

INTERNALIZATION OF PEDAGOGICAL CONTENT KNOWLEDGE IN THE LECTURE OF MICROTEACHING FOR TEACHER CANDIDATES

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Abstract: This article describes the ability of pedagogical content knowledge of Indonesian Language teacher candidates pursuing a microteaching course. This descriptive qualitative study employs an observation and documentation in collecting data. The data of this present investigation were learning devices contained in the students' portfolios of microteaching course and the activities of students' microteaching at Indonesian Language Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta. Furthermore, the collected data were analyzed through a content analysis. The result shows that the content knowledge and pedagogic knowledge of the students are decent in the perspective of the arranged learning devices. The indicators which are used to find out the content knowledge include (1) the appropriateness of drafting indicators; (2) the suitability of the material to the determined indicators; and (3) the suitability of the arranged questions/tasks to the formulated indicators. In addition, the criteria which are used to determine the knowledge of pedagogy are such as (1) the selection of the appropriate learning methods; (2) the implementation of the learning steps that correspond to the specified methods; (3) the selection of the relevant media and learning resources.

Keywords: pedagogical knowledge, content knowledge, pedagogical content knowledge, and microteaching

INTRODUCTION

An ability in acquiring the teachers content knowledge and pedagogy of learning is known as a pedagogical content knowledge (PCK). This mastery is mandatory to the teachers in order to realize the mandate of the regulation number 14, the year 2015 about teachers and lecturers as professional educators. A teacher is defined as a professional educator as his/her main assignment is to teach, educate, mentor, train, assess, and evaluate learners. Therefore, a teacher is expected to not only grasp a science as a material that needs to be studied by students but also being able to organize a number of different ways, means, and infrastructures which are capable to support the achievement of understanding against the science. In accordance with the statement, Yulianti (2017) stated that professional teachers are those who do not only have a content knowledge but a pedagogical knowledge as well.

Students of Indonesian Language Education are prepared to be a professional teacher so that they can be referred to as the Indonesian language teacher candidates. Hence, they are exposed to the teaching experience through lecturing practice called as

microteaching. In this course, they are expected to be able to internalize the content knowledge and the pedagogic knowledge in their teaching practices. Sulastrri (2016) explained that the well content knowledge is the understanding and mastery of the material with a real-life problem which is supportive in shaping and impacting knowledge and thinking processes of students. It should be balanced with the pedagogical knowledge or how to teach and manage the class, in order to build an effective learning.

Moreover, according to Sulastrri (2016), a noble content knowledge can be realized if it corresponds to the gallant pedagogical knowledge. It shows that the understanding of the taught material has to be balanced with the mastery of the teaching process. The mastery of the pedagogical knowledge covers the management class assignment and planning the teaching. The drawback of the understanding of the pedagogical knowledge leads to the less-meaningful learning process to the students.

Nevertheless, there are many teachers and prospective teachers who have difficulties in integrating those both capabilities. Purwianingsih (2011) picturizes the difficulties experienced by the teachers in implementing the learning process is to integrate the content knowledge to the pedagogical knowledge. Several studies depict that teachers are frequently unable to integrate the conceptual and the content to be taught. This is due to a large number of teachers who prefer to emphasize their understanding of the content knowledge.

The research on the importance of PCK for teachers or prospective teachers had previously been studied by many researchers, including Sukaesih (2016) entitled "Clinical Supervision to Develop Pedagogical Content Knowledge on Biology Microteaching Lectures". Her study showed that most of the students confronted with the decline of the material mastery, the drawbacks of allocation management of time and the use of inappropriate media. The Pedagogical Content Knowledge of the students could be divided into two priesthoods i.e. middle and bottom. The reflection of the students showed that most of the students were still weak in the arena of content mastery, time management, and the use of the right media in the teaching-learning process.

Further, Kartal Tezcan (2012) in a study under the title "Developing Pedagogical Content Knowledge in Preservice Science Teachers through lesson study of microteaching" explained that the pedagogical development of the teacher candidates should be evaluated by noting the microteaching writing practice of "heat and temperature". According to this research result, the practice of Microteaching contributes to pedagogical content knowledge of the science teachers about the high content knowledge.

