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The Development of A Teacher Working Group Model Based on A Community of Practice in Elementary Schools

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ABSTRACT:

The Teacher Working Group (Kelompok Kerja Guru/KKG) is a strategic tool for enhancing the competencies of elementary school teachers. However, in practice, this platform has not been fully utilized. Therefore, the researcher sought to develop it by leveraging the potential of a community of practice to create a model that can be effectively used in the field. The objectives of this study are: (1) to analyze the current condition of the KKG, (2) to develop a KKG model that meets the needs, and (3) to analyze the feasibility of a community of practice-based KKG model in elementary schools. This research is a development study (Research and Development) using the 4D model by Thiagarajan, which includes Define, Design, Develop, and Disseminate. The research design flow begins with an analysis of the factual model, followed by the development of a conceptual model, FGD (Focus Group Discussion), limited testing, main field testing, and the formulation of a hypothetical model followed by operational field testing. Data collection for this research and development study was conducted at three levels: preliminary field testing with 10 subjects, main field testing with 30 subjects, and operational field testing with 85 subjects from 30 elementary schools actively implementing the KKG in Rembang Regency. Data collection methods included questionnaires, documentation, and interviews. The results of the study indicate that the factual condition of KKG implementation is neither effective nor efficient, as evidenced by a low average participation rate and activity impact, around 60%. The researcher then conducted analyses using IFAS, EFAS, CPM, GSM, BCG, and QSPM to develop a model that meets the needs. The conceptual model was reviewed in an FGD with education experts and practitioners, resulting in a community of practice-based KKG model. This model underwent limited testing, followed by the first revision, then main field testing, and finally, operational field testing after a second revision. The community of practice-based KKG model demonstrated feasibility with effectiveness at 90%, efficiency at 89.2%, appeal at 94.3%, satisfaction at 91.4%, and teacher performance reaching 96.5%. Pedagogical competence increased to an average of 75.20 from a previous average of 60.21. Professional competence improved from 64.52 to 80.94. T-test results show a significant difference between the pretest and posttest scores, with a difference of 6.792.

Keywords: Teacher Working Group, Community Of Practice, Professional Competence, Pedagogical Competence, Elementary School Teachers.

1. Introduction

Education plays a crucial role in shaping the quality of human resources in a society. Low educational quality can negatively impact students (Dahlan et al., 2020). One of the indicators of an advanced nation is its educational sector (Anser et al., 2024). The more advanced a country's education system, the greater the hope that the country itself will progress (Almutairi, 2023). The key to successful education lies in the teaching process conducted by teachers (Issa et al., 2024). Graduates with low quality will find it difficult to adapt to rapid changes, as what is taught in education may not effectively address these developments (Mumpuniarti et al., 2020). However, in reality, the quality of education in Indonesia is still relatively low (Bris et al., 2021). Data from the World Top 20 Project, The Times Education Ranking survey, and the 2023 United Nations Development Programme (UNDP) report specifically indicate that Indonesia is not among the countries with the best education quality (Soleimani et al., 2023). Additionally, Indonesia's 2024 PISA score did not meet the expected targets set in the Medium-Term Development Plan (RPJM), placing Indonesia in the lower quartile, ranked 66th out of 81 countries (Rappleye et al., 2024). One of the determining factors of education quality is the level of teacher competence. Teacher competence is a crucial requirement that significantly affects the success of education (Salguero et al., 2024). While many factors contribute to the quality of education, teacher competence is paramount, along with infrastructure (Azizah et al., 2024). There are four competencies that teachers must continually develop (Julia et al., 2020). These are pedagogical, professional, personal, and social competencies (Adipat et al., 2023). Indonesia has conducted several teacher competency tests (Sarmidi et al., 2020). Results from these tests indicate that teacher competence in Indonesia remains low (Fajriah et al., 2021). The minimal knowledge of teachers about professional competence within the Ministry of Education and Culture's environment is only 13.9% of the 80% standard (Becevic, 2023). Meanwhile, pedagogical competence is only 41.6%, slightly higher than in schools under the Ministry of Religious Affairs (Kissi et al., 2023). Furthermore, the Teacher Competency Test results show that around 81% of teachers in Indonesia do not even reach the minimum score (Karacan Ozdemir et al., 2022). The Teacher Working Group (KKG) plays a strategic role in enhancing teachers' pedagogical competence and the quality of classroom learning. This platform is specifically available to elementary school teachers (Pulling Kuhn et al., 2021). Similar activities at the junior and senior high school levels are conducted through Subject Teacher Consultations (MGMP) (Walker et al., 2021). These activities are already established in each district, coordinated by activity committees in each school cluster (Tasman & Fauzan, 2023). The number of members in each school cluster ranges from 9-12 schools or approximately 60-90 teachers (Sarjani et al., 2021). Through KKG, teachers can continually develop their professionalism and pedagogical skills, and receive support from their peers to improve the quality of education they provide to students (Benner et al., 2023). Although KKGs have long existed in Indonesia, they have not been effectively used as platforms for teacher professional development (Roa et al., 2022). A survey conducted by the Center for Educational Policy and Cultural Research in 2019 showed that KKGs are not operating optimally (Neina et al., 2023). The KKG's functions have not been effectively utilized to support teacher competence improvement (Seleznyov et al., 2024). Communities of Practice are a potential resource among elementary school teachers. This is considered a potential because elementary school teachers are the most numerous and diverse (Suherman et al., 2024). The potential is substantial for forming communities with various interests (Yusri et al., 2024). A Community of Practice is a group of teachers who share a common interest and direction within a specific disciplinary understanding (domain), meeting both online and offline to discuss experiences and knowledge on particular topics (practice) (Wenger, 2009). According to Estienne Wenger, the conditions for forming a Community of Practice are met when community, domain, and

