check for updates

THE INFLUENCE OF GOVERNMENT POLICY, PRINCIPLE LEADERSHIP, AND PARTICIPATION OF PARENTS ON STRENGTHENING TEACHER ORGANIZATIONS (KKG/MGMP) AND DEVELOPMENT OF PROBLEM SOLVING IN STUDENTS: INDONESIA CASE

[iD] **Lucia H Winingsih**[1+]
Iskandar Agung[2]
Agus Amin Sulistiono[3]

[1,2,3]*Research Center for Educational and Cultural Policy, Research and Development Agency, MOEC Republic of Indonesia.*
[1]*Email: luciahw@yahoo.com Tel: +622181287675404*

(+ Corresponding author)

ABSTRACT

This study aims to determine the effect of government policy, school principal leadership, and parental participation on the strengthening of KKG/MGMP teacher organizations and developing students' problem solving abilities. This paper is part of a field study on KKG (elementary school) and MGMP (Junior/senior high school) in DKI Jakarta, Indonesia, with a total sample of 120 teachers. Data collection was carried out using questionnaire techniques, interviews, and conducting focus group discussions (FGD). The distribution of questionnaires to test the relationship between variables was analyzed with the help of the LISREL 8.80 program. The results showed that the three exogenous latent variables had a positive influence on the endogenous latent variables in the strengthening of the KKG/MGMP teacher organization, reinforcing that the teacher organization had a positive influence in developing students' problem solving ability. The influence of parental participation had a considerable effect and it made an important contribution in supporting teachers to participate in KKG/MGMP activities. It is recommended that the government revoke the regulations on prohibiting schools from collecting funding from parents, in order to let the school design school improvement programs with strict supervision and control to prevent deviations.

Contribution/Originality: This study is one of very few studies which have investigated the influence of KKG/MGMP empowerment, so that action can be taken to improve teacher competence and its impact on student learning outcomes, especially in building creative power, critical thinking, collaborative, and conveying thought in an effort to improve problem solving skills.

1. INTRODUCTION

The PISA (2016) study shows the low problem solving ability of adults in Indonesia. It is thought that one reason for this condition is due to a lack in the nation's education system whereby the student is not taught how to develop higher order thinking skills which are defined by Bloom *et al.* (1956); Krulik and Rudnick (1999); Anderson and Krathwohl (2001) as analyzing, evaluating, and being creative in problem solving. Teachers themselves seem to lack mastery in implementing learning approaches based on problem solving. In national exams many students complain about their difficulties in solving math problems (Antaranews, 2019; Detik News, 2019).

479

The Ministry of Education and Culture of the Republic of Indonesia is therefore committed to improve students' thinking abilities in problem solving. Their learning should be oriented in achieving higher order thinking skills (HOTS) based on their real experience. This is in line with educational experts who have developed a problems based learning and project based learning (PBL) approach in an effort to improve students' thinking abilities that are adaptive to environmental changes (Savery and Duffy, 1995; De Graaf and Kolmos, 2003; Hmelo-Silver, 2004; Lambros, 2004; Barge, 2010). Teachers' roles in learning activities have to become an entry point in improving students' thinking abilities.

Since 2016, the Directorate General of Teachers and Education Personnel (Dirjen GTK) (Directorate General of Teachers and Education Personnel, 2019) of the Ministry of Education has been implementing a training program called Teacher Learners involving approximately 400 thousand junior and senior high school teachers. The government is utilizing teacher organizations by replacing teacher working groups (KKG) for Early Childhood Education (PAUD) teachers and Elementary Schools and Subject Teachers' Consultation (MGMP) for junior and senior high school (SMP / SMA) teachers.

In 2017, such a teacher training course changed its name to Sustainable Professional Development by involving more than 300 thousand teachers. It used KKG and MGMP as well as an effort to empower so that the course could be a place for care, sharing knowledge, solving shared learning problems, continuing professional development, and others to build a professional teacher community.

The purpose of these teacher training programs has been to improve the ability of teachers in teaching, instead of focusing on the ability of students in learning. However, since July 2019, the Continuing Professional Development Program through Improving Learning Competencies has been focusing on how to improve students' higher-order thinking skills. To carry out this program the government continues to utilize the KKG and MGMP groups in the zoning area as a training ground with guidance from the Core Teachers (DGTEP, 2019). By involving the organization, the government considers it to allow the KKG and MGMP to function optimally. The KKG and MGMP involvement in the program is reasonable and visionary in that they demonstrate their activities obviously in improving the quality of student learning outcome. However, the mechanism for involving the KKG and MGMP will only lead to success, if the government pays attention to the factors that influence it. Among the factors that are thought to influence the strengthening of KKG and MGMP teacher organization are government policy itself, school principal leadership, and parents' participation.

This paper intends to examine the influence of government policy factors, school principal leadership, and parents 'participation in strengthening the KKG and MGMP in HOTS learning, and its impact in shaping students' thinking abilities in solving problems. The factors (government policy, principal leadership, and parents 'participation) become exogenous latent variables which affect the endogenous latent variables (strengthening KKG and MGMP and students' thinking ability).

2. LITERATURE REVIEW
2.1. Teacher Organizations (KKG and MGMP)

Nearly thirty years ago the government formed a teacher working group teacher organization (called: KKG / MGMP) as a forum for maintaining, sharing knowledge and experience, solving learning problems, increasing knowledge and abilities, and others. This organization, which is based on the principles of, by, and for teachers, was established after the teacher received a teacher's job training program in order to be able to maintain and develop skills continuously and become an entry point for improving the quality of national education (Agung, 1993).

