The Situation of Classroom Action Research

Pimchanok Photipussa
Jaitip Na Songkhla
Prachyanun Nilsook

Abstract

The current survey research aims to investigate the present and the desired situation of classroom action research. The participants were 400 government teachers and pre-service teacher. A questionnaire investigating the current situation of classroom action research was used as a data collection tool. The data was analyzed using means of data interpretation and descriptive statistics: frequency, percentage, mean and standard deviation. Research results show that 1) most government teachers and pre-service teacher used classroom action research to find solutions to classroom problems. 2) most educational institutions encouraged teachers to conduct research. However, the professional community network is not strong because the advice from experts and cooperation from teachers were needed. 3) the desired situations of the classroom action research process were the mutual learning of teachers, the establishment of a professional network of classroom action research, the availability of research sources and guidance from experts in classroom action research, and the supportive policy from school directors.

Keywords: Classroom Action Research, Government Teacher, Pre-Service Teacher, Research Process

Received 17 February, 2020; Revised 19 April, 2020; Accepted 26 April, 2020
สภาพของกระบวนการวิจัยปฏิบัติการในชั้นเรียน

พิมพ์ชนก โพธิปสสา¹
ใจทิพยณ สงขลา²
ปรัชญนันท์ นิลสุข³

การวิจัยครั้นนี้มีวัตถุประสงค์เพื่อศึกษาสภาพปัจจุบันและสภาพที่พึงประสงค์ของกระบวนการวิจัยปฏิบัติการในชั้นเรียน โดยใช้ระเบียบวิธีวิจัยเชิงสังเคราะห์ กลุ่มตัวอย่างได้แก่ ข้าราชการครู จำนวน 400 คน และนิสิตฝึกประสบการณ์วิชาชีพครู จำนวน 400 คน เครื่องมือที่ใช้ในการเก็บข้อมูล คือ แบบสอบถามสภาพของกระบวนการวิจัยปฏิบัติการในชั้นเรียน วิเคราะห์ข้อมูลโดยใช้สถิติเชิงบรรยาย ได้แก่ ค่าความถี่ ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน ผลการวิจัยพบว่า 1) ผู้ตอบแบบสอบถามที่เป็นข้าราชการครูและนิสิตฝึกประสบการณ์วิชาชีพครูใช้กระบวนการวิจัยเพื่อด้านนิติกรรมการแก้ปัญหาที่เกิดขึ้นในห้องเรียนมากที่สุด 2) สถานศึกษาส่วนใหญ่มีนโยบายส่งเสริมให้ครูทุกที่ต้องท้าทายวิจัย และเตรียมข้อมูลวิชาชีพอย่างมีประสิทธิภาพ ทั้งนี้ข้อมูลที่ได้มาจะนำไปพิจารณาการวิจัยได้ 3) สภาพที่พึงประสงค์ของกระบวนการวิจัยปฏิบัติการในชั้นเรียน ได้แก่ การเรียนรู้ร่วมกันของครูและนักเรียน การสร้างชุมชนทางวิชาชีพในการวิจัยปฏิบัติการในชั้นเรียน ความพร้อมของแหล่งข้อมูลในการวิจัย ค่าแนะนาระหว่างผู้ที่เกี่ยวข้องในการวิจัยปฏิบัติการในชั้นเรียน และการสนับสนุนด้านนโยบายจากผู้บริหาร

คำสำคัญ: การวิจัยปฏิบัติการในชั้นเรียน, ข้าราชการครู, นิสิตฝึกประสบการณ์วิชาชีพครู, กระบวนการวิจัย

รับบทความต่อฉบับ 17 กุมภาพันธ์ 2563; รับบทความแก้ไข 19 เมษายน 2563; ตอบรับการตีพิมพ์ 26 เมษายน 2563

