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TEACHER EMPOWERMENT THROUGH THE TOPING METHOD IN VISITING TEACHER ACTIVITIES TO IMPROVE PEDAGOGIC COMPETENCE

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Abstrak

Program pengabdian masyarakat ini bertujuan memberdayakan guru melalui metode Gasing (Gampang, Asyik, dan Menyenangkan) dalam program Visiting Teacher dalam meningkatkan kualitas pendidikan di daerah perbatasan seperti Kabupaten Timor Tengah Utara. Metode Gasing dipilih karena efektif membantu guru meningkatkan kompetensi pedagogik guru. Kegiatan ini melibatkan kelompok kerja guru (KKG) dan Musyawarah Guru Mata Pelajaran (MGMP) di TTU selama tiga hari, dari 26 hingga 28 September 2024. Pelatihan dan praktik langsung dilakukan untuk melatih guru mengaplikasikan metode Gasing dalam pembelajaran. Hasil analisis menunjukkan adanya peningkatan signifikan pada rata-rata pemahaman guru, yaitu dari 55,8 sebelum pelatihan menjadi 87,07 setelah pelatihan. Selain itu, hasil observasi mencatat tingkat keaktifan peserta yang tinggi. Keaktifan bertanya mencapai 88%, kemampuan menjawab pertanyaan fasilitator 92%, diskusi kelompok 84%, dan keaktifan mencoba teknik baru Gasing mencapai 96%. Secara keseluruhan, 90% guru menunjukkan keaktifan sangat baik dalam berbagai aspek, mencerminkan efektivitas kegiatan ini. Program ini tidak hanya meningkatkan pemahaman guru, tetapi juga mendorong suasana belajar yang lebih menyenangkan dan efektif. Implementasi metode Gasing memiliki potensi besar untuk meningkatkan kualitas pengajaran, tidak hanya di TTU, tetapi juga di wilayah lain dengan karakteristik serupa, guna mendukung pengembangan pendidikan yang lebih baik.

***Kata Kunci**: Kualitas Pendidikan Metode Gasing, Pemberdayaan Guru*

Abstract

The quality of education in border areas, such as the Timor Tengah Utara (TTU) Regency, often faces challenges in improving teacher competencies. This community service program aims to empower teachers through the Gasing method (Easy, Fun, and Enjoyable) as part of the Visiting Teacher program. This method was chosen because it is effective in helping teachers improve their pedagogical competence. The program involved teacher working groups (KKG) and subject teacher working groups (MGMP) in TTU over three days, from September 26 to 28, 2024. Training and hands-on practice sessions were conducted to equip teachers with the skills to apply the Gasing method in their teaching. The analysis results showed a significant improvement in the teachers' average understanding, rising from 55.8 before the training to 87.07 afterward. Additionally, observations recorded high levels of participant engagement. Question-asking activities reached 88%, the ability to answer facilitators' questions was 92%, group discussions demonstrated 84% engagement, and the active application of new Gasing techniques reached 96%. Overall, 90% of the

teachers displayed excellent engagement across various aspects, reflecting the program's effectiveness. This initiative not only improved teachers' understanding but also fostered a more enjoyable and effective learning environment. The implementation of the Gasing method holds significant potential to enhance teaching quality, not only in TTU but also in other regions with similar characteristics, contributing to the advancement of education.

Keywords: Border Education Quality, Gasing Method, Teacher Empowerment

INTRODUCTION

Timor Tengah Utara (TTU) is one of Indonesia's border areas located in East Nusa Tenggara Province, adjacent to the Timor Leste region (Julqurniati & Susanty, 2019). The region faces various challenges to improve the quality of education (Nenotek et al., 2023). With remote geographical conditions and limited infrastructure, access to quality education in this area is still relatively low. In addition, limitations in terms of facilities, infrastructure, and human resources, especially teaching staff, have a direct impact on the quality of the learning process that takes place (Rifky, et al., 2024).