The studies conducted by Sukaesih and Kartal are necessary to be the basis for conducting this study since both of them discuss the application of content knowledge and pedagogic knowledge in preparing teacher candidates through microteaching. This

article focuses on the description of the ability of Indonesian Language Education students to internalize the PCK in their practice of teaching in the microteaching course.

APPROACH & RESEARCH METHOD

This descriptive-qualitative study aims at describing the aspect of Pedagogic Content Knowledge through the integration of the Microteaching course at the Indonesian Language Education Department, Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta. The data were collected through documentation and observation. The documentation method is used to document the entire students' learning devices in the practice of microteaching course, while the observation was conducted when they practice the teaching in microteaching class. The data collection was accomplished through a snowball at 40 students, then it was analyzed by the use of content analysis.

RESULTS AND DISCUSSION

A teacher who would like to run an effective teaching-learning process should cognize and be able to integrate the content knowledge into the curriculum understanding, learning, students' characteristics, and the way of the lesson which is not only to comprehend the contents that will be taught. Those pieces of knowledge will lead the teachers to construct the learning situations on the individual and group of students' needs. This is the so-called Pedagogical Content Knowledge (PCK). According to Anwar, et al (2016) PCK is a collection of integrated bits of knowledge, concepts, beliefs, and values developed by teachers in a teaching situation.

Pedagogical Content Knowledge (PCK) is a combination of two elements, namely Content Knowledge and Pedagogical Knowledge. Those two elements are related to the four demands of competence that should be owned by the teachers and lecturers in Indonesia, two of them are professional and pedagogic competence (Sulastri, 2016). The noble Content Knowledge of the teachers cannot emerge if it does not correspond to the virtuous Pedagogical Knowledge as well. In relation to the Pedagogical Content Knowledge (PCK) that consists of the Content and Pedagogical Knowledge which should be owned by every single teacher, the Government of the Republic of Indonesia has actually been ruled the Regulation number 74 the year 2008. The PCK is able to be developed by the teachers from time to time through various experiences about how to teach a specific content in a certain way to improve the students' understanding. According to Resbiantoro (2016), Pedagogical Content Knowledge (PCK) can be understood as knowledge of a material and how to teach it, which includes the ancillary aspects of teacher tasks to carry out the study. PCK is an identifier that teaching is not merely a transfer of knowledge and skills, but are more complex since it includes a complex activity and requires decision and response to the students' need of learning (Dazrullisa, 2017).

The teacher candidates with less teaching experiences in the classroom will affect the area of their Pedagogical Content Knowledge (PCK), compared to experienced teachers. For the teacher candidates that would like to develop their Pedagogical Content Knowledge (PCK), they are able to follow a debriefing to elicit parts of a holistic PCK. This is accomplished since it is essentially PCK is a dynamic relationship between those parts and has its relation to the facets of practice. According to Hartati (2016), there are several ways for the teachers in order to acquire PCK, namely, carrying out a reflection after teaching; interviewing/conducting a dialogue with the pupils; implementing a discussion with other teachers; as well as supportive activities, such as seminars, Research Action, courses, joining to professional organization(s), writing in journals and the mass media as well. A good PCK is identical with good professional teachers. However, a professional teacher is not born but is formed through a series of process in a long period.

Merely, Pedagogical Content Knowledge (PCK) can be interpreted as a picture of how a teacher teaches a subject by accessing what he/she may know about the subject and what he/she believes as a good way of teaching in a context. A professional teacher must have and know his/her ability of the PCK. A good PCK impacts on the concept of accomplishment and the improvement of students' ability. The ability of teachers' PCK is formed not only when he/she has become a teacher, but also influenced in the early formation: education period. Therefore, the teacher candidates should be set up to have a noble PCK starting at the beginning of their education.

Based on the definitions above, then, several criteria are formulated to find out the capabilities of the students pedagogical knowledge as follows: (1) the selection of the approaches, methods, strategies, and creative techniques of the subjects taught; (2) the selection of media, tools, and relevant learning resources; (3) the suitability of the approach, methods, strategies, and techniques with step-by-step instruction.

