	49 Countries	397	500
2011	38	42 Countries	386	500
2015	44	49 Countries	397	500

There are 4 criteria in TIMM survey, they are: low (Low 400), medium (Intermediate 475), high (high 550), and advanced (advanced 625). Based on the table 1 above, even in 2011 Indonesia was under Palestine where this country was in a state of war turmoil. In addition to the results of the TIMM survey for Indonesia, which has low mathematical ability, it is also shown by several research results that the motivation to learn mathematics and achievement in mathematics learning outcomes is not optimal either at the elementary school level or at the secondary school level (Suyanti, 2010; Dwi, 2020; Cahyani, 2020; Putriana & Noor, 2021). Based on the description above, to change the learning of mathematics that is still not satisfactory or not optimal, it takes an effort for mathematics teachers in fun learning situations and conditions, full of harmony, no fear and boredom, both physically and psychologically for students. Therefore, one alternative is to implement the principles of guidance and counseling services held by guidance and counseling teachers (counselors) in providing services, which seems to be the right solution to be implemented by mathematics teachers during the learning process, even in the time of the Covid-19 pandemic, it has a very good opportunity to be used.

The purpose of this study is expected to be an illustration for mathematics teachers in order to provide active, innovative, creative, effective and fun learning services so that it will have an impact on improving students' mathematics learning outcomes and students' negative perceptions of mathematics, and the wrong perceptions of guidance and counseling teachers can become positive.

▪ **METHOD**

**Participants**

The research was conducted at SMP Negeri 1 Telukjambe Timur Karawang on students of class VIII, which consisted of 10 classes, and the research sample was class VIII B.

**Research Design and Procedures**

The implementation of this research used a quantitative research approach with the one-group pretest-posttest design by giving treatment to the group that become the research sample. The research design is described as follows:

**Table 2.** Research design (Fraenkel & Wallen, 1993)

O	X	O
Pre-test	Treatment	Post-test
Multiple choice questions with four choices of 20 questions	Learning Mathematics with the principle of guidance and counseling services	Multiple choice questions with four choices of 20 questions
Dependent Variable	Independent Variable	Dependent Variable

Then, for the group that was used as the research sample, it was taken based on the results of discussions with the mathematics teacher at the research location related to the abilities and characteristics of students who could represent the population, therefore sampling used purposive sampling technique.

### Instrument

This study's instrument was a test with a type of written test in the form of multiple choices. The number of tests given to the research subjects were 20 questions consisting of 4 choices. The indicators used for the written test:

**Table 3.** Test instrument grid

No	Basic competencies	Indicator	Question Number	Number of Questions
1.	1.3. Understanding Relations and Functions	Explain the notion of function in words and explain of everyday problems related relations and functions.	1.8.9.10.11	5
2.		Write about how to represent a function to use arrow diagrams, Cartesian diagrams, and sets of ordered pairs.	2.3.4.5.6.7.18.19	8
3.		Determines the number of possible mappings of the two sets.	12.13.14.15.16.17.20	7

The instrument used in this study consisted of a written test with multiple choice types, interviews with students, and learning observations. The multiple-choice test consisted of 20 questions with 4 choices. Before this question was used, a material and content validity test were carried out together with mathematics teachers on September 29, 2022. Based on the results of the validity and reliability test, the instrument can be used for the next stage.



**Figure 1.** Research instrument validation test

Furthermore, for non-tests, a questionnaire about motivation to learn mathematics used to. The questionnaire was made by the research team with reference learning motivation indicators. The questionnaire consist 16 statements, that each supported and did not support each of the 8 statements.

**Table 4.** Distribution of questionnaire statements

Questionnaire	Questionnaire Number
Questionnaire that supports (+)	1. 3. 5. 7. 9. 11. 13. and 15
Questionnaires that do not support (-)	2. 4. 6. 8. 10. 12. 14. and 16

**Research Procedure**

The research was carried out from October 11, 2022, to November 19, 2022, starting with giving a pretest to determine the students’ initial abilities, then giving treatment (learning treatment with the principles of counseling guidance services) for 3 meetings, and finally giving a posttest to determine the effect of the treatment given by researchers.

