

Model based group approach (MBGA); an alternative approach for improving the quality of student learning in Universities

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Abstract

This research is driven by the phenomenon of the poor quality of learning activities of new students in universities. This study aims to analyzed the strengths through the work of the Model-Based Group Approach to improve the quality of student learning activities. This research is a quasi-experimental research involved 206 students of Universitas Negeri Padang. The instrument used is IAKB (Activation Instrument Learning Activity) and analysis of research data using T-Test. The result from this research shows that there is an improvement of learning activity quality before and after application of the model that is 13.68 to 57.10. This shows a gain of 43.42%. Based on the results of research that has been done can be concluded that the development of this model is useful to improve the quality of student learning activities.

Keywords: Model based group approach (MBGA), alternative approach, universities

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Introduction

Learning activity is a two-way process that is an input process and output the process (Asmawi, 2010; Hernawan, Andriyani, Susilana, Chandrawati, & Mulyati, 2007; Latipah, 2015). An appropriate input process can provide quality output. This can be carried out if the student has long-term learning principles (long life learned). The application to the principle in college has four processes, including experience of the university, distancing themselves from non-academic searches, having mature learning care for, and establishing themselves as students who have a long-life learned principle (McWilliams & Barrett, 2018).

Effective learning in colleges suffered from students cognitively undertaking with the material in many ways also occurs in stronger insight and retention (LaDage et al., 2018). In fact, the phenomenon experienced by students from various tri-success universities expressed has not matched with the expectations, both in calls of GPA, career preparation and social-community in question (Prayitno, 2007). Another phenomenon found determined that from the National Selection Data of State Universities (SNMPTN) in 2010 received data that raw-input coming in at some state universities in Padang takes a poorer average entrance test value connected with those received leading state universities in Indonesia.

Another previous study is that the nature of cheating has a high intensity among new students (Ashworth, Bannister, Thorne, & Unit, 1997; McCabe, 2005; Tindell & Bohlander, 2012). The fact is reinforced by some investigation follows that cheat actions become a very popular situation made by students to become a pattern (Suganda, 2006; Wulandari, 2014). The same is noticed among the Survey results by Buchari Alma, which indicates 100% of the student said often cheat (Alma, 2010). Such learning activities also generate academic stress conditions and even end in deaths such as suicide (Bariyyah, 2015; Taufik, Ifdil, & Ardi, 2013). Furthermore, this condition in addition to unsettled areas of student learning has the potential to inhibit the ability of individuals in determining the direction of his career (Fadli, Alizamar, & Afdal, 2017). This is because the lack of individual knowledge of self, especially self-belief associated with the habit of cheating.

Students' knowledge of ways of learning in college does not bring substantial changes to the quality of their learning activities. The results of the ATAM (Student Academic Assessment and Tutorial Student) research in 2003 in six LPTK universities (UNIMED, UNP, UNJ, UNNES, UNESA, and UNM) found that the average quality of their learning activities was slighter than 50% (excellent score 330). Such conditions reinforce the demand for research development of learning service model for new students. Behavior of learning "congenital" students to college have not enough changed so as not yet meet the requirements in college.

Based on the information and reality above, it is crucial to have a significant program applied to develop learning activities for students. One is the group approach model for the development of learning activities for students. This is reinforced by the results from previous studies that find the relation of quality learning activities of students with learning outcomes or the success of learning in college (Chen, Yang, & Hsiao, 2016; Nasution, 2016; Pokay & Blumenfeld, 1990).

Methods of group activities can improve learning skills (Atmatzidou, Demetriadis, & Nika, 2018). Group activities become useful for promoting student learning activities because group learning involves cooperation between one and another person (Hung & Chen, 2018). The group activity model becomes an efficient strategy used outside the classroom (Molle & Lee, 2017).