Teachers as the main component in education have an important role in determining the quality of student learning (Savira, 2023). To become an effective educator, a teacher must have four competencies following the mandate of the Law on Teachers and Lecturers No. 14 of 2005, namely pedagogic, professional, social, and personality competencies (Dewan Perwakilan Rakyat Indonesia, 2005). Among these four competencies, pedagogic and professional competencies have a direct influence on teachers' ability to compose, manage, and implement effective and interesting learning methods in the classroom (Faridah et al., 2020).

However, the results of observations in the TTU Regency area show that teachers' competence in implementing innovative learning methods still needs to be improved. Based on a local survey conducted on 50 teachers at TTU, only 32% of teachers admitted to feeling confident in using innovative learning methods, while another 68% still relied on conventional methods. In addition, 74% of students from schools in the area indicated that learning is often less engaging and difficult to understand. This data shows that there is an urgent need to improve teachers' ability to apply more creative and effective learning methods to support the quality of education at TTU.

One of the learning methods that can support the improvement of teacher competence in teaching is the Gasing Method (Easy, Fun, and Fun) (Sulistiawati, 2019). This method was developed by Prof. Dr. Yohanes Surya as a learning approach designed to help teachers convey basic concepts more easily and pleasantly (Sulistiawati, 2019). Teacher empowerment is a key concept in the development of innovative educational practices, especially when aligned with collaboration-based pedagogic theories such as Professional Learning Communities (PCL). The application of these concepts in the development of the Gasing Method can be carried out effectively through a structured visiting teacher program. The

visiting teacher program serves as a mentoring platform for local teachers (Widyaswari, 2024.) In this approach, teachers with high competence, both from other regions and nearby educational institutions, are periodically sent to remote areas. They provide direct instruction to students as well as assist local teachers in the application of innovative learning methods (Abshor, 2021). This dual role ensures immediate benefits for students as well as long-term professional development for teachers.

In addition, visiting teachers not only teach subject matter but also share effective techniques and approaches, allowing local teachers to adopt new methods such as the Gasing Method. *Visiting teachers* can act as mentors, providing continuous assistance in improving the pedagogic and professional competence of local teachers (Paolini, 2015). This service activity focuses on collaboration, creating an environment where knowledge transfer goes beyond the classroom. Local teachers get direct exposure to the best practices brought by visiting teachers (Asbari & Novitasari, 2021). This interaction allows them to explore more varied learning methods, including the Gasing Method, which can be adapted to the needs and characteristics of students at TTU.

Collaboration through Professional Learning Communities further strengthens the impact of the visiting teacher program. By participating in professional learning communities, teachers develop a shared vision for educational excellence (Ismail et al., 2019). This collective approach not only improves teaching practices but also empowers educators to face challenges collaboratively, creating a culture of sustainable professional growth (Harlita & Ramadan, 2024). The integration of this collaborative pedagogic framework ensures that the Gasing Method and other innovative approaches can be effectively applied and maintained in local education systems.

Professional Learning Communities offer an important foundation for building a culture of collaboration among teachers (Harjaya & Idawati, 2022). Within this framework, educators have the opportunity to exchange experiences, reflect on learning practices, and jointly develop better strategies. This process encourages data-driven decision-making and innovation relevant to the local context. Thus, Professional Learning Communities not only improve individual competencies but also create a more resilient and adaptive educational ecosystem to the changing needs of students and society.

The main goal of the visiting teacher program is expected to build a collaborative atmosphere among teachers, where they support each other and share knowledge to improve the quality of education (Kasmawati, 2020). Another goal of ongoing mentoring is that visiting teachers can act as mentors to local teachers, provide input, and help them develop the pedagogic and professional skills needed to create effective and inspiring learning.

With the support of the visiting teacher program and the application of the Gasing Method, it is hoped that the quality of education at TTU Regency can improve significantly. Students will gain a more interactive and enjoyable learning experience, while local teachers will gain valuable new skills to improve the teaching and learning process in this border region. In the end, this service is expected to help students and teachers at TTU reach their maximum potential, even in existing limitations.