Table 1 A Description of the Capabilities of Pedagogical Knowledge (PK) of Indonesian Language Education Students of Microteaching.

No.	Criteria	Description
1.	the selection of the approaches, methods, strategies, and creative techniques of the subjects taught	<p>Students select the approaches, methods, strategies and learning techniques creatively.</p> <p>14 students opt for Numbered Heads Together learning methods.</p> <p>4 Students select The Power of Two learning method.</p> <p>5 Students choose Think Pair Share learning method.</p> <p>2 Students choose Active Learning Sharing learning method.</p> <p>4 Students choose a lecture, discussion, and question and answer learning method.</p> <p>2 students choose STAD learning method.</p> <p>2 students select Think Talk Write learning method.</p> <p>4 students choose the Talking Stick learning method.</p> <p>2 students choose True or False learning method.</p>

2.	The suitability of approaches, methods, strategies, and techniques to the learning steps	<p>Numbered Head Together Out of 14 students, 2 apply Numbered Head Together with an unsuitable learning step. The 12 others apply has been suitable. The Power of Two The students' implementation of the learning steps is not suitable to the learning method. Think Pair Share There are 3 students who select this method to apply an unsuitable learning step. There are two students implement the suitable one Active Learning Sharing Students implement a suitable learning step. Lectures, Discussions, and Question and Answer. Students have applied a suitable learning step. Student Teams Achievement Division (STAD) The implementation of the learning steps has been concordance. Think Talk Write The learning steps have been accordant. Talking Stick The learning steps have corresponded to the learning method. True or False The learning steps that have been selected by two students have not been suitable to the learning method</p>
3.	The selection of media, tools, and relevant learning resources.	<p>16 students apply power point presentation, laptop, and LCD 12 students utilize video 8 students apply the taught texts as their media and learning tools 4 additional media selected by the students are the wheel rotation. The learning sources utilized by the students are such as subject book and textbook as well.</p>

a. The Selection of Approaches, Methods, Strategies, and Creative Techniques in Subjects Taught

Table 1 shows that the learning methods selected by the students pursuing the microteaching class of Indonesia Language education varies. There are nine variations of learning methods selected by the students. The selected methods are including (1) Numbered Head Together, (2) The Power of Two, (3) Think Pair Share, (4) Active Learning Sharing, (5) lecturing, discussion, dan question-answer, (6) STAD, (7) Think Talk Write, (8) Talking Stick, (9) True or False.

Among those selected nine learning methods, Numbered Head Together becomes the most frequent learning methods selected by the students. Then, the least of the learning methods selected by the students are Active Learning Sharing, STAD, Think Talk Write, and True or False.

A lecturing, discussion, and questions and answers may not be relevant to the current curriculum applied in the education system (curriculum 2013). In accordance with the curriculum 2013, the use of scientific approach, research-based learning (discovery/inquiry), as well as a learning that can produce a contextual work is highly recommended to apply a problem-based learning. Besides a cooperative, communicative, and innovative learning. It shows that 10% of the students who opt for the methods of lecture, discussion, and questions and answers have less mastery regarding pedagogic knowledge.

b. The suitability of the method of Approach strategies and techniques with Step- Step Learning

Among 14 students opting for Numbered Head Together method, there 12 students that have been appropriate in applying the learning steps. However, 2 other students unsuitably decide the steps. This appears on the activity of the teachers which are supposed to divide the same number of heads on each member of the group discussion; however, it runs differently, such as by counting every head and then grouped in accordance with the mention of the same number.

The suitability of The Power of Two methods towards the steps selected by the students is not suitable. It can be observed from the activities organized in the learning steps, the teacher splits the class into two groups that should have done based on the method: students are asked to a group consisting of two people or in pairs.

The suitability of the Think Pair Share method towards the learning steps prepared by the students is less suitable. Midst 5 students who choose the method, three of them do not show appropriate learning steps towards the method, but the two others do. The discrepancy of the methods towards the learning steps prepared by the teacher candidates is picturized from the activities presented. It seems that the teacher candidates do not fully take into account on each learning steps of Think Pair Share so that the activity seems to be accomplished by forming a group of discussion and then presenting the result of the discussion.

