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TRAINING NEED ASSESSMENT: TO IMPROVE MATHEMATICS TEACHER COMPETENCIES IN ELEMENTARY SCHOOL & MADRASAH IBTIDAIYAH IN MOJOKERTO CITY

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ABSTRACT

Training Needs Assessment (TNA) is the right step to design a cost-effective training program with clear priorities for achieving knowledge, skills and practice. This study aims to examine the needs for competency training for Mathematics teachers at the elementary and madrasah ibtidaiyah level, and the preparation of a sustainable program (road map). It used quantitative research methods by using the response scoring analysis technique from the priority scale the training required (Likert 1-4). The research population is all Mathematics teachers in elementary and madrasah ibtidaiyah, grades 4 to 6 in Kota Mojokerto. The number of respondents is about 72 people. List of questions within research refers to Minister of Education Regulations Number 16/2007 about Teacher Academic and Competence Qualification Standards, the actual competence of elementary school teachers consists of pedagogic, personality, social, and professional competence. Generally, this research found that the highest required teacher competency among class grade is Mastery the skill and application of Arithmetic for Elementary level. Specially, the competency of Mastery the skill and application of Arithmetic for Elementary level. Furthermore, this research also found that teacher in grade 4 need to priority to be trained. They gave higher responds in the questionnaire more than others. The most needed teacher competency is The Concept of Learning Theory in Learning Mathematics. It indicated that as a mathematics teacher in elementary school and madrasah ibtidaiyah level, they should mastery the Learning Theory.

Keywords: training needs assessment, elementary school and madrasah ibtidaiyah Mathematics teachers in Mojokerto City

1 INTRODUCTION

In teaching and learning activities, the influenced factors is the competencies of the educator or teacher. A teacher or educator must have standard competencies, such as pedagogic, personality, social and professional. The teacher's role in learning process is

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to accommodate students so that they will be enthusiasm for learning, generated a sense of criticality, motivated to be independent and the accuracy of intellectual logic, so as to create a teaching and learning atmosphere that conducive (Taqwa et al., 2021).

Teachers play an important role in education carrying out vital tasks namely educating, teaching, guiding, directing, training, assessing, and evaluate students with the responsibility of planning, implementing, and evaluate learning (Law Number 14 of 2005 concerning Teachers and Lecturers). The development of these competencies brings some benefits for students and for teachers themselves. A teacher who is competent in his field can use their skills to improve educational services for student.

There are many ways that can be arranged to improve teacher competency in madrasah ibtidaiyah and elementary schools. One of the efforts that can be done is through workshops, both internally and externally madrasah ibtidaiyah/ elementary school. In developing education and training programs requires knowledge of what education and training needed. A Training Needs Analysis (TNA) is the first step in building a targeted education and training program. TNA serves as a reference for determining the objectives of learning activities, designing education and training programs and evaluations.

Training Needs Analysis (TNA) is a series of sustainable development activities begins with collecting data to determine training needs, so that existing education and training programs can be developed, then it can help the schools to achieve their goals. By assessing an initial analysis in the form of need assessment, it is the right step for the success on the education and training program. Often, schools or offices will develop and implement education and training without first conducting training needs assessment.

Education and training is one of program to develop human resources, especially to develop the intellectual and personality of employees. Umar's findings (2005:12) regarding education and training is a series of efforts to improve employee skills and work methods for current needs, upgrading skills, and also forming attitudes and personalities for prepare employees for future tasks. Correspondingly, Gorda (2004:121) stated that through education and training, companies are make plan to improve and develop attitudes, behaviors, skills and and knowledge, as well as the intellectuality of employees according to the company's goals (Andriyani & Utama, 2017).

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Education and training programs would be better if planned accurately and in accordance with the current projected needs of the organization up to future needs. Employees who receive educational programs and training well, it will be able to complete the job more good too. In his research, Supiatni (2011) stated that the default variable education and training or education and training are variables that provide the most obvious or dominant influence compared to other research variables, namely work compensation. Education and training variables have the most influence significant impact on the work performance of an employee. Research conducted by Moses (2011) indicated that there was a significant impact between education & training with employee performance, as well as reviewing the types, materials and the right training time will improve employee performance (Andriyani & Utama, 2017).