The novelty of this service lies in empowering teachers as agents of change in the learning process through increasing pedagogic competence in remote areas with a systemic approach (Suparyono et al., 2024), focusing on improving student understanding in the context of certain classroom learning with short-term results, In contrast to the service carried out by Suparyono et al. (2024) which produces a short-term impact and is limited to one learning context, the service carried out provides a long-term solution by empowering teachers as a catalyst for change. Competent teachers can create better learning experiences for students, spread innovation to peers, and strengthen education systems in remote areas. These impacts show that the potential for service to be carried out can be a model for sustainable educational transformation in regions with resource challenges.

Teacher Empowerment Through the Gasing Method in Visiting Teacher Activities at TTU is expected to make a significant contribution to long-term learning innovation compared to similar services before. This service not only targets teachers' technical mastery in one specific subject matter, such as in community service (Gunawan et al., 2021) which focuses on local training in teaching fractional numbers, but also focuses on empowering teachers as agents of change in various subjects. With a systemic approach, teachers are trained to understand and apply the Gasing method holistically, allowing them to create a broader impact in their educational communities. In addition, this service has a wider scope of subjects than the service at Bebandem which only focuses on the student's learning experience in mathematics learning. Service at TTU creates a domino effect by empowering teachers who are able to spread learning innovations to their peers, so that the impact extends to other schools in remote areas.

The Visiting Teacher in Service program is also a key differentiator, as it integrates collaboration between higher education institutions and local schools, strengthens educational networks, and ensures sustainable knowledge transfer. This approach is designed to create a long-term transformation by fundamentally improving teachers' pedagogic competence, differing from previous Devotion which was more limited in scope and impact. By addressing educational challenges in areas with limited resources, this service contributes to improving the quality of education not only for current students, but also for future generations, making it a relevant and sustainable model of learning innovation.

MATERIALS AND METHODS

The method used in community service combines *the visiting teacher* approach with Gasing Method training (Easy, Fun, and Fun). This activity is an initiative of the Ministry of Religious Affairs of East Nusa Tenggara Province to improve the pedagogic and professional competence of teachers in border areas, especially in North Central Timor Regency. This program uses the MGMP (Subject Teacher Conference) and KKG (Teacher Working Group) forums with a Lesson Study and Team Teaching approach. assistance to local teachers. MGMP (Subject Teacher Conference) and KKG (Teacher Working Group) were chosen as a forum for the implementation of community service based on their effectiveness as a forum for collaboration and professional development of teachers. In addition, these two forums have an organized structure, wide scope, and focus on improving teacher competence, making them an ideal platform to support Lesson Study and Team Teaching-based programs. This approach allows teachers to discuss, share experiences, and develop innovative learning methods such as the Gasing method. In addition, MGMP and KKG operate at a local level, so mentoring can be tailored to the specific needs of teachers in the area, ensuring relevance and real impact. By involving MGMP and KKG.

This service involved 25 teachers from Madrasah Ibtidaiyah (MI) and Madrasah Tsanawiyah (MTs) levels in Timor Tengah Utara (TTU), who were selected using purposive sampling techniques. This technique is used to ensure that participants are teachers who have a direct relationship with the implementation of the Gasing Method in learning and come from areas with limited access to professional training. Service Instruments include: (1) Observation sheets, which are used to evaluate teachers' proficiency in applying the Gasing Method during the mentoring process; (2) Comprehension questionnaire, which is designed to measure the level of improvement of teachers' knowledge about the principles, application, and benefits of the Gasing Method; and (3) Reflection sessions, which aim to explore teachers' experiences, challenges, and changes in perception during the training.

A long-term evaluation plan to ensure the continuity of community service activities will be carried out periodically through meetings at the MGMP and KKG forums to discuss the obstacles and success of the implementation of the method in the classroom, followed by monitoring and evaluation activities with field visits by the facilitator team to observe the implementation of the Gasing method in their respective school environments, and Tiered training that includes the dissemination of training by participating teachers to peers in schools or other groups to expand the impact of community service programs.