¹ ผู้รับผิดชอบบทความหลัก ภาควิชาเทคโนโลยีและสื่อสารการศึกษา คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กรุงเทพมหานคร 10330  อีเมล: tiggygunners@gmail.com
² ภาควิชาเทคโนโลยีและสื่อสารการศึกษา คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กรุงเทพมหานคร 10330  อีเมล: jaitip.pu@chula.ac.th
³ ภาควิชาครุศาสตร์เทคโนโลยี คณะครุศาสตร์อุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ กรุงเทพมหานคร 10800  อีเมล: prachyanun@hotmail.com
Introduction

Teachers are those who spend most time with students at school and influence the learning of students since they have duties and are responsible for what happens in the classroom. One of their important duties is to make every opportunity a learning opportunity. Teaches is the most important factor leading to quality education as stated in guidelines for the first and second decade of national educational reform (2009-2018). The guidelines highlight the improvement of teacher quality as they are mechanism for the development of quality Thai citizens who will further develop the global society. The development of the teacher quality includes competency, coaching, motivation and strategies. Furthermore, the Teachers’ Council of Thailand which is a government organization in charge of the promotion and development of the teaching profession has recognized the importance of teachers and educational officers. Therefore, it determines knowledge assets and competency of educational officers to be used as guidelines to maintain the standard of the teaching profession. In order to meet the set standard, it is necessary to enhance competency and skills of educational officers so that they are able to perform to accomplish the goals of their institution.

Currently, research has increasingly played many important roles since it is a vital mechanism or device for knowledge searching in order to solve problems or overcome obstacles and develop Thailand. Initially, research is only done among academics and in higher education. Later, it is done by people with professions in other fields. Research is even commonly done in politics field to help with political activities since it is considered as criteria-oriented, reliable, worthy, and can lead to successful activities. In education field, educators and those involved at all levels must seek knowledge in order to make decisions in work according to educational framework using research as one of the main methods. Additionally, the National Education Act BE 2542, section 4, article 24 (5) discusses research as “encourage teachers to provide environment and instructional media to facilitate students’ learning and support teachers to become knowledgeable and capable of conducting research as part of a learning process from instructional media and different aspects of science”. In addition, Article 30 states that “educational institutions have to develop effective learning and teaching process and encourage teachers to conduct research in order to provide learning suitable for students in each level of education” This clearly proves the importance of learner development through research process and the development of teaching profession, with cooperation of educational institutions needed. The teacher themselves have to rely on their competency to seek more knowledge and create an innovation suitable for learners so that they can improve themselves with their full potential. One important way to improve the teaching profession is to encourage teacher to improve themselves concretely. The emphasis is laid on teachers developing their work related to their students. They are also encouraged
to use their research skills to improve teaching and learning in the classroom. There are two main reasons why teachers have to conduct classroom action research (Panyaphinyo, 1998). As the nature of the teaching profession requires freedom of teachers to make decisions in teaching and learning based on the “freedom to teach” principle. At the same time, teachers have freedom to conduct research together with performing their teaching to improve their teaching profession. There has been a claim that previous forms of educational research done by other researchers are inappropriate as it they seem to help improve teachers’ teaching. In fact, they cannot be applied to teachers’ teaching. However, a limitation of classroom action research which is suitable for the existing problems in the classroom is the separation of the teaching activities and research activities. Furthermore, a small number of teachers conduct classroom action research because they are not knowledgeable about doing research. They also think conducting research is difficult and it requires special knowledge related to research methodology (Wongwanit, 2007). Apart from the aforementioned problems, there are some others encountered by researchers. For example, researchers do not have sufficient knowledge about their research topics or research methodologies. It was also because researchers had no interest in conducting research but there was some other reasons behind it. For instance, their superiors order them to do research. Another reason is they do it because they want to apply for a research grant and it is a requirement of the program they are studying in. These result in the submission of low quality and impractical research. This leads to the promotion of a new approach to doing research for teachers to make them feel encouraged to do research without having to only conduct academic research. Academic research requires researchers to use research methodologies and psychological statistics to analyze the data. It also depends on experiments in which there strictly are variables and the hypothesis testing using research participants as samples. Therefore, classroom action research (CAR) is introduced to teachers and educational officers. CAR is suitable for research focusing on solving immediate classroom problems. This kind of research depends on action research as research planning and methodology.