Botung (2008) stated that KKG / MGMP activities can provide benefits in terms of being a place for discussion and problem solving for teachers who have difficulties in learning activities, as a place for the activities of teachers who are members of a group who want to improve their professionalism together, as a place for disseminating information about updates education related to efforts to improve learning outcomes, as a center for the practice of

making teaching aids, acquiring a variety of teaching skills and developing classroom administration, and providing opportunities for creative and innovative teachers to share knowledge, insights, abilities and professional skills with fellow colleagues and discussing to get something better. Suhardi (2009) argues that in essence the KKG / MGMP functions as a forum for teacher professional development, fosters a spirit of competitive cooperation among KKG / MGMP members in order to improve student learning outcomes, a forum for information dissemination, innovation, and teacher development, and growing trust self in completing academic, social, personality and pedagogical duties and obligations.

Teacher organizations that have been distinguished between KKG (for early childhood / PAUD education level and Elementary School and MGMP for junior high / high school level), so far have not yet shown the expected results. Noor (2019) noted that there are still many teacher organizations that have not yet demonstrated active activities and that there are still many teachers who have not participated in KKG and MGMP activities. The reasons given by the teachers such as teaching time being already dense, clashes with teaching time, prohibition by schools, distant locations of activities, perceptions that it is not useful, and other reasons.. From the external side there is a lack of financial support for teachers to participate in activities, fulfill administrative tasks in schools that take up time, and other reasons.

The USAID (2009) concluded that the KKG and MGMP forums were not yet effective in facilitating the improvement of teacher teaching abilities.

2.2. Government Policy to KKG and MGMP

In 2016, the directorate general of teachers implemented a Teacher Learning (GP) training program to make teachers continuously learn to improve their skills. There are several reasons teachers become learners chief of which is the teaching profession which demands that they keep learning, be able to adapt to change, and be able to inspire students to become independent, responsible, creative, and innovative subjects. The Learner Teacher Program is a training process that includes activities aimed at improving and growing abilities, attitudes, and skills. It is hoped that this activity will produce a change in teacher behavior and have an impact on improving teacher performance in the teaching and learning process in the classroom.

The above program was designed based on the Teacher Competency Standards (TCS) which refers to the Minister of National Education Regulation (now: Ministry of Education and Culture) No. 16 of 2007 which requires teachers to have four basic competencies, namely: pedagogical competence, professional competence, social competence, and personality competence. Based on the competency achievement indicators in the TCS a teacher competency map was developed which was divided into ten groups and became the basis for the development of the competency test (called as *Uji Kompetensi Guru* or UKG) grid and the preparation of competency improvement modules.

The competency improvement program is carried out through three approaches: face-to-face, online, and a combination of face-to-face and online. The face-to-face approach is a learning system through direct interaction between the facilitator and the teacher participants who study eight to ten modules. The online approach is implemented by utilizing computer and internet network technology which is intended for teachers who study three to five modules. The combination of face-to-face and online approach is for teachers who study six to seven modules with a learning system in two ways: (1) via a face to face meeting between instructors and participants; or (2) via meeting face to face virtually, whether through video, audio or text. There are several obstacles encountered in implementing the program, especially in the online approach or a combination of face-to-face and online (teachers do not have laptops, internet networks are classified as difficult, elative instructors are difficult to contact, etc.).

In 2017, the program was changed by just applying a face-to-face approach and changing its name to Sustainable Professional Development (called as *Pengembangan Keprofesian Berkelanjutan* or PKB). This program is only aimed at teachers and has not affected students. Therefore, since July 2019, the implementation of a new

481

program was launched by the Director General of GTK - the Ministry of Education and Culture, which is called the Continuing Professional Development Program through Increasing Competence in Zoning-Based Learning. In this program the emphasis is placed on preparing HOTS-oriented learning so that students have higher-level thinking skills (creative, critical thinking, and solving real-life problems).

2.3. Higher Order Thinking Skill (HOTS)

HOTS is a high-level thinking ability originally conceived by Bloom *et al.* (1956) which divides cognitive domains into six dimensions, namely: knowledge (C-1), Comprehension (C-2), Application (C-3)), Analysis (C-4), Synthesis (C-5), and Evaluation (C-6). Then Bloom divided it into cognitive domain changes to remembering / C-1, understanding / C-2, applying / C-3, Analyzing / C-4, Evaluating / C-5, and Creating / C-6. Krulik and Rudnick (1999) simplified it into four levels, namely: recall thinking, basic thinking, critical thinking and creative thinking.

Anderson and Krathwohl (2001) attempted to map the level of thinking skills and the description of their use to measure the thinking skills of a person or group. Someone has low level thinking skills, if they are in the realm of cognitive remembering (C-1), understanding (C-2), and applying (C-3), and conversely they have high level thinking skills if they have the domain of analyzing (C-4), evaluating (C-5), and Creating (C-6).

Table-1. Thinking level skills.

Level	Domain	Activities
HOTS	(C-6) Creating	• Create your own ideas / ideas • Verbs: construct, design, create, develop, write, formulate
	C-5) Evaluating	• Make your own decisions • Verbs: evaluating, evaluating, refuting, deciding, choosing, supporting
	C-4) Analyzing	• Specifying aspects / elements • Verbs: compare, examine, test, criticize, test
LOTS	(C-3) Applying	• Use information on different domains • Verbs: use, demonstrate, illustrate, operate
	(C-2) Understanding	• Explain ideas / concepts • Verbs: explain, classify, accept, report
	(C-1) Remembering	• Recalling • Verbs: remember, register, repeat, imitate

Source: Anderson and Krathwohl (2001).

The government uses KKG and MGMP to strengthen this teacher organization in the long term. But that utilization should be carried out in a sustainable manner, not incidental. Various studies in a number of regions show that the government's commitment to the KKG / MGMP as a forum for teacher professional development shows success and is expected to continue to be sustainable (Chepy, 2016). Winingsih (2016) suggested that the assistance provided by the government to the KKG and MGMP was able to make this forum or forum in the school cluster, sub-district, or district / city level as a strategic vehicle to improve teacher competency. On that basis it is necessary to know the effect of this government policy on strengthening the KKG and MGMP teacher organizations.