It is stated that there are 2 program objectives training. First, the training is conducted to close the gap between employee skills with a request for office. Second, programs in education and training are possible can create efficiency and effectiveness of employee work to achieve work goals that have been planned by the company. Several things which can be achieved through an education and training program can be detailed as follows (Handoko, 2008):

1. Trainees can work more efficiently.
2. Minimum monitoring because after employees carry out training, then it is projected that there will be fewer errors in the task.
3. Training participants can further develop their skills after attending the training certain. By following the training, employees will develop their potential and his career faster.
4. Reducing labor turnover because employees with long tenures have get training by the company.
5. Training aims to reduce the inability to utilize assets (goods, production, and machines), as employees become more skilled in carrying out their work and reduce the accident rate employees so that the amount of medical insurance costs incurred company can be reduced.

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According to Rae (Sofyandi, 2008), the effectiveness of educational activities and the training provided by the company to its employees can be measured by looking at several aspects, including:

1. The material being taught, the suitability of the content of the material and educational needs and training, so that education and training can improve skills and support employee tasks.
2. The method used, the suitability of the method of education and training with the character of the activity participants and the method according to the learning style participant.
3. Supporting facilities/facilities, namely the place where education is held and exercises can be mastered by the instructor, and according to the type of program education and training.
4. The ability of the instructor, namely the instructor has the attitude and skills delivery that encourages people to learn.
5. The ability of participants, namely education and training can make participants work more creatively, effectively in carrying out their duties.

Training Needs Analysis (TNA) is a series of activities organized in a systematic way to identify knowledge needs, competencies and attitudes of employees expected by company to be improved through training. TNA is the initial foundation in determining the effectiveness and efficiency of a training. By implementing TNA, it will eliminate the gap between the competencies possessed by employees with the competencies required by the company, so that the training/training can be carried out smoothly. The benefits obtained from TNA are preparation of training programs in accordance with the needs of the organization, organizational cost efficiency and relevant to issues/problems in organization, so that participants/employees will be motivated to follow the process learning because it is relevant to their needs.

TNA is an attempt to identify gaps or main issues which must be completed first and must be prioritized through the process skills upgrading activities, namely training (Qamariyah & Nurhadi, 2021). Besides that, the needs will increase or will be more

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diversed over time. The needs assessment is not absolute. It means that the need for training is still temporary. So it is necessary to do another effort to identify other needs from the participants through several approaches and observations. In addition, efforts outlining gaps should be seen from the product not the process. Therefore, identify the problems that are being faced by the participants should be done through the work of participants during the training. That way, the trainer will get information about the type of need priority training that participants want and need, so that they can participate effectively in the training series. Furthermore, the trainer will easily determine the orientation of activities and improvements or development of training activities.

In education, the need for training is not a necessity the teacher as an individual, furthermore it is the demands of the institution/school to find areas/expertise of teachers who still have weaknesses. The training needs do not address the weaknesses of the teacher individually, but related to deficiencies or incompetence that owned by an educational institution (school). Thus, the training needs that taken by the teacher can only be determined based on the institutional planning comprehensive (Qamariyah & Nurhadi, 2021).

Noe explains about needs assessment regarding education and training in an organization are in three levels of analysis (Noe, 2017), namely:

1. Analysis of needs at the organizational level, related to performance organization as a whole.
2. Analysis of needs at the level of the task or job, which affects the types specific tasks in the organization.
3. Analysis of needs at the individual level, which affects performance individual or individual needs.

Training Needs Analysis (TNA) is considered urgent to be implemented as a step to determine the level of competence and knowledge of training participants, by comparing between competencies possessed by participants with what they aspired/expected. For To achieve these goals, TNA can be reached by interviews, questionnaires, and observations (Qamariyah & Nurhadi, 2021). In line with that, no

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wonder that Training Needs Analysis (TNA) assists in selecting the people who appropriate for delivering training programs. The suitable training topics can be selected through a process TNA. A leader or trainer should focus on the needs of trainees before implementing a training program to reduce risk failure (Mahmud et al., 2019).