**Table 5.** Schedule of giving mathematics learning treatment in research class

No	Day	Date	Activity	Time
1	Monday	October 11, 2022	Pretest	08.00-08.30
2	Wednesday	October 20, 2021	Giving a questionnaire	10.30-11.00
			Research Learning	
3	Wednesday	October 27, 2021	Process	07.30-08.30
			Research Learning	
4	Wednesday	November 03, 2022	Process	10.00-11,00
			Research Learning	
5.	Wednesday	November 10, 2022	Process	07.30-08.30
6.	Wednesday	November 17, 2022	Postest	10.00-10.30

### Research Data Processing Process

The research data processing technique (pretest and posttest) used SPSS, software to describe whether there was an effect of the treatment carried out or not. This effect test takes a simple linear regression test  $y = ax + b$ . The final conclusions drawn from the results of the study were strengthened by the results of interviews with students after the entire learning processes and the learning observation assessment sheet from the mathematics teacher were completed.



**Figure 1.** Learning Process

Then for processing the questionnaire data used a Likert scale with the following criteria:

**Table 6.** Provision of guideline score questionnaire

No	Category	Support Statement (+)	Statement not supported (-)
1	Strongly agree	5	1
2	Agree	4	2
3	Undecided	3	3
4	Don't agree	2	4
5	Strongly Disagree	1	5

The questionnaire scores into each motivational indicator were converted into percentages and then converted into percentage category tables.

**Table 7.** Questionnaire percentage category guidelines

Percentage Range	Category
90% - 100%	Very Good
80% - 89 %	Good
65% - 79 %	Enough
55% - 64 %	Not enough
0 % - 55%	Very Less

▪ **RESULT AND DISSCUSSION**

**Pretest and posttest results**

The pretest was carried out on October 11, 2022, with the aim of knowing the initial abilities of students before giving treatment and the posttest on November 15, 2022, with the aim of knowing the final ability after being given learning treatment. The results of the pretest and posttest can be seen in the following table:

**Table 8.** Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X	17	4	11	7.88	2.176
Y	17	0	16	9.12	4.167
Valid N (listwise)	17				

From the table above, it can be concluded that the average score for the pretest was 7.88 and the average score for the posttest was 9.12. Based on the difference between the average initial ability and the average final ability of students, there is a difference of 1.24. This means that there is an increase in ability after the treatment of research subjects is 58.49%. A teacher named Muh Farozin, always try to create educational interactions and human treatment in the teaching and learning process, of a goal of the teaching and learning process's goals. The implementation of guidance and counseling principles in the learning process illustration that learning with no favoritism in providing learning services and always providing positive things in the learning process is an innovation in learning that will have a significant impact on learning outcomes learners. (Farozin, n.d.). Furthermore, when the principles of guidance and counseling services is carried, not only does the average value of student learning outcomes increase, but so does the value of initial ability to final ability. Thus, it is clear that implement learning mathematics using the principles of guidance and counseling services can increase students' average and provide a significant increase in value from initial ability to final ability.

This is reinforced by the research results of Shehu Ibrahim, et al that the finding revealed that eighty percent (80%) of the students responded that their academic performance was changed after receiving counseling services. Seventy-two percent (72%) of the class teachers perceived the level of students' academic performance after counseling as good, while 20% perceived it very good and 8% rated it bad. Guidance and counseling services have positively influenced the academic performance of the students and should be strengthened to improve the students' performance in national examinations. (Ibrahim et al., 2021). Baskin et al. (2010) reported the results of their research on studies of youth counselling found significant self-reports of academically related outcomes, indicating that participants positively appraised counselling's impact on their academic achievements. This means that guidance and counseling services are very meaningful when implemented by mathematics teachers who are integrated in the teaching and learning process on learning achievement.

### Interview results

The interview was carried out after the entire learning series was completed by taking a random sample of 3 students, namely: ER, HNF, and MBI.

**Table 9.** Description of interview results with students

No.	Name	Description of Interview	
		Before the Implementation of Learning Process	After the Implementation of Learning Process
1.	ER	<ul style="list-style-type: none"> <li>- Does not like mathematics</li> <li>- Makes me dizzy with all the numbers and calculations.</li> <li>- Have an indifferent nature towards mathematics</li> </ul>	<ul style="list-style-type: none"> <li>- Love learning mathematics.</li> <li>- Fun learning process</li> <li>- Enthusiast in participating in the learning process</li> </ul>
2.	HNF	<ul style="list-style-type: none"> <li>- Does not like mathematic</li> <li>- Lack of enthusiasm if there is a math lesson.</li> <li>- Just follow if there is math</li> </ul>	<ul style="list-style-type: none"> <li>- Become fond of math.</li> <li>- Want to continue the learning process if you were the teacher or the teacher taught just like you.</li> <li>- Always will seriously learning if mathematics were taught by you</li> </ul>
3.	MBI	<ul style="list-style-type: none"> <li>- Afraid towards mathematic lesson</li> <li>- Not enthusiastic about learning math</li> <li>- Do not pay attention to mathematics</li> </ul>	<ul style="list-style-type: none"> <li>- It was fun learning process if the teacher taught like you did.</li> <li>- Became enthusiastic.</li> <li>- I want to understand mathematics</li> </ul>