Comparison between individual student learning outcomes and group learning shows that student achievement learning through group work is higher, and they use higher-level reasoning and critical-thinking skills (Babamohamadi, Fakhr-Movahedi, Soleimani, & Emadi, 2017; Burbach, Matkin, Gambrell, & Harding, 2010; Eftekhari, Sotoudehnama, & Marandi, 2016; Kim, Park, Jang, & Nam, 2017; Loes & Pascarella, 2017; Moreno, Shwayder, & Friedman, 2017). Therefore, this research intends to analyze the strengths through the work of the Model-Based Group Approach to improve the quality of student learning activities in universities.

Method

This type of research is quasi-experimental research (Campbell & Stanley, 2015; Christensen, Johnson, & Turner, 2011; Wildemuth, 2016) This type of research is quasi-experimental research involving 206 new students and working with purposive cluster random sampling. The instrument of this research is IAKB (Activation Instrument Learning Activity) with Cronbach's Alpha is 0.92. and AUM PTSDL with Cronbach's Alpha is 0.86. The data analysis techniques applying T-Test to measure the effect before and after the treatment to the group approach model.

Procedure and assessment

The first step is to identify the initial condition of the students before the implementation of the model, the quality condition of the students' learning activities generally has low scores with sufficient learning problems. The operation of MGBA Model (Model Group Based Group Approach) can be viewed in Figure 1.

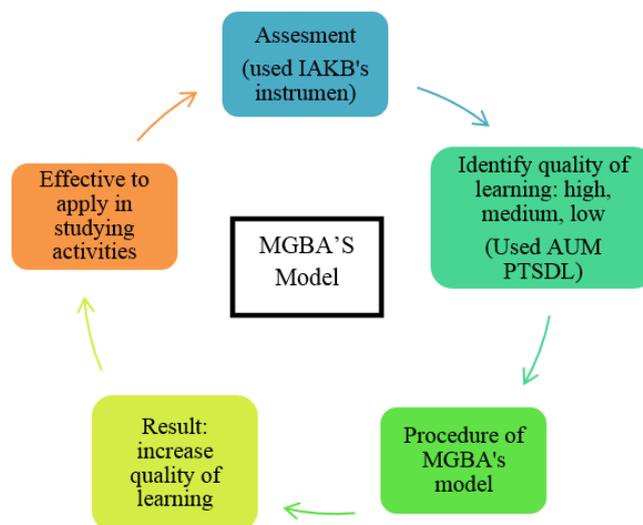


Figure 1. Procedure of Model Based Group Approach (MBGA)

MGBA model is implemented through several works, which consist of assessment activities using IAKB addresses to describe conditions of quality activities of student learning activities, occurring in three alternative categories specifically, high, medium, low. Study need is done that is using AUM PTSDL. Based on these three categories, medium and low categories are taken to implement the MGBA Model.

In relationship to adaptation through the use of group guidance by Prayitno in the MGBA model, this is first in the attending stage that is worked out praying, building a rapport of group members in the form of greetings, open questions, and followed by structuring related to grouping guidance. Second is an introduction to the form of self-introduction activities of group members such as using games and the determination of topics to be discussed (topic of a task or available topic from a counselor).

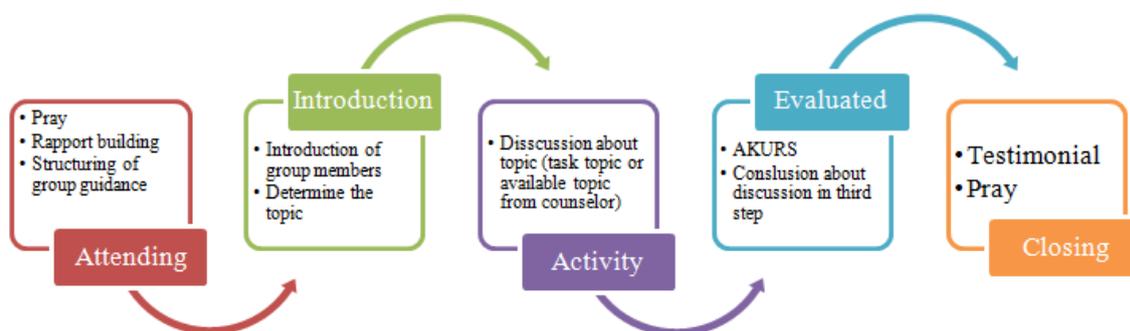


Figure 2. Model Based Group Approach (MGBA)'s Model Adapted from Group Guidance which Developed by

