

Teacher's Mentoring Model Development in Study Writing Based on Mind Mapping

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Abstract: This study aimed to get an overview of the development of the teacher's ability in the writing of the current study, obtain a mentoring model of writing studys based mind mapping is valid, practical and attractive, and the effectiveness of mentoring models of writing studys based mind mapping. The research location in SMKN 4 Makassar. This type of research is the development model of mentoring teachers to write studys based on mind mapping. Data were analysed through the validity, effectiveness and practicality of the mentoring model. The results showed that condition of teacher's ability in writing a scientific study is very low. This is because: lack of teacher motivation in writing the study. The lack of training of writing studys for teachers, training pattern which has been held is a pattern of training or workshops, the methods used is lecture method and usually ends only to the understanding of theory and Model MPMM expressed by experts and practitioners valid and ready to be tested. Having tested otherwise practical because almost all aspects of the model components implemented in full and also declared effective because mastery learning has been reached, the mentee activities as expected, the ability to manage learning is a very good mentor and mentee to training response has been positive. Thus, the model development MPMM have valid criteria, practical, attractive and effective. Therefore, the purpose of obtaining the model MPMM quality has been achieved.

Key words: Development, mentoring models, mind mapping, Makassar, data

INTRODUCTION

Teacher professional development efforts that related research is to write which is the one thing that should not be separated in the activities of a teacher in order to run the educational profession at schools. Teachers in its function as a digger, the successor and heir of science for his students, it is not enough just by orally but must also be through in a form of writing. Writing is a means of exercise for logical thinking, systematic, argumentative, and usage of language. All of these capabilities are very supportive of the teaching profession both in the process of teaching and also learning as well as in solving a problem.

Rusman (2010) in detail, the main characteristics of a professional teacher. The teacher will work just purely as humanitarian service rather than attempt of personal interests, teachers are legally required to meet the various requirements to get a teaching license as well as the requirements to remain in one of the new organization. Teachers are required to have high understanding and skills in terms of teaching and teaching materials, methods, pupil and the educational foundation, teachers in a professional organization has professional publication which can serve the teachers, therefore they

always get updated, even more they will always on top of every development, teacher, always sought to keep up with every courses, workshops, seminars, conventions and are widely involved in various activities. Teacher is fully recognized as live time careers teachers have values and ethics nationally functions as well as locally.

The importance of scientific publications for the career development of teachers has been emphasized by the Government through the regulation of the Minister of State for the empowerment of State Officials Bureaucratic Reform Number 4 years functional teacher's incumbency and her credit figures. In this case, the teacher will not get rank promotion without any research study/writing that as the result of research that is carried out either independently or in a group.

Conditions that occur in field shows that the majority of teachers are not interested in conducting scientific studies in the form of research and writing. This, supported by data where there are still number of teachers who are not able to climb the ranks of the IVa/to the next rank level because it requires them to write scientific papers. This kind of reality are statistically very clearly visible on the data of the National Staffing Agency of the year. Currently, of the 2.6 million teachers in Indonesia, only a few that can be promoted quickly. Teachers with

rank Class 4b only 0, 87%, the rank Class 4c only about 0.007% as well as the rank Class 4d 0.002%. Until January 2009 there were 569, 611 (21, 84%) teacher career trapped in 4a (compass, June 18, 2010).

While the data from the LPMP (Rientea and Anas, 2009) South Sulawesi also shows that of the 234 study who entered in 2010, only 109 Scientific Papers (KTI) that pass that can be the basis of the increase in the teacher's Career. Some other facts which show that the ability of teachers in writing studys is one of the scientific study is still low, the fact showed that: lack of teacher's writings that published on scientific journals, the publication of a book written by teachers is still lacking compared to the number of teachers that there are approximately 2.6 million, certification inspection results on seven components, namely the work of professional development shows that the teachers book and study publication is still lacking in numbers if there is any, usually it will only published on the local level and the lack of participation in the scientific forums.

According to Dalman (2012) scientific studys is one of the studys that are written based on the results of the research and the results of thought or a literature. It can also be said that the scientific study which contains someone's opinion who analyze a specific problem that is actual and sometimes controversial with the aim to provide information, influence, persuade (a persuasive argumentative) and entertain readers. Meanwhile, Bambang study is a writing that contains the attitude or subjective establishment on the issue being discussed. In other words, a scientific study is a factualessay about an issue in full that is not necessarily loaded in the newspaper, the magazine, the bulletin and so on. The purpose of conveying ideas and facts in order to convince, educate and offers the solution of a problem.

