USING CREATIVE QUESTIONS FOR DEVELOPING STUDENT THINKING IN CLASSROOM ACTION RESEARCH CLASS

Jutatip Suangsuwan
Thailand National Sports University Samut Sakhon Campus,
Samut Sakhon Province, Thailand, Jutasu3@hotmail.com

Abstract: Creative questions are a key for developing a students' thinking process. Classroom action research class, which perceived as a difficult subject by Physical Education students, could be an alternative stimulation for developing student thinking. This research revealed the effects of using creative questions in Classroom Action Research Class (CARC) and guidelines for using them through the qualitative approach. The key informants were ten students who participated in CARC, into 2018. They were divided into two groups for an interview; the five highest ranking score, and the five lowest ranking score. The qualitative data derived from group interviews were analyzed. The data analyses were data reduction, content analysis, and synthesis. The contributions of creative questions and guidelines for using them in class were presented.

Keywords: *creative questions, Physical Education Student, Classroom Action Research class, using class questions*

Introduction

Asking and answering question is an effective traditional way of learning. The Question-Answer method is one teaching methodology. It is an old strategy known as "Socratic Method of teaching" developed by the famous philosopher, Socretes. It is a key to all educative activity focused on achieving cognitive objectives and bringing knowledge to the conscious level (Farooq, 2013). Hashemi (2011) indicated that all teaching and learning lies in the art of questioning. Questioning was the basis of teaching task that encouraged recall, deepened the learning process and comprehension, promoted the imagination and problem-solving, satisfied the sense of curiosity, and increased creativity. Siburian, Corebima, and Saptasari (2019) indicated that critical thinking and creative thinking which could be developed by inquiry learning, affected student cognitive learning. Their quantitative research found that there was a correlation between critical thinking and creative thinking skills on students' cognitive learning in which resulted in inquiry learning strategy. They also revealed contribution of critical thinking skills and creative thinking skills to students' cognitive learning results.

Creative questions are the questions tend to make the people not only think about specific or an abstract thing, but also abstract thing that may be more valuable answer (Mortan, 2019). Bratel (2013) indicated that questions that developed creativity and inquiring mind were the open-ended questions which had more than one correct answer. It broadened people imagination and ideas. When people asked the question, they would not stop asking yes/no questions, but they would also incorporate creative question to find alternative way of solving problems. Creative questions might help solve difficult situations or conditions in a present or in the future. In class with creative questions, the learners take role thinking, telling and discussing. Therefore, creative questions supported student learning that leading to students' cognitive development.

Creative Questions can develop student thinking. Tofade, Elsner and Haines (2013) suggested that Questions have long been used as teaching tools to assess students' knowledge, promote comprehension, and stimulate critical thinking. Well-crafted questions led to new insights, generated discussion, and promoted the comprehensive exploration of subject matter. The teachers often asked lower order questions to support remembering, understanding and applying questions to help student recover what had been learned and recall of prior knowledge. However, if teacher asked higher-order, divergent questions, such as analyzing, evaluating and creative questions, they would promote deeper thinking, requiring students to analyze and evaluate concepts. Harvard Graduate School of Education (2015) indicated that creative questions were able to generate and transform questions encouraged students to create interesting questions and then imaginatively think about them in order to explore their creative possibilities. They provided students with the opportunity to practice developing good questions that provoked thinking and inquiry into a topic. They were used as a tool to expand and deepen students' thinking, to encourage students' curiosity and increase their motivation to inquire.

In class, teachers need to take a role as listener and encourage students to think and participate. Creative questions needed to be prepared and arranged in a logical sequence. They had to be presented in such a way that curiosity arises among the learners, before asking a new question linking with the learners' responses. While asking questions, the teacher keeps in mind the abilities, needs and interest of the learner (Farooq 2013). Harvard Graduate School of Education (2015) suggested that to apply creative questions, the teacher needed to look over the list and transformed some of the questions into questions that challenge the imagination. Using creative questions in class, the teachers needed to choose questions to imaginatively explore by imaginatively playing out its possibilities. The teachers might write a story or essay, draw a picture, create a play or dialogue, invent a scenario, conduct an imaginary interview, or conduct a thought experiment.

