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# Indonesian Senior High School Geography Teachers' Understanding of Written Curriculum

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## Abstract

The implementation of the recent geography curriculum in the classroom requires further review. This study aims to identify Indonesian geography teachers' understanding of the written geography curriculum at the senior high school, which comprises cognitive activities terms, the meaning of activities demanded in the curriculum and the organization of topics. The content analysis method is applied to interpret teachers' understanding by measuring data against a standard or criteria. In addition to explaining the influencing factors, document analysis is carried out to identify the presence of a conceptual framework and the problems of the meaning of concepts in written curriculum. The findings of this study are: (a) teachers' understanding of terms engaging students in cognitive activities is limited to lower-order thinking, (b) the majority of teachers do not really understand that the purpose of the use of active learning methods is to foster thinking, and (c) most teachers perceive the topics merely as a collection of fragmented or unconnected concepts and skills. To sum up, geography teaching and learning do not move considerably from traditional inventory and fact-based approaches that focus on "what" and "where." Furthermore, this study found that problems in the written curriculum contribute to the teachers' difficulties in understanding topics and learning activities. It is concluded that gaps exist between the written curriculum and the taught curriculum of what teachers actually deliver in the classroom and between the written curriculum and the recommended curriculum. This study suggests aligning these geography curricula.

**Keywords:** teachers' understanding, cognitive process, curriculum gaps.

## Introduction

The curriculum needs to be revised in order to find out what is worth learning in a limited school time. Regarding this issue, Indonesia has revised the primary and secondary education curriculum five times over the past three decades. The latest 2013 curriculum was partly revised in 2016, but without significant change in content and structure, so it is also called the new version of the 2013 curriculum. The curriculum explicitly states that it intends to prepare the students to face 21st-century challenges. It emphasizes that the teaching and learning approach should shift from traditional content-based to competency-based and from didactic and teacher-centered to learner-centered in order to engage students to experience deep and meaningful learning. The curriculum stated that the student's ability to think creatively, productively, critically, and independently are the main competency skills to achieve. Nevertheless, the effectiveness of implementation still requires further evaluation.

The problem of achieving educational goals does not rely entirely on the written curriculum but also on the teachers' knowledge who enacted it in school. Teaching begins with teachers understanding of what is to be learned and taught and then transforms it into instruction (Fernandez, 2014; Nilsson, 2009; Shulman, 1986, 1987).

Glatthorn et al. (2000) define curriculum broadly as "to run a course." Besides what is commonly known as written curriculum, the other types comprise recommended, taught, assessed, supported, learned, and hidden curriculum. There are possibilities that the unalignment of these types of curricula mislead the educational goals.

Previous empirical research on implementing the 2013 curriculum (or its revised version) reveals that teachers' inadequate preparation to apply the curriculum was caused by insufficient knowledge and limited ability to use methods (Maba & Mantra, 2018; Prasetyono et al., 2021).

High-order thinking becomes jargon commonly found in the teachers' lesson plan document, but the teaching and learning process still goes on the low-order thinking level (Sutarto, 2017).

The same phenomena are frequently found in developing countries even though they implement a paradigm shift to student-centered learning approach (Schweisfurth, 2011). Some experts and teachers have criticized the 2013 curriculum and textbook as not easy to comprehend (Kathryn et al., 2017).

The evaluation of teaching and learning in primary and secondary school is carried out more in core subject matters such as sciences, mathematics, English, and the Indonesian language. Meanwhile, geography is not a core subject matter in the Indonesian curriculum, so research on this subject is rarely found. In primary and junior high school, it is part of the social studies subject. In senior high school, geography is a compulsory subject in majoring social science but an

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elective subject in natural science. Nevertheless, geography has an important role in youth education, considering that it is a powerful knowledge that gives people the power to think about the world (Maude, 2016; Jackson, 2006, p. 203; Lambert, 2004). It is important to do research on various aspects of geography teaching and learning, especially in high school, where it is an independent subject matter.