The previous study about training need assessment conducted by Yousif et al (2019) stated that the Training Needs Assessment (TNA) has three dimensions, namely (1) training (any activity to acquire knowledge, skills or changing attitudes), (2) needs (the gap between the present and the desired or needed), and (3) assessment (process to identify needs and put them in order of priority). Investing in the academic training of educators or teacher can lead to better performance. TNA is a step that appropriate to design a cost-effective training program with clear priorities for achieving knowledge, skills and practice. Yousif's research (2019) was conducted to assess the training needs in Gezira University School of Dentistry in Sudan. Questionnaire distributed to 35 staff. The response rate was 82.9% (29 respondents). Results indicating the urgent training priorities to be carried out are research competence, leadership, health professional education, managerial, community development, and finally teaching and learning skills. Competencies that are not urgent for training are skills computers and communications (Yousif & Ahmed, 2019).

By considering with subjects that are urgent discussed is mathematics. Recognizing mathematical numbers is an activity that have to be introduced at the beginning of students entering class in madrasah ibtidaiyah and elementary schools. Almost all aspects of mathematics lessons from elementary to upper levels will continue include numbers. Understanding of the material about the given number correctly and continuously will make students think logically. It means, students no longer know mathematics as a student to memorize, formulas, as well as algorithm calculations, but it becomes a skill that interesting in solving math cases in everyday life students (Nugraha et al., 2017).

One of these activities that realize teacher competencies in teaching activities is preparing the right training program. One of the urgently step to be done first of all is doing identification of training needs. For this reason, in this research, we will identified the

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needs of Mathematics teachers at the elementary school & madrasah ibtidaiyah level in Mojokerto City in order to competency improvement.

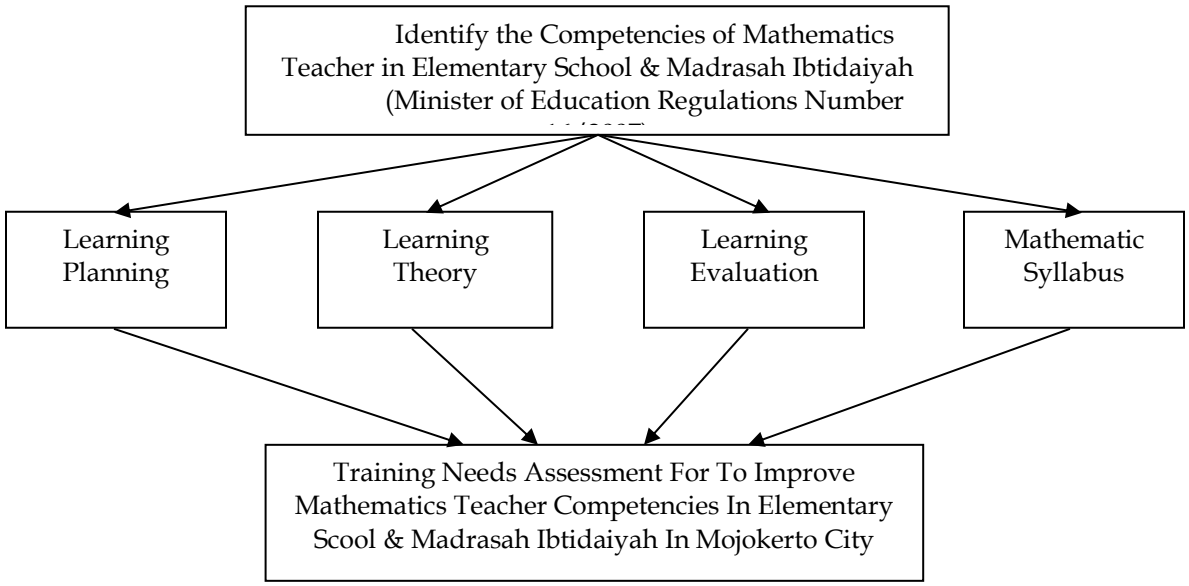
By looking at the background of the problem above, this research was made to answer some of the formulation of the problem, among others:

1. What are the training topics and issue for Mathematics Teachers at the elementary school & madrasah ibtidaiyah level those are urgently needed in order to realize quality learning?
2. What kind of urgently needed sustainable training program (road map) for Mathematics Teachers at elementary school & madrasah ibtidaiyah level, in order to realize mentoring program for teachers among Mathematics Teachers Forum (MGMP) in Mojokerto City?