practice exist (Pyrko et al., 2017). The activities of teacher groups act as a starting point for delving into subject matter within their fields, which can later be disseminated or shared in larger forums or across other fields (Afzal et al., 2021). For these communities to form optimally, they need encouragement from the school principal and guidance from school supervisors (Radojlovic et al., 2022). The school principal's role is strategic in motivating teachers to form communities based on their interests, such as music, mathematics, calligraphy, etc. (Sapieva et al., 2023). Once these Communities of Practice are established in each school or among several schools with supervisory support, the hope is that collaboration with other teachers will be easily facilitated within KKG activities (Akcan, 2022). According to Ministry of Education and Culture Regulation No. 16 of 2019 concerning the alignment of teacher qualifications, it is stated that elementary school class teachers may not only come from PGSD (Elementary School Teacher Education) graduates but may also come from other majors. There are 32 other study programs that can register and teach as class teachers (Ministry of Education and Culture Regulation No. 16 of 2019 concerning Amendments to Ministry of Education and Culture Regulation No. 46 of 2016 on the Alignment of Teachers with Teaching Certification, 2019). In accordance with this regulation, elementary school class teachers, who were previously only PGSD graduates, now come from diverse study backgrounds (Zukhraeni et al., 2023). This potential will be utilized as the basis for Communities of Practice in elementary schools (Akcan, 2022). The diversity of teacher backgrounds makes Communities of Practice in elementary schools more varied (Pyrko et al., 2017). Thus, Communities of Practice will eventually form among teachers who specialize in mathematics, science, Indonesian language, and other subjects (Kissi et al., 2023). These Communities of Practice will serve as the foundation for KKG activities, which are expected to function more effectively in improving teacher competence (Alalwan et al., 2020). With the establishment of Communities of Practice, they will become the driving force behind KKG activities, which previously had not been active due to difficulties in determining activity themes and identifying resource persons (Kandiero & Chizwina, 2023). This study aims to (1) analyze the current state of KKG, (2) develop a KKG model that meets the needs, and (3) assess the feasibility of a Community of Practice-based KKG model in elementary schools. Theoretically, this research will produce a new model of a teacher working group based on Communities of Practice, contributing to the theoretical development of primary education studies, particularly regarding the application of social identity theory. This theory suggests that an individual's behavior can be influenced by the behavior of the group (Paruzel et al., 2020). Based on this theory, KKG activities conducted in groups will positively impact teachers' behavior in the classroom (Małecka et al., 2022). This model is expected to provide a solution for organizing KKGs so that they can function effectively, efficiently, attractively, and satisfactorily (Laffan, 2021).

2. Method

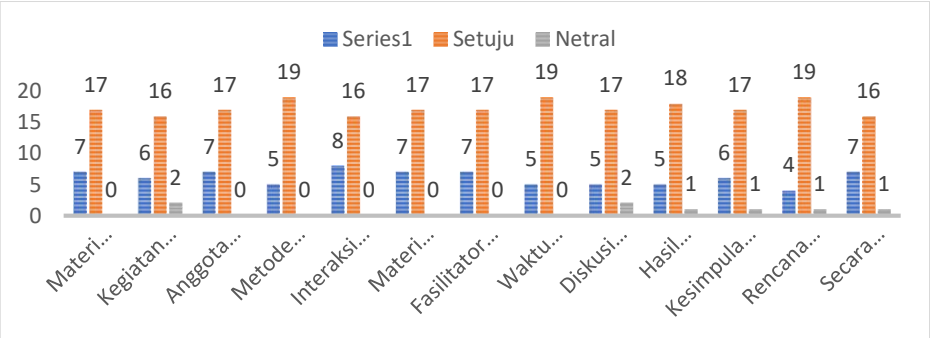
The researcher used the Research and Development (R&D) method with the 4D model by Thiagarajan (Define, Design, Develop, and Disseminate) (Aisyah, 2022). R&D at level 3 involves researching to improve existing products (Sugiyono, 2008), with the expectation that the existing products will become more effective, efficient, practical, attractive, and satisfactory. The data sources used in this research include the Head of the Rembang Regency Education Office through the Head of the Elementary School Curriculum Section, School Supervisors, Elementary School Principals, KKG administrators, and Classroom Teachers. R&D research focuses on developing existing products, with each stage determining the number of research subjects. According to Sugiyono, 2022, in his book Research and Development Methods, the subjects at each stage are explained as follows: 1) In the preliminary field testing phase, the researcher determines a combination of quantitative (experimental) and

