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ANALYSIS OF TEACHERS' TECHNOLOGY PEDAGOGICAL CONTENT KNOWLEDGE (TPACK) COMPETENCE IN HISTORY LEARNING

(Research of History Teacher Survey in Sumedang District)

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Abstract: The background of this research is the competence of teaching knowledge of history teachers through the MGMP (Subject Teacher Consultation) in Sumedang Regency which is quite varied. Educators or teachers are agents of change who should continue to develop their teaching processes in the classroom. The purpose of this study was conducted to describe and analyze the description of the Technology Pedagogical Content Knowledge (TPACK) abilities of teachers in teaching history to history teachers in Sumedang Regency. The subjects of this study were all history teachers who are members of the History MGMP in Sumedang Regency. This research is a descriptive study using a descriptive survey research method with a sample of 50 history teachers. Besides using data collection techniques through interviews, observation and documentation. The instrument used in this study was a questionnaire that measured attitude, behavior, and cognitive scales. The results showed that the understanding of history teachers' TPACK in Sumedang Regency was still in the growing and developing category. This is because the gap between the teacher's pedagogical abilities and content abilities is still high. TPACK's abilities do not just appear but require a long process to acquire this collection of knowledge and abilities. Analysis of history teacher competence on the results of the questionnaire by calculating the respondent's level of attainment (TCR). In conclusion, the MGMP activities as a support for the TPACK ability of history teachers in Sumedang Regency were carried out quite well and effectively, these activities included the implementation of lesson study, preparation of HOTS-based questions, workshops, discussion of lesson plans, etc. The level of achievement of respondents in the teacher competency questionnaire obtained a category with good average results.

Keywords: history teacher, history learning, pedagogical knowledge

RESEARCH BACKGROUND

Educators are agents of change who should continue to develop their teaching processes in the classroom. Not only educators, but prospective educators must also train their abilities in designing learning, one of which is by understanding technology pedagogical content knowledge. In the very 21st century technology literate teachers are needed in every teaching. The importance of understanding technology pedagogical content knowledge for educators and prospective educators is because educators must be familiar with alternative theories or concepts. In addition, educators must also understand the difficulties that will be faced by

students with different backgrounds. More than that, educators must be able to organize, compile, run and assess subject matter, where all of these components are summarized in technological pedagogical content knowledge (Shulman et al, 1986).

A teacher besides just knowing the teaching materials to be given, a teacher must also understand and be able to integrate content knowledge into knowledge about curriculum, learning, teaching and students. This knowledge can ultimately guide the teacher to arrange learning process situations according to individual needs and groups of students. Knowledge like this is expressed as pedagogical content knowledge or Pedagogical Content Knowledge (PCK) (Rahmadhani, et al. 2016, p. 18).

It is known that in the learning process that takes place in class, the teacher still applies the traditional learning system, namely the teacher comes with the material and the students listen. This makes history learning monotonous so history learning tends to be considered boring. The next obstacle found in the field experienced by history teachers in the learning process is in terms of the use of media and learning resources. As we know that a teacher should have skills in carrying out teaching and learning process activities with mastery of subject matter, accuracy/skill in selecting the use of teaching materials, accuracy in selecting methodologies and media, and learning resources to prepare effective evaluation tools. Basically learning media is used to support the achievement of certain goals combined with the teaching and learning process in classroom situations. So a teacher must pay attention to the learning objectives he wants to achieve as well as consider the stages of preparation, implementation, and follow-up so that the process of teaching students can be maximally successful including improving the quality of learning. It is the same with learning history when a scientific approach is applied. Media such as computers and the internet play an important role in supporting successful learning. However, some teachers experience difficulties regarding computer and internet media because there is no adequate access and a lack of teacher knowledge and skills in operating and using internet computers.

Especially for the Sumedang Regency History MGMP itself, they have received lesson study guidance which has been implemented since 2006. Lesson study activities are one of the government's efforts to improve the learning process. The MGMP-based Lesson Study activities in the Sumedang district had an impact on all the components involved, namely supervisors, school principals, MGMP facilitators, teachers, students and lecturers. The results of interviews with several school principals found that lesson study activities had a positive impact on teacher performance and the quality of learning (Siahaan, 2010).

