SE - 8

THE COMPARISON BETWEEN THE DAILY LESSON PLAN OF INDONESIA AND CORES (CONTENT REPRESENTATION) AS LESSON PLAN MODEL IN PEDAGOGICAL CONTENT KNOWLEDGE (PCK) TO DEVELOP PROFESSIONAL SCIENCE TEACHING

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Abstract
The aim of this study is to compare the quality of Indonesia's Lesson Plan and CoRes (Content representtion) as a model of Lesson Plan based on Pedagogic Content Knowledge used for preparing profesional science teaching. This qualitatif Research used observation to collect the data. Qualitatif analysis showed that both of that lesson plan is similar, however, deep analysis based on the form and the content of themindicated that (1) The content of the lesson plan model in Indonesia and based on PCK is almost same; (2) Content Representation (CoRes) as a lesson plan model bassed on PCK, gives an holistic overview of expert teachers related to the teaching of a particular topic; (3) The CoRes has provided teachers with a stronger framework for thinking about their teaching; (4)The CoRes has made teacher think more deeply about the big ideas; (5) CoRes(content Representation) is further contributein the professional science teaching developing.

Key word: lesson plan, CoRes, professional science teaching

INTRODUCTION
The Lesson Plan

A lesson plan is extremly useful tool that serves as a combination guide, resourse and historical document reflecting our teaching philosophy, student population, textbooks and most importanly, our goals for students. It can be described with many metaphors such as road map, blueprint or game plan, but regardless of the analogy, a lesson plan is essential for novice teachers and convient for experienced teachers. A lesson plan is also a record of what we did in class, this record as a valuable resource when planing assesment measuressuch as quizzes, midterms adn final exams. In addition, just as teachers expect their student to come to class prepared to learn, students come to class expecting their teachers to be prepared to teach. A lesson plan is part of that preparation (Linda Jansesn in Marianne Celce-Murcia, 1991)

A good leson plan is the result of both macro and micro planning. On the macro planning, a lesson plan is a reflecting of a philosophy of learning and teaching which is reflected in the methodology, the syllabus, the texts and the other course materials and finally results in a specific lesson. In brief, an actual lesson plan is the end point of many other stages of planning that culminate in daily lesson. When creating the lesson, a teacher must consider the beckground of the students, the objectives of the lesson, the skills to be taught, the activities, the materials and texts, the time constraits, and the connections to previous plan and the future lessons. Like most activities, alesson plan has stages: a begining, a middle and an end. Most plan begin with a brief description of the class and students.There are three key components of lesson plan (Milkova, S., 2015):

1. Objectives for student learning
2. Teaching/learning activities
3. Strategies to check student understanding

And there are six steps to create lesson plan are: (1) Outline learning objectives; (2) Develop the introduction; (3) Plan the specific learning activities (the main body of the lesson); (4) Plan to check for understanding; (5) Develop a conclusion and a preview; (6) Create a realistic timeline.

Lesson plan in Indonesia

Lesson Plan in Indonesia call as "planing of learning implementation" (in the Indonesia language call as RPP=rencana pelaksanaan pembelajaran). Definition of it in Indonesia according to The Constitution number 19 of year 2005 that is: A set ofplansthat describe theprocessesandproceduresorganizinglearning activitiestoachievea basic competencespecifiedinthe contentandstandardsoutlinein the syllabus.

Lesson plan is alearning design of subjectperunitwhichwill beapplied tothe teacherin theclassroom. Based onthat, teachers canapply theprogrammedlearning. Therefore, lesson plan shouldhavehigh applicable.On theother hand, through it,to beknownthe level ofability teacherin their profession.Eachteacheris obliged todraw upa completeand systematiclesson planthattake placein an interactivelearning, inspiring, fun, challenging, efficient, motivatinglearners toactively participate andprovide enough spacefor innovation, creativity, andindependencein accordancewiththeir talents, interests, anddevelopmentalphysicalandpsychologicalstudents. Itis based onbasic competenceorsub-themes ofthe meeting that heldinoneormore meeting.Component of the lesson plan consist of:

1. School Identity
2. Theme / sub-theme
3. Class/ semester
4. Subject matter
5. Time allocation
6. Objectives
7. Basic competence and indicators subject
8. Time allocation per sub-subject
9. Teaching methodology
10. Learning media
11. Learning resources
12. Steps of teaching
13. Assessment

Principals in the preparation of lesson plan are follows:

1. Take not of the individual differences of learners
2. Encourage student participation
3. Develop culture of reading and writing
4. Provide feedback
5. Accommodatethelinkageandintegration of basic competencieslinkageandintegrationof learning materials, learning activities, indicators of achievement ofcompetencies, assessment, and learning resourcesintheintegrity ofthe learning experience
6. Accommodates integrated-thematic learning, cross-subject integration, crossaspectsof learning, and cultural diversity
7. Applying the information and communication technology

The steps to draw up of lesson plan

1. Introduction activities
a. Orientation

Focus student to the materials will be learned, by showing the interesting objects, illustration, reading news, animation slide, natural phenomenona, social phenomena or others.

b. Apperception

Provide the initial perception to students about the material to be taught

Advance activities of introduction

a. Motivation

The teacher gives an overview of the benefits of studying the material to be taught

b. Giving references

Reference may be an explanation and description of outline the subject

c. Divide class into group

d. Explanation of lesson plan mechanism with action of it

2. CoRes Activities

Using amodel of learning, teaching methods, instructional media, and learning resources that are tailored to the characteristics of learners and subjects.