Based on the above data description, it is understood that almost all students have chosen a method of learning that is in accordance with the principle of learning in the curriculum 2013 i.e. from an individual learning to a group and a one-way learning system to an interactive learning. Nevertheless, there are still some discrepancies found in the application of the learning steps.

c. 3. The selection of Media tools and relevant learning resources

The selection and utilization of media are much better if the teacher is able to integrate the information and communication technology (ICT). The use of information-based media and communication technology as a medium of instruction

is in accordance with the principle of learning in the 2013 curriculum. This is in line with the regulation of the Indonesian Minister of Education and Culture No. 22 the year 2016 about the standard of the process of primary and secondary education. It is stated that the utilization of information and communication technologies aims at improving the effective and efficient quality of the learning itself.

Based on table 1 above, it is depicted that the teacher candidates have utilized the information and communication technology in the selection of learning media. The selected information and technology-based learning media are in the form of a power point. Further, there are 12 teacher candidates opt for videos as a medium of instruction in the exercise. However, the other 12 teacher candidates do not. Here, they select several texts as their learning media and properties such as swivel wheel.

The selection of text as the media of learning in relation to the subject is not relevant to the principal of curriculum 2013. One of the principles of learning in Curriculum 2013 is the mass of the learning based on the needs of customers. Dealing with the current development of the increasing of the students need, the distribution of text cannot accommodate the needs of the students in understanding the text. The sample text should be integrated into the other ICT element. In addition, the introduction of the text to the students can be either oral or written. This corresponds to the principle of text learning that the text is not only considered as a strand of written words.

Based on the identification of the teacher candidates' pedagogic knowledge through the election of their teaching-learning method, its application in the learning steps, and the selection of learning resources/media, it is noted that they have a good pedagogic knowledge. This is apparent in the election of methods and learning resources that have been tailored to the curriculum and the principle of the learning.

Furthermore, the identification of the content knowledge of the Indonesian Language Education students viewed based on several criteria, such as (1) the appropriateness in drafting the indicator towards its basic competence; (2) the selection of learning materials in accordance with the specified indicator; (3) the development of the learning materials into a complete and extensive material description and; (4) the suitability of the questions and the specified indicators to achieve the core competence.

Table. 2 The Description of the Capabilities of *Content Knowledge (CK)* of Indonesian Language Education Students Pursuing *Microteaching*.

No.	Kriteria	Deskripsi
1.	The appropriateness of indicator to the basic competence	28 teacher candidates have been appropriately drafting the indicators and the basic competence 12 teacher candidates have not been appropriately drafting the indicator dealing with the basic competence

2.	The selection of teaching materials correspond to the determined indicator	26 teacher candidates select the suitable teaching materials to the arranged indicator 12 teacher candidates select the less suitable teaching materials to the arranged indicator 2 teacher candidates select the unsuitable teaching materials to the arranged indicator
3.	The suitability of the tasks/questions to the specified indicators to achieve the core competence.	28 teacher candidates' tasks arrangement have been appropriate to the indicators to achieve its core competence 12 teacher candidates arrange the tasks which are less suitable to the determined indicators to achieve the core competence.

d. The Appropriateness in Drafting the Indicators to the Basic Competence

The arrangement of the indicators should be accomplished by taking into account several aspects include: (1) the formulated indicators should refer to the basic competence (it can explain the tasks word found in the basic competence, materials in the basic competence or both; meaning that it is not only in relation to one indicator only); (2) the indicators are formulated by taking into account the characteristics of the learners, subjects and school; (3) the indicators are formulated by the use of operational verb; (4) the formulated indicators should be measurable, meaning that it can be observed and the achievement can be measured; (6) the indicators are the reference to give the students score; (7) the indicators are formulated based on the level of thinking, easy to difficult.

Based on table 2 displays the formulation of the indicators accomplished by the teacher candidates. There are 28 students correctly determining the basic competence, but 12 others are not. The inappropriacy is due to several things such as (1) the formulated indicators are not measurable and abstract; (2) the indicators are still the same with the basic competence, meaning that the basic competence is not elaborated or translated into indicators; and (3) the formulated indicators are not based on the level of thinking; from the easy one to the difficult one.