This study aims to identify teachers' understanding of the written geography curriculum at the senior high school comprising cognitive activities terms, the meaning of activities demanded in the topic, and the organization of topics. These findings examined the possibility of a gap between the planned curriculum and the actualized curriculum. The results of this study are expected to contribute in mapping the problems in curriculum integration, especially in the teaching and learning of geography

Based on the description, this study focused on answering the following research questions.

What is teachers' understanding of the cognitive verb terms in the written curriculum? Do they define the terms according to the cognitive taxonomy of learning?

What is teachers' understanding of activities demanding in the written curriculum such as discussion activity, writing assignment, and constructing map assignment? Do they understand the meaning of activities appropriately?

What is teachers' understanding of the organization of topics? Do they conceive vertical organization of topics?

Are there problems in the written curriculum that contribute to the teachers' difficulties in understanding topics?

## Literature Review

### The Problem of Teaching

Wiggins & McTighe (2005:15-16) called coverage-focused and activity-focused the twin sins of typical traditional educational design that do not lead the student intellectually. Delivering a list of facts, concepts, and readings with no sense of overarching goals will lead teaching to a coverage-focused. Focusing on engaging students in the learning activity but give not much emphasis on fostering thinking will bring learning into hands-on without minds-on activity. Both designs produce unconnected and undeveloped ideas in class.

The content of a subject matter should be organized in a specific structure according to the logic of curriculum organization. The content needs to be organized vertically based on continuity and sequencing criteria (Ralph, 1949, 84-86). Continuity is the vertical reiteration of knowledge and essential skills, whereas sequencing is the organization of topics where a new topic is built on the previous one. Bruner (1960;2) said that the curriculum design was not only for coverage but also for structures. Topics need to be arranged sequentially. It should be taught or revisited over time with increasing complexity to form a spiral model (Bruner, 1960) or iterative model (Stern et al., 2017). In line with that, (Shulman, 1986) said that understanding the content of a discipline requires not only knowledge of facts and concepts but also understanding of the structure of knowledge and the relationship between core ideas and particular modes of inquiry.

Problems arise when teachers do not understand the structure of the subject matter. They will tend to practice unconnected topic by topic teaching, one type that is more suitable for teaching fragmented issues (Geis, 1996). Consequently, teachers are incapable of realizing the difficulty of teaching topics containing complex concepts.

Mascolo (2009) suggests that whatever approach of learning to be taken, teacher-centered or student-centered, the teacher should transform the structure of students' knowledge. New knowledge should be constructed based on existing knowledge and accumulated into increasingly higher-order forms.

Other problems of teaching and learning, as said by Wiggins & McTighe (2005), are coming from a not well design content of curriculum, namely overload problem (too many contents), goldilocks problem (too big / too global of content or vice versa, too small) and nebulous problem (too vague concepts that can be interpreted variously).

### The Nature of Geography Teaching

Nagel (2008) said that geography is one of the essential skills for living in the 21st century. It involves understanding where something is located and how it relates to place and affects other phenomena. This statement recalls what (Hartshorne, 1939) said in the early 20th century that knowledge of geography and history is important because it captures the relationships between the phenomena we live that shape our perception of space-time. Bednarz (1998, cited in Schoenfeldt, 2002) said that the strength and beauty of geography lie in the view, understanding, and appreciation of the network of connectedness between residents, places and the environment. Daniels et al. (2016) said that the power of geography comes from its integrative approach to understanding regions. Geography concepts give an understanding of human and environmental integration, but its intersection with other domains of knowledge such as natural sciences, social sciences and humanities makes it susceptible to stray not teaching its disciplinary concepts (Standish, 2021:146).

There has been a shift in views on geography education over the last century. In the early 20th-century, geography teaching was described as encyclopedic, fact-based and descriptive (Kim & Bednarz, 2013:22). In the late 20th century, there was a change in the nature of geographic education from the inventory-dominated activity of knowing "what" and "where" to understanding "why" and "how" in order to emphasize the cognitive need for the creation of knowledge (Golledge, 2002). Geography is more than just about knowing the term and location of geographies. It is a way of thinking, asking questions, observing and appreciating the world around us (Schoenfeldt, 2001), a way of thinking and a sense of perspective in looking at the world around (National Research Council 1997:28-46; Standish, 2021).