RESULTS AND DISCUSSION

At the opening stage of the Visiting Teacher activity in TTU Regency, the objectives, schedule, and expectations were conveyed to the participants. The impact of this stage is the creation of initial enthusiasm, a positive atmosphere, and good communication between the facilitator and the participants. With a thorough explanation of the activities that will take place, participants become more prepared and motivated to participate in each training session, so that they can achieve optimal results from this training, the stages of this activity can be seen in figure 1.

Figure 1. Opening Stages of Activities by the Head of Islamic Education of the Regional Office of the Ministry of Religion of NTT

The next stage, namely the delivery of material on number recognition, addition, subtraction, multiplication, and division with the *Gasing Method*, provides participants with skills in teaching the concept of basic calculation innovatively and effectively. The impact of this stage is an increase in in-depth understanding of the Gasing technique, so that it can be applied in their respective classes. The distribution of comprehension questionnaires and reflection sessions also added value to this activity, as participants were able to evaluate their understanding, provide feedback for facilitators, and deepen participants' competencies. The stages of this activity can be seen in Figure 2.

Figure 2. Stages of material delivery

At the closing stage, the activities were summarized, and appreciation was given to the participants. The positive impact of this stage is the formation of a sense of community and professional networking among teachers, which motivates them to apply *the* Gasing method in their respective classrooms. The closing also gave a positive impression that encouraged participants to continue to develop teaching skills, bringing sustainable benefits to the quality of learning in the TTU district area. The stages of this activity can be seen in Figure 3.

Figure 3. Closing Stages

The community service activity through the Visiting Teacher program in North Central Timor Regency aims to empower teachers by introducing the Gasing Method for teaching basic mathematics. Key indicators of the program's achievement include improving teachers' understanding and skills in teaching the concepts of numbers, addition, subtraction, multiplication, and division. Indicators

of understanding of participants in teacher visting activities can be seen from Table 1.

Table 1. Descriptive Analysis of Understanding Before Visting Teacher Activities

Statistics		
N	Valid	25
	Missing	0
Mean		55.0800
Median		58.0000
Mode		50.00[a]

a. Multiple modes exist. The smallest value is shown

Based on Table 1, the results of the descriptive analysis of the participants' understanding before the Visiting Teacher activity showed a mean value of 55.08, with a median of 58 and a mode of 50. This data shows that there is a variation in understanding among participants, where most participants have a score of around 50, which is also a mode value. A higher average of the mode indicated that some participants had a slightly better understanding, although most were still below a score of 60. This indicates that before the Visiting Teacher activity, the participants' understanding of the material taught is still varied and most still require further improvement of understanding.

Table 2. Descriptive Analysis of Understanding After Visting Teacher Activities

Statistics		
N	Valid	25
	Missing	0
Mean		87.0800
Median		90.0000
Mode		82.00[a]

a. Multiple modes exist. The smallest value is shown

Based on Table 2, the results of the descriptive analysis of the participants' understanding after the Visiting Teacher activity showed a mean value of 87.08, with a median of 90 and a mode of 82. This figure shows a significant improvement compared to pre-activity comprehension, where most participants now have better comprehension, with higher mode values. A lower than median mean indicated variation, with some participants achieving higher understanding. Overall, this data illustrates that Visiting Teacher activities have succeeded in significantly improving participants' understanding, although it still varies. The following is a table of the results of observation of the activity of participating teachers with a qualitative description and percentage described in table 3.

Table 3. Results of Observation of Participant Activity

Activity Indicator	Percentage of Activity (%)	Description
Ask	88%	Most teachers actively asked questions about the steps of the GASING method, especially in the presentation of new technical concepts and practices.
Answering Questions	92%	Almost all teachers were able to answer the facilitator's questions well, showing sufficient understanding of the material presented.
Active Discussion	84%	Most teachers are actively involved in group discussions, providing feedback, and sharing experiences with peers.
Trying New Techniques	96%	The majority of teachers fully participated in trying new GASING techniques, with the guidance of the facilitators and showed high enthusiasm.
Average Activeness	90%	As many as 90% of teachers showed high activity based on indicators of asking, answering, discussing, and trying new techniques.