Moreover, using creative questions in class, it could to be routine starting by introducing a new topic to help students get a sense of the breadth of a topic or it could be used when the teachers were in the middle of studying a topic as a way of enlivening students' curiosity. It also can be used when teachers were near the end of studying a topic to show how the knowledge students had gained about the topic helped them to ask ever more interesting questions. This routine could also be used continuously throughout a topic, to help the class keep a visible, evolving list of questions about the topic that could be added to at any time (Harvard Graduate School of Education, 2015).

Using the creative questions might be some new ideas about the topic, concept or object that students didn't have before. Harvard Graduate School of Education (2015) suggested tips for the teachers are that before using Creative questions, the teachers have to ask students what they think makes a good question. Then, when you show the creative questions, explain that this routine is a tool for asking good questions. Then, start the routine by providing a topic, concept or object and ask them to use the creative questions to generate a list of questions about the topic or object. Teachers also need to encourage students to explore it by imaginatively playing out its possibilities thought various activities. At the end of the exploration process the teachers need to be sure to take time to reflect on new insights and ideas about the topic, object or concept.

The instruction in Classroom Action Research Class (CARC) for students in Faculty of Physical Education, Thailand National Sports University (TNSU), Samutsakhon campus was

the TNSU curriculum application. The aims of the curriculum were to develop physical educators with knowledge and capability in physical education and education. Hence, CARC was identified as one research subject area the students had to learn. The prior course was Educational Research, Measurement and Evaluation, Statistics for life. In naturally, the students tend to enjoy the Physical subject more than the academic subject like Research. However, the academic classes are vital not less than the physical class. The students need to gain knowledge and capability in Education. In the fifth years, the students have to conduct individual Classroom Action Research (CAR). Therefore, CARC is an important one for them in the future.

CARC is a three credits subject with two hours practice and two hours lecture. The content consisted of meaning, types, and benefit of CAR, and how to conduct CAR. In class, after introduction, the students would practice analyzing the problem to identify CAR problems and its causes. Then, they selected problem solution based on literature review. After that, the students practiced to set the CAR research topic, research concept by practicing their CAR research project. The research background, questions, purposes, scope and so on would be written in chapters of their report. Next, the section of research design and planning which consist of sample, measurement and analysis design would be reviewed. Some kinds of research such as operational research, laboratory research, and research and development would be presented so that the students more understand about the nature of CAR and were able to develop their research frameworks and procedures. Later, the students had to adapt their prior knowledge from many classes to select and develop research tool, innovation and select statistical analysis especially t-test for their research. Finally, all research procedures, data collection, data analysis and research results would be written in their research report.

CARC is an integrated subject combined with various subjects such as educational measurement and evaluation, Innovation development, basic statistics, educational curriculum and educational research. In class, the content knowledge related to classroom action research needed to be reviewed using questions. Later, creative questions linked to the CAR contented would be used as a tool for checking students understanding and stimulate their ideas and creativity. This paper aimed to show that the use of creative questions in CARC could be effective in classroom.

Objective

The objective of this paper was to present the effects of using the creative questions in Classroom Action Research class (CARC), and the guidelines for using them through qualitative approach.

Research Scope

This research was conducted at the end of CARC section, second semester, 2018. Ten students who took CARC were selected as participants in the study. These students were selected on the basis of their grade in class. The five highest and lowest ranks of CARC scores were the selection indicators. The two groups of participants were identified as Group1: Five highest ranking score group, and Group2: Five lowest ranking score group.

The purposes of this study were to identify the contributions of using creative questions in the CARC and guidelines for using them. In CARC, the students were learning through class activities included expository lectures, whole-class guided discussion, teacher demonstration,

individual and small-group hand-on tasks. The emphasized activity was the students response to the creative questions such as "Why-How" or their response to solving difficult situations. After the teacher presentation, the whole class summarized the presented topic. Then, they were stimulated to discuss the given problems or solutions. The subjects and example creative questions asked in the CARC were presented as follows;

1. Review on education and research in education
   If you want to conduct a research in education, what are the processes that should be done? Why?