From the results of the interviews with the students mentioned above, it can be concluded that by providing a learning treatment that is harmonious, full of warmth, full of joy and fun, it will have a very positive impact on students who were initially afraid, indifferent to mathematics, and feel difficult to be happy with the mathematic learning process. As empirical evidence submitted by the homeroom teacher of the class which became the research sample, that ER managed to reach the first rank or top rank in the class, previously the student was lazy and not enthusiastic about learning. This shows that the nuances of learning using the principles of guidance and counseling services can provide a very meaningful meaning for students, as given by the study results of Fahrurrazi and Riska Damayanti, who concluded that when given counseling guidance, there are changes in which they start to have the effort in learning, such as willing to do assignments, study independently, and study in groups with friends. (Fahrurrazi & Damayanti, 2021)

Reseachers from Department of Education, Chuka University provide information to school administrators, policy makers, parents and other stakeholders on various issues that need to be addressed in Guidance and Counseling to enables students adjust to school physical environment. the study further suggest ways of ways of improving Guidance and Counselling services in order to make it more effective in public boarding secondary schools. (Kanga et al., 2015)



**Observation results**

The implementation of learning observations is carried out in every meeting which held by a mathematics teacher as an observer. Observer values in each implementation of the principle of guidance and counseling services in mathematics learning can be seen in the following table:

**Table 10.** Observer assessment results in the implementation of learning process

No	Principles of Guidance and Counseling Service	Implementation in the Learning Process	Observer Assessment Score					Percentage				
			1	2	3	4	5	1	2	3	4	5
1.	For all counselees/students	Mathematics learning services for all students, meaning that there is no discrimination in the provision of teaching, education, and mentoring.				6	2				75	25
2.	Each student has a unique nature (different).	Learning services must accommodate all students with different abilities (high, medium, and low).				6	2				75	25
3.	Providing services for positive things.	Learning services always provide positive things for all students.				2	6				25	75
4.	Activities with all components of the school.	Learning services strive for multi-directional collaboration of all components in the classroom.					8				0	100
5.	Decision make is on the students' hands.	All learning service activities, material acceptance decisions, doing practice questions, are on				6	2				75	25

No	Principles of Guidance and Counseling Service	Implementation in the Learning Process	Observer Assessment Score					Percentage				
			1	2	3	4	5	1	2	3	4	5
		the students' hands, the teacher is only a facilitator.										
6.	Guidance services can be carried out with various settings.	Learning services can be done with various settings (scenes).				7	1			87,5	12,5	
7.	Guidance Services an integral part of the educational program.	Learning services are part of the Education program				8				100	0	
8.	Implemented within the framework of Indonesian culture.	Indonesian culture-based learning services (courteous, polite, greeting, smiling and greetings)				8				100	0	
9.	Flexible	Learning services must be flexible.				1	7			12.5	87.5	
10.	Guidance services must be professional.	Learning services must be professional.				5	3			62.5	37.5	
11	Services are arranged based on an analysis of student needs	Learning services with a student-centered system				6	2			75	25	
12	There must be an evaluation and follow-up	Learning services must have an evaluation as feedback.				7	1			87.5	12.5	

From the table above, it can be concluded that the average observer gives an assessment of each indicator of the implementation of the principles of guidance and counseling services in the learning process is categorized as good at 64.58% and very good category at 35.42%.

### **Treatment Effects toward Learning Outcomes**

The results of the effect for the treatment on the results used a simple linear regression test through the SPSS. The results can be seen in the SPSS output as follows:

**Table 11.** SPSS output of correlation and determination value

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.470 <sup>a</sup>	.221	.169	3.79746

a. Predictors: (Constant), X

The SPSS output table informs that the value of the correlation or relationship (R) is 0.470 while the coefficient of determination which is the result of the square of R is 0.221 which means that the influence of the independent variable on the dependent variable is 22.1% while the rest is influenced by other variables which are not studied in this research.