2 RESEARCH METHOD

This research activities carried out on elementary school & madrasah ibtidaiyah in the City area Mojokerto in semester 2 of the 2021-2022 academic year. Approach used is quantitative through surveys. This survey method is used in order to received information about symptom status at the time the study was conducted. The aim is to describe the existing conditions and situations (Judiani, 2017).

Figure 1. Conceptual Framework



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Data was collected by filling out a questionnaire with a lisf of questions adapted to Minister of Education Regulations Number 16/2007 on Academic Qualification Standards and Teacher Competencies, the actual competencies of elementary school teachers consist of: pedagogic, personality, social, and professional.

Questionnaire that disseminated is in the form of questions or statements containing the main competencies that must be owned by an Mathematics teacher at the elementary school & madrasah ibtidaiyah level. This instrument consists of 15 questions that show indicators of implementation competencies that must be possessed by an Mathematics teacher at elementary school & madrasah ibtidaiyah. Scale The assessment used is a 1-4 Likert Scale with the assumption that the assessment is as follows: 4 = really need; 3 = need; 2 = quite need; and 1 = no need.

Table 1. List of Questionnaire

Criteria	**Mathematics Teacher Competency**
Math Syllabus/ Lesson	1. Understanding of Mathematics for Elementary level 2. Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level 3. Mastery the skill and application of Algebra for Elementary level 4. Mastery the skill and application of Arithmetic for Elementary level 5. Mastery the skill and application of Geometry for Elementary level 6. Mastery the skill and application of Statistics for Elementary level
Learning Planning of Mathematics for Elementary level	7. Mathematics Learning Planning for Elementary level 8. Characteristics of Mathematics Learning for Elementary level 9. Mathematics Learning Strategy for Elementary level 10. Mathematics Learning Skills for Elementary level
Learning Evaluation	11. Understanding and Application of Minimum Completeness Criteria (KMM) 12. Concept of Authentic Assessment In Mathematics Subject 13. Application of Assessment Techniques for Mathematics Subject
Learning Theory	14. The Concept of Learning Theory in Learning Mathematics 15. Implementation of Learning Theory in Learning Mathematics

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Source: Minister of Education Regulations Number 16/2007

Participants or respondents were determined by purposive sampling to fill out those specified questionnaire. Teacher who became the respondent in this study were Mathematics teachers in grades 4, 5 and 6 at elementary school & madrasah ibtidaiyah in Kota Mojokerto as many as 72 people.

The stages of data analysis carried out are : 1) input answers questionnaire into the SPSS 21.0 ; 2) analysis of the validity and reliability of the instrument with SPSS21.0 ; 3) Scoring of questionnaire responses; and 4) classification of needs Mathematics teacher training based on grades 4, 5 and 6.

3 RESULTS AND DISCUSSION

3.1 RESULTS

The respondents of this study were 72 people from 27 In elementary and madrasah ibtidaiyah in Mojokerto City. The number of 39% of respondents are 4th grade teachers, 30% of respondents are 5th grade teachers and the other 31% are 6th grade teachers. The following is an illustration of the distribution of respondents in the form of a chart below.