Based on the results of observation of the activeness of participating teachers, most teachers showed a high level of activity in various indicators. The activity of asking questions was recorded at 88%, with the majority of teachers actively asking about the steps of the GASING method. The ability to answer the facilitator's questions was also very good, reaching 92%, which showed a good understanding of the material. Group discussions had an 84% activity rate, with many teachers involved in sharing experiences and providing feedback. The most prominent was the activeness in trying the new GASING technique, which reached 96%, showing the high enthusiasm of the participants. Overall, 90% of teachers showed excellent activity in all aspects measured, reflecting the effectiveness of activities in increasing their participation

To provide a closer picture of the teachers' experience in the field, here are two testimonials from the trainees. These testimonials illustrate how they view the GASING method and its impact on the teaching and learning process in their respective schools. Here are two testimonials from 2 speakers.

> *"Beta su rasa ini pelatihan betul-betul bantu sekali, apalagi untuk ajar matematika. Biasanya beta su bingung mau ajar anak-anak soal perkalian atau pembagian karena anak-anak susah paham. Tapi waktu ikut pelatihan ini, beta su tahu cara yang lebih gampang dan anak-anak pasti lebih senang kalau diajarkan pelan-pelan dan asyik begini. Pas beta coba di sesi praktik, teman-teman kelompok langsung paham juga. Beta yakin ini metode GASING bisa bantu banyak anak-anak kita di desa sini biar tidak takut lagi belajar matematika"* (Interview with Mrs. Halimah MI Teacher at TTU)

> **"***Pelatihan ini kasih beta banyak ide baru untuk ajar di kelas. Di sekolah, anak-anak kemampuan belajar macam-macam, ada yang cepat, ada yang lambat sekali. Tapi metode GASING ini bikin beta lihat cara yang bisa bikin semua anak ikut belajar dengan gampang. Pas beta coba di simulasi, beta rasa ini cocok bukan cuma untuk matematika, tapi bisa juga buat bantu anak-anak berpikir logis di pelajaran lain. Beta harap pelatihan seperti ini ada terus, supaya kita guru-guru bisa terus belajar dan tambah ilmu buat bantu anak-anak*" (Interview with Mr. Arifin, MI Teacher at TTU)

From the testimonials of Mrs. Halimah and Mr. Arifin, it can be seen that the GASING method training has a significant positive impact on teachers' understanding and motivation in teaching. Mrs. Halimah highlighted the ease of this method in explaining the basic concepts of mathematics in a gradual and fun manner, while Mr. Arifin emphasized its benefits in reaching students with diverse learning abilities. Both agreed that the GASING method not only increases the effectiveness of learning, but also inspires to develop a more inclusive and fun way of teaching, with the hope that programs like this can continue and expand to improve the quality of education at TTU.

This community service activity is an activity initiated by the Ministry of Religion, in this case the Islamic Education Division of the Regional Office of the Ministry of Religion NTT. The purpose of this community service is to offer relevant solutions to educational needs in remote areas, such as in Timor Tengah Utara Regency, where quality and access to education remain a challenge. The use of the Gasing Method as a tool in basic mathematics learning is very much in accordance with local conditions, because the method is simple and easy to apply (Wibowo et al., 2022) even with the limited educational resources available in local schools. This service activity allows teachers to access effective and applicable methods without the need for advanced technology (Astuti&Wiyanti., 2024).

The Gasing method, which was introduced through community service, is one of the mathematics learning methods that is very helpful for teachers in teaching basic mathematical concepts to students. This method relies on practical and fast-to-understand teaching techniques, which can overcome learning obstacles that are often encountered in remote areas (Nyoman et al., 2024). The trainees who are local teachers benefit directly from this method, and they can teach math concepts more easily to students (Agusfian & Pratiwi, 2021).