**Table 12.** SPSS output of value f-count and sig.

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.454	1	61.454	4.262	.057 <sup>b</sup>
	Residual	216.311	15	14.421		
	Total	277.765	16			

a. Dependent Variable: Y  
b. Predictors: (Constant), X

SPSS output table on whether there is a significant effect of variable X on the participation variable (Y). From the output, the result for F count is 4.262 with a significance level of  $0.000 < 0.05$ . Thus, this regression model can be used to predict the participation variable.

**Table 13.** SPSS output of value of constants, coefficients and t calculate

<b>Coefficients</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.019	3.560		.567	.579
	X	.901	.436	.470	2.064	.057

a. Dependent Variable: Y

In the SPSS output table above, the value of a is 2.019 and the value of b is 0.901 so that the linear regression equation is as follows:  $Y = 2,019 + 0,901 X$ . From these equations it can be concluded that the direction of the relationship is positive. Furthermore, the results of SPSS continued with hypothesis testing from simple linear regression. Based on the results of SPSS output,  $t_{count} = 2.064$  and  $t_{table} = 0.688$ . Then the value of t count is higher than t table ( $2.064 > 0.688$ ), thus  $H_0$  is rejected, it means that  $H_1$  is accepted, so the conclusion that can be drawn is there is a significant effect between variable X and variable Y.

Why is the achievement of mathematics learning outcomes become a continuous problem? Whereas almost all countries have carried out various activities to obtain more successful mathematics outcomes. For example, the movement to review the curriculum for mathematics lessons through workshops, seminars, and other activities, socialize the latest mathematics learning models, and activities to increase the professionalism of mathematics teachers. It should be an important note in this regard, if it is seen that the success of individual or individual mathematics achievement, both in Indonesia and other countries, is clearly shown by the large number of students who excel in the field of mathematics. However, when viewed as a whole, for example, in Indonesia, from Sabang to Merauke, the level of mathematical ability still does not provide satisfactory expectations.

Ardilla & Hartanto (2017) convey that there are four factors that influence the low learning outcomes of mathematics, they are (1) lack of student interest in mathematics, (2) lack of student concentration during the learning process, (3) low understanding of the concept, and (4) lack of student discipline (Ardilla & Artanto, 2017). Furthermore, Nabilah & Abadi (2019) stated in their article that the low factor in mathematics learning outcomes was caused by two factors, they are: internal factors which come, from students themselves, such as lack of interest and motivation in learning mathematics and (2) external factors which come from outside the student, such as the method used by the teacher does not attract the attention of the students.

In general, there is a change in the trend of strategies in learning mathematics from time to time. This trend occurs all over the world, although not at the same time. In the past, at the beginning of the 20th century, the brain was thought to be composed of faculties that needed to be trained so that learning mathematics was considered a mental exercise (Ruseffedi, 2006). As a result, the material given is difficult, the harder the better. Currently the paradigm shifts towards a learning paradigm in which the implementation of learning prioritizes the interests of students. In accordance with Canvied & Hansen (2004) quoting Meladee McCarty's expression that "the children in the classroom are absolutely more important than the lessons we teach them".

Thus, the problem of low mathematics learning outcomes that occurs today is related to the trend of learning strategies that must be managed properly by a mathematics teacher. Paying attention to the existence of students or known as the student center learning (SCL) paradigm is a learning paradigm that is very popular among education practitioners in the world. Rosyada (2015) said that SCL is believed to be very effective in improving the learning process to achieve optimal student learning outcomes. This is in accordance with the philosophy of learning, that learning is an activity to acquire new knowledge where the more knowledge students gain, the greater the chance for them to continue to improve the quality of their attitudes and behavior. This view is in line with the learning approach developed by the flow of cognitive psychology which believes that students who have a lot of information and knowledge can explore new learning resources, either alone or together with their peer groups. Because of that, they can gain a lot of new knowledge information and continue to add new conclusions (Rosyada, 2015).

Guidance and counseling aim to help students achieve optimal developmental tasks as God's creatures, socially, and personally. Furthermore, the purpose of guidance and counseling is to assist individuals in achieving: (a) the happiness of personal life as God's creatures, (b) a productive and effective life in society, (c) living together with other individuals, (d) harmony between one's thoughts and feelings. -their ideals with the abilities they have. Thus, students can enjoy the happiness of their lives and can make a meaningful contribution to the life of society in general. To achieve these goals, students must have the opportunity to: (1) recognize and implement their life goals and formulate a life plan based on those goals; (2) recognize and understand their needs realistically; (3) recognize and overcome their own difficulties; (4) recognize and develop their abilities optimally; (5) use their abilities for personal and public interests in common life; (6) adapting to the conditions and demands in the environment; (7) develop everything they have in a proper and orderly manner, in accordance with their developmental tasks to an optimal extent.