2.4. Principal's Leadership

School management is very much determined by the principal, whether he or she is a visionary and able to be an agent of change or vice versa. If the principal supports the vision, direction, and goals to be achieved, then he or she tends to be active, caring, creative, innovative, and pay serious attention to the performance of his or her subordinates. He or she will act as a provider of values to be achieved by schools, act as agents of change, and

support the courage to take risks. His or her efforts to achieve vision, goals, and better results will be the basis for constantly improving the performance of subordinates, especially teachers.

KKG and MGMP organizations are a forum that aims to improve the ability and performance of teachers in carrying out their teaching assignments. A visionary school principal tends to support their teachers involved in KKG and MGMP activities and even motivates, encourages, facilitates, supervises, and evaluates the results of teacher involvement, if the involvement is considered beneficial. However, they will be pessimistic if deemed not useful, and tend to look for other efforts, for example seeking expert guidance or resource person who come from universities or from other institutions. Field findings often show that quite a number of school principals are reluctant to send teachers into KKG and / or MGMP activities on the grounds that they interfere with learning in schools, there are no substitute teachers, there are limited funds to support teacher activities in KKG/MGMP, the activities are considered less effective, and so on (Agung, 2019).

On that basis, it is suspected that the strengthening of the KKG and MGMP is also influenced by the leadership of the school principal in encouraging teacher participation in the activities of this organization. Priyastutiningrum (2014) suggests the importance of school principal leadership in encouraging English teachers to take part in MGMP activities. Similar findings were found by Lidia (2016); Muhajirin *et al.* (2017); Aminudin (2017) and Sumedi (2018) in their research on the role of school principals in motivating their teachers to participate in KKG and MGMP activities.

2.5. Parents Participation

In simple terms, participation can be interpreted as the involvement of a person or group of people to strive for the success of an activity, so as to achieve the expected goals. Davis and Newstrom (2004) argued that participation is the mental and emotional involvement of a person to achieve goals and take responsibility in them. Participation is the mental and emotional involvement of someone who is motivated to contribute and achieve group goals.

In the Law of the Republic of Indonesia Number 20 of 2003 emphasizes that education is a responsibility between the government, the community and the family. It has explicitly said that the implementation of the national education system is also determined by the participation of parents, namely mental and emotional participation in supporting activities in schools, especially learning.

There are at least four forms of parental participation in the administration of education in schools, namely: financial participation to support and facilitate the achievement of school needs, property participation (for example: personal computer assistance, laptops, props, procurement of wifi, etc.), participation in physical services (for example: building classrooms, maintaining the security of the school environment, etc.), and participation in skills (for example: as a resource person, looking for experts to provide guidance, and so on).

As a forum for parents of students, the government formed a School Committee. In the regulation of the Minister of Education and Culture No. 44 of 2012 concerning the Collection of Education Fees and Donations to the Basic Education Unit, School Committees are prohibited from collecting funds of any kind from students' parents. For certain reasons, especially in the effort to provide quality education services, the government has issued Minister of Education and Culture Regulation Number 75 Year 2016 which allows for fundraising from students' parents and the community. That is, through this regulation the school is also given the discretion to collect funds from the community (individuals, community leaders, entrepreneurs, and others) as well as parents of students.

2.6. Problems Solving Student Skill

The development of the global environment in the 21st century is marked by the rapid advancement of information and communication technology (ICT), opening up the lives of the global community. The era of globalization has an impact on the emergence of a competition between nations that is getting tougher for

employment opportunities at home and abroad. Without a qualified and skilled workforce, Indonesians will be less able to take advantage of competition to seize opportunities to improve their standard of living. All of that indicates the challenges faced by education in order to produce quality and competitive human resources. Implementation of national education must be able to produce students who are creative, critical thinking, able to collaborate in solving increasingly complex problems, and able to communicate with various parties and convey innovative thoughts and ideas (Pearlman, 2006; ISTE, 2008; The National Institute of Education, 2015).

Explicit implementation of national education in the 21st century must be able to produce students who can solve problems. That ability not only shapes the mastery and development of science and technology, but also creative and critical thinking in solving problems and needs in life. Through the emergence of creative and critical thinking, the student will become a creator, have high competitiveness, and become part of problem solving (not the opposite which is to create a burden of problems that must be overcome by the government). To produce such student outputs, teacher skills are needed which: are able to develop HOTS-based learning plans, describe and realize complete and effective learning instructions, encourage the emergence of students' active and creative attitudes, encourage students to actively communicate thoughts and ideas, develop and utilize digital technology in learning, develop collaborative learning through problem based learning and project based learning approaches; and other skills (Agung, 2017).

2.7. Theoretical Framework

We developed the following theoretical framework.
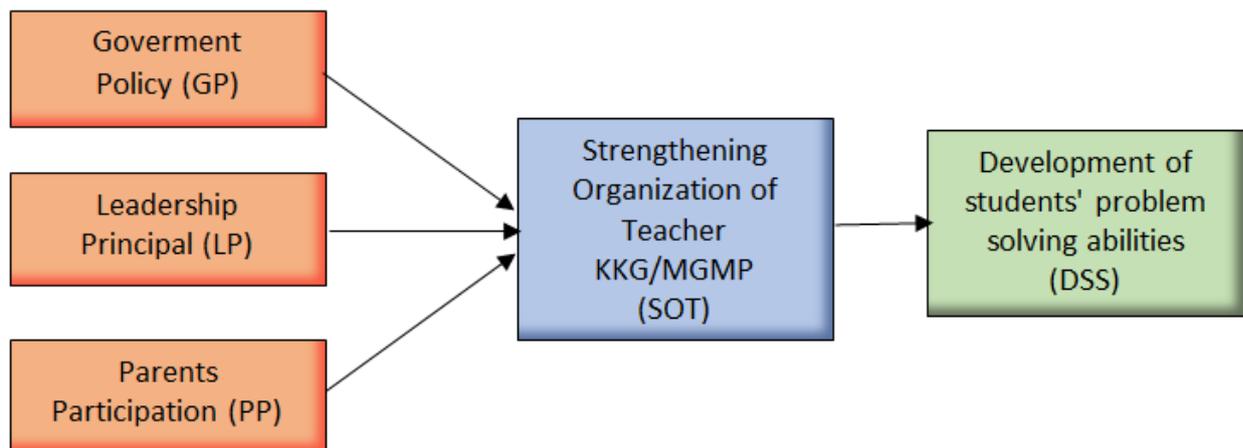
Figure-1. The theoretical framework of study influence of government policy, the principle of leadership, and participation of parents on strengthening teacher organizations (KKG /MGMP) and the development of problem solving in students: Indonesia case.