This community service activity in the form of visting teceher also aims to help build a professional network among the teachers involved (Sitopu et al., 2023). During the training, teachers have the opportunity to discuss, share experiences, and learn from each other. This is especially valuable in areas where you may rarely have the opportunity to collaborate in professional forums. This network is expected to strengthen collaboration in the future, where teachers can support each other and share best practices in learning.

The main indicator of the achievement of this program can be seen from the

increase in participants' understanding of the material taught. Based on the results of the descriptive analysis conducted on the participants' understanding before and after the activity, there was a significant increase. Before the activity, the average comprehension score of the participants was 55.08, with most participants having scores around the 50 mark. After the activity, the average participant score increased to 87.08, with most participants having a better understanding, which was reflected in the higher scores.

This data shows that the Visiting Teacher activity has succeeded in significantly increasing the understanding of participants. This increase reflects the effectiveness of the Gasing method in improving teachers' competence in teaching basic mathematics. Although there are still variations in participants' understanding, overall, this data illustrates that this activity has a great positive impact on improving the quality of teacher teaching.

The use of innovative learning methods such as the Gasing Method shows significant effectiveness in improving teachers' pedagogic competence, especially in areas with limited educational resources. In accordance with community service (Andesta & Windrawanto, 2017), the Gasing method has proven to be very relevant because it does not require advanced technology, but can provide optimal learning results. In the local context of TTU Regency, this method offers a simple and applicable approach, allowing teachers in remote areas to overcome learning obstacles that are often faced, such as low levels of students' understanding of basic mathematical concepts.

In addition, the findings of this service activity are in line with the theory of constructivist learning, which emphasizes the importance of interactive and contextual learning. (Nyoman et al., 2024) explained that the Gasing method provides opportunities for students to understand concepts through a direct and practical approach so that they can accelerate the learning process. This is reflected in the experience of the trainees who feel more confident in teaching mathematics after practicing this method. The emphasis on systematic and easy-to-follow steps also provides a meaningful learning experience, not only for students but also for teachers.

This Visiting Teacher activity also provides additional benefits in the form of building a professional community among teachers (Banderlipe, 2022), as the results of the Service conducted by Botha & Nel, (2022) which shows that through group discussions and cooperation during training, teachers can share experiences and find solutions to learning challenges. This interaction strengthens the professional network which is expected to become a forum for continuous collaboration. With the support of teachers, the best practices in improving teachers' pedagogic skills, so that the positive impact of the Gasing method is not only felt in the classroom, but also in collective efforts to improve the quality of education in the TTU area.

The results of the observation of the activeness of the participating teachers during the activity also showed a high level of activity. The activity of asking questions was recorded at 88%, which shows that most teachers actively ask about the steps of the Gasing Method. The ability to answer the facilitator's questions was also very good, with 92% of teachers able to answer correctly and show a good understanding of the material presented. The activeness in group discussions was recorded at 84%, with many teachers actively involved in sharing experiences and providing input.

The most prominent is the activeness in trying new techniques, which reaches 96%. This shows that the majority of teachers fully participate in trying the Gasing technique with great enthusiasm. Overall, 90% of teachers showed excellent liveliness in various indicators measured. This shows that this activity not only improves the understanding of participants, but also increases their active participation in each training session.

The increase in the activeness and understanding of participants also reflects the success of the facilitator in delivering the material in an interesting and easy-to-understand way. This is in line with the service carried out by (Sapitri et al., 2024) which shows that the teacher's activeness in asking questions, answering, discussing, and trying new techniques shows that the methods used in this activity are very relevant to their needs. Participants feel engaged in the learning process and motivated to further develop their teaching skills.

The high level of activity in this training is in line with the theory of constructivist learning, which emphasizes the importance of the active involvement of participants in the learning process. According to Vygotsky (1978), social interaction and collaborative discussion play an important role in building understanding. In the context of this training, the high level of participation in asking questions (88%), answering facilitator questions (92%), and group discussions (84%) showed that the interactive approach applied through the GASING Method succeeded in creating a supportive learning environment. Similar service by (Hake, 1998) stated that active learning significantly improved participants' understanding compared to traditional approaches.