In particular, the purpose of guidance and counseling in schools is so that students can: (1) develop their full potential as optimally as possible; (2) overcoming difficulties in understanding oneself; (3) overcoming difficulties in understanding the environment, which includes school, family, work, socio-economic, and cultural environments; (4) overcome difficulties in identifying and solving problems; (5) overcoming difficulties in channeling their abilities, interests, and talents in the fields of education and work; (6) obtaining appropriate assistance from parties outside the school to overcome unsolvable difficulties at the school.

Guidance and counseling aim to help students to have the competence to develop their potential as optimally as possible or to realize the values contained in the developmental tasks that must be mastered as well as possible. Potential development includes three stages, namely: understanding and awareness (awareness), attitude and acceptance (accommodation), and skills or actions (action) carrying out developmental tasks. Based on the understanding and purpose of guidance and counseling above, it is necessary to have the principles of guidance and counseling services that must be carried out by guidance and counseling service teachers in schools. Regulation of the Minister of Education and Culture Number 111 Year 2014 on Guidance and Counseling in Primary and Secondary Education Article 5 explains the principles of guidance and counseling services. Based on the principles of guidance and counseling services, the atmosphere of learning mathematics which has been dominated by negative student perceptions needs to adopt these principles into the atmosphere of learning mathematics or implement these principles in an atmosphere of learning mathematics so that the obstacle factor for learning mathematics outcomes that has been low so far is scary, boring, and lack of interest in learning mathematics will be translated into a learning atmosphere nuanced with the principles of guidance and counseling services. In detail, the implementation of the principles of guidance and counseling services in learning is as follows:

**Table 2.** Implementation of guidance and counseling service principles in learning process

Nu	Principles of Guidance and Counseling Service	Implementation in Learning Process
1.	For all counselees/students.	Mathematics learning services for all students, meaning that there is no discrimination in the provision of teaching, education, and mentoring.
2.	Each student has a unique nature (different).	Learning services must accommodate all students with different abilities (high, medium, and low).
3.	Providing services for positive things.	Learning services always provide positive things for all students.
4.	Activities with all components of the school.	Learning services strive for multi-directional collaboration of all components in the classroom.
5.	Decision make is on the students' hands.	All learning service activities, material acceptance decisions, doing practice questions, are on the students' hands, the teacher is only a facilitator.
6.	Guidance services can be carried out with various settings.	Learning services can be done with various settings (scenes).
7.	Guidance Services an integral part of the educational program.	Learning services are part of the Education program.
8.	Implemented within the framework of Indonesian culture.	Indonesian culture-based learning services (courteous, polite, greeting, smiling and greetings).
9.	Flexible.	Learning services must be flexible.
10.	Guidance services must be professional.	Learning services must be professional.
11	Services are arranged based on an analysis of student needs.	Learning services with a student-centered system.
12	There must be an evaluation and follow-up.	Learning services must have an evaluation as feedback.

As study material for subject teachers, especially mathematics teachers for the level of success in improving student learning outcomes and motivation to encourage students to enjoy mathematics, Sutirna, Haerudin & Prihandani (2022) have conducted experimental research at the junior high school level and the results show that there is a significant effect of the treatment of mathematics learning by implementing the principles of guidance and counseling services and can change the perception of students who initially do not like mathematics to like mathematics. This has all been disseminated at the Focus Group Discussion (FGD) event as a form of dedication to mathematics teachers and published in the community service journal of Post-Graduate Program at the Universitas Gorontalo.

## ▪ CONCLUSION

The conclusion from the results of this study is that active, innovative, creative, effective and fun mathematics learning is needed to implement the principles of integrated guidance and counseling services in the implementation of the teaching and learning process, because the learning atmosphere will be warmer, hormonal, and encouraging so that participants' learning outcomes, perceptions students towards the subject and the teacher as well as high student motivation to learn will be created. This can all be shown based on the results of research and research data processing where there is a significant effect from the treatment of the implementation of the principle of guidance and counseling services in learning mathematics.

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