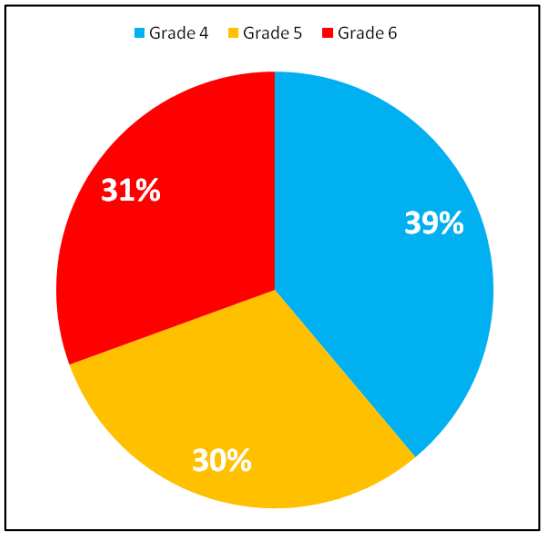

Figure 2. Number of Respondents Based on Graded Classes Taught

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Source: Analysis, 2022

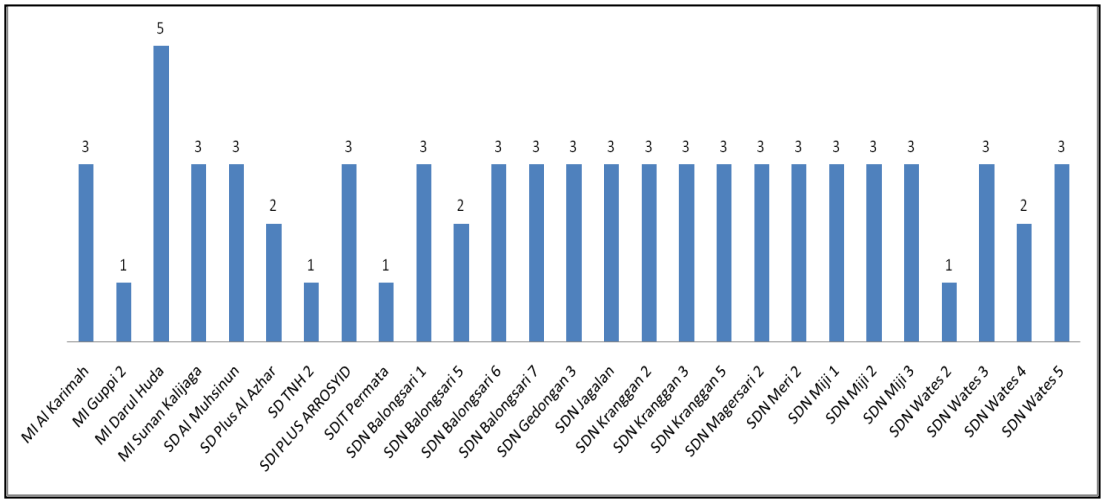

Figure 3. Number of Respondents Based on School Origin

Source: Analysis, 2022

First step of analysis is validity and reliability test. The r_{table} value for =5%, N=72 is 0.2319. Because the value of r_{count} is more than r_{table}, it can be concluded that the data is valid. The basis for making this decision is taken from the results of the analysis of the validity of the instrument with SPSS 21.0. The following table showed the results of the analysis of the validity test:

Table 2. The Instrument Validity Test Results

No.	Variabel	R_{count}	Decision
1	Understanding of Mathematics for Elementary level	0,613	valid
2	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	0,653	valid
3	Mastery the skill and application of Algebra for Elementary level	0,768	valid
4	Mastery the skill and application of Arithmetic for Elementary level	0,727	valid
5	Mastery the skill and application of Geometry for Elementary level	0,721	valid
6	Mastery the skill and application of Statistics for Elementary level	0,639	valid
7	Mathematics Learning Planning for Elementary level	0,654	valid
8	Characteristics of Mathematics Learning for Elementary level	0,753	valid

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No.	Variabel	R_{count}	Decision
9	Mathematics Learning Strategy for Elementary level	0,595	valid
10	Mathematics Learning Skills for Elementary level	0,636	valid
11	Understanding and Application of Minimum Completeness Criteria (KMM)	0,565	valid
12	Concept of Authentic Assessment In Mathematics Subject	0,625	valid
13	Application of Assessment Techniques for Mathematics Subject	0,497	valid
14	The Concept of Learning Theory in Learning Mathematics	0,725	valid
15	Implementation of Learning Theory in Learning Mathematics	0,731	valid

Source: Analysis, 2022

The results of the reliability test with SPSS 21.0 stated that Cronbach's Alpha value was 0.930. Because the value of Cronbach's Alpha is higher than 0.6 , it can be concluded that it is reliable.

Reliability Statistics

Cronbach's Alpha	N of Items
,930	15

Discussion of research results regarding the identification of training needs in order to improve the teaching abilities of elementary school and madrasah ibtidaiyah Mathematics teachers in Mojokerto City. The aspects of the identified needs include training needs for: (1) the ability to plan teaching, (2) the ability to implement teaching, (3) the ability to evaluate, and (4) the ability to master the material/ syllabus.