Action research is a research methodology related to the improvement of education quality and the development of teaching profession. It allows teachers to seek knowledge and to reflect on the results gained from action research or interpret the results by themselves. It encourages teachers to conduct research together with improving their teaching. Action research is done to solve problem arisen from teaching management of teachers themselves. This kind of research is small scale research focusing on finding resolutions to existing classroom problems not revealing new findings or body of knowledge related to teaching management. Therefore, teacher researchers do not have to present their research results following academic research approach, in which it consists of 5 chapters of a research report. Instead, action research enables teachers to conduct research using an easy a research methodology to find resolutions to classroom problems by themselves. The most important
methods of classroom action research are research, action, reflection and action learning. After the research is done, the most important thing to do for researchers is to apply the research results to solve problems. Researchers have to reflect on what they have learned from doing action research, how they are going to apply the results in their teaching, what their further research plan is, and how they are going to publicize and share their research report to make it useful among teachers.

In the past ten years, the computer system has grown continuously and swiftly more advanced. Therefore, it is necessary to use more efficient computer resources in order to respond to the needs of the operational system for the services and enormous data storage. However, the Internet is not able to solve all the existing problems. At the same time, it is necessary for various sectors to have information sources for research. They also need to develop a research support system to analyze and improve the conditions of their own sectors in order to adjust and tackle with the aforementioned circumstances or changes. To encourage teachers to be active in doing research, it is vital to fully support them to use their research data for self-development to the best of their knowledge. Therefore, the researcher is engaged in the investigation of the current situation of classroom action research. The thesis is entitled "Classroom Action Research Cloud Support System with the Collective Inquiry for Pre-service Teachers' Adaptive Teaching Competency". The data obtained will be used to develop components and procedures for the conceptual framework of classroom action research cloud support system with the collective inquiry for pre-service teachers' adaptive teaching competency. The framework could lead to effective classroom action research in the near future.

![Figure 1: Research design](image)
Research objective

The research objective is to investigate the current and desired situation of classroom action research.

Research methodology

Population and samples

Research population is 367,287 government teachers under the Office of Basic Education Commission and 5,934 student teachers (Office of Higher Education Commission, 2015).

The sampling of research participants is based on the table of Krejcie & Morgan (1970) which indicates the 0.5 ratio of the population proportion, 5% of the acceptable error and 95% of confidence level. The lowest number of participants is 380 government teachers and 361 pre-service teachers. Therefore, the researcher has sampled 400 government teachers and 400 pre-service teachers. Out of the 400 pre-service teachers, 100 of them are from public universities, another 100 of them are from autonomous universities, another 100 are from private universities and the rest is from Rajabhat universities.

Research tool

The research tool used in the current research is a questionnaire investigating the current situation of classroom action research utilized among government teachers and student teachers. The questionnaire is divided into 4 parts.

Part 1 includes basic information of the questionnaire respondents. The questions included in this part are in the form of the checklist.

Part 2 consists of the questions to elicit the respondents’ opinions towards the current situation of classroom action research. The questions are in the forms of checklist and five Likert scale ranging from 1-5.

Part 3 presents the questions to elicit the respondents’ opinions towards the competency of teachers to adjust a learning process to respond to different learning needs of students. The questions are in the forms of checklist and five Likert scale ranging from 1-5.

Part 4 includes the open-ended questions to elicit the respondent’s opinions towards the current and desired situation of classroom action research. This part allows respondents to express their opinions and give suggestions on the current and desired situation of classroom action research.
Research tool construction process

1. The researcher studied documents and related research to identify issues and questions to be included in the questionnaire investigating the government teachers and pre-service teacher’s opinions towards the current situation of classroom action research.

2. The researcher presented the draft of the questionnaire to her supervisor to check the accuracy, clearness, appropriateness, and of generality of the language and questions used in the questionnaire.