2.8. Hypotheses

- *Government Policy (GP) has a significant influence on the Strengthening of KKG / MGMP Teacher Organizations (SOT).*
- *Leadership Principal (LP) has a significant influence on the Strengthening of KKG / MGMP Teacher Organization (SOT).*
- *Parents Participation (PP) has a significant influence on the Strengthening of KKG / MGMP Teacher Organizations (SOT).*
- *Strengthening the Teacher Organization KKG / MGMP (SOT) has a significant influence on the Development of students' problems solving abilities (DSS).*

3. METHODS

3.1. Sample Respondent

This paper is part of the results of field research on the Elementary School KKG and Middle and High School MGMP in the capital city of the Republic of Indonesia, DKI Jakarta. At the elementary level, 2 (two)two KKG are taken for Mathematics and Indonesian Language subjects, two Junior High School MGMP for Economics and English subjects, and three High School MGMP for Mathematics, Economics, and Social Science subjects. The sample of this study was teachers of seven KKG and MGMP groups with as many as 120 people obtained through random sampling techniques as per Table 2. From the sample of respondents 65 (54.17%) were female and 55 (45.83%) were male.

Table-2. Sample respondent.

No.	Organization of teacher (KKG/MGMP)	Total (%)
1.	Elementary Teachers KKG:	
	- Mathematics subjects	14,17
	- Indonesian Language subjects	13,33
2.	Junior High School MGMP:	
	- Economics subjects	16,67
	- English subjects	13,33
3.	Senior High School MGMP:	
	- Mathematics subjects	12,50
	- Economics subjects	13,33
	- Social Sciences subjects	16,67
	Total (%)	100,00

*Source: Study influence of government policy, the principle of leadership, and participation of parents on strengthening teacher organizations (KKG/MGMP) and the development of problem solving in students: Indonesia case.

3.2. Data collection and Analysis

Data collection was carried out through three types of instruments, namely questionnaires, interviews, and focus group discussions (FGD). Questionnaires were distributed to teachers to answer questions related to the topics studied and interviews were conducted with principals and administrators of the KKG and MGMP, while the FGD was conducted with the MGMP chair and a number of teachers. The previous questionnaire was validated and verified using the product moment test criteria from Pearson and Cronbach alpha using the SPSS version 24.0 program. The analysis of used Structural Equation Modeling (SEM) using LISREL 8.80 program was carried out and SEM could be used, because the number of samples met the minimum requirement of 100 respondents (Kusnendi, 2009; Haryono and Wardoyo, 2017).

4. RESULTS AND DISCUSSION

4.1. Findings

4.1.1. CFA Results

In the quantitative research process that is often carried out by researchers in social science disciplines, the most difficult stage after successfully formulating a framework is the measurement or operationalization of research variables. This stage in the research process serves as a link that connects the deductive mindset to the inductive direction. Through the operationalization of variables, the research hypothesis is transformed into data. Data were analyzed and hypotheses tested. Thus, in quantitative approach-based research, the stages of measuring variables are crucial things that determine the success or failure of a study explaining a phenomenon. The issue of the quality of measuring reliability and validity is crucial in research based on quantitative approaches (Richie, 2017).

4.1.2. Validity Test Results

Testing the validity of the question items is shown by the value of the standardized loading factor. For a standardized loading factor value greater than 0.5 (Sugiyono, 2010). The CFA test results in Table 3 show that all indicator items used in this study were valid, because they had a loading value greater than 0.5.

Variables	Indicators	loading factor	Conclusion
Government Policy (GP)	x1	0,78	Valid
	x2	0,82	Valid
	x3	0,99	Valid
	x4	0,53	Valid
Principal Leadership (LP)	x5	0,85	Valid
	x6	0,67	Valid
	x7	0,97	Valid
	x8	0,65	Valid
Parents Participation (PP)	x9	0,92	Valid
	x10	0,87	Valid
	x11	0,97	Valid
	x12	0,80	Valid
Strengthening Organization of Teacher (KKG/MGMP) (SOT)	x13	0,87	Valid
	x14	0,88	Valid
	x15	0,87	Valid
	x16	0,86	Valid
	x17	0,65	Valid
	x18	0,66	Valid
Development of students' problem solving abilities (DSS)	x19	0,89	Valid
	x20	0,97	Valid
	x21	0,59	Valid
	x22	0,60	Valid

Source: Study influence of government policy, the principle of leadership, and participation of parents on strengthening teacher organizations (kkg / mgmp) and the development of problem solving in students: Indonesia case.

4.1.3. Goodness of Fit Model

Structural model analysis in SEM began with testing the suitability of the overall model seen based on the Goodness-of-Fit Index (GFI) statistical indicators of the LISREL output (Hair *et al.*, 2010). Overall a summary of the critical value of the model match testing is in Table 4.

Table-4. Goodness of fit model results.

| Size of degrre of comparibility	Value	Acceptable level of compatibility	Decision
Goodness of fit indices (GFI)	0.97	GFI ≥ 0,9	Good Fit
Root mean square error of approximation (RMSEA)	0.063	RMSEA ≤ 0,08 (good fit)	Good Fit
Normed fit index (NFI)	0.93	NFI > 0,90	Good Fit
Adjusted GFI (AGFI)	0.88	AGFI ≥ 0,90	Marginal Fit
Comparative fit index (CFI)	0.96	CFI > 0,90	Good Fit
Incremental fit index (IFI)	0.96	IFI > 0,90	Good Fit
Relative fit index (RFI)	0.92	RFI > 0,90	Good Fit

Source: Study influence of government policy, school leadership, and community participation in strengthening teacher organizations (KKG / MGMP) and student development in ability in solving problems: Indonesia case.