2. What is Classroom Action Research? (CAR)
   Is CAR the same as other type of research such as educational research, operational research, innovative or developmental research, experimental research, descriptive research? If yes, why? And if not, why?

3. How to conduct CAR?
   Are the items in CAR different from educational research? If yes, why? And if not, why?

4. How to identify the CAR problem?
   How could the curriculum, instruction, and evaluation relate to the student problem?
   What will happen if the teachers are not concern about curriculum, instruction, and evaluation when they conduct CAR?

5. When and how we conduct CAR?
   If you are a physical education teacher, how could you conduct your educational research?
   If you have to conduct CAR, what will you do in class?

6. Which innovation is proper to the students problem?
   How could we develop the effective innovation for solving the student problems?

7. How to develop the innovation?
   If the teachers need to develop the innovation for solving the student problems, how could they do it?
   How could we develop the innovation in CAR?

8. How could we know that the innovation can solve the problem?
   If you have to develop the innovation, what will you do to guarantee its success?

9. What are good tools for CAR? How could we identify them?
   In CAR, how could the researcher identify which tool should be developed in his/her research?
   How could you develop your tools in your CAR project?

10. What is the proper research framework in your CAR?
    Is CAR framework different from the educational research? If yes, why? And if not, why?
    What is a research framework in CAR?

11. Who can be your population in CAR?

Why do we need to identify the population, sample, and sample size and how to derive data from sample?
Who should be the population in CAR? Why?

12. How could we record the student data in CAR?
How do we design the data record and presentation?

13. How could we analyze data in CAR?
Which statistics can be used to identify the innovation efficiency and effectiveness?
How could we use these statistics?

14. What can we write in our CAR report?
If we need to write CAR report, what should be written in?
What is different between CAR report and educational research report?

15. What is your CAR project?
What are the problem solving solutions and which innovation is used in the project?
Why was it selected? What is your CAR project plan?

Method

Research Procedure

This study focused on the creative questions that stimulated student thinking and the guidelines for using them in class. The ten students enrolled in CARC were interviewed using semi-constructed questions after all the CAR instruction and final exam had been completed.

In academic year 2018, 2nd semester, the researcher as a lecturer had taught almost 15 weeks of classes according to the instructional plan. In each class, consisting of 26-27 students, the questions were used as the content knowledge review. In case there was no response from the class, the lecturer would pick a person to answer. After the class introduction and content presentation, the lecturer asked the questions to review the content and sometimes apply the knowledge in their experience. As CARC also had a practice time, they would be assigned work sheets, solved problems or developed their research projects. Creative questions were also always used for clarify and testing the students understanding. They sometimes presented their ideas and works to the class. The emergent issues with understanding or misunderstanding would be the subjects for class discussion. Finally, before the class finished, the questions would be used again for the whole class summary.

In the 2018 academic year, there were 72 students enrolled in CARC. The top five students receiving an "A" were selected as the high score group and five students receiving "D+", "D" and "F" were selected as the low score group.

This research was conducted after all the processes in CAR class finished. When the 1st semester academic year 2019 started, the researcher gave a speech to thank all student participated in CARC. Then, the students were informed about the research project, the purposes of the project, such as to gain information for the next CARC, and for the researcher's instruction development. At the same time, the research procedures were explained. Then, the 10 selected students who passed the subject selection criteria were asked to participate in the group interviews. Each groups' interview was conducted separately for

about 40 minutes. There were five rounds of questions. Every student answered each question in a round. They were able to ask for clarification, or add their idea or to add on friends' idea. Finally, they individually summarized the pros and cons of using creative questions in CARC in their point of view.

Research Instrument

In data collection, the researcher as a teacher was a moderator in the group interview. Permission for tape recording was granted by all participants before the interviews. The questions for the group discussion were as follows;

1) How do you feel about CARC?
2) What types of question do you like in class?
3) How do you feel about those questions?
4) Did that question stimulate your thinking? How?
5) In the future, if you are a teacher in CARC or other classes, what kind of questions will you ask students so that will be able to improve their thinking?