Advance of CoRes activities:

a. Using athematicapproachand/orintegratedthematicand/orscientificand/orinquiryanddisclosure(discovery) and/or produce work-based learning problem solving(project-based learning) adapted to the characteristics of competency and education level.

b. Loading the development of attitudes, knowledge and skills are integrated in the learning

3. Clossing activities

a. Find direct and indirect benefits of learning outcomes that have been taking place together

b. Giving the feedback to the process and produce of learning

c. Conduct follow-up activities in the form of duties, both individual and group assignments

d. inform the planning of learning activities for the next meeting

Content Representation (CoRes) as Lesson Plan Model Based on PCK

The term *pedagogical content knowledge* (PCK)was introduced into the discourse of teacher education in Shulman's presidential address to the American Educational Research Association (Shulman, 1987). Sincethe concept ofPCKintroducedbyShulman, a great deal of research has been conducted into *pedagogical content knowledge* (PCK), much of that research to date has focussed on efforts to define, describe or measure it. But . Little of this research has focussed on ways of explicitly promoting PCK, and rarely in the context of professional development programs (Abell, 2007). According to Abell (2008), the idea ofPedagogicalContentKnowledge isstillactualand useful for theprofessional developmentof teachers after twenty five introduced by Shulman.

Efforts to capture the PCK of expert science teachers and to explore how PCK might be portrayed in ways that are meaningful and applicable for teachers' practice had conducted by loughran et al. (Loughran, Milroy, Berry, Gunstone & Mulhall, 2001; Loughran, Mulhall & Berry, 2004; Loughran, Berry & Mulhall, 2006).They had developed a set of conceptual tools known as *Content Representations* (CoRess) and Pedagogical and Professional-experience Repertoires (PaP-eRs) that make explicit the different dimensions of, and links between, knowledge of content, teaching, and learning about a particular topic. The CoRess, represented in table form (see Table 1) attempt to portray holistic overviews of expert teachers' PCK related to the teaching of a particular topic. They contain a set of *enduring ideas* about a particular topic at the head of the columns and a set of pedagogical questions for each row.CoRess have been used successfully in pre-service science teacher education to help novice teachers understand what PCK might involve and to develop their own representations of teaching in particular topic areas.

Table 1
Framework of Content Representation

Sample CoRes Matrix Topic	Enduring Idea 1	Enduring Idea 2	Enduring Idea 3	Enduring Idea 4
Why is it important for the students to know this?				
Difficulties connected with teaching this idea				
Knowledge about student thinking which influences teaching about this idea				
Teaching procedures				
Ways of ascertaining student understanding or confusion about the idea				

CoRes has been used successfully in pre-service science teacher education to help novice teachers understand what PCK might involve and to develop their own representations of teaching in particular topic areas. In the study by Loughran et al. (2008). The findings from Loughran et al, student teachers study strongly suggest that the focus on PCK using CoRes to frame their thinking about the links between science content and pedagogy did help the student teachers to gain a more sophisticated view about learning to teach science and how to teach for understanding. Another study along similar lines also sought to promote science student teachers' PCK through CoRes design (Hume & Berry, 2010). The student teachers found the task challenging, and their lack of classroom experience and experimentation proved to be a limiting factor in being able to develop CoRes successfully. However, the contribution such a task could make to their future PCK development remained a distinct possibility. In the following year, Hume scaffold the learning prior to CoRes construction such that the student teachers could more readily access relevant knowledge when attempting such a task. Their resultant CoRes and comments indicate that with appropriate and timely scaffolding the process of CoRes construction does have the potential for promoting PCK development in novice teachers.

RESEARCH METHOD
This study is a qualitative research design. Qualitative research is an inquiry process of understanding based on distict methodological traditions of inquiry that explore asocial or human problem (Cresswell, 2007). Qualitative research consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including fieldnotes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them.Qualitative research includes an interpretive and naturalistic approach. This means that inquiry takes place in its natural setting. Qualitative research involves the studied use and collection of a variety of empirical materials—case study, personal experience, introspection, life story, interview, artifacts, and cultural texts and productions, along with observational, historical, interactional, and visual texts—that describe routine and problematic moments and meanings in individuals' lives Denzin and Lincoln (2000).The researcher tries to make sense of what occurs and tries to make sense of the experiences he or she is seeing. Document analysis, which is one of the qualitative research methods, was used in this study. Researchers reviewed and compared related the policy of lesson plan in Indonesia and policies on lesson plans and procedures based on *Pedagogical Content Knowledge*(PCK). Data obtained from the documents were analyzed by content analysis method. The research question was addressed: What diffrences and similarities

between lessonplan in Indonesia and CoRes as lesson plan based on PCK ?