Table 3. The Competency of Mathematics Teachers for Elementary School and Madrasah Ibtidaiyah in Mojokerto City that Needs to be Improved

No.	Competency	Not Needed		Quite Needed		Needed		Really Needed	
		f	%	f	%	f	%	f	%
1	Mastery the skill and application of Arithmetic for Elementary level	1	1%	5	7%	25	35 %	41	57%
2	Mathematics Learning Strategy for Elementary level	0	0%	5	7%	26	36 %	41	57%
3	Mathematics Learning Skills for Elementary level	0	0%	4	6%	27	38 %	41	57%

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No.	Competency	Not Needed		Quite Needed		Needed		Really Needed	
		f	%	f	%	f	%	f	%
4	Implementation of Learning Theory in Learning Mathematics	1	1%	5	7%	26	36%	40	56%
5	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	1	1%	4	6%	29	40%	38	53%
6	Mastery the skill and application of Algebra for Elementary level	1	1%	3	4%	30	42%	38	53%
7	The Concept of Learning Theory in Learning Mathematics	1	1%	6	8%	27	38%	38	53%
8	Mastery the skill and application of Statistics for Elementary level	2	3%	4	6%	29	40%	37	51%
9	Application of Assessment Techniques for Mathematics Subject	0	0%	7	10%	28	39%	37	51%
10	Mastery the skill and application of Geometry for Elementary level	1	1%	6	8%	29	40%	36	50%
11	Concept of Authentic Assessment In Mathematics Subject	0	0%	3	4%	35	49%	34	47%
12	Characteristics of Mathematics Learning for Elementary level	0	0%	5	7%	34	47%	33	46%
13	Mathematics Learning Planning for Elementary level	0	0%	6	8%	35	49%	31	43%
14	Understanding of Mathematics for Elementary level	1	1%	11	15%	32	44%	28	39%
15	Understanding and Application of Minimum Completeness Criteria (KMM)	2	3%	7	10%	42	58%	21	29%

Source: Analysis, 2021

Based on the level of respondents' needs, the types of training that are needed by more than 50% of elementary school and madrasah ibtidaiyah Mathematics teachers in Mojokerto City are Mastery and Application of Elementary School Arithmetic (57%), Mathematics Learning Strategies for Elementary Level (57%), Mathematics Learning Skills for Elementary Level (57%), Application of Learning Theory in Mathematics Learning (56%), Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary Level (53%), Mastery and Application of Algebra for Elementary Level (53%), Concept of Learning Theory in Mathematics Learning (53%),

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Mastery and Application of Statistics for Elementary Level (51%), and Application of Assessment Techniques for Mathematics Subject (51%)

Table 4. The Required Competencies for Mathematics Teachers in Grade 4 at Elementay School and Madrasah Ibtidaiyah in Mojokerto City

No.	Competency	Really Needed	
		f	%
1	Mathematics Learning Planning for Elementary level	18	64%
2	Mastery the skill and application of Arithmetic for Elementary level	18	64%
3	Mathematics Learning Strategy for Elementary level	18	64%
4	Mathematics Learning Skills for Elementary level	18	64%
5	Application of Assessment Techniques for Mathematics Subject	17	61%
6	Mastery the skill and application of Geometry for Elementary level	17	61%
7	Mastery the skill and application of Algebra for Elementary level	16	57%
8	Characteristics of Mathematics Learning for Elementary level	15	54%
9	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	15	54%
10	Mastery the skill and application of Statistics for Elementary level	14	50%
11	Understanding of Mathematics for Elementary level	14	50%
12	The Concept of Learning Theory in Learning Mathematics	12	43%
13	Implementation of Learning Theory in Learning Mathematics	10	36%
14	Concept of Authentic Assessment In Mathematics Subject	10	36%
15	Understanding and Application of Minimum Completeness Criteria (KMM)	8	29%

Source: Analysis, 2021

Based on the grade level taught, there are more than 60% demand that really need training for competency of Mathematics Learning Planning for Elementary level (64%); Mastery the skill and application of Arithmetic for Elementary level (64%); Mathematics Learning Strategy for Elementary level (64%); Mathematics Learning Skills for Elementary level (64%); Application of Assessment Techniques for Mathematics Subject (61%) and also Mastery the skill and application of Geometry for Elementary level (61%).