3. The research revised the questionnaire based on the advice from the experts and then present it again to her advisor to give approval to the revision and finalize the questionnaire.

Data analysis

The research analyzed the data based on the following descriptive statistics.

1) Frequency and percentage to analyze the basic information of the respondents.

2) Mean and standard deviation to analyze the current and desired situation of classroom action research and content analysis to analyze the fourth part of the questionnaire.

Then the analysis is presented in the table and essay.

Research results

The researcher has collected 390 questionnaires from the government teachers which is 97.5 % of the questionnaire distribution. 384 questionnaires were also collected from pre-service teachers which is 96% of questionnaires given away to the participants.

1. Results of analysis on general information of the participants

Government teachers: The total number of government teachers responded to the questionnaire is 390. Females outnumbered males. The number of female respondents was 273 (70%). In terms of the respondents’ age, 180 of them was over 51 years old (46.15%). 23.59 % of them aged between 31-40. 16.41% of them was under 30. The rest (13.85%) aged between 41-50 respectively. About the educational background of the respondents, 230 of them accounting for the majority (54.62%) held bachelor degrees followed by 177 of them (45.38%) who held master’s degrees. Regarding the respondents’ teaching experience, 136 of them (34.87) accounting the majority had more than 30 years of teaching experience followed by 22.05 % of them with 6-10 years of teaching experience, 19.74%of them with 21-30 years of teaching experience, 12.82 % of them with less than 5 years of teaching experience, and
11-20 years of teaching experience respectively. When looking at their teaching positions and academic standing, it was found that 213 of them (54.62%) who is the majority were advisory level teachers followed by the position of teachers (18.72%), professional level teachers (12.80%), assistant teachers (8.2%), government employees (5.38%), and expert level teachers (0.26) respectively. Regarding the learning areas taught by the respondents, 100 of them accounting for the majority (25.64%) who taught Thai learning areas followed by 15.13% of them who taught occupations and technology learning areas, 14.10% of them who taught foreign languages, 11.54% of them who taught arts learning area and mathematics, 8.2% of them who taught social studies, religion and culture learning area, 6.92% of them who taught science and health and physical education learning areas respectively. Relating to the levels of education the respondents were teaching, 113 of them accounting for the majority (28.97) who taught 7th to 9th grades followed by 24.36% of them who taught 10th to 12th and 4th to 6th grades, 17.18% of them taught 1st to 3rd grades, and 5.12% of them taught kindergarten. Considering the respondents’ objectives of using CAR, 340 of them (87.18%) accounting for the majority utilized CAR to find solutions to the classroom problems, followed by to the seek for a teaching innovation through such research, to promote the learning of students, to promote their academic standing, and to develop their teaching profession respectively.

**Pre-service teachers:** From the total number of 384 pre-service teachers, the majority is female accounting for 75%. Considering their majors, 153 of them, accounting for the majority (39.84%) studied teaching mathematics, followed by teaching at the secondary level and teaching foreign languages (19.84%) teaching social studies, religion and culture (10.94), and teaching Thai (9.64%). Regarding the levels of education in which they practiced teaching, half of them (50%) practiced teaching 7th to 9th grades, followed by 1st to 3rd grades (20.31%), 4th to 6th grades (18.23%), and 10th to 12th grades respectively. When looking at the educational service area the pre-service teachers belonged to, it was found that 267 of them accounting for the majority (69.53%) belonged to primary educational service area offices and the rest belonged to the secondary educational service areas. Regarding their objectives of conducting classroom action research, 307 respondents, accounting for the majority (79.95%) conducted research to find solutions to the classroom problems, followed by to develop teaching innovation, to promote the learning of students, to promote their academic standing, to develop their teaching profession and to mutually learn with other teachers respectively.

2. Respondent’s Opinions on the general situation of classroom action research
They believed that classroom action research emerged from observation and analysis of classroom problems. They also believed that classroom action research can be ultimately used to solve classroom problems considering from the following information.