Likewise, the interesting facts that the authors found in the field regarding the knowledge of history teachers in Sumedang Regency were that in the Special for the History MGMP Sumedang district itself had received activities or programs that supported facilitating history teachers in Sumedang district, while these activities were in the form of workshops, lesson study, making questions, and other collaborative programs. This activity is expected to facilitate teachers to get real examples of the learning process in the field so that it can be studied and applied in everyday learning. Effective development of teacher professionalism should not only involve large-scale group activities but also discussions with peers (per group) so that teachers can practice, think, learn from the experiences of colleagues in the profession so they can continue to improve their abilities.

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REVIEW OF RELATED LITERATURE

1. Technology Pedagogical Content Knowledge

Technological Pedagogical Content Knowledge (TPACK) is a framework that identifies the knowledge teachers need to teach effectively within a technology framework. According to Mishra (2009: 2) TPACK is a framework for understanding and describing the type of knowledge needed by a teacher to streamline pedagogical practices and understand concepts by integrating a technology in the learning environment. The basic concept of TPACK is as follows: TPACK was first introduced by Mishra and Koehler in 2006. They discussed TPACK as a teacher/designer framework in integrate technology in learning. The TPACK concept appears in learning technology based on models pedagogy *content knowledge* (PCK) pioneered by Shulman.

a. Component*Technological Pedagogical Content Knowledge* (TPACK) In the TPACK scheme there is a relationship between the constituent components, intersecting material (C). pedagogy (P) and technology (T) which are influential in the learning context.

The figure illustrates the relationship between the three components. The components are C, P and K which then C becomes (CK). P becomes (PK) and T becomes (TK) and the relationship between components can be explained as follows:

1).***Content Knowledge*** **(CK)** namely knowledge of the subject matter to be studied. The material is contained in the curriculum.

2). ***Pedagogy Knowledge*** **(PK)** describes in-depth knowledge related to teaching and learning theory and practice which includes objectives, processes, assessment learning

methods, strategies and others. Pedagogical knowledge requires an understanding of cognitive, affective, social aspects and the development of learning theory and how the theory can be applied in the learning process. Teachers should understand deeply and focus on the required pedagogy, namely how students understand and construct knowledge, attitudes and skills (Koehler, et al. 2009).

3). ***Technology Knowledge*** **(TK)** are the basics of technology that can be used to support learning.

4). ***Pedagogy Content Knowledge*** **(PCK)** includes interactions and intersections between pedagogy (P) and subject matter (C).

5). ***Technology Content Knowledge*** **(TCK)**included in the understanding of technology and subject matter that can help and influence other components.

6). ***Technology Pedagogy Knowledge*** **(TPK)**is a series of understandings of how learning changes occur by utilizing technology that is used to support active learning and can help and simplify the concepts of the subject matter.

7). ***Technology Pedagogy Content Knowledge*** **(TPACK)** summarizes a series in learning where the ability to master technology in an integrated manner cannot be separated from one another from its constituent components (C), (P) and (K). TPACK requires the occurrence of multiple interactions and combinations between components, namely subject matter, pedagogy and technology.

2. Subject Teacher Conference (MGMP)

MGMP is a type of forum for school teachers that is recognized by the government. To date, apart from PGRI, MGMP was established at the suggestion of officials from the Ministry of Education and Culture. (Soetjipto, 2009 p. 36). MGMP is a forum or forum for professional activities for teachers of similar subjects. The essence of the MGMP is to function as a forum or means of communication, consultation and exchange of experiences. The MGMP is expected to increase teacher professionalism in carrying out quality learning in accordance with the needs of students. This professional communication forum is indispensable in contributing to improving teachers' abilities, insights, knowledge and understanding of the material being taught and its development (Saondi, 2010 P. 80).

3. History teacher

History teachers are teachers who must continue to learn to balance their past, present and future knowledge. A history teacher must be able to see the character of his students and appreciate every difference in the background behind the students. Forming the mental and character of students, will not be separated from the problem of planting values, transfer of values. Therefore, teachers are not just teachers, but truly educators who will transfer those values to their students. Becoming a history teacher who is friendly, harmonious and intelligent with a global perspective is urgently needed for the world of education today.