qualitative (observation and interview) methods conducted in 1 to 3 schools with 6 to 12 teacher subjects. 2) The results of the preliminary field testing are used to revise product 1, which will be applied in the main field testing phase. Testing is conducted in 5 to 15 elementary schools with 30 to 100 teacher subjects. 3) The analysis results are then used as the basis for revising the product, which will be tested in the operational field testing phase. Testing is conducted in 10 to 30 elementary schools with 40 to 400 teacher subjects. Data collection techniques include structured interviews, closed questionnaires, and observation. Documentation is conducted by collecting data through written documents, archives, reports, photos, videos, etc., as well as experiments. Data analysis through limited and broader trials uses qualitative and quantitative descriptive analysis. Model development is conducted using descriptive statistics. Descriptive analysis of variables is performed using index analysis. Index analysis is used to understand respondents' general perceptions of a researched variable. The questionnaire to measure the improvement in teacher competence through the Community of Practice-based KKG model uses the Three Box Method, dividing the existing score range into three. Once the range is determined, it can be used as the basis for interpreting the index value according to the following criteria. Then, to determine whether the population data is normally distributed, a normality test is used. The model is tested using a difference test for groups where this model is applied (observation and questionnaire). The analysis of the experiment based on subject matching always uses the t-test formula for correlated samples. To prove the hypothesis, the researcher uses a Paired Samples T-Test.

3. Results And Discussion

Through in-depth interviews and Likert scale questionnaires from 10 elementary schools spread across the Wukiretawu, Pringgodani, and Sawojajar clusters, the following data were obtained:

Table 1. Data on Factual Conditions



The table presented shows that during KKG activities, they were not punctual. The materials were monotonous, and the level of participation was low. The methods used (discussion, presentation, etc.) were ineffective. The time allocated for each session was not well managed. The time provided for discussion and Q&A was insufficient. Additionally, the summary of the discussion results was inadequate, and the follow-up action plan was not clearly explained.

Figure 1. Factual Model

The factual condition of the KKG activities that have been taking place is illustrated in the model shown in Figure 1 above. It is evident that the activities are characterized by very low participant engagement, averaging around 60%. The resource persons for these activities are predominantly school supervisors and principals, with minimal involvement of teachers' potential and the existing community of practice. If the school supervisors have other tasks, the activities are often canceled, indicating a high dependency on the supervisors. Only certain principals serve as resource persons, and even then, only if they have free time. The role of the KKG committee is mainly focused on preparation, including arranging the venue, preparing facilities, and scheduling. The committee also coordinates and connects various KKG actors to ensure readiness for the activity day. The role of classroom teachers is limited to being participants, as indicated by the dotted lines. Teachers are not yet involved as active subjects, leveraging their potential and expertise, such as teachers who excel in mathematics or other fields. Based on these conditions, the researcher conducted an analysis to accurately identify the problems and propose solutions using SWOT analysis, EFAS, IFAS, CPM, GSM, and QSPM. Internal and external factors that influence the organization were considered, both of which are part of a more in-depth SWOT analysis, helping to formulate strategies more systematically.

Tabel 2. IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary)

Internal Factors	Weight	Rating	Weighted Score
Strong collaboration among practitioner communities	0.25	4	1.00
Access to educational resources	0.20	3	0.60
Limitation of teachers' time	0.30	2	0.60
Uneven involvement	0.25	2	0.50
Total	1.00		2.70

External Factors	Weight	Rating	Weighted Score
Opportunity of support from the Government and the Department of Education	0.30	4	1.20
Opportunity of technological advancements	0.25	3	0.75
Threat of lack of school management support	0.20	2	0.40
Threat of changes in educational policy	0.25	3	0.75
Total	1.00		3.10

From the results of this analysis, KKG can see that the total IFAS score (2.70) and EFAS score (3.10) indicate areas of strengths and opportunities that can be leveraged, as well as weaknesses and threats that need to be addressed. Based on this, KKG can formulate more effective strategies to improve its performance and impact.