However, there is still a discrepancy between the goals of the geography curriculum and teaching practice. Kim & Bednarz (2013:22) shows that understanding geography subject matters requires powerful concepts and reasoning, but the teaching practice still applies a fact-based and descriptive approach. Alexandre (2009) identifies that geography teachers have a narrow epistemological perspective and view the discipline as an encyclopedic discipline whose purpose is to provide lists of places, present facts and statistical data and portray the character of regions and continents.

### Review of Geography Curriculum in Indonesia

High school curriculums in Indonesia are written uniformly, consisting of basic competencies, topics, and learning activities. The basic competencies or objectives statement combines verbs (indicate cognitive process) and nouns (indicate knowledge). These competencies are divided into

the domain of knowledge and skill.

Geography courses in grades X, XI, and XII consist of 5, 7 and 4 topics, respectively. Grade X consists of basic knowledge of geography topics. Grade XI contains topics about aspects of Indonesia's geography. Topics in grade XII are about the application of geography in development.

In the 2013 geography curriculum document, there is no description of how topics are structured. Nonetheless, we can interpret from the composition of topics that grade X provides an introduction to geography knowledge to help students in grade XI to understand the characteristics and issues of Indonesian geography. Finally, in grade XII, use geography concepts to understand development issues. The structure of Indonesia's geography curriculum is presented in Table 1.

# METHOD

## Research Design and Method

Content analysis is applied to interpret teachers' understanding and identify the problems of concepts presented in written curriculum. Teachers are asking about their understanding of the written curriculum, which comprises of the meaning of terms of cognitive process, methods of active learning, and their perception of the organization of topics.

The logic to draw inferences about teachers' understanding is by categorizing data to what class it belongs by measuring against a standard or criteria. Krippendorff (2004) categorizes it as standard inference, and Cohen et al. (2017) named it typological analysis, wherein data are classified based on a clear criterion analysis.

Document analysis is carried out to identify the presence of a conceptual framework to organize content and the problems of insufficiency, confusion or incorrect definition of concepts in written curriculum. Two topics that should apply complex concepts to organize the content are selected for analysis.

**Table 1.** *Structure of Indonesia Geography Curriculum*

| Grade | Broad Topics | Unit* |
|---|---|---|
| X | Basic knowledge of geography | Basic knowledge of geography |
| | Basic knowledge of mapping | |
| | Geography research process | |
| | Earth as a space of life | |
| | Dynamics of the lithosphere, atmosphere, and hydrosphere and their impact on life | |
| XI | Indonesian strategic position as the world maritime axis | Geography of Indonesia |
| | Flora and fauna in Indonesia and the world | |
| | Indonesia's natural resource management | |
| | Food security, industry, and energy | |
| | Population dynamics in Indonesia | |
| | Indonesian cultural diversity | |
| | Natural disaster mitigation | |
| XII | Regional concepts and spatial planning | Application of geography in development |
| | Spatial interaction of rural and urban | |
| | The use of maps, remote sensing, and Geographic Information Systems | |
| | Interaction between developed and developing countries | |

This study used open-ended questionnaires and was delivered using google forms. Then to get more in-depth information about teachers' understanding and practices in the classroom, the interview was conducted for selected teachers by using zoom cloud meetings on two selected topics.

The two selected topics are the strategic position of Indonesia as the world maritime axis (topic one in grade XI) and the spatial interaction of rural and urban (topic two in grade XII). These two topics are selected because both cover three essential geographical concepts: space, place, and scale. The relationship between these concepts must be revealed to fully understand these topics. From this in-depth interview, we can identify teachers' difficulties in understanding the topics. The two topics can be seen in Table 2.