Third is the activity in the form of stages of discussion tasks linked to the topic. Fourth, evaluated in the form of assessment activities using AKURS (Reference, Competence, Effort, Feel, Truly) and formulate conclusions related with the topic discussed. Fifth are closing in the form of the delivery of impressions and messages and followed by the reading of prayers as a Thanksgiving. Implementation of this MGBA model based on test results found to improve the quality of student learning. So this model can be an alternative approach that can be applied in learning activities both by lecturers and all education practitioners.

Results and Discussion

The results showed that the MGBA model was effective to improve the quality of student activities. The results from the research have been conducted using this model where, the initial condition of the quality score of student learning activities is described in Table 2.

Table 1 shows that on average, there is an increase in the quality score of student learning activities after the model is implemented for all PTSDL components. The increase occurred in each component is P = 39.58%; T = 46.26%; S = 48.39%; D = 48.39%; L = 17.70% and generally there was an increase of 43.42% against the ideal score. The use of this model that applies the group model, there is a significant increase in helping students improve the quality of learning activities. This is in line with the findings of Atmatzidou where the use of group models has a positive effect in improving the quality of student learning activities in his research in the student's faculty of Engineering (Atmatzidou, et al., 2018). Furthermore, how students engage in group learning environments is essential to design and facilitate productive learning opportunities for students (Pawlak, Irving, & Caballero, 2018). It is also supported by Liu & Zang's research findings to the Business Faculty students whom the group-based learning method is effective to improve the quality of student learning activities (Liu, Li, & Zhang, 2018). Based on this case it can be concluded that the method of group-based learning, especially the model that has been developed into an effective alternative to improve the quality of student learning activities.

The existence of learning problems found to be influenced by the factor approach used by teachers in learning and knowledge factors owned by students. This is in line with Shyr & Chen's findings that about 20.50% of students have higher knowledge using a conventional approach than a non-conventional approach (Fang & Tajvidi, 2018; Shyr & Chen, 2018). Problems encountered in learning are also influenced by the intervention of schools, parents and the environment. Based on this case, it can be concluded that the learning problems experienced by the students are motivated by various factors. So it takes a solution to help students in handling the problem.

Table 1. Quality Conditions of Student Learning Activities (Average Scores) Before and After Using The Group Approach Model

No.	Majors	Component										Total	
		P		T		S		D		L		SIM	TIM
		SIM	TIM	SIM	TIM	SIM	TIM	SIM	TIM	SIM	TIM		
1	PBSI	3.96	25.00	15.41	85.00	4.33	18.00	8.09	34.00	10.65	30.00	42.43	192.10
2	BSI	3.96	23.00	17.27	79.06	4.15	23.06	7.08	28.94	11.85	26.94	44.31	161.96
2	PMAT	4.57	28.03	17.83	96.95	5.97	17.95	10.2	56.97	13.13	28.97	51.70	228.95
3	KIM	4.79	26.96	17.18	88.96	4.50	17.04	9.86	38.04	19.79	28.96	47.11	199.96
4	IAN	3.09	9.00	13.70	82.00	3.72	17.00	6.86	32.00	9.98	21.01	37.35	161.01
5	PSA	4.82	24.97	17.11	82.94	5.18	22.92	8.62	34.91	12.26	21.03	47.98	186.75
	Average	4.20	22.83	16.42	85.82	4.64	19.33	8.45	37.48	12.94	26.15	45.18	182.73
	%	10.50	50.08	10.95	57.21	15.47	64.43	14.08	62.47	25.88	43.58	13.68	57.10
	Enhancement (%)	39.58		46.26		48.96		48.39		17.70		43.42	
	Ideal Score	40.00		150.00		30.00		60.00		50.00		330.00	

Introduction: PBSI = Indonesian language and literature education; BSI = Indonesian Language and Literature (Non-Education); PMAT = Mathematics education; KIM = Chemistry (Non-Education); IAN = Science State Administration (Non-Education); PSA = Anthropology Sociology Education; SIM = Before the implementation of the model; TIM = After the implementation of the model; P = Learning Prerequisites; T = Learning Skills; S= Learning facilities; D= Personal self; L: Environment.