Table 3. Competitive Profile Matrix (CPM) Analysis

Critical Success Factors	Weight	KKG A Practitioner Community	Weighted Score KKG A	KKG B Traditional	Weighted Score KKG B	KKG C (Technology-Based)	Weighted Score KKG C
Collaboration and knowledge sharing	0.20	4	0.80	3	0.60	3	0.60
Access to resources	0.15	4	0.60	3	0.45	5	0.75
Professional support	0.15	4	0.60	2	0.30	3	0.45
Skill enhancement	0.10	5	0.50	3	0.30	4	0.40
Technology and innovation	0.10	3	0.30	2	0.20	5	0.50
Networking and solidarity	0.15	5	0.75	3	0.45	3	0.45
Member involvement	0.15	4	0.60	3	0.45	4	0.60
Total	1.00		4.15		2.75		3.75

From the CPM table above, the practitioner community-based KKG (KKG A) has the highest total score (4.15) compared to the traditional KKG (KKG B) with a score of (2.75) and the technology-based KKG (KKG C) with a score of (3.75). This indicates that the practitioner community-based KKG model has a competitive advantage in terms of collaboration, professional support, skill enhancement, and networking, although there is still a need to improve the use of technology and innovation.

Table 4. Grand Strategy Matrix (GSM)

Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Strategies for KKG with high competitive strength and in a fast-growing market:	Strategies for KKG with low competitive strength but in a fast-growing market:	Strategies for KKG with low competitive strength and in a slow-growing market:	Strategies for KKG with high competitive strength but in a slow-growing market:
Market Penetration	Market Development	Divestiture	Diversification

Product Development	Product Development	Liquidation	Horizontal Integration
Vertical Integration	Strategic Alliances	Cost Cutting	Strategic Alliances
Strategic Alliances	Efficiency Improvement	Restructuring	Product Development

Using the Grand Strategy Matrix, a practitioner-based KKG can assess its strategic position and choose the most suitable strategies to enhance its performance. For example, if the practitioner-based KKG is in Quadrant I, the main focus should be on market penetration and product development to leverage its high competitive strength and the fast-growing market.

Table 5. Boston Consulting Group (BCG)

	High Market Growth	Low Market Growth
High Market Share	Stars: Programs or initiatives of KKG that have a high market share and are in a rapidly growing market. Example: Innovative training programs that are popular.	Cash Cows: Programs or initiatives of KKG that have a high market share but are in a slow-growing market. Example: Established mentoring programs.
Low Market Share	Question Marks: Programs or initiatives of KKG that have a low market share but are in a rapidly growing market. Example: New collaboration programs that are being tested.	Dogs: Programs or initiatives of KKG that have a low market share and are in a slow-growing market. Example: Old programs that are less popular.

Using the BCG Matrix, KKG based on practitioner communities can identify and classify its programs based on market share and market growth. This helps in making strategic decisions regarding investment, development, or discontinuation of programs, thereby maximizing the efficiency and effectiveness of the organization's operations.

Table 6. Quantitative Strategic Planning Matrix (QSPM)

Key Factors	Weight	Strategy	AS	TAS	Strategy	AS	TAS
Internal Factors							
Collaboration and Knowledge Sharing	0.15	4	0.60	2.40	3	0.45	1.35
Access to Resources	0.10	3	0.30	1.00	4	0.40	1.00
Professional Support	0.15	4	0.60	2.40	3	0.45	1.35
Skill Improvement	0.10	4	0.40	1.50	3	0.30	0.90
Technology and Innovation	0.10	3	0.30	1.00	4	0.40	1.00
Network and Solidarity	0.15	4	0.60	2.40	3	0.45	1.35
Member Involvement	0.15	3	0.45	1.80	4	0.60	1.80
External Factors							
Support from Government and Education Authorities	0.10	4	0.40	1.50	3	0.30	0.90
Technological Advancement	0.10	3	0.30	1.00	4	0.40	1.00
Internal Factors	0.10	4	0.40	1.50	3	0.30	0.90
New Educational Trends	0.10	3	0.30	1.00	4	0.40	1.00

Changes in Educational Policy	0.10	4	0.40	1.50	3	0.30	0.90
Total	1.00			18.00			14.00

Based on the QSPM results, Strategy 1 has a higher Total Attractiveness Score (TAS) of 18.00 compared to Strategy 2 with a TAS of 14.00. Therefore, Strategy 1 is more recommended for the practitioner-based KKG. Strategy 1 includes efforts to increase KKG member participation through active promotion and the development of new, relevant, and engaging products or programs for members. It also involves investing in collaboration and knowledge sharing, as well as reflecting on and promoting best practices in learning. Based on the analyses conducted and the factual conditions, the researcher has formulated the conceptual conditions as shown in the image below:

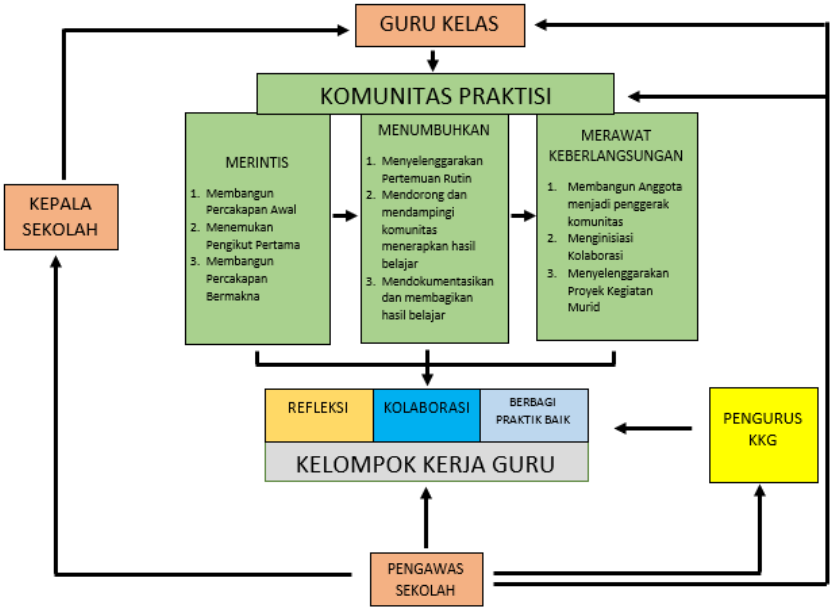


Figure 2. Conceptual Model

The figure shows that classroom teachers are the primary subjects to join the practitioner community. Classroom teachers have significant potential to form communities based on their educational backgrounds, such as mathematics, science, Indonesian language, social studies, civic education, and Javanese language. The process begins with 2-3 individuals as the core or embryo of the community. The practitioner community activities start with initiating by building initial conversations, recruiting the first members, and then proceeding to create meaningful discussions about competencies. Once the initiating phase is defined, the next phase is growing. The growing phase involves organizing regular formal and informal meetings scheduled weekly or bi-weekly. In these activities, members encourage each other to apply learning outcomes in their community and document the community's learning outcomes. The next phase is maintaining the community's sustainability, involving developing each member to become a community leader, initiating and promoting collaboration, and organizing student project activities. The activities of the practitioner community built by several practitioners are recorded by the KKG administrators. These practitioner communities are small groups supported by school principals in their activities. The basis for grouping practitioner communities is the domain characteristics with indicators of clear goals and focus areas. Activities are conducted according to the predetermined field of interest or expertise. The second characteristic is active community participation. Members actively participate in

discussions and activities. The third characteristic is sharing practical experiences. Members share their practical experiences, and practical examples shared are beneficial and applicable by other members. There are discussions about best practices in the community field, and members attempt to implement the discussed best practices. The community provides tools or resources to aid members' practices. The practitioner-based KKG is scheduled to be held once a month, coordinated by the KKG administrators consisting of a chairperson, vice-chairperson, treasurer, and secretary. The KKG administrators plan the schedule, prepare the venue, and arrange the necessary facilities. Activities during KKG sessions are driven by the existing practitioner communities, such as the mathematics practitioner community and others. The predetermined schedule is the time for reflection on learning from each teacher. Collaboration activities among several teachers are also a crucial part of the KKG, and all activities are guided and driven by the scheduled practitioner communities. The next phase involves sharing best practices from the practitioner community members regarding the learning applied in their classrooms. The role of the school principal is to motivate classroom teachers to be more active and diligent in forming and joining practitioner communities. Each formed practitioner community will be recorded by the KKG administrators and will receive support from the school supervisor in its activities. Another role of the school supervisor is to act as a mentor and supervisor for the principal. This conceptual model is then analyzed in a Focus Group Discussion (FGD) forum with lectures followed by interactive discussions divided into 3 sessions. The first session discusses the meaning and activities of the practitioner community presented by the researcher, the second session discusses the role of the principal and supervisor in KKG presented by the school supervisor, and the third session discusses the KKG work program presented by the administrators. The FGD was attended by 9 practitioners and experts to discuss the concept and implementation of the practitioner-based KKG, as analyzed in the table below:

Table 7. FGD Analysis of KKG Model

Speaker	Focus group	Contr	% Contrib	Words	% Words	Charac	% Charac	Sex	Position
Interviewer	FGD text	1	10.00	37	8.41	289	7.95	F	Researcher
Participant 1	FGD text	1	10.00	57	12.95	494	13.58	M	School Supervisor
Participant 2	FGD text	1	10.00	50	11.36	420	11.55	M	School Supervisor
Participant 3	FGD text	1	10.00	42	9.55	356	9.79	M	Principal
Participant 4	FGD text	1	10.00	47	10.68	389	10.70	M	Principal
Participant 5	FGD text	1	10.00	37	8.41	304	8.36	F	Principal
Participant 6	FGD text	1	10.00	42	9.55	342	9.40	F	Principal
Participant 7	FGD text	1	10.00	38	8.64	305	8.39	M	Principal
Participant 8	FGD text	1	10.00	44	10.00	351	9.65	M	Teacher
Participant 9	FGD text	1	10.00	46	10.45	387	10.64	M	Teacher

The conceptual model created by the researcher and discussed in the Focus Group Discussion (FGD) with experts and practitioners will next undergo a limited trial. This trial will be conducted with 10 teachers, accompanied by 1 principal and 1 school supervisor. The process begins with the practitioner community, which has conceptualized the meeting materials based on an analysis of the final assessment results. The data from the final assessments in 9 subjects revealed the lowest average score of 3.8, leading the practitioner community to focus on this material, specifically to deepen understanding of the topic of speed.

Table 8. Results of Limited Trial Observations

No	Indicator	Number	Percentage	Category
1	Member Involvement	12	80%	High
2	Collaboration and Cooperation	8	53%	Medium
3	Use of Technology	7	46%	Low
4	Focus on Learning Practices	12	80%	High
5	Self-Reflection and Evaluation	9	60%	Medium
6	Ongoing Professional Development	9	60%	Medium
7	Leadership and Facilitation	14	93%	High
8	Sharing Teaching Practices in Class	12	80%	High

From the observations of the model tested in the limited trial, it can be concluded that the involvement of members in the community-based KKG is categorized as high at 80%. This high level of involvement is indicated by the level of participation in discussions, the equality of contributions among members, as well as the attendance and punctuality of participants. Collaboration and cooperation, however, were only categorized as medium at 53%, which is below the researcher's expectations. This is reflected in the low level of cooperation in designing learning plans, sharing resources and materials, and collaborating on problem-solving in education. The use of technology in this limited trial was still categorized as low at 46%, indicating that the optimization of online discussions, the use of presentation aids, and the accessibility of digital materials are not yet fully utilized. The results of the pretest and posttest for the 10 teachers show that the Kolmogorov-Smirnov test indicates a normal distribution. The Shapiro-Wilk test also showed significance values of 0.380 and 0.272, which are greater than 0.05. The mean difference between pretest and posttest scores is -14.50. The p-value (Sig. 2-tailed) is 0.01, which is less than 0.05, leading us to reject the null hypothesis and conclude that there is a significant difference between the pretest and posttest scores. The t-value is -7.127, indicating a substantial difference between pretest and posttest results. The 95% Confidence Interval (-19.102 to -9.897) does not include zero, supporting the finding of a significant difference. Thus, the paired t-test provides statistical evidence that the intervention (community-based KKG) has a significant effect on teachers. Based on the analysis of the model applied in the limited trial, several important inputs were received from experts regarding the model's effectiveness. These inputs and suggestions from the experts are crucial references for revising the implemented model. The changes and development in the revised model are expected to enhance its effectiveness in subsequent stages.

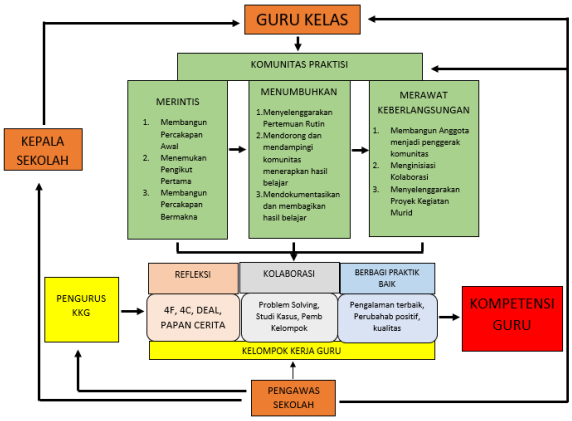


Figure 3. Revised Conceptual Model

Revised Concept I emphasizes that the main activity of the community-based KKG should be reflection. There are four reflection models that can assist teachers in reflecting: Model 4F (Fact, Feeling, Finding, Future), Model 4C (Connection, Challenge, Concept, Change), and Model DEAL, which guides teachers in reflection using a fill-in-the-blank sentence provided by the facilitator. The collaboration used in KKG activities includes several forms such as problem-solving, case studies, and group learning. Problem-solving is a process used to address issues or challenges encountered. This process involves analysis, evaluation, and the development of effective solutions to resolve problems. Case studies are an approach used to study and analyze specific situations or events. Sharing best practices includes activities such as sharing the best experiences, positive changes, and the quality of learning. The revised conceptual model was then tested in the field with 30 participants consisting of elementary school teachers. The field trial activities were guided by three teachers from the mathematics practitioner community. During this opportunity, these three teachers presented mathematics content on the topic of speed. Activities began with the preparation of concepts, media, and pretest and posttest questions by the practitioner community. The researcher observed these activities using a prepared observation instrument.