**Table 2.** *The content of two geography topics for an in-depth interview*

| Basic competencies or objectives | Topic and Subtopics | Learning activities |
|---|---|---|
| Grade XI<br>3.1 Students are able to understand the condition of the region and the strategic position of Indonesia as the world maritime axis.<br>4.1 Students can present reasoning about the strategic position of Indonesia in the form of maps, tables, and/or graphs.<br>Grade XII<br>3.2 Students are able to analyze the rural and urban spatial structure, their interaction, and their relation to the attempts to eliminate disparities.<br>4.2 Students are able to write papers about the attempts to eliminate disparities in rural and urban areas presented in maps, charts, tables, graphs, and/or diagrams | The strategic position of Indonesia as the world maritime axis:<br>1. The location, area, and boundaries of Indonesia.<br>2. Characteristics of Indonesia land and sea.<br>3. Development of transportation routes and international maritime trade in Indonesia.<br>4. Indonesia's marine resources potential.<br>Interaction of rural and urban:<br>1. Spatial structure and the development of rural and urban.<br>2. Interaction patterns and factors of rural and urban.<br>3. The attempts to eliminate disparities in rural and urban.<br>4. The effect of urban development on rural and urban people. | 1. Observe the geographical location of Indonesia through a map of the world.<br>2. Discuss the location and geographical position of Indonesia and its relation to the world maritime axis<br>3. Present a report about Indonesia's strategic position as the world's maritime axis.<br>1. Observe a map/remote sensing image and/or video about rural and urban spatial patterns and their interaction.<br>2. Discuss the above-presented material.<br>3. Present a report with tables, graphics, and/or diagrams. |

### Data Collection

The data was collected from 30 high school geography teachers from various Indonesian provinces and islands, covering Sumatra, Java, and Kalimantan. These geography teachers as the participants were taken by a snowballing method where a known respondent suggests others to be recruited. Then, five teachers among respondents were selected for in-depth interviews about their learning activities on two topics.

### Data Analysis

Qualitative data analysis aims to identify teachers' capacity to encourage students in active learning and recognize the problems of written curriculum as teaching guidance. This study intends to make inferences about (a) teachers' understanding of cognitive activities terms by comparing their definition with cognitive taxonomy definitions, (b) teachers' understanding of methods to foster active learning by interpreting their sample assignment and statements of the purpose of activities, and (c) teachers' understanding of the organization of topics from their view of the sequence and continuity of topics and the difficulty of teaching complex concepts. Finally, identify problems in written curriculum that appear to contribute to the teachers' problem of understanding topics and learning activities.

## Result And Discussion

### Teachers' Understanding of Cognitive Verbs Terms

In competencies statement, the geography curriculum frequently uses the verbs "able to understand" and "able to analyze". Common words to prompt learning activities such as "discuss," "write a paper," and "create a map". However, in the curriculum document, the definition of those verbs is not provided. It assumes that teachers are going to interpret it in accordance with the standard definition of the Bloom's cognitive taxonomy (1956) or its revised version (Anderson et al., 2001). According to the taxonomy, the term "to analyze,", is demanded a more higher cognitive activity than "to comprehend/to understand and to apply". It is defined as the ability to differentiate, organize or attribute in order to determine how the parts relate to one another and to an overall structure or purpose.

All teachers describe the meaning of the phrase "able to understand" as students merely know the facts and concepts. They express the definition of "able to analyze" in words such as "knowing more deeply," "being able to explain an event," "being able to apply it contextually," "being able to investigate and find out," "being able to categorize," and "being able to separate something to its parts."

They conceive the words "to analyze" as covering activities transmitting knowledge and do not adequately aware of the idea to grasp the overall structure or purpose demanded in analyzing. Teachers' understanding of the word "to analyze" is more appropriate to include in the comprehension or understanding category, a lower level of cognitive skills referring to Blooms' or its revision taxonomy. To sum up, the verb "to understand/comprehend" is conceived as "to know" while "to analyze" as "to understand/comprehend."

### Teachers Understanding of The Discussion Activities

Discussion is a common learning activity applied by teachers. However, most teachers mentioned they enacted discussions for questions in which the answers are easily found in textbooks or various sources. While they hardly give any discussion task on topics that contain geographical issues and perspectives, such as Indonesian position as the world maritime axis, spatial interaction between rural and urban, or interaction between developed and developing countries.