Basic Competence

3.2 Examines a structure of description text about objects (school, attraction, historical sites, and/or an atmosphere of regional art festival) which are heard and read.

Indicators of Achievement Competence

- 1. Understanding the structure of the description text*
- 2. Reviewing the structure of the description text*

Based on the formulated indicators above, it is shown that the indicators are not yet specific and measurable. The unmeasurable indicators appear on the operational verb 'understanding' which is abstract. In this case, the teacher will later certainly have difficulty in giving assessments to indicator 'understanding'. In order

to measure the students' understanding, the operational verb in the indicator is supposed to be whether 'mention' or 'define'. Next is the following data.

Basic Competence

3.8. Identifying values of life consisted of a collection of short story

Indicators of Achievement Competence

3.8.1. Knowing the moral values of the short story

3.8.2. Mentioning the moral values in the short story

3.8.3. Showing the evidence of moral values in the short story

It is the same with the operational verb *memahami* 'understanding', the operational verb 'knowing' cannot be measured and is abstract. Besides, the basic competence uses an operational verb as 'identifying values'. The operational verb belongs to an analytic thinking which transcends the level of thinking knowledge, understanding, and implementation. Therefore, in formulating the indicators, it should apply the level of analysis.

However, the indicators which are formulated by the teacher candidates utilize the operational verb 'mentioning the moral values and showing the evidence of moral values'. The formulated indicators are in the lower level than the analysis. The formulation of the indicators cannot be applied to achieve basic competence. In other words, the indicator is too easy.

e. The Suitability of the Selection of Learning Materials to the Determined Indicators.

One of the important components in the learning process is the materials. The teaching-learning materials are significant to help students to achieve the determined basic competence. Based on table 2, there are 26 students suitably choosing the learning materials to the indicators. 12 students are less suitable for choosing the learning materials, and 2 students are unsuitably selecting the materials.

The selection of the materials should take into account several things: (1) the materials should contain fact, principal, and relevant procedure; and (2) the materials should be suitable to the formulated indicators. The following is the example of material chosen by a teacher candidate which is considered unsuitable.

Indicators of Achievement Competence

1. Identifying the text structure of explanation text

2. Examining the linguistic element of explanation text

Learning Material

The essence of explanation text

The selected material above does not correspond to the indicators as formulated. It is apparent from the indicators mentioning the activity that will be accomplished by the students is to identify the structure of the text while the selected material is the essence of the text. The essence of the text has a very wide scope such as definition, type, or structure. Therefore, the selection of material is considered less appropriate because there is no specific knowledge and skills to achieve.

f. The suitability of the Task to the Determined Indicators to achieve the Core Competence

The design of the task is used to determine whether or not the formulation of the indicator can be achieved. Hence, in arranging the task should correspond to the indicators. Based on table 2, there are 28 teacher candidates who have been appropriate in arranging the task, while 12 others are less appropriate. The following is the task arranged by the teacher candidates which is considered as less suitable to the indicator.

Indicators of Achievement Competence

- 1. Identifying the text structure of explanation text*
- 2. Examining the linguistic text of explanation text*

Reserved

Read the text entitled "Flood" above. In a group, determine the parts of the text structure. Then, conclude the structure based on its comprehensiveness!

The arranged task is considered less suitable to the indicators. It can be pictured that the task is only able to be utilized to measure the first indicator. However, the measurement of the second indicator is not present. It results in the inability to understand whether or not the second indicator is achieved. Based on the case above, the teacher candidate should also arrange the task of the linguistic element existed in the explanation text.

Based on the identification of the teacher candidates' content knowledge, it shows that 30% of them have not acquired the content knowledge in running the teaching-learning system. It is not separated from their pedagogic knowledge acquisition. The pedagogic knowledge towards the principle of the learning can help the teachers and teacher candidates to comprehend the content knowledge better.

CONCLUSION

Based on the elaboration above, this study concludes that the students of Indonesian Language Education, Faculty of Teacher Training and Education pursuing microteaching course have been capable to internalize the content knowledge and

pedagogic knowledge well. It can be depicted from a number of learning devices arranged by the students of microteaching.

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