(Susilo, 2019)

RESEARCH METHOD

In this study, a survey method will be used with a descriptive approach. The step taken was distributing questionnaires with instruments containing aspects of the history teacher's technological competence and pedagogical content knowledge which were shown to history teachers who were members of the Sumedang Regency History MGMP. After getting the results from the questionnaire, the next step is to describe the results of the questionnaire by calculating descriptive statistics. The purpose of this research using this survey is to describe how influential the historical MGMP of Sumedang Regency is in developing the technological competence of pedagogical content knowledge of history teachers in Sumedang Regency. In addition to the questionnaire, interviews, observation and documentation were used to examine the activities of the Sumedang Regency History MGMP, and find out the opinions of teachers regarding the influence of the Sumedang Regency History MGMP on the technological competence of Pedagogical content knowledge of history teachers in Sumedang Regency.

This research is a descriptive research with a descriptive survey research method. According to Sugiyono (2013 P. 12) The survey method is a method used to obtain data from certain natural populations, data collection is carried out by distributing questionnaires and does not provide treatment as in experiments. The survey method is an investigation conducted to obtain facts from existing phenomena and seek factual information, either about the social, economic or political institutions of a group or an area. (Nazir, 1988 P. 65) Sukmadinata (2012 P. 54) argues that the survey method is used to collect information in the form of opinions or opinions from a number of people on certain topics. This survey method is used to get an overview of the characteristics of a particular population.

RESULT AND DISCUSSION

Based on the results of the study, there were seven components in the TPACK that were asked of history teacher respondents who were members of the MGMP in Sumedang Regency, namely Pedagogical Knowledge, Content Knowledge, Pedagogical Content Knowledge, Technological Content Knowledge, Technological Pedagogical Knowledge, and Technological Pedagogical and Content. Knowledge. Based on the results of research through questionnaires and interviews, in aspects of Pedagogy *Knowledge* (PK) as much as 83% of the total history teacher respondents already know and practice pedagogical abilities when teaching. Meanwhile, 12% of history teacher respondents expressed doubts indicating that they were still not ready to practice pedagogical abilities. In indicators *Content knowledge* (CK) as many as 86% of respondents stated that they had mastered history subject matter at the high school level. In fact, as many as 6% of respondents said they really understood some of the history learning content. Next in indicators pedagogy *content knowledge* (PCK) the average respondent stated that they strongly agreed (91%) and agreed (9%) on all statements on the PCK indicator. This finding indicates that the respondents really understand and are able to practice PCK abilities in the learning process. PCK

capabilities are closely related to PK and CK. Based on the results of indicator research technology *Knowledge* (TK), all respondents were able to use technology for learning. Some of them are even very good at using various facilities on laptops/PCs, making videos, and using various tools and software. The survey results also indicate that in general, the history teachers in Sumedang Regency who are the respondents are ready to utilize technological devices in learning.

In indicators, *Technology Content Knowledge* (TCK) shows that as much as 57% of respondents stated that they mastered TCK, and even 30% of them stated that they really mastered it. However, there were still 13% of respondents expressed doubts about mastering TCK skills. In aspect, Technology *Pedagogy Knowledge* (TPK) showed that 78% of respondents stated that they already had TPK skills, while 22% stated that they were very good at TPK. From abilities Technology *Pedagogy Content Knowledge* (TPACK) for all respondents, there were 3% of respondents who did not answer and were categorized as "False". While the majority of respondents, namely as much as 80%, stated that they had TPACK abilities with 7% of them being in the very mastering category. However, there are still 13% of respondents who are unsure. This indicates that history teacher respondents in the Sumedang district still have not mastered TPACK skills.

The results showed that the understanding of history teachers' TPACK in Sumedang Regency was still in the growing and developing category. This is because the gap between the teacher's pedagogical abilities and content abilities is still high. TPACK's abilities do not just appear but require a long process to acquire this collection of knowledge and abilities. Analysis of history teacher competence on the results of the questionnaire by calculating the respondent's level of attainment (TCR).

CONCLUSION

In conclusion, the MGMP activities as a support for the TPACK ability of history teachers in Sumedang Regency were carried out quite well and effectively, these activities included the implementation of lesson study, preparation of HOTS-based questions, workshops, discussion of lesson plans, etc. The level of achievement of respondents in the teacher competency questionnaire obtained a category with good average results. This research is expected to be able to increase knowledge about teachers' technological pedagogical content knowledge competencies in history learning through the historical MGMP and can become reference material for further research.

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