Research Analysis

All qualitative data from the group interview's audio recording were reduced, analyzed, and present in a narrative content of each question. The students' answers to five questions were rewritten, read, and analyzed. The codes or words or short phases were identified to represent the themes or idea of the significant words related to the questions. The information related to the effects of using creative research in the CARC and the guidelines for using them were emphasized. After the data analyzed, they were synthesized into topics, subtopics and presented.

Results

The results of the students answered in each five questions were following.

Question 1: *How do you feel about CARC?*

The data analysis showed that the students in two groups were enjoyed with CARC. The questions in class helped them review their background knowledge in Educational Research class. They participated in class by answering questions. They engaged in learning. Therefore, their knowledge and understanding in research were deepening.

Five highest ranking score group

Student 1: *CARC was easier than Educational Research class because we had knowledge background. Therefore, we enjoyed CARC.*
Student 2: *We more understood in Research content in CARC which was the second class in Research subject.*
Student 3: *CARC was fun. Learning in class was natural. We were able to apply all knowledge for developing our future students. I think it was useful knowledge for me; I tried to understand, remember, and take note whatever I learn from the class.*
Student 4: *It is a class reviewed our knowledge derived from previous class, Educational Research Class. We reviewed many topics such as research framework, type of research, research procedures.*

Student 5: *I had no tension in class. I was comfortable with the questions and research content. It was a joyful class*.

Five lowest ranking score group

Student 6: *I enjoyed with CARC. I more understood about research content via the questions. I knew what research was and how to conduct it.*
Student 7: *Participated in class made me fun. I enjoyed with answering the questions in the CARC.*
Student 8: *It was a class reviewed our knowledge in previous subject, educational research class. I more understood the content about research method in this class.*
Student 9: *We developed our knowledge content in research method. I understood the content through questions in CARC. Then, I applied it for my research project.*
Student 10: *I more knew about the CARC. I knew what the classroom action research procedures were, and how I could conduct my research.*

Question 2: What types of question do you like in class? and Question 3: How do you feel about those questions?

The content analysis showed that the students liked using creative questions in CARC. The questions activated them in class. The smart group liked mediocre difficult questions as they stimulated their thinking. Some of the poor group liked easy questions because they did not want to think about the questions. However, questions are benefit to them because they reviewed the content knowledge and motive students' thinking.

Five highest ranking score group

Student 1: *I like mediocre difficult questions as they challenge me and it is possible to find the answers. And the questions related to the subject help us develop our thinking. The closed ended questions are easy for us. The open ended questions develop our creative thinking as we are free to think and answer. Questions make me fun in class and expand my content knowledge.*
Student 2: *The questions stimulated our thinking especially the open ended ones. They supported freely thinking, beyond the thinking frame. However, the close ended questions were also benefit to us. I sometimes found the answers in my notebook. Even they were not challenging me; I waited to hear the answer.*
Student 3: *I was comfort with the overall class questions more than the personal identify questions. And I enjoyed moderate hard questions related to the subject content needed for us. Too hard questions made me have a tension in class, especially the open ended questions.*
Student 4: *I liked the questions used as reviewing our knowledge. I did not like the introduction question as it was hard for us to answer and I was not comfortable if our answers were always wrong.*
Student 5: *I had no tension because of the class or the questions related to the subject content knowledge. I enjoyed answering teacher questions, searching the answers and concluding to the answers.*

Five lowest ranking score group

Student 6: *I liked the questions motivated our thinking as there were various answers. Some questions with the limited answers were not challenging me. Anyway, the questions related to research contented were needed as the same as open ended questions that stimulated and expanded our creative thinking. These questions made me fun.*

Student 7: *I liked repeated questions as I already knew the question. Using those questions was a way to review my knowledge. I used to with them. In contrast, the new questions were awkward me.*
Student 8: *I liked searching information related to the subject content. The questions activated us eager to learn and know content more. When teacher asked me the questions, I searched the answer from internet or asked friends. They urged me to search the information.*
Student 9: *I liked the questions reviewed our knowledge. They helped me in memorize the content. They made me think how I could answer your questions. They made me concentrate in class and more understanding.*
Student 10: *I liked short and easy questions. I did not like thinking. I loved listening and note a lecture. The long and hard questions were difficult for me.*

Question 4: Did that question stimulate your thinking? How?