The teachers tend to view the discussion as a method to involve students in collecting information in groups. Their view is quite far from the aims of discussion to acquire better communication, clarify content, teach rational thinking, and encourage the student to make a judgment about a problematizing idea (Preskill, 2005).

### Teachers' Understanding of Writing Assignment

The assignment to write academic writing ("makalah" in Indonesian term) is frequently demanded in written curriculum but without any description of what its meaning is. All of the teachers enact academic writing assignments in the topic of "the geography research process" for simple reason because this topic is about how to do simple geography research and present it in an academic report form. However, in others topics, although stipulated in many learning objectives or learning activities, almost a third of teachers do not assign students to write.

Most teachers that give writing assignments tend to consider it as an exercise to fill a writing format, as revealed in their response to the question about the function of writing assignment. The typical answers of the teachers such as: "an exercise to collect information and then write it in the form of academic report" or "an exercise to observe geographic phenomena and then write a report."

In giving writing assignments, teachers commonly ask unspecific questions and do not give reasoning guidance. The assignments simply state the topic but do not define the cognitive tasks to engage students with ideas and thinking. For example, teachers instruct students to: "make a paper about environmental problems around your place" or "write a paper about natural disasters using the writing format we just learned." They seem to have not conceived writing assignments as a systematic inquiry activity to answer an investigative question by collecting data, interpreting the information, and drawing conclusions. It is also found that some assignments are too difficult for students to accomplish, for example, "write a paper about problem and solution of regional spatial planning in Indonesia."

Specific instruction about the topics, approach and format in writing assignments is needed in order to master new material, formulate and clarify ideas, demonstrate creativity, and develop critical thinking (Davis, 2009, p.315). Referring to this statement, most teachers fail to regard the purpose of writing as a method to promote thinking. They tend to use writing activities more as learning to write than writing to learn.

### Teachers' Understanding of Constructing Map Assignment

The ability to represent and construct information with map is an important skill competencies in geography curriculum. All of the teachers give a task that is expressed in words such as: "make evacuation map for hazard mitigation in your place" or "represent discussion about spatial pattern with map." But as cross-checking with learning activities on topics that only present facts, the task seems merely mean to show location on a map. As we look further into the written curriculum, those assignments to construct maps are presented without any term definition.

Processing information and reasoning geographically with the map is an essential geography learning. Downs

(2001) states that the purpose of learning with map representation is to model reality about spatial relations among multiple locations. Uttal (2000) emphasized that maps represent the big picture of reality. Therefore, constructing maps requires students to think spatially. However, we can say convincingly that all teachers conceive the role of mapping in learning merely as a tool for representing cartographic elements correctly. They do not introduce maps as an essential tool for developing spatial cognition.

## Teaching and Learning Practice in Two Topics

The objective of the first topic about the strategic position of Indonesia as the world maritime axis (topic one in grade XI) is to enable students to understand the condition of the Indonesia region and its strategic position as the world's maritime axis and to present reasoning about such strategic position. All five interviewed teachers enact much the same activities in class. They introduce students to Indonesian geographic information, such as its astronomical position, area and boundaries, and location between two continents and oceans. Then continue with details information about the number of islands, marine resources, sea transportation routes and ports in Indonesia, and Indonesian maritime development programs.

To engage students in reasoning about the strategic maritime position of Indonesia, all of the interviewed teachers only ask students to display maps of Indonesian positions in the world and then identify coordinates and locations of maritime features (islands, shipping lanes, Indonesian fisheries resources, or port facilities). The teachers appeared to be satisfied when the students were able to show and describe the elements of Indonesian maritime on the map.

What is actually taught is fragmented factual information about "what" and "where" of Indonesian situations. There is not much attempt to invite students to connect spatial information conceptually and draw conclusions about strategic location. This interesting topic of applying essential spatial concepts then falls on merely teaching technical descriptions of maps and physical geographical elements. The introduction of essential geographical concepts (such as site and situation, distance, connection and linkage, or spatial interdependency) that can frame and explain Indonesian strategic position in the world has been unnoticed by all teachers.