Table 2. Quality Improvement of Learning Activities Before and After Using the Group Approach Model

No.	Elements of Learning Activities	Average Quality Score		Ideal Score	Enhancement (%)
		Before the implementation of the model	After the implementation of the model		
1	Prerequisites for mastery of learning materials (P)	4.20	22.83	40.00	46.57
2	Learning skills (T)	16.42	85.82	150.00	46.26
3	Learning facilities (S)	4.64	19.33	30.00	48.96
4	Personal Conditions (D)	8.45	37.48	60.00	48.39
5	Physical and socio-emotional environments (L)	12.94	26.15	50.00	26.42
	Average Overall	46.65	181.61	330.00	40.91

Table 2 explains that the group approach model for the development of learning activities, in this case very successfully raise the quality of student learning activities. The findings above are the increase as the quality of learning activities from 46.65 to 181.61 (40.91%) of the ideal score of 330.00. Among the five elements of learning activities in the sequence that most upgraded the quality is learning facilities (48.96%) and personal condition (48.39%). Followed by prerequisite for mastery of learning material (46.57%), learning skill (46.26%), and physical and socio-emotional environment (26.42%). Improving the quality of learning activities regarding the prerequisite of mastery of the above learning materials gives the meaning that the group approach model can be used to improve the quality of student learning activities that lead to mastery learning materials optimum / thorough (mastery learning) (Cheung-Blunden & Khan, 2018; Ning, 2018; Wang, Yang, Culpepper, & Douglas, 2018). In relation to complete learning, learning activities that lead to the prerequisite of mastery of learning, materials are extremely important to the students as they will be immediately related to higher mastery of the material either in one subject or in other related subjects. So that in the end the student concerned will be able to achieve optimal learning outcomes.

Complete learning is very crucial to be involved in learning by developing all the possible learners in learning. Furthermore, according to Ernest H. Hilgard, learning is to be able to do something done before knowing it or if its behavior changed so that other ways of dealing with a situation than before it (Hakim, 2009). Slameto also supports that learning is a series of activities of the body and soul to obtain a change of behavior as a result of individual experience in interaction with its environment concerning cognitive, affective, and psychomotor (Slameto, 2010). If the completeness of learning in question can be implemented by students / students, then the concerned has had the mastery over the material or the substance as the lecture material as a prerequisite to learn the next material, which at the end of the student will have no difficulty in learning the higher lecture materials. The MGBA model has been prosperous in improving the quality of student learning activities, so this model is suitable to be implemented and developed for the larger target population. This model becomes one of the alternatives that can be used in efforts to optimize the achievement of academic goals. Training of Trainer The MGBA model can be run for educators to optimize the learning process.

Conclusion

MBGA is significantly effective in developing student learning activities, can improve the quality of student learning activities. Improving the quality of learning activities for each element of learning activity is a prerequisite of mastery of learning materials (P) 46.57%, learning skills (T) 46.26%, learning tools (S) 48.96%, personal condition (D) 48.39%, and the physical and socio-emotional (L) 26.42% with an average overall increase of 40.91%. The results from the implementation showed that the group guidance model in developing student learning activities can significantly reduce student learning problems. Based on the research findings, the decrease of learning activity problem is the prerequisite of mastery learning material (P) 13.3%, study skill (T) 5.29%, learning tool (S) 2.93%, self-condition (D) 7.20 %, and the physical and socio-emotional (L) environment 10.2% with an overall average of 7.15%. The results of the implementation showed that the group guidance model in developing student learning activities significantly impacted also on the improvement of student achievement. This model becomes one of the alternatives that can be used in efforts to optimize the achievement of educational goals. Training of Trainer The MGBA model can be run for educators to optimize the learning process.

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