In addition, Service by Karmana (2024) revealed that the use of innovative methods in teacher training can increase participants' confidence in applying new techniques in the classroom. In this study, the participation of teachers in trying new techniques reached 96%, which shows high enthusiasm to adopt the GASING method. Another service Fitri et al., (2023) also found that the GASING method helps teachers understand difficult concepts in a fun and simple way so that it can be applied effectively in various learning contexts. The activeness of these participants not only reflects the success of the facilitator but also indicates that the methods used are relevant to the practical needs of teachers.

In the process of community service activities, there are also several

weaknesses, especially limited facilities and resources in schools in Timor Tengah Utara Regency. Not all schools have access to adequate learning facilities or the required method manuals, so teachers need to adapt to limited conditions, especially schools under the auspices of the Ministry of Religion (Indonesia, 2024). This is a challenge in itself in the implementation and sustainability of the introduced methods.

Lack of support for facilities in schools, such as teaching aids that support the application of the Gasing Method. Not all schools have the means to make learning more concrete, especially in areas with limited access to technology and resources. This condition can reduce the effectiveness of the method, as visual aids and manipulative aids are important components in the Gasing Method. To address this, facilitators can develop creative guides that use simple materials or local resources as prop alternatives. For example, using objects available in the school environment to explain mathematical concepts in a practical way. Thus, teachers can still implement the method in a relevant and affordable way.

One of the other weaknesses in this community service process is the difference in the level of understanding among the participating teachers. In some cases, some teachers need more time to understand the Gasing Method (Husna & Sari, 2018), while others quickly master the material. This diverse level of understanding can hinder the course of training, as facilitators need to adjust the delivery of the material so that it can be accepted by all participants. This requires patience and flexible teaching strategies.

To deal with differences in understanding levels among participating teachers, facilitators can apply learning differentiation strategies during the training process. One step that can be taken is to divide participants into small groups based on their level of understanding of the Gasing Method. These groups are then given an approach that suits their individual needs, such as enrichment for participants who already understand the material quickly and intensive mentoring for those who need more time. This way, all participants have the opportunity to learn optimally without feeling left behind or overwhelmed.

The sustainability of this community service activity also faces challenges in the monitoring and evaluation process after the training is completed. With its remote geographical location and limited access, it is difficult for facilitators to directly supervise the application of the method by teachers in their respective schools. This condition reduces the ability of facilitators who do community service to ensure whether the Gasing method taught is really applied well in the long term.

To overcome challenges in the process of monitoring and evaluating the sustainability of the implementation of the Gasing Method in remote areas, facilitators utilize a technology-based and community-based approach. One solution is to form an online workgroup using communication platforms such as WhatsApp, Telegram, or video-based learning apps such as Zoom and Google Meet. This group

can be used to facilitate discussions, share experiences, and solve problems faced by teachers in applying methods. In addition, facilitators can design a simple online evaluation form to monitor the progress of implementation in each school. For schools with limited internet access, facilitators can rely on a community-based monitoring mechanism, where teachers from adjacent schools visit each other and share progress reports. By combining technology, collaborative work, and scheduled periodic visits, facilitators can ensure that the monitoring and evaluation process remains ongoing despite geographical constraints.

Behind the limitations of community service, there is a great opportunity to improve the quality of education in Timor Tengah Utara Regency in the long term. With an easy-to-apply method, this program opens up opportunities for teachers to continue to develop their abilities and produce students who understand mathematical concepts better. If the application of this method is successful, it can be expected that the quality of education in the TTU Regency area will improve, with students having a better understanding of basic mathematics

This community service can also open up opportunities to develop teaching methods that are more adaptive to local wisdom and the needs of the local community. By understanding the characteristics of students and the constraints faced by teachers in remote areas, methods such as the Gasing Method can be modified or combined with other relevant approaches. This can be the first step towards developing a more inclusive and effective education model for the community in the TTU Regency area

One of the services that is relevant to the community service that has been carried out is the service carried out by c regarding the application of the Gasing Method to improve students' mathematics learning outcomes in elementary school. This service shows that the Gasing Method, which is simple and activity-based, can be applied effectively in areas with limited facilities. These findings are in line with the goals of community service in TTU Regency, which focuses on the application of methods that are easily accessible and can be modified according to local needs. This method has the potential to improve students' basic understanding of mathematics in the area, despite the constraints of limited facilities.