The model match test results in Table 3 show that the RMSEA is smaller than 0.08, CFI, IFI, NFI, RFI, and GFI got values greater than 0.90, while AGFI had values smaller than 0.90. These results indicated that the model was a good fit.
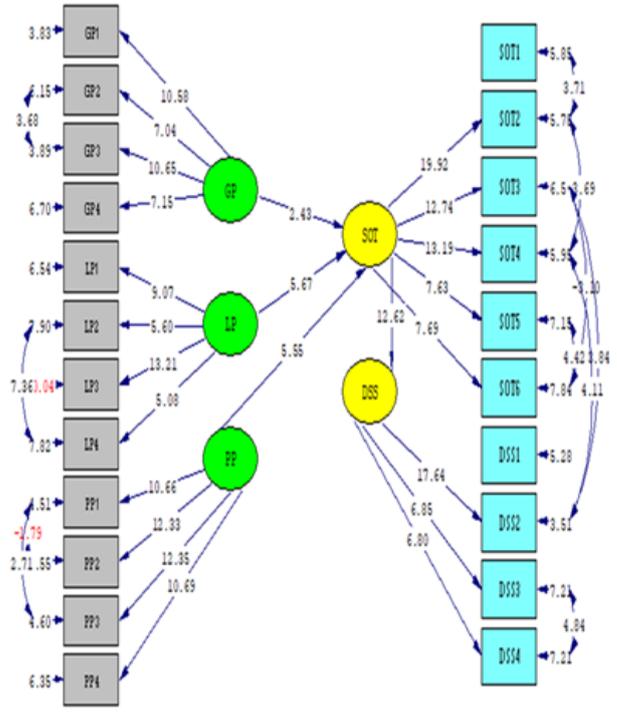
4.2. Hypothesis Test Results

Data processing using the help of the Lisrel 8.80 program produced a structural model of the variables and indicators studied, as follows.

Figure 2 Standardized Solution Figure 3 T-Value.
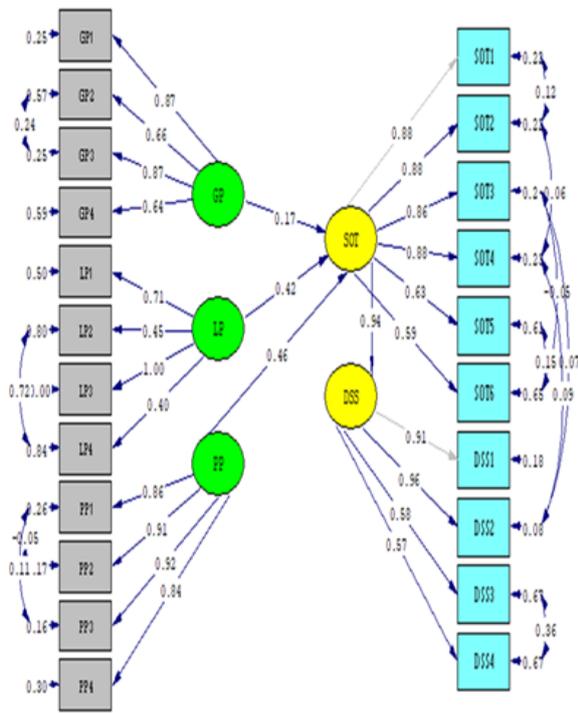
Figure-2. and **Figure-3**. Structural Model Results study influence of government policy, school leadership, and community participation in strengthening teacher organizations (KKG / MGMP) and student development in ability in solving problems: Indonesia case.
Source: Developed by the researchers.

Hypothesis testing in this study was done by looking at the critical value (CR) at a 95% confidence level or 5% error, and the CR value obtained was 1.96 (Hair *et al.*, 2010). Table 4 shows the results of testing the hypothesis in this study.

<div align="center">Table-5. Hypothesis test results.</div>

No	Hypothesis	Loading	T-Value	Conclusion
1	GP has positive effect (+) toward SOT	0,17	2,43	Accepted
2	LP has positive effect (+) toward SOT	0,42	5,67	Accepted
3	PP has positive effect (+) toward SOT	0,46	5,55	Accepted
4	SOT has positive effect (+) toward DSS	0,94	12,62	Accepted

*Source: Study influence of government policy, school leadership, and community participation in strengthening teacher organizations (KKG / MGMP) and student development in ability in solving problems: Indonesia case.

Table 5 explains that the proposed hypothesis was accepted because it obtained a direction coefficient value greater than 0.05 or a T-value greater than 1.96.

Based on the results of the hypothesis test, it appeared that the parent participation variable (PP) had the highest value of the direction coefficient, followed by the principal's leadership (LP) and government commitment (GP). This reflects that the role of parents is quite important in supporting the participation of teachers in KKG / MGMP activities. However, this participation also needs to be supported by the visionary headmaster's leadership and their positioning as an agent of change for school progress. The results of the hypothesis test also showed that the strengthening of the teacher's organization had a positive influence on improving student competence, especially in problem-solving learning that demanded creativity, critical thinking, collaboration, and the ability to convey new ideas.

4.3. Testing Indicators in Variables

Based on the results of structural testing it is known that the relationship between the indicators of the exogenous latent variable and the latent endogen variable. The goal is to look at the contribution of indicator values to each variable, as shown in Table 6.

Table-6. Test results of the relationships between indicators of exogenous latent variables and endogenous latent variables.