One of the learning methods that have been proven to be able to optimize the results of learning is a method of concept maps or called mind maps (mind mapping). According to Edward (2009) mind maps (mind mapping) is the most effective and efficient way to enter, store and issue data to or from the brain. Based on that it can be inferred that the mind maps (mind mapping) is one of the ways noted the subject matter that makes it easy for teachers in learning to write the study. Jamasy (2009) explains that mentoring is a process are interconnected in the form of bond of friendship or mate between companion who accompanied through dialogue with a critical and continuing education in order to dig and the resources management in order to solve the problems of life together as well as encourage the growth of the

courage to reveal the reality that marginalize and doactionsto rebuilding them. As for the conceptual framework of the study developed is as follows.

The conceptual framework of the study starts with the achievement of a professional teacher. That has 4 competence, i.e., competence, pedagogic competency, the personality competence, social and professional competence. Specifically for the improvement of professional competence, teachers are expected to have the ability to write studys. Research related to the improvement of the ability to write studys have some grounding theory, i.e., a theory about the studys, theories about mind mapping and a theory about the mentoring model. Based on the theory foundation a theoretic model is born about teacher mentoring based on mind mapping to write an study and the end result is a product model to assists teachers in writing scientific studys based mind mapping.

This PMPM Models which serve as references in this study as the ultimate goal of the mentoring model development process of writing studys based mind mapping has three stages of the procedure, namely planning, implementation and evaluation.

Planning phase: This stage is the initial meeting between the mentor and the mentee as well as other elements to jointly carry out the preparation includes: training of mentors who will train and assist research on the subject. In this training, teachers equipped with training materials which include: theories of learning that supports the model of mentoring-based mind mapping, techniques to motivate the mentee, the implementation of the implementation plan of training (RPP), the use of guide books, the use of the worksheet and techniques to train and assist the mentee in writing studys based mind mapping. Assistance devices preparation, namely guide books, teaching materials and PTK and preparation of instruments for analysing the general idea of the teacher's ability to write study this whole time.

Implementation phase: In order for the application of the MPMM provides optimal results, then in this study will explain the application of the MPMM model as follows. In this stage the mentor and mentee meeting to make preparations include: consolidation to harmonize and agree on goals, objectives, materials, strategies and mentoring schedule. At this stage, mentor will provide an explanation of materials related to the mind mapping and studys by using the components of the model that is syntax, the social system, the principle of reaction, support systems, instructional impact and impact

accompanist. In this phase, the mentor also use the training and mentoring are: guidebooks, PTK and evaluation tools.

Evaluation and follow-up phase: Customized evaluation procedures used with the application of this assistance is to test the ability of the theory with respect to the writing of the study and the second is the writing results assessment of the study. That observation shaped test to determine whether the studys written by the teacher are in accordance with the systematics and language writing studys.

In order for the model application to be more optimal, we conducted a follow-up after the whole learning activity has been completed. These activities are carried out with all the components involved in pilot activities, these activities aim to obtain input on the implementation of learning that applying model MPMM

MATERIALS AND METHODS

This research is the development, the development model of mentoring teachers to write studys based mind mapping with reference to the model developed Plomp (1997) in which the phases of development include:

- Phase of preliminary investigation (initial investigation)
- Design phase (design)
- Realization/construction phases (realization/construction)
- Test phase, evaluation and revision (testing, evaluation and revision)
- Implementation phase (implementation). Steps or procedures that applied in the implementation of research on the development model of mentoring ability of teachers to write studys based mind mapping, it can be seen in the form of the development flow

The instruments developed are:

- Pieces of assessment models
- The observation sheet
- Trainees questionnaire responses and the writing evaluation sheet

While data collection techniques used in this research are:

- Experts data validation results
- Mentee activity data
- Mentor data response
- The result of the training. In making decisions on data that has been collected using the instruments

The data were analysed quantitatively used to determine the practicality and effectiveness of a learning model developed, i.e., "Model Development Assistance writing studys based mind mapping (Model mentoring) through analysis validity of data, data analysis practicality and effectiveness of data analysis model of mentoring as well as to evaluate the mastery of writing studys.

RESULTS AND DISCUSSION

All RPP components is considered good, although RPP can be used with minor revisions while the result of the calculation of the reliability of instrument-based training implementation plan MPMM models, derived indigo amounted to $R = 0.8992$ or 89.92%. That is, the level of reliability and confidence in the measuring instrument RPP indicator predetermined by 89.92, 10.08% are still about other aspects that can affect the reliability and trustworthiness of the instrument. In line with the conceptual Sugiyono (2008) testing the validity and reliability of the instrument was conducted to determine valid or invalidity and reliable or not reliable instruments used in the collection of research data.