. In this community service, although teachers in TTU Regency show differences in understanding of the Gasing Method, it is important for facilitators to provide continuous assistance through teacher working groups or field visits. This will help teachers overcome obstacles that arise during the implementation of the method in their classrooms, as well as ensure that the method is applied properly. This is in line with the service carried out by (Suhaedin et al., 2024) which also provides important insights into continuous mentoring and continuous training for teachers in the region is very important to ensure the sustainability of the implementation of new methods, for example the Gasing method.

The Gasing method is one of the methods that is adaptive to local conditions

at TTU, which allows teachers to modify or combine this method with other relevant approaches. By understanding the local context, teaching mathematics can be done in a more contextual and culturally appropriate way, which in turn can improve the effectiveness of learning. This is in line with the Service carried out by Pratama, (2023) which in the Service learning methods, especially learning methods in the 3T (Disadvantaged, Frontier, and Outermost) areas, must be adjusted to local wisdom and the characteristics of the local community so that it can improve student learning outcomes.

In this community service, facilitators can strengthen the implementation of the Gasing Method by providing assistance through field visits or periodic discussions, which allows teachers to share experiences and support each other in facing challenges in the classroom. This is in line with the research conducted by Korani, et al, (2024) in which the Service emphasizes the importance of teacher assistance in the application of active learning methods, especially in areas with limited resources. This devotion reveals that teachers need ongoing support to ensure the effective application of methods.

In addition, this service integrates local wisdom as one of the main elements in the application of the Gasing Method. Adaptation to the cultural context and characteristics of TTU society provides added value in the learning process, because mathematics material can be delivered in a more relevant and interesting way for students. This approach makes service superior to previous service, which generally only focuses on academic aspects without considering the local context in depth. Thus, the program not only contributes to improving student learning outcomes but also empowers teachers in creating more inclusive and sustainable learning.

Overall, the results of this previous service provide a strong basis to support the success of community service in TTU Regency. Adaptation of the method to the local context, continuous training and mentoring, and the use of a contextual approach are key to ensure that the application of the Gasing Method can have a positive impact on improving the quality of education in the North Central Timor region, East Nusa Tenggara.

CONCLUSIONS AND SUGGESTIONS

The community service programs that have been carried out have had a significant impact both practically and theoretically. Practically, the Gasing method proved to be effective in improving teachers' understanding of basic mathematical concepts, with observation results showing high activity and better understanding after training. It also strengthens professional networks between teachers, creating a community that supports each other and shares experiences. Theoretically, the application of this method supports the principle of constructivist learning, which emphasizes the importance of interactive and contextual learning, as well as the relevance of method adaptation to local conditions. The program also opens up

opportunities for the development of a more inclusive and contextual education model in remote areas, which can be modified according to local needs, thereby improving the quality of education in a sustainable manner.

The Visiting Teacher program with the application of the Gasing method needs to be continued and expanded to other regions to improve pedagogic competence and teacher professionalism more broadly. The expansion of the Visiting Teacher program with the application of the Gasing method to other regions requires several strategic steps. First, support from local governments in providing supporting infrastructure, such as adequate training spaces and technological facilities accessible to all participants. Second, it is important to involve local educational institutions in the training process to build the sustainability of the program by involving local facilitators. Third, periodic evaluation and reflection need to be carried out to ensure the effectiveness of the program and adjustments to the needs of participants. Fourth, financial support from the central government or donor institutions is urgently needed to fund further training, which will improve teacher competence in a sustainable manner. Finally, the right socialization campaign will help increase understanding and support from the community and related parties on the importance of this program in improving the quality of education.

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