Variables	Indicators	Loading value	Construct Coefficient	Contribution
Government Policy (GP)	x1 = Preparation of training modules	0.25	0.87	0.2175
	x2 = Training funds	0.57	0.66	0.3762
	x3 = Instructor	0.25	0.87	0.2175
	x4 = Learning facilities	0.59	0.64	0.3776
Principal Leadership (LP)	x5 = The vision and goals	0.50	0.71	0.3550
	x6 = KKG / MGMP appreciation	0.80	0.46	0.3680
	x7 = Teacher competency	0.00	1.00	0.0000
	x8 = Funding support for activities	0.84	0.40	0.3360
Parents' Participation (PP)	x9 = School fund participation	0.26	0.86	0.2236
	x10 = Participation in learning	0.17	0.91	0.1547
	x11 = Participation in learning facilities	0.06	0.92	0.0552
	x12 = Participation of supervision	0.30	0.84	0.2520
Strengthening Organization of Teacher (KKG/MGMP) (SOT)	x13 = Organizational activities	0.88	0.21	0.1848
	x14 = Activity funding support	0.88	0.21	0.1848
	x15 = community resource participation	0.86	0.20	0.1720
	x16 = Government care	0.88	0.21	0.1848
	x17 = Management of learning	0.63	0.61	0.3843
	x18 = Determination of HOTS topic	0.59	0.65	0.3835
Students' problem solving abilities (DSS)	x19 = Creativity	0.91	0.18	0.1638
	x20 = Critical thinking ability	0.96	0.08	0.0768
	x21 = Collaboration	0.58	0.61	0.3538
	x22 = Submission of ideas	0.57	0.67	0.3819

*Source: Study influence of government policy, school leadership, and community participation in strengthening teacher organizations (KKG / MGMP) and student development in ability in solving problems: Indonesia case.

5. DISCUSSION

5.1. Government Policy (GP) towards KKG / MGMP (SOT)

Hypothesis test results indicated that government policy (GP) has a significant influence on strengthening teacher organizations (SOT) with a direction coefficient value of 0.17 > 0.05. From the GP variable, providing activity learning facilities (x4) was the indicator with the largest contribution value (0.3776), followed by funding assistance (x2), and preparation of training modules (x1) and training by instructors (x3).

Government policies in carrying out training for teachers by utilizing the KKG / MGMP forum are indeed accompanied by the application of the learning module approach, funding assistance, learning facilities, and delivery of material by instructors.

However, this policy is considered to be incidental, while teachers expect that KKG / MGMP activities can be sustained by obtaining government assistance (facilities and activity funds) in order to truly be able to improve their teaching abilities. The government is seen as not being highly committed to truly empower the KKG / MGMP forum, other than just to use it as a training ground. For example, financial support was only obtained by the KKG / MGMP at the time of the training by the government, but not routinely received every month. Many KKG / MGMP do not carry out routine activities due to low teacher participation but one of the obstacles is the lack of financial support and learning facility facilities in this forum.

The results of interviews with leaders and teachers tended to indicate that they need more support from learning facilities and financial assistance to carry out routine activities in the KKG / MGMP, not only related to training. Providing training modules was considered inappropriate, because they already have textbooks for

subjects. For teachers what was important was to understand the contents of textbooks as a provision of learning to students.

The modules often obtained were not appropriate to the needs of teachers carrying out teaching tasks. Some teachers assumed that they are tired of getting training because it had been done during a competency test. Training was only considered to take time to teach in school. Even instructors provided by the government to provide training materials were considered less useful in improving teaching skills. Studies conducted by Alwi (2009); Mutmainah (2011); Ma'rifataini (2014); Winingsih (2016) and Pratiwi (2018) suggested the importance of government (central and regional) commitment in supporting KKG / MGMP activities.

5.2. Principal Leadership (LP) toward KKG/MGMP (SOT)

The variable that had an influence on SOT was the Principal Leadership (LP) with a direction coefficient value of 0.42> 0.05. From the KSI2 variable, the appreciation indicator of KKG / MGMP (x2) had the highest contribution of 0.3680, followed by the vision and goal indicator (x1) of 0.3550, and the support of activity funds (x8) of 0.3360. This means that the principal's appreciation of the KKG / MGMP activities is important in sending their teachers to participate in the activities in this forum. The KKG / MGMP container is considered to be able to improve the ability of its teachers, so that it directly supports the vision and goals supported by the school principal. A school principal who has a high appreciation for teacher organizations is likely to support funding for his teachers to take part in KKG / MGMP activities.

Strictly speaking, teacher participation in activities in the KKG / MGMP is closely related to the appreciation of the principal for this organization and alignment with the vision and goals in managing the school. Principals themselves may find it difficult to improve the competence of their teachers, so the KKG / MGMP forum is considered to support the achievement of the vision and goals of improving education in their schools. Wit visionary leadership, the principal would consider it important to send their teachers to participate in the KKG / MGMP activities.

High or low appreciation of the principal of this school also depends on the benefits of KKG / MGMP in improving the ability of its member teachers. Appreciation tends to be low if the KKG / MGMP was considered not to provide significant benefits, so the principal would prohibit their teachers from participating in activities in this organization.

Various cases in the field often show KKG / MGMP activities that are less able to improve the ability of teachers and student learning outcomes, so school principals are reluctant to send teachers because they are considered less useful, due to the loss of leaving teaching time, no substitute teachers , and so on (Alwi, 2009; Hidayati, 2014; Nurlaeli and Oyon, 2018).

5.3. Parents' Participation (PP) toward KKG/MGMP (SOT)

The exogenous latent variable Student Parent Participation (PP) had a significant influence on the strengthening of KKG / MGMP teacher organizations (SOT) with direction coefficient values of 0.46> 0.05. The role of these parents is higher than the two other exogenous latent variables used in this study, even compared to the principal's leadership variable. This shows the importance of parents' support for the implementation of education in schools in various aspects, both material and non-material.

There are at least four indicators that affect SOT latent endogenous variables. The supervisory participation indicator (x12) provides the highest contribution value to the exogenous PP variable, followed by the participation indicator in the need for school funds (x9) of 0.2236, participation in supporting learning (x10) of 0.1547, and participation in the provision of learning facilities amounting to 0.0552. The results showed that participation in monitoring the implementation of education in schools and financial assistance was considered more important than participation in learning and learning facilities.