All the components worksheet rated valid. The worksheet reliability value of $R = 0.852$ or 85.20%. That is the level of reliability and confidence in the worksheet instrument measuring indicator predetermined by 85.20, 14.80% are still about other factors not identified in this study so it made minor revisions before the worksheet is used in the field.

Based on the results of the validation test on aspects of the indicator in the preparation of the book mentee through the aspects of the format, illustrations aspects, language aspects and aspects of the contents, showing the entire testing criteria requirements that are in the category of very valid so that all components of the book mentee rated valid. Obtained value of $R = 0.887$ or 88.70%. Although, it is recognized that there are still about 11.305 of other factors that also affect the reliability and the trust instrument mentee books that are not detected in the validation test so it is recommended to do a small revision. In line with the concept of quality (Triguno, 1997) standards that must be achieved by a person or group or institution or organization regarding the quality of human resources, the quality of the workings, processes and work or product in the form of goods and services.

The results of the validation test instrument mentor book on four indicators, namely the aspect of the format, aspect illustration, aspects of language and content aspect can be concluded that the entire indicator instrument mentor book declared invalid. It is supported by the value of the reliability R of 0.822 or 82.20%. There is still 17.80% of other factors that also affect the level of

reliability and trustworthiness of the instrument so it is advisable to do some minor revisions. For the feasibility aspects quality language in the book is the suggestion submission of materials such as vocabulary, sentences, paragraphs and discourse. Aspects related to the level of ease of legibility language (vocabulary, sentences, paragraphs and discourse) for groups or tiers mentee. Level reliability and trustworthiness of the instrument, obtained the R-value of 0.850 or 85.00%. There is still 15.00% of other factors that also affect the level of reliability and trust worthiness of the instrument so it is advisable to do some minor revisions.

Observation instrument validation test model training process MPMM, it can be concluded that the entire indicator instrument is declared invalid. Obtained the R value of 0.860 or 86.00% . There is still 14.00% of other factors that affect the level of reliability and trustworthiness of the instrument so it is advisable to do some minor revisions. Obtained value of $R = 0.857$ or 85.70%, there are still about 14.30% of other factors that also affect the reliability and trustworthiness of instrument observations MPMM training management models that are not detected in the validation test so that is recommended to do a small revision. Obtained value of $R = 0.720$ or 72.00% . That is, there are still about 28.00 percent of other factors that also affect the reliability and trustworthiness of the instrument so it is recommended to do a small revision conducted by researchers based on advice from the validator. The processed data about mentee activity indicator instrument observations on the application of the model MPMM declared invalid. Obtained the R-value of 0.940 or 94.00%. These data indicate that there is still 6.00% other factors that also affect the level of reliability and trust instrument mentee response to the application of the model MPMM so it is advisable to do some minor revisions, before they are distributed to the informant instrument research, subsequently processed for data analysis.

The whole indicator instrument mentee response to the book mentee declared invalid. Obtained the R-value of 0.980 or 98.00%. There are still 2.00% other factors that also affect the level of reliability and confidence in this instrument, so it is advisable to do some minor revisions. Obtained value of $R = 0.880$ or 88.00%. That is, there are still about 12.00% of other factors that also affect the reliability and confidence in this instrument so it is recommended to do a small revision conducted by researchers based on the advice of the validator and then use the response instrument mentee to the worksheet for further data collection.

As for the level of reliability and trust instrument response MPMM mentor on the application of these

models we can see the value of $R = 0.857$ or 85.70%. Although, it is recognized that there are still about 14.30% of other factors that also affect the reliability and confidence in this instrument so it is recommended to do some minor revisions through suggestions instrument validator before they are distributed to the research informants. The whole indicator instrument evaluating the ability of writing studys declared invalid. That is aspects to be measured can represent the real conditions in the field. Obtained the R-value of 0.850 or 85.00%, 15.00 percent still other factors that also affect the level of reliability and trustworthiness of the instrument so it is advisable to do some minor revisions through CONSTRUCTS advice from the validator. Referring to the indicator instrument validation capabilities in training with a model mentor MPMM scattered on the user aspect, the aspect of coverage mentor activities and aspects of language can be seen the value of reliability $R = 0.880$ or 88.00%. That is, there are still about 12.00% of other factors that also affect the reliability and confidence in this instrument so it is recommended to do a small revision conducted by researchers based on advice from the validator.

Practicality MPMM models that are based on the results of assessment experts and practitioners claim that the model is feasible MPMM practical use by teachers in developing talents and interests they have in making scientific studys. Keterlaksanaan models by using design patterns implementation of training and mentoring of the trial is in conformity with the criteria of practicality. However, there are some small aspects or components that still need to be improved implementation.