Data analysis indicated that the question stimulated their inquiry minds. After the class got the questions, they thought first how they could find the answer unless they knew the answers. They thought about the ways and sources of information to answer. They searched information from the internet via their smart phones. They listened to lecturer and friends for more information and clues, scoping and thinking for more possible answers. They judged searched information whether it was the answers. They practice to be a good listener. They listened to the friends' answers and evaluated answer's possibility. Listening, discussing, and the answering stimulate students' thinking. These expanded their thinking ability. Sometimes, the open ended questions developed their creative thinking and encouraged them to think and say.

Five highest ranking score group

Student 1: *The questions stimulated our thinking. When I did not know the answer, I would find the ways to solve the problems. I was eager to know. They made be an enthusiastic one. I always thought how or where I could find the answers.*
Student 2: *The questions made us think. Once the teacher asked the questions, I would think about the answers, I wanted to share the answers. I listened to the friends' answers and think whether that answers were right. The questions activated us very much. We listened to the classes which were not boring and sleepy.*
Student 3: *We found the answers. We shared the answers and searched supportive reasons. We loved listening to the teacher clues. It was the way to find and scope the answers. We learned how to conclude the answers.*
Student 4: *The questions activated us. I listened to teacher question and think what your questions were, and what the possible answers were. Sometimes I knew the answers. I enjoyed with that. If I did not know the answer, I would think what the answers were.*
Student 5: *When I answered the questions and I knew that it was not correct. I thought and searched before answering. I expected that my answer would be right. I listened to the lecture and class. It expanded my content knowledge.*

Five lowest ranking score group

Student 6: *Some questions created our inquiry mind. Some urged us finding additional knowledge. Some developed creative thinking as there was no right or wrong answer. Some questions made us fun to find the answers in our notebook. It would be boring just to open and read the notebook.*

Student 7: *It motivated my thinking even it made me have a little bit tension. I thought and listened to the friends' answering. I wanted to know the answer, so I listened to the questions and friends' answers. I also found the answer whereas the friends answered your questions.*
Student 8: *I was happy with the questions because they provided me knowledge. I thought about the questions and try to find the answer from many resources such as internet, friends, and listen to teacher and friends. They made me think how to get the answers.*
Student 9: *Having participated in finding knowledge, finding answers, made the class fun. Involve in the class made better content memory. Assigned the questions by the paper task was not stimulate us like whole class question-answering. The more questions, the more forget. Finding the answer in class is the way to develop student participation and knowledge recognition.*
Student 10: *We participated in class. If the teacher lectures, it was boring and we had less learning. Jot down the lecture was boring. It did not stimulate our learning. In contrast, answering the questions were courage us to find the answer. We are able to find the answers through our smart phone. We read the information that we had got and summarized it to answer the questions. Sometimes I discussed with friends. It made the class joyful.*

Question 5: In the future, if you are a teacher in CARC or other classes, what kind of questions will you ask students so that will be able to improve their thinking?

Content analysis revealed that they liked using creative questions in class. For the better class, they suggested that some questions needed to be clarified and adapted to the student ability or knowledge. They enjoyed using the questions after they gained knowledge or reviewed questions much more than introduction questions. They developed their thinking through close ended and open ended questions. They appreciated with positive feedback on their answering as it encouraged them to search and say the answers. They really wanted to know the exactly answer of each question. The class might be more enjoy if the questions were utilized with some activities such as game, document reading, or task.