According to the teachers' perceptions, the school really needs the participation of parents. To improve the results of education in schools need to be conveyed to students' parents to support their achievement. This will run smoothly if parents supervise the implementation of education and know the goals and needs of the school, so that it contributes to the participation and the needs of the school.

The results of interviews with several teachers found that the need for funds to participate in KKG / MGMP activities becomes a burden if they have to bear it themselves, such as for transportation, consumption, purchase of learning tools, and so on. So far, part of the fulfillment of needs comes from the school and some from the teachers themselves. The school only helps according to ability, for example by setting aside part of the school operational assistance funds from the actual government to meet other needs. In this context there are regulations of the Indonesian government that prohibit school funding from parents, except in the form of voluntary donations.

Studies by Rogers *et al.* (2009); Durišić and Mila (2017); Ahmad *et al.* (2017); Syamsudduha (2017) showed that school achievement is good, and is often caused by the participation of parents in the administration of education in schools, especially in supervision. Through supervision, parents of students can find out the needs faced in learning at school, so they voluntarily provide the funds needed. Support was also given to the needs of learning and learning facilities, although some of the parents of students interviewed stated that it was more the responsibility of the government or the Foundation.

5.4. Strengthening KKG/MGMP (SOT) toward Students' Problems Solving Abilities (DSS)

Data processing also showed the strengthening of KKG / MGMP (SOT), especially in learning with HOTS, had a significant influence on improving students' ability to solve problems (DSS) with a coefficient value of 0.94> 0.05. The highest contribution of indicators to the exogenous latent variable SOT was management learning (x17) of 0.3843, determination of HOTS topic (x18) of 0.3835, organizational activity (x13) - support of HOTS activity funds (x14) - government care (x16) each showing the same value is 0.8148, and community resource participation (x15) is 0.1720.

In the DSS variable an increase was shown in the indicator of the delivery of ideas (x22) of 0.3819, followed by the collaboration indicator (x21) of 0.3538, creativity (x19) of 0.1638, and critical thinking at 0.0768. Strengthening KKG / MGMP in managing learning that is assembled with HOTS topics encourages students to be more active in conveying their thoughts and ideas, both in expressing opinions or trying to solve shared problems. From the other side, the value of the increase is still relatively small from the indicator of creativity and critical thinking ability of students in reading phenomena that require systematic solution. The Alwi (2009) and Gunadi and Yurianto (2017) studies show the role of this teacher organization in improving the ability of teachers, and in impacting student learning outcomes.

6. CONCLUSION

The description above shows that Government Policy (GP), Principal Leadership (LP), and Parent Participation (PP) as exogenous latent variables have a significant influence on Strengthening the Organization and the Strengthening of KKG / MGMP Teachers as endogenous latent variables. The Parent Participation Variable (PP) shows the highest coefficient value of the other two that teachers perceive as very supportive of their participation in KKG / MGMP activities. Principals often find it difficult to send their teachers to this forum, because they have financial limitations. According to the teacher interviewed, the lack of funds often becomes an obstacle in participating in KKG / MGMP activities. In fact, many studies have shown that a strong KKG / MGMP organization has a significant influence on improving teacher ability and having a positive impact on improving student ability.

In an effort to strengthen the KKG / MGMP organization, several things need to be considered. The government has to fulfill funding needs and facility activities. In terms of leadership what is needed is the principal's

appreciation of the MGMP KKG and support for having the vision and goals of the school while in the case of teacher organizations it is the improvement of HOTS topic-based learning management. The latter shows the need for a HOTS-based learning model that can be used as a teaching guide in enhancing creative abilities, critical thinking, collaborative students, and providing innovative problems solving ideas.

In addition, given the parents' participation factor, it is important to strengthen the KKG / MGMP so that it is reframed to revoke the regulations prohibiting schools from collecting funds from parents and the community, instead providing flexibility according to the needs faced.

REFERENCES

Agung, I., 1993. KKG / MGMP: Forum for transmission and efforts to improve education quality. Jakarta: Ministry of Education and Culture Monitoring Forum Magazine, No. 16th. 6.

Agung, I., 2017. Competent and professional teachers, scientific oration of research professor, Indonesian Institute of Sciences - Ministry of Education and Culture, MOEC Republic of Indonesia.

Agung, I., 2019. Teacher learning management through MGMP based on HOTS and problem solving. Research Report, Center for Research of Education and Culture, MOEC Republic of Indonesia.

Ahmad, N., S. Hassan, A. Ahmad, L. Chua and N. Othman, 2017. Parental involvement in learning environment, social interaction, communication, and support towards children excellence at school. Journal of Sustainable Development Education and Research, 1(1): 77-84.Available at: https://doi.org/10.17509/jsder.v1i1.6247.

Alwi, M., 2009. The role of teacher working groups (KKG) in enhancing professionals of elementary school science teachers in Suralaga District. EducatiO Journal, 4(2): 101-117.

Aminudin, A., 2017. Effect of principal leadership and supervision of school supervisors on teacher performance in achieving learning achievement in islamic education. Garut Aminuddin University Education, 11(1): 88-96.

Anderson, L. and D.A. Krathwohl, 2001. Taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman.

Antaranews, 2019. SMP 228 students complained about the difficulty of the UNBK Mathematics problem. Available from https://www.antaranews.com/berita/841003/siswa-smp-228-keluhkan-sulitnya-soal-unbk-matematika.

Barge, S., 2010. Principles of problem and project based learning: The Aalborg PBL model. USA: Aalborg. Available from: https://www.en.aau.dk/digitalAssets/66/66555_pbl_aalborg_modellen-1.pdf.

Bloom, B.S., M.D. Engelhart, E.J. Furst, W.H. Hill and D.R. Krathwohl, 1956. The taxonomy of educational objectives the classification of educational goals, handbook I: Cognitive domain. New York: David McKay.

Botung, H., 2008. Understanding and history of the establishment of the KKG. Available from http://www.ucokhsb.blogspot.com.