Component syntax through the sub indicators, the obtained data is the average of 1.82 on a scale of 1-2, meaning that all the sub-indicators already performing well. Obtaining these values through several revisions from the first meeting to the next meeting. Conducted data components of the social system indicates there are some aspects that have not been implemented in its entirety on a meeting-1, among others: the interaction between the mentee and the mentee with a mentor, the environment and other learning resources, active participation by the mentee in each learning activity, the activity of the mentee to understand and fill out the worksheet and motivating mentee less or not participated actively. However, with the revision in each meeting, then the meeting-5 and 6 all has been implemented optimally.

Criteria for effectiveness in model development MPMM determined six things in optimizing the implementation MPMM as expected, namely: management training model MPMM, activity Mentee in training with the model MPMM, the response Mentee on

the implementation of the model MPMM, in response to the book mentee, the mentee response to the worksheet, and a summary of the student's response. Based on trial results, some things need to be revised based on suggestions from the instructor or mentor, observer and some of the mentee as follows: revision book models MPMM, revision books mentor, revised book mentee, revision worksheet and Revision lesson Plan (RPP).

The evaluation was conducted on each completion of learning activities ranging from meetings 1st, 2nd meeting, meeting 3rd, 4th meeting, the meeting-5 and 6. Each meeting has a different evaluation based on the material taught at the meeting. Material from the first meeting until the meeting to 6 is a sustainable material and interrelated. According Kardi and Nur there are four special features learning model, namely: rational theoretical logical, organized by the creator or developer, the rationale of what and how people learn, behaviour of teaching and assisting role models needed to be implemented successfully and the learning environment necessary for learning objectives that can be achieved.

MPMM models that have been tested and meets the criteria to be stated for the practicality and effectiveness of training or learning in the writing of the study. This model can also be used to teach the subjects. In fact, this model can also be used by teachers in their daily activities such as preparing the Annual Work Plan, monthly or daily. Some of the reasons used to teach subjects, among others: Syntax MPMM developed models are dynamic so it can be developed by teachers of subjects based on their needs; development of a model MPMM refers mentoring models applied by the subject teachers for this so the model MPMM allows also applied by teachers of other subjects to follow the pattern syntax has been developed; to apply the model MPMM should consider the following matters: the characteristics of the subject matter, learning objectives, availability of facilities, conditions of learners and the allocation of available time, and excellence Mind Map is that it can help activate the brain, focusing on staple discussion, show the relationship between parts of information apart from each other, giving the overall picture is clear and detailed about a subject and can also to focus on topics that will help divert some information from short-term memory into long-term memory.

Vygotsky's theory assumes that learning occurs when learners work or learning to handle tasks that have not been studied yet those tasks are still within reach of his ability (zone of proximal development), namely the development of the mentee's ability slightly above ability he already owns. According to Ausubel, learners will

learn premises good if the so-called "regulatory progress (learning)" advance organizers defined and presented well and on the learners to link new learning materials with prior knowledge (Riyanto, 2009). Regulatory progress of learning is a concept or general information which includes all the content of lessons to be taught to the mentee (Ahmadi, 2004).

According to Hudson (2008) that mentoring is acknowledged as a professional tool for transformation and Gives Credence to the base of the mentee relationship (preserves teacher) and mentor (cooperating classroom teacher). Mentoring is recognized as a tool for the transformation of professional and provide confidence in the relationship between the mentee (teachers in preparation) and mentor (teacher class collaboration).

Virtual Mentoring Model or remotely. Virtual Mentoring using video-conferencing, internet or e-mail to mentor individuals or companies. That is usually done for people or workers who cannot leave their work). Virtual mentoring models are usually cheaper in funding compared to-face mentoring and provide more choices to the individual to choose a mentor. In fact, the results of virtual mentoring will be very good if a meeting or face to face at least one between mentors with a mentee. Model mentoring group. Group Mentoring is a methodology for individual development that involves a group of experts and a group of learners. Although the shape of groups, learning in the form of individual and each mentee work according to particular learning needs and development goals.

CONCLUSION

The condition of the teacher's ability in writing a scientific study is very low, due to: lack of teacher motivation in writing the study. The lack of training activities for teachers of writing studys, training pattern which has been held is a pattern of training or workshops, the method used is lectures and usually ends only to the understanding of theory.

Model MPMM expressed by experts and practitioners valid and ready to be tested. Having tested the model MPMM declared as practical because almost all aspects of the model components MPMM implemented entirely and models MPMM also declared effectiveness as expected, the ability of mentors to manage learning is very good and the response mentee to learning/training has been positive. That is the development of models MPMM have valid criteria, practical and effective, therefore the aim of obtaining the model MPMM quality has been achieved.

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