Table 9. Results of the Main Field Trial Observation

No	Indicator	Number	Percentage	Category
1	Member Involvement	14	93%	High
2	Collaboration and Cooperation	13	86%	High
3	Use of Technology	15	100%	High
4	Focus on Learning Practices	14	93%	High
5	Reflection and Self-Evaluation	13	86%	High
6	Ongoing Professional Development	13	86%	High
7	Leadership and Facilitation	15	100%	High
8	Sharing Classroom Teaching Practices	13	86%	High

The main field trial was conducted with the revised conceptual model (Revision I). The focus of this KKG (teacher working group) was on reflection models, collaboration models, and sharing best practices. As seen in the observation table, several indicators showed a 100% implementation rate, such as the use of technology and leadership and facilitation. This was

influenced by the practitioners' thorough preparation from the previous day. Meanwhile, three other aspects were in the lowest category, namely collaboration, reflection, and sharing best practices, each at 86%. The pretest and posttest results from 30 teachers showed that the data were normally distributed, as indicated by sig 0.200 and 0.86 > 0.05. The mean difference between pretest and posttest scores was -17.66. The p-value (Sig. 2-tailed) is 0.001. Since it is less than 0.05, we reject the null hypothesis and conclude that there is a significant difference between pretest and posttest scores. The t-value is -6.792, showing a substantial difference between pretest and posttest. The 95% Confidence Interval (-22.986 to -12.346) does not include zero, supporting the result that the difference is significant. Therefore, the paired t-test provides statistical evidence that the intervention of the community-based KKG has a significant effect on teachers..

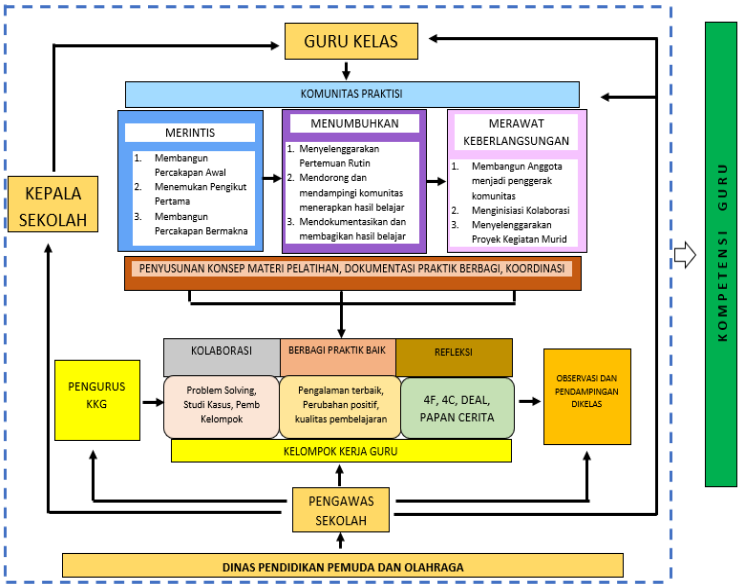


Figure 4. Hypothetical Model

The second revised model incorporates attention and guidance from the Department of Education, Youth, and Sports in providing support to school supervisors for enhancing teacher competencies through teacher working groups. The community of practitioners also experienced a development of activities that were well-conceptualized at the sustainability stage. With activities supervised by school supervisors, this community of practitioners first prepares training material concepts and documents best practices to be shared. Coordination with KKG administrators is undertaken to prepare for the next teacher working group meeting. A fundamental change in this revised model is the inclusion of follow-up actions post-KKG, which involves classroom observations and teacher support to be conducted by school supervisors. With this second revision, the researcher has chosen to establish the developed stages as the hypothetical model.

Table 9. Results of Operational Field Trial Observations

No	Indicator	Number	Percentage	Category
1	Member Engagement	14	93%	High
2	Collaboration and Cooperation	15	100%	High
3	Use of Technology	15	100%	High
4	Focus on Teaching Practices	14	93%	High
5	Reflection and Self-Evaluation	14	93%	High
6	Ongoing Professional Development	14	93%	High

7	Leadership and Facilitation	15	100%	High
8	Sharing Classroom Teaching Practices	15	100%	High

The model for the Community of Practice-Based Teacher Working Groups (KKG) shows high engagement among group members, teaching practices, reflection, and professional development with a percentage of 93%. In terms of collaboration, use of technology, leadership, and sharing of best practices, the model achieves a high rating of 100%.
The feasibility of the model was tested using instruments prepared by the researcher and validated by experts. These instruments included categories of feasibility such as effectiveness, efficiency, attractiveness, and satisfaction. Each indicator was observed with 3 aspects. There were 4 internal experts and 4 external experts as validators. The data from these eight validators were analyzed and used to conclude the feasibility of the model.