1) Most government teacher and preservice teacher observing behaviors of students and classroom problems in order to identify solutions to classroom problems.

**Government teachers:** Classroom action research is conducted in order to identify solutions to classroom problems by 1) observing behaviors of students and classroom problems (98.2%) 2) studying background of students (68.46) 3) discussing with other teachers who also taught the same class of students (61.54%) 4) discussing about the problems with students’ parents (60%) and 5) using the same information about student as data without having to collect data again (10.26%).

**Pre-service teachers:** Classroom action research is conducted in order to identify solutions to classroom problems by 1) observing behaviors of students and classroom problems (100%) 2) discussing with other teachers who also taught the same class of students (29.95%) 3) studying background of students (25%).

2) Most government teachers and pre-service teacher always exchanged and shared their experience with their colleagues. Only 2.05 percent of government teachers relied on autonomous learning process.

**Government teachers:** Classroom research is done in order to exchange and learn with colleagues. Most government teachers always exchanged and shared their experience with their colleagues. (76.45%), followed by a number of them who exchanged and shared their experience with their co-workers sometimes (22.31%). The minority relied on autonomous learning process (2.05%) Regarding the network building or a teaching profession community establishment for education work, the majority (83.08%) built a network or established a teaching profession community, followed by 16.2 % of them who did not.

**Pre-service teachers:** Classroom research is done in order to exchange and learn with colleagues. Most pre-service teachers always exchanged and shared their experience with their colleagues. (79.95%), followed by a number of them who exchanged and shared their experience with their co-workers sometimes (1.25%). Regarding the network building or a teaching profession community establishment for education work, the majority (79.95%) built a network or established a teaching profession community, followed by 1.25 % of them who did not.

3) Considering the support from individuals involved in classroom action research, it was found that most schools 1) received support to organize action classroom research
trainings for teachers 2) received support and help from school directors to conduct classroom action research 3) introduced quality classroom action research studies as examples to teachers.

**Government teachers**: Considering the support from individuals involved in classroom action research, it was found that most schools 1) received support to organize action classroom research trainings for teachers 2) received support and help from school directors to conduct classroom action research 3) introduced quality classroom action research studies as examples to teachers. It was also found that a number of schools 1) had a clear policy to conduct classroom action research and 2) had experts to give advice and guidance on classroom action research.

**Pre-service teachers**: Considering the support from individuals involved in classroom action research, it was found that most schools 1) received support to organize action classroom research trainings for teachers 2) received support and help from school directors to conduct classroom action research 3) introduced quality classroom action research studies as examples to teachers 4) had a clear policy to conduct classroom action research and 5) had experts to give advice and guidance on classroom action research.

4) Government teachers and pre-service teacher were most familiar with Google Drive as used for cooperative work.

**Government teachers**: Most familiar with Google Drive as used for cooperative work, followed by Google Docs, Google Sheet, Google Group, Google Slide, Google Calendar, Google Keep and Dropbox respectively.

**Pre-service teachers**: Most familiar with Google Drive as used for cooperative work, followed by Google Docs, Dropbox, Google slide, Google Sheet and One drive respectively.

5) About research resources and tools for classroom action research, it was found that most schools 1) had research resources and operating systems for school cooperative work 2) had Internet search system and tools for cooperative work 3) had documents, books, research studies, and related database useful to study before starting classroom action research 4) had database of quality classroom action research available 5) had received help and support when asking for information about classroom action research from other organizations 6) had received support for documents and books on classroom action research as required by teachers 7) had received support for materials to create innovation to conduct classroom action research 8) had printers and other devices to facilitate classroom action research and 9) had quality computers available for classroom action research. It was also found a number of research centers that provides analysis tools such as computers, and software packages for data analysis.
3. Opinions on the competency of teachers to adjust learning process to respond to various learning needs of students.