This is not entirely the teachers' misinterpretation of the written curriculum because the teachers have delivered the topic accordingly. Understanding the meaning of strategic position needs a clear conceptual relationship, but it is not presented in written curriculum.

Furthermore, there is a vague definition of the maritime axis, the concept first presented as the vision of Indonesia during the presidential campaign in 2014. Is it an intermediary sea route between the centers of world economic activity where recent Indonesian conditions match this definition, or is it a center of maritime economic activity where some large maritime kingdoms in the past of Indonesia can be attributed to this definition but not in the present days?

Without a clear definition, it is not easy for the teachers to connect the past and present reality of the Indonesian maritime position and use essential geographic concepts in explaining current conditions and planning for the future.

The objective of the second topic about spatial interaction of rural and urban (topic 2 in grade XII) states to enable students to analyze the spatial structure of rural and urban, their interactions, and their relation to eliminating disparities. Thus, there are three concepts in this statement that needs to be understood integratively.

The terms "spatial structure and interaction" are two confusing terms to integrate. There is an unclear meaning of spatial structure. To connect the idea of structure and interaction, the spatial structure must define as the spatial organization of nodes and linkages that give rise to interaction. However, all teachers interpret its meaning similarly to spatial pattern, a static concept of land use arrangement. Consequently, teachers seem to have difficulty understanding the relationship between the two concepts.

The term "efforts to eliminate disparities" is not a geography-specific disciplinary concept but a practical concept commonly used in public policy discourse. However, skill competence demand students to be able to write a paper about this vague concept. The teachers faced problems relating concepts of "disparity" with the basic concept of geography.

Almost all of the interviewed teachers teach these three concepts separately. First, they expose rural and urban land-use patterns, then inform interaction factors such as migration and trade between urban and rural, and finally present a list of government policies and programs to eliminate the disparity. Only one teacher had tried to interpret spatial structure in terms of distance and access that can explain the interaction. Overall, the teachers do not know the precise meaning of these concepts. For them, the concepts in the topic are merely a collection of factual information.

To fulfill the second activity, which requires students to write papers about the attempts to eliminate disparities, teachers assign students to collect information about policy or programs from various sources or to list the problems in their neighborhood. However, both activities fail to answer the objective of revealing the idea of the relationship between the three concepts.

## Teachers' Understanding of The Organization of Topics

Teachers in Indonesia is allowed to select or modify the sub-topics and learning activities in the curriculum. Therefore, overloading content for teaching and learning is not a problem because they can adjust it to the available time. However, in response to the question in what grade they have limited time to enact the lesson, most of the teachers mentioned grade XI for the simple reason that this grade has the most number (seven) of topics.

Most of the teachers said that the most difficult topics to teach are Geographic Information Systems (topic two in grade X) and its application (topic three in grade XII), then followed by Regional Concepts and Spatial Planning (topic one in grade XII), and Physical Geography (topic four and five in grade X). A few (three) teachers said they did not find any difficulties in teaching.

It shows that most teachers have difficulties teaching topics containing many technical terminologies, such as in Geographic Information Systems. Additionally, teachers seem less aware of the difficulties of teaching complex geographical concepts and issues in grade XII. This grade has the least topics (four topics), but only few teachers consider as more difficult to teach. Teaching and learning that is still framed on a descriptive inventory of facts make most teachers unable to realize the difficulty of teaching complex concepts.

When they were asked whether it was necessary to repeat or recall concepts in the previous topic, more than half of the teachers said that topics could be taught separately

without repeating the previous ones. The rest of the teachers said that they recall the factual information of map knowledge and physical geography when needed. Only a few (three of thirty) teachers said it was necessary to repeat the basic concepts of geography.

Most teachers appear to view the topics as a collection of fragmented or unconnected concepts and skills. Even if a topic's content needs to be recalled from the previous one, it is limited in recalling technical terms. These findings indicate that they still view the content of the curriculum as a descriptive inventory of facts.