Table 10. Feasibility Test Results

No	Indicator	External Validators				Internal Validators				Average
		Expert 1	**Expert 2**	**Expert 3**	**Expert 4**	**Expert 1**	**Expert 2**	**Expert 3**	**Expert 4**	
1	Effectiveness	93,3	86,7	100	80	86,7	93,3	86,7	93,3	90
2	Efficiency	86,7	80	93,3	93,3	80	93,3	93,3	93,3	89,2
3	Attractiveness	100	100	93,3	93,3	93,3	93,3	93,3	93,3	94,3
4	Satisfaction	86,7	80	93,3	93,3	93,3	93,3	100	86,7	91,4

It can be seen from the feasibility test that the KKG model based on the practitioner community in elementary schools has the following results: in terms of effectiveness, the average is 90%, which falls into the high effectiveness category; in terms of efficiency, it is 89.2%, which also falls into the high efficiency category; attractiveness is categorized as high at 91.4%, which is the highest percentage among the other indicators; and satisfaction of participants is also in the high category at 91.4%. For data collection, the researcher selected a random sample of 15 teachers from 3 school clusters to observe their performance. The observation data was then compiled for analysis.

Table 10. Performance Observation Test Results

No	Performance Indicator	Observedd Teachers															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	Class Atmosphere	4	4	4	4	3	5	4	4	3	4	3	4	5	4	5	4,00
2	Expectations of Students	4	5	5	4	4	5	5	3	3	3	4	5	5	3	4	4,13
3	Application of	3	4	5	4	4	5	5	5	4	4	3	5	5	4	4	4,27

	Positive Discipline																
4	Interactive Activities	4	4	4	3	4	5	4	3	4	3	4	5	5	5	3	4,00
5	Constructive Feedback	5	4	5	3	5	4	4	4	5	3	4	4	4	4	4	4,13
6	Adaptive Instructions	4	5	4	4	5	4	5	3	5	4	3	5	4	4	5	4,27
7	Attention and Concern	3	4	3	4	4	4	4	4	5	4	3	4	4	5	4	3,93
8	Learning Instructions	5	5	4	3	4	4	4	4	4	3	3	4	4	4	3	3,87
Total		32	35	34	29	33	36	35	30	33	28	27	36	36	33	32	32,60
Percentage		80	88	85	73	83	90	88	75	83	70	68	90	90	83	80	81,50

With a validity test involving 85 respondents, the result shows a value of 0.1796. The SPSS output displays a Cronbach's Alpha value of 0.945, indicating that the instrument has very good reliability. Data analysis from SPSS indicates that the calculated r > table r, which means the item is considered valid. Pedagogical competency has increased to an average of 75.20 from a previous average of 60.21. Professional competency has risen from 64.52 to 80.94. The t-test shows a significant difference between the pretest and posttest with a value of 6.792.

4. Conclusion

Teacher working groups (KKG) in primary schools are a strategic means for improving teacher competencies. However, in practice, KKGs have not been optimally utilized. This is evidenced by the factual conditions where implementation is still lacking, teacher participation is low, training activities are not optimal, and there is no follow-up on the implementation. The potential of existing practitioner communities in primary schools is a crucial asset to drive the implementation of KKGs in these schools. Practitioner communities, which start from groups of primary school teachers with similar interests and educational backgrounds, are structured to carry out activities and practice together to enhance competencies. These communities will be coordinated by administrators with support from school principals and supervision from school inspectors, working together to prepare everything for KKG implementation. The conceptual model developed as an extension of the factual model was applied in limited trials and further developed into a main field trial to produce a hypothetical model. The hypothetical model testing showed that the feasibility in terms of effectiveness, efficiency, attractiveness, and satisfaction was high, ranging from 89.2% to 91.4%. The performance level of teachers after participating in KKG activities was also high, with a percentage of 81.50%. Professional competency was at 80.94 (moderate), and pedagogical competency was at 75.20 (moderate).
The practitioner-based teacher working group model is very effective for improving teacher competencies and performance. The better the management of practitioner communities, the better the functioning of teacher working groups. Activities emphasized in KKG include collaboration, sharing best practices in teaching, and reflection activities. By actively engaging

in KKGs based on practitioner communities, primary school teachers will be able to develop their potential to enhance their competencies and performance.

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