RESULT AND DISCUSSION
Result

Step of this study starting by collected the documen of lesson plan, both in Indonesia and in PCK's model that call as CoRes (Content Representation). We identify components of the lesson plan. Result of it illustates in Tabel 2.

Tabel 2
The Analysis of both lesson plan models (in Indonesia and based on PCK)

	Lesson plan in Indonesia	CoRes, Lesson Plan in PCK
Identity	More detail	Simpler, based on topic, write out of the tabel as a title
Shape	Naratif	Table
objectives	▪ Illustrated by indicators ▪ Based on syllabus	▪ connection of the ideas ▪ clear in each enduring idea ▪ specific to the topic ▪ based on curriculum knowledge
Student understanding	General and abstract	▪ student's needed ▪ previous student's knowledge ▪ student's difficulties ▪ student's misconception
Activities	▪ introduction ▪ CoRes activities (labwork, engage student) ▪ closing ▪ time allocation of each steps	▪ Orientation to design labwork activities to engage student ▪ Consider time allocation
Assesment	To determine student's learning outcomes	To ascertation student's understanding or confusion about the lesson

Discussion

The analysis showed some differences and similarities between lesson plan in Indonesiaand lesson plan based on thePCK call as CoRes (Content Representation).The shape ofIndonesia'slesson plan is in narrativeandCoRes in the tabuler form. An Excess of table if compared with the narrative form, that tabular formis easier to read and seen as a summary rather than describing a very long written in narrative form. Table of CoRes (Content Representation) contains a set of enduring ideas about a particular topic at the head of the columns, and a set of pedagogical questions for each row. It makes explicit the different dimensions of, and linked between, knowledge of content, teaching and learning about a particular topic. Objective of the teaching and learning explicitly in each enduring idea, it's more easier to compare them (Jensen, Linda, in Marianne Celce-Murcia, 1991). The CoRes has made teacher think more deeply about the big ideas (Loughran, J.J., Berry, Amanda, Mulhall, Pamella, 2012). But in lesson plan in Indonesia is written by describing each pedagogical point as a narrative. Every content knowledge written separately and nothing connection and linked between content knowledge, student knowledge for learning in a particular topic.

Components of lesson plan in Indonesia is more than CoRes. The identity of CoRes is simpler than lesson plan in Indonesia. Identity of CoRes just by writing as a title of table, but in

Indonesia, complete written in the number sequences. It's clear but not simple. It shows that in Indonesia prefer the form of formality and does not give priority to the content.

CoRes prefers so that teachers understand of student's conditions and prepare it before teaching. Student knowledge is illustrated clearly in the CoRes which includes previous student's knowledge, student's needed, student's difficulties and student's misconception. So, teacher have to prepare teaching strategies for student understandaning. The teacher must prepare matterials, media, illustrate, analogies, explanation anddemonstration about particular concept in specific subject. All of it nothing in the lesson plan of Indonesia. So, the CoRes has provided teacher with a stronger framework for thinking about their teaching (Loughran, J.J, 2012).

Learning strategies also written more concise and meaningful in the CoRes than in Indonesia daily lesson plan. Learning activities in the CoRes direct to the laboratory work, include their media and sequences and based on student difficulties, so the student easier to understan it. Teacher has prepared a strategy for dealing student misconceptions. But in Indonesia, teaching strategies is more complex, include the name of that strategy or model of teaching and then steps of teaching consist of introduction, CoRes learning and clossing. All of it written in the long narrative. In the fact, teacher confuse to choose the kind of teaching strategy, for example cooperative learning, CTL, or inquiry, and then, in the implementation not specific with that teaching strategy. It's not match between theory of teaching strategy and activities learning.

In the assesment, orientation of CoRes is to determine the area of understanding and confusion of students. So, teacher will emphasize in the confusion area of student understanding. But in the daily lesson plan of Indonesia, assesment oriented to the learning outcomesthat consist of cognitive, psychomotor and affective. This assesment is very complex and and teachers are burdened with this assessment.

CONCLUSION AND SUGGESTION

The content of the lesson plan model in Indonesia and based on PCK is almost same. But Content Representation (CoRes) as a lesson plan model bassed on PCK, gives an holistic overview of expert teachers related to the teaching of a particular topic.The CoRes has provided teachers with a stronger framework for thinking about their teaching.The CoReshas made teacher think more deeply about the big ideas.CoRes is further contributein the professional science teaching developing.

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