### Problems in Written Curriculum to Guide Instruction

There are some problems found in geography curriculum contents. Firstly, it brings many concepts of development policy such as maritime axis, spatial structure, spatial planning, regional disparities, food security, etc. Although they have a vague and multi-interpretational meaning, those concepts are presented without any clear definitions or even clues of meaning. As previously shown, it is hard for the teachers to grasp the precise meaning of the terms which lead to various interpretation. This vague concept also contributes to the teachers' misconception that teaching can be delivered topic by topic separately. This type of content organizing is more appropriately applied in teaching the non-critical relationships of issues than connected concepts and topics in geography.

Secondly, in the curriculum the discussion and writing assignment is frequently found in learning activities, but without a clear focus on what students should do with information or ideas. Most of the assignment simply states the topic by adding the verb of cognitive task; therefore, it is too open-ended and does not able to invite thinking.

Thirdly, the written curriculum does not correctly express learning activities about map skills. Most of the meaning word "to create" (membuat) can be substituted by "to present" (menyajikan), so the true meaning had to be guessed in context. A sentence like "Create a map of the distribution of fauna flora" can be read as present a map. The incorrect wording of cognitive activities makes the curriculum ineffective in guiding learning with maps as an important way of reasoning geographically.

## Conclusion

This study investigates geography teachers' understanding of the written curriculum. The finding shows that:

Regarding Bloom's taxonomy or its revised version, geography teachers seem to be not adequately aware of the analysis activities. Their understanding of terms engaging students in cognitive activities is still limited to a lower-order level of thinking. The evidence shows that teachers do not fully understand that the purpose of discussion and writing activities is to help students to promote reasoning. They conceive these methods as activities that merely complement the teaching activities to present information. What happened in class seems to be much more hands-on without mind-on activities.

Modelling spatial relationships on a map is the core skill for developing spatial reasoning. However, teachers conceive maps simply as a tool for representing location.

The content of the 2013 geography curriculum has been organized vertically from the basic concepts toward the application of geography in development so that the learning process should be done cumulatively like a spiral. But most teachers view the topics in written curriculum as a collection of fragmented or unconnected concepts and skills. Even if the content of a topic requires to review the previous one, it is mostly limited on recalling technical terms of map. Moreover, teachers also seem to be less aware of the difficulties of teaching complex geographical concepts and issues.

This study also found three problems in the written curriculum. Firstly, the written curriculum does not distinctly define the terms of the cognitive process. This problem contributes to teachers' interpretation of the required high-order cognitive activity terms as limited to lower-level order of thinking. Secondly, the learning activities assignments in written curriculum simply state the topic by adding the verb of the cognitive task. Therefore, it is too open-ended and unfocusing to guide the learning process. Finally, many vague and unfamiliar nonacademic concepts about issues inserted in the topics bring various interpretations and contribute to the teachers' perception of fragmented or unconnected topics.

The curricula span between what the geography curriculum expects to accomplish and what teachers actually deliver in the classroom. There are three types of curricula forming the output of learning, recommended curriculum that emphasize on goals of education that ought to achieve, written curriculum that state the specific objectives to be mastered and learning activities that should be used, and taught curriculum as what teachers deliver. It is concluded that gaps exist between these curricula. Recommended curriculum wants to enhance intellectual abilities through the student-centered learning approach while in practice the teaching and learning activities do not considerably move from traditional inventory and fact-based approaches.

Teachers interpreted the verbs referring to higher-order cognitive activities demanded in the written curriculum as lower-order level. Consequently, there is a gap between competencies or objectives stated in the written curriculum and the practice of teaching and learning.

Furthermore, there was a discrepancy found between the written and recommended curricula. The aims of the recommended curriculum to develope students' intellectual ability are not yet specified clearly in the written curriculum. The document does not distinctly define the cognitive process terms and learning methods, so allowing the teachers to practice the old way of teaching.

Three recommendations are proposed to align the gap between recommended, written, and taught geography curricula. First, it is necessary to rewrite the written curriculum by introducing the essential concepts of geography to organize the topics and eliminate vague and unfamiliar nonacademic concepts. Second, it is necessary to provide the definition of cognitive activities terms in written curriculum precisely. Finally, it is necessary to prepare teachers to apply active learning methods.

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