Table 5. The Required Competencies for Mathematics Teachers in Grade 5 at Elementay School and Madrasah Ibtidaiyah in Mojokerto City

No.	Competency	Really Needed	
		f	%
1	Mastery the skill and application of Geometry for Elementary level	14	64%

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No.	Competency	Really Needed	
		f	%
2	Characteristics of Mathematics Learning for Elementary level	14	64%
3	Mastery the skill and application of Statistics for Elementary level	14	64%
4	Mathematics Learning Skills for Elementary level	12	55%
5	Application of Assessment Techniques for Mathematics Subject	12	55%
6	Implementation of Learning Theory in Learning Mathematics	12	55%
7	Mastery the skill and application of Algebra for Elementary level	11	50%
8	Mathematics Learning Planning for Elementary level	10	45%
9	Mastery the skill and application of Arithmetic for Elementary level	10	45%
10	Understanding of Mathematics for Elementary level	10	45%
11	Understanding and Application of Minimum Completeness Criteria (KMM)	10	45%
12	Mathematics Learning Strategy for Elementary level	9	41%
13	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	9	41%
14	Concept of Authentic Assessment In Mathematics Subject	8	36%
15	The Concept of Learning Theory in Learning Mathematics	7	32%

Source: Analysis, 2021

The results of the cross table above, stated that more than 60% of Grade 5 math teachers responded that they really needed training in Mastery the skill and application of Geometry for Elementary level (64%); Characteristics of Mathematics Learning for Elementary level (64%); and Mastery the skill and application of Statistics for Elementary level (64%).

Table 6. The Required Competencies for Mathematics Teachers in Grade 6 at Elementay School and Madrasah Ibtidaiyah in Mojokerto City

No.	Competency	Really Needed	
		f	%
1	Mastery the skill and application of Statistics for Elementary level	13	59%
2	Application of Assessment Techniques for Mathematics Subject	12	55%
3	Mathematics Learning Skills for Elementary level	11	50%
4	Mastery the skill and application of Algebra for Elementary level	10	45%
5	Mathematics Learning Planning for Elementary level	10	45%
6	Mastery the skill and application of Arithmetic for Elementary level	10	45%
7	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	10	45%
8	Mastery the skill and application of Geometry for Elementary level	9	41%
9	Implementation of Learning Theory in Learning Mathematics	9	41%

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No.	Competency	Really Needed	
		f	%
10	Understanding of Mathematics for Elementary level	9	41%
11	Understanding and Application of Minimum Completeness Criteria (KMM)	9	41%
12	Mathematics Learning Strategy for Elementary level	9	41%
13	The Concept of Learning Theory in Learning Mathematics	9	41%
14	Characteristics of Mathematics Learning for Elementary level	8	36%
15	Concept of Authentic Assessment In Mathematics Subject	3	14%

Source: Analysis, 2021

Table 6 above shows the need for training for Grade 6 math teachers. There are more than 50% math teachers in grade 6 responded that they really needed training program in Mastery the skill and application of Statistics for Elementary level (59%) and Application of Assessment Techniques for Mathematics Subject (55%).

From Table 4, Table 5 and Table 6, then the level of training needs is weighted based on the type of training and the level of teachers who need to be trained. The following is the result of weighting the level of training needs:

Table 7. Cross-tabulation Results of Weighting the Types of Competency Training Needs for Mathematics Teachers at Elementary School and Madrasah Ibtidaiyah in Mojokerto City

No.	Competency	Priority Score graded by Teachers			Score/ Weight
		4	5	6	
1	The Concept of Learning Theory in Learning Mathematics	12	15	13	40
2	Mastery the skill and application of Statistics for Elementary level	10	14	12	36
3	Understanding of Mathematics for Elementary level	11	13	11	35
4	Mastery the skill and application of Algebra for Elementary level	7	10	15	32
5	Implementation of Learning Theory in Learning Mathematics	14	7	10	31
6	Concept of Authentic Assessment In Mathematics Subject	13	11	5	29
7	Characteristics of Mathematics Learning for Elementary level	9	5	14	28