Five highest ranking score group
Student 1: *Using questions in class were suitable for the smart students. For the poor students who lacked of basic knowledge, the content should be presented to them before using questions.*
Student 2: *Questions were work for students with concentration. Student without listening or paying attention could not answer the questions. The teacher also needed to motive student with low motivation in class.*
Student 3: *Not only discussion related to the question, but we also need the exactly answer so that we were able to memorize it. The teacher might apply questions after lecturing, or practiced student information seeking skill.*
Student 4: *Asking the questions to the class made less tension than identifying personal solutions. And teacher should not spend a long time on the questions between the classes. It would be boring if we needed to think and find the answers all the time.*
Student 5: *We needed an introduction before using the questions. Inform the topics related to the questions so that we had the clues. In addition, using some close ended questions in class would be motivated us if we had the content knowledge sheet or document. It made us have confident in answering the questions.*

Five lowest ranking score group
Student 6: *The open ended questions should be used more in the CARC because they would make the class be fun. They motivated our thinking and expand our content knowledge.*

Student 7: *Some questions should be clarified. If not, the students confused with the questions and were not enjoyed answering questions.*
Student 8: *The teacher feedback should be positive and encourage students to think and discuss. The teacher should avoid saying "no" or "it is not correct". In addition, the teachers needed to indicate the correct answer.*
Student 9: *Sometimes using questions in CARC was boring. It would be motivated if the teachers used questions in class with other activities liked games.*
Student 10: *Students do not like the homework or searching knowledge after the class. We needed to know the answers in class. It is not exciting to know something at home, not in class. Moreover, the number of questions should be moderate and we sometimes needed some question explanations.*

Discussions

The research results derived from five questions were concluded in two topics; 1) the contributions of using creative questions in CARC and 2) the guidelines for using creative question in CARC or other class.

1. The results showed that creative questions benefited to class. In CARC, students were motivated to learn in class. All students with high and low score enjoyed the lesson in CARC. They felt more comfortable with questions and discussion. They had a better understanding in research content. Questions helped them reviewing their knowledge in previous classes, and they were able to links those to CARC. They also thought that the subject contents were advantage to them. Questions in CARC activated their thinking and learning. The students engaged in class because they were happy to learn. They paid attention in listening questions, thinking and searching for the information. They were happy when they were able to acquire the answers or discuss with friends. Most of the low group students were comfortable with review question, not high order thinking questions. The questions help them to memorize the content and some were deepen their knowledge. They did not like the creative questions because they too much stimulate their thinking. For the high score group students, they enjoyed the creative questions because they were able to think with their imagination and broaden their idea. In other words, creative questions challenged their thinking. However, the ways of using questions with teaching helped students' content recognition and deepened their understanding in CARC content. These are in line with Tofade, Elser and Haines (2013) who indicated that using questions in class provided the students' new insight, generated discussion, promoted comprehensive exploration of subject matter and deeper critical thinking. In addition, Luna and others (2018) presented that the questions enhanced classroom activities. The students enjoyed the class because they were able to think openly or had free thinking. They were confident in their various abilities such as learning, asking the question, exploring variety of ideas. These abilities helped individualize learning and support students thinking so that they were able to think openly and productivity.

2. The results showed that there were many guidelines in using creative questions in classes such as types of questions, theirs difficulty, the purposes of using them, and so on.
First, most of high score group students liked challenging questions such as open ended questions that developed their creativity and thinking. Most of low score group students loved the moderate hard question like the uncomplicated and shorten ones because they were able to find the answers. Creative questions might sometimes discourage them. Second, the content knowledge questions liked open ended questions still were vital for the classes