Chepy, A., 2016. American researcher learns MGMP KKG Banjarnegara. Available from https://semarangpedia.com/peneliti-amerika-pelajari-kkg-mgmp-banjarnegara/.

Davis, K. and J.W. Newstrom, 2004. Organizational behavior: Human behavior at work. McGraw-Hill.

De Graaf, E. and A. Kolmos, 2003. Characteristics of problem-based learning. International Journal of Engineering Education, 19(5): 657-662.

Detik News, 2019. High school students complain about difficult problems in Mathematics UNBK. Available from https://news.detik.com/berita/d-4493942/siswa-sma-keluhkan-sulitnya-soal-unbk-matematika.

Directorate General of Teachers and Education Personnel (Dirjen GTK), 2019. Design of sustainable professional development program through improvement of zoning-based learning competencies. Jakarta: MOEC Republic of Indonesia.

Durišić, M. and B. Mila, 2017. Parental involvement as a important factor for successful education. C.E.P.S Journal, 7(3): 137 – 153.

Gunadi, T. and Yurianto, 2017. The effect of the effectiveness of geography deliberation on subject teacher management (MGMP) on teacher pedagogical competencies in improving student learning achievement (Survey on High School Geography Teachers in Sumedang Regency). Coopetition, 8(2): 113-111.

Hair, J.J.F., C. William, B.J. Black and R.E.A. Babin, 2010. Multivariate data analysis. United States: Pearson.

Haryono, S. and P. Wardoyo, 2017. Structural equation modeling (SEM) for management research with AMOS 18.00. Jakarta: Luxima Metro Media.

Hidayati, A.N., 2014. Teacher professional competency development through work group empowerment (KKG / MGMP). Available from https://pujiadilpmpjateng.wordpress.com/2014/05/16/pengembangan-kompetensi-profesional-guru-melalui-pemberdayaan-kelompok-kerja-kkgmgmp/.

Hmelo-Silver, C.E., 2004. Problem-based learning: What and how do students learn? Educational Psychology Review, 16(3): 235-266.Available at: https://doi.org/10.1023/b:edpr.0000034022.16470.f3.

ISTE, 2008. International society for technology in education. National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers, Canada.

Krulik, S. and Rudnick, 1999. Innovative taks to improve critical and creative thinking skills. Develoving Mathematical reasoning in grades K-12. Reston: The National Council of Teachers of Mathematics, Inc.

Kusnendi, 2009. Structural equation models. Bandung: Alfabeta Publisher.

Lambros, A., 2004. Problem-based learning in middle and high school classrooms. CA: Corwin Press.

Lidia, A., 2016. Effects of principal leadership, teacher motivation and participation in economic subject teacher training (MGMP) activities on professional competence of high school economics teachers in Padang City, Teacher training and education colleges (STKIP) PGRI West Sumatra.

Ma'rifataini, L., 2014. MGMP effectiveness in increasing the professionalism of general subject teachers in MTs. Education, 12(1): 70 - 82.

Muhajirin, P. Titi and Y. Amin, 2017. The effect of academic supervision and teacher participation on MGMP through work motivation against the professionalism of high school / MA teachers. Educational Management Journal, 6(2): 170 – 177.

Mutmainah, N., 2011. The role of subject teachers' consultation (MGMP) in the development of professional competence of history teachers at high schools in Rembang District in Academic Year 2010/2011, Thesis, Faculty of Social Sciences - Semarang State University.

Noor, I.H.M., 2019. MGMP management study, research report, research center - MOEC Republic of Indonesia.

Nurlaeli, Y. and S. Oyon, 2018. Effectiveness of subject teachers' forum (MGMP) in improving teaching performance of English teachers. Indonesian Journal of Education Management & Administration Review, 2(2): 308 - 317.

Pearlman, B., 2006. 21st century learning in schools – a case study of new technology high school in Napa, CA. New Directions for Youth Development.

PISA, 2016. Technical Report, Organisation for Economic Co-operation and Development Publications.

Pratiwi, R.H.W., 2018. The efforts of teacher working groups (KKG) in improving the performance of teachers of islamic education (PAI) in primary schools (SD) in Bendosari District in 2018, IAIN Surakarta.

Priyastutiningrum, R.W., 2014. The effect of principal leadership and teacher participation in MGMP on the performance of English teachers in high schools in Sleman Regency, Yogyakarta State University. Available from https://eprints.uny.ac.id/18867/1/RISKA%20WAHYU%20P.%2009101244019.pdf.

Richie, 2017. Confirmatory factor analysis (CFA). Available from https://www.mobilestatistik.com/analisis-faktor-konfirmatori-cfa/.

Rogers, M.A., J. Theule, B.A. Ryan, G.R. Adams and L. Keating, 2009. Parental involvement and children's school achievement: Evidence for mediating processes. Canadian Journal of School Psychology, 24(1): 34-57.Available at: https://doi.org/10.1177/0829573508328445.

Savery, J.R. and T.M. Duffy, 1995. Problem based learning: An instructional model and its constructivist framework. Educational Technology, 35(5): 31-38.

Sugiyono, 2010. Educational research methods. Bandung: Alfabeta.

Suhardi, 2009. KKG and MGMP pilot activities BERMUTU program clears chronic disease after teacher. BERMUTU Bulletin, 4(1): 7-12.

Sumedi, 2018. The principal's strategy in improving teacher quality in state junior high schools 1 Cawas Klaten in the 2016/2017 Academic Year, IAIN Surakarta.

Syamsudduha, S., 2017. Parent participation in child education in schools at Al-Fityan SDIT, Gowa Regency.Journal Speech, 9(2): 141 − 158.

The National Institute of Education, 2015. A teacher education model for 21st century. Singapore: NIE.

USAID, 2009. Teacher education and professional development in Indonesia: A gap analysis. Jakarta: United States Agency for International Development.

Winingsih, L.H., 2016. The role of local government in implementing the 2013 curriculum. Journal of Education and Culture, 1(1): 37-57.