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No.	Competency	Priority Score graded by Teachers			Score/ Weight
		4	5	6	
8	Mastery of Facts, Concepts, Principles and Skills/Procedures of Mathematics for Elementary level	8	6	9	23
9	Understanding and Application of Minimum Completeness Criteria (KMM)	15	3	1	19
10	Mathematics Learning Skills for Elementary level	1	12	6	19
11	Mastery the skill and application of Geometry for Elementary level	5	4	8	17
12	Mastery the skill and application of Arithmetic for Elementary level	2	9	3	14
13	Mathematics Learning Planning for Elementary level	3	8	2	13
14	Application of Assessment Techniques for Mathematics Subject	6	2	4	12
15	Mathematics Learning Strategy for Elementary level	4	1	7	12

Source: Analysis, 2021

Table 7 was analyzed by teachers from each grade class. They gave priority score 1 to 15 to each training topic or competency. The score become the weight or level urgency of upcoming training topic. From that table, it was conclude that most requested topic or competency to be trained for the next training is The Concept of Learning Theory in Learning Mathematics.

3.2 DISCUSSION

Generally, this research found that the highest required teacher competency among class grade is Mastery the skill and application of Arithmetic for Elementary level. It means that as a mathematics teacher in elementary school and madrasah ibtidaiyah level, they should mastery the Mathematics Syllabus before deliver the lesson to students. Specially, the competency of Mastery the skill and application of Arithmetic for Elementary level.

Furthermore, this research also found that teacher in grade 4 need to priority to be trained. They gave higher responds in the questionnaire more than others. The most

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needed teacher competency is The Concept of Learning Theory in Learning Mathematics. It indicated that as a mathematics teacher in elementary school and madrasah ibtidaiyah level, they should mastery the Learning Theory.

For upcoming proposals, a sustainable training program or Road Map of Improving the Competence of Mathematics Teachers for elementary school and madrasah ibtidaiyah can be recommended based on the level of urgency, namely training:

1. The Concept of Learning Theory in Learning Mathematics (Learning Theory)
2. Mastery the skill and application of Statistics for Elementary level (Mathematics Syllabus)
3. Understanding of Mathematics for Elementary level (Mathematics Syllabus)
4. Mastery the skill and application of Algebra for Elementary level (Mathematics Syllabus)
5. Implementation of Learning Theory in Learning Mathematics (Learning Theory)
6. Mastery the skill and application of Arithmetic for Elementary level (Mathematics Syllabus)

In line with the research of Mahmud et al. (2019), that the suitable training topics can be selected through training need assessment. A leader or trainer should focus on the needs of trainees before implementing a training program to reduce risk failure (Mahmud et al., 2019).

4 CONCLUSION

The results of the study concluded that mathematics teachers at elementary school and madrasah ibtidaiyah in Mojokerto City need training to increase their competencies or skill. The type of Mathematics teacher competency training that is most needed is Teaching Planning. Based on the type of enthusiast, grade 4 teachers responded that they urgently needed training to improve the competence of Mathematics subjects. However, of the total number, teachers in grades 5 and 6 also responded to the high

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interest and need for the training. The type of training to increase competence that is very much needed is training in Mathematics Syllabus and Learning Theory.

As a proposal for the Education Office of Mojokerto City, it can be proposed the establishment of a Training Road Map so that efforts to improve the competence of mathematics teachers' skill, were more effective and sustainable. Therefore, the proposed training that can be implemented in the next period is training for Mathematics Teachers at elementary school and madrasah ibtidaiyah, such are The Concept of Learning Theory in Learning Mathematics; Mastery the skill and application of Statistics for Elementary level; Understanding of Mathematics for Elementary level; Mastery the skill and application of Algebra for Elementary level; Implementation of Learning Theory in Learning Mathematics; and Mastery the skill and application of Arithmetic for Elementary level. The Education Office of Mojokerto City is advised to cooperate with Mathematics Teachers Forum (MGMP) in conducting training.

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