because they were able to use as tools for content review, class introduction, class motivation and participation, class discussion and conclusion. These questions helped students to develop their thinking and searching for information skills. Third, to use the creative questions method in class, teachers needed to prepare the questions and made them clear to the students. In the same way, the class introduction and student prior knowledge were the needs for using creative questions. The students in low score group loved to have various activities in class such as games, document for reading or task. If not, using too many questions was boring. Finally, even the students were listening to the questions and answers, it was essential for the teacher to summarize or conclude students' answers to be exactly one answer especially the close ended questions so that students could memorize the right answers. These results were congruence with Zolfaghari, Fathi, and Hashemi (2011) informing that most of the questions posed in class were able to use at first to check the students' comprehension and then to diagnose their problems and to recall the facts. In addition, the questions could be used for developing students' creativity, questioning skill, and thinking skill. Cotton (1988) indicated that to use the question in class, the teachers had to incorporate questions into the classroom learning/teaching practices, asked questions focusing on the salient element in the lesson, and used the materials in class with lower cognitive questions. In addition, using questions for the differentiate abilities had to be adapted. Teachers were able to use questions to student with high ability or older before the materials were read or started the class. In contrast, teachers needed to provide the knowledge before using the questions with the students with low ability or younger. And the questions difficulty needed to be adjusted related to the students' ability. The teachers needed to motivate the class and probed the questions. In class, the steps for using questions were in the following; asking the inference questions, answering them, finding clues to support them and telling students how to get the answers from the clues.

From the research results, there were many contributions of using creative questions to the class even for the students in higher education and the question using in class must be varied according to the students' ability and the purpose of using them. Therefore, the further studies relating to creative questions can be various in the level of creative questions' difficulty suitable to the specific groups and subjects. The creative questions developing to use in class should be presented from various groups such as students themselves, teachers, specialists in thinking and question development. In addition, the quantitative study supporting the way to develop students through creative questions is needed. The further information enhances the importance of using creative questions to help the students learning with happiness.

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References

Bartel, M. (2013). Teaching Creative Thinking with Awareness and Discovery Questions (Inquiry Learning). Retrieved from http://www.bartelart.com/arted/questions.html.

Cotton, K. (1988). Classroom Questioning. Office of Educational Research and Improvement (OERI), New Jersey, US: North West Regional Educational Laboratory.

Farooq, U. (2013). Question-Answer Method of Teaching: Socratic Method of Teaching Retrieved from http://www.studylecturenotes.com/curriculum-instructions/question-answer-method-of-teaching-%7C.

Hashemi, M. (2011). The Role of Creative Questioning in the Process of Learning and Teaching. *Procedia - Social and Behavioral Sciences, 30* (2011), 2079 – 2082.

Harvard Graduate School of Education. (2015). Creative Question (Visible Thinking). Retrieved from http://www.pz.harvard.edu/sites/default/files/VT_CreativeQuestions.pdf.

Luna, E, Ernst, J, Clark, A DTE, Deluca, V. W. and D. Kelly. (2018). Enhancing classroom creativity. *Technology and Engineering Teacher*, 26-31.

Mortan, A. (2019). Why You Need to Ask More Creative Questions? Retrieved from https://lateralaction.com/articles/creative-questions/.

Siburian, J., Corebima, A.D. and I. M. Saptasari. (2019). The Correlation Between Critical and Creative Thinking Skills on Cognitive Learning Results. *Eurasian Journal of Educational Research.* 81, 99-114.

Tofade, T., Elsner, J., and S.T. Haines. (2013). Best Practice Strategies for Effective Use of questions as a Teaching Tool. *American Journal of Pharmaceutical Education*, *77*(7), 1-9.

Zolfaghari, A. R., Fathi, D., and M. Hashemi. (2011). The role of creative questioning in the process of Learning and Teaching. *Procedia Social and Behavioral Sciences*. 30, 2079-2082.

Bio Statement

Jutatip Suanguwan is a lecturer in Faculty of Education, Thailand National Sports University, Samut Sakhon campus since 2016. She holds a B.E. in Elementary Education, a M.E. in Educational Measurement and Evaluation, and Ph.D. in Research Methodology in Education from Chulalongkorn University, and Ed.D. in Educational Administration from Kasetsart University. She is experienced as a primary teacher for 24 years before moving to be a lecturer. She is responsible for Educational Research, Classroom Action Research, Project Evaluation, Educational Measurement and Evaluation, and Educational Administration and Quality Assurance. She is interested in topics including with instruction and ethics for organization development.