**Government teachers:** They agreed that most schools have a policy to enhance the competency of teachers’ teaching to respond to various needs of students. Most government teachers used a mixed teaching method, followed by a teaching method focusing on practice and classroom activities, a teaching method focusing on lecture and theories, and a teaching method with the use of distance learning respectively. When asked about their opinions on the teachers’ competency to adjust their teaching to respond to various learning needs of their students, it was found that most government teachers 1) were knowledgeable about topics, information, concepts, principles related to the learning areas they taught 2) were able to identify problems and behaviors of their students 3) were able to identify ways to solve problems and improve students’ learning behavior 4) were able to apply an innovation to solve classroom problems/ improve students learning behaviors properly 5) be able to use techniques and teaching methods to respond to the needs of students 6) had information of individual students about their skills, background and interests 7) were able to create and develop tools to collect data on students and efficiency of teaching and learning 8) be able to control a class and ensure their smooth and effective teaching.

**Pre-service teachers:** They agreed that most schools have a policy to enhance the competency of teachers’ teaching to respond to various needs of students. Most pre-service teachers used a mixed teaching method, followed by a teaching method focusing on practice and classroom activities, a teaching method focusing on lecture and theories, and a teaching method with the use of distance learning respectively. When asked about their opinions on the teachers’ competency to adjust their teaching to respond to various learning needs of their students, it was found that most government teachers 1) were knowledgeable about topics, information, concepts, principles related to the learning areas they taught 2) were able to identify problems and behaviors of their students 3) were able to identify ways to solve problems and improve students’ learning behavior 4) were able to apply an innovation to solve classroom problems/ improve students learning behaviors properly 5) be able to use techniques and teaching methods to respond to the needs of students 6) had information of individual students about their skills, background and interests 7) were able to create and develop tools to collect data on students and efficiency of teaching and learning 8) be able to control a class and ensure their smooth and effective teaching.

4. Opinions and suggestions on the current and the desired situations of classroom action research

1) **In terms of the policy from sectors related to classroom action research,** research results show that most government teachers and pre-service teachers agreed that the majority
of schools had the policy to encourage teachers to conduct at least one classroom action research study within a semester. Nevertheless, some schools did not clearly set a classroom action research policy. As a result, only a small group of teachers in those schools conducted classroom action research.

2) Concerning the importance of classroom action research for teaching and learning management, it was found that the majority of government teachers and pre-service teachers agreed that classroom action research was useful because they could apply the education principles and theories to solve classroom problems effectively.

3) Considering factors, support and guidelines for more effective classroom research, it was found that most government teachers and pre-service teachers agreed that it was critical for school administrators to acknowledge the importance of research and provide teachers with research knowledge and skills to conduct classroom action research with the support of the experts or the qualified peers who act as their advisors. Moreover, technology and systems used to support the teachers’ research procedures were necessary. Last but not least, some government teachers stated that group research should be encouraged more in context to improve teaching and learning in the core subject. Also, there should be training in research technology and tools for more productive classroom action research.

Discussion

From the results of the study on the situation of classroom action research, the research results have brought some interesting issues for discussion.

In terms of the current situation of classroom action research, over all it has greatly gained a lot of attention from teachers. This might be because educational institutions have emphasized the use of classroom action research to solve classroom problems. They are also aware that the achievement of learners largely depends on the quality of teachers particularly those who maintain their teaching profession’s standard. The following aspects are the factors affecting situation of classroom action research.

1) Learning and sharing among teachers

Government teachers and pre-service teachers always learned and shared their knowledge and experience among one another even though some of them only did so sometimes. In addition, a small number of them solely depends on autonomous learning process (2.05%). This is in accordance with the profession development approach purposed by Bredeson (2003) who claims that team learning is effective, especially the team that always take an opportunity to work cooperatively and learn continuously. Such team has the same learning objective, makes a plan to solve problems together, and always learns and shares
their knowledge and experience together. It is considered a mutual professional learning and continuous self-development.

2) Support from individuals involved in classroom action research

Most schools received support to organize a classroom action research training workshop to improve teachers' research skills and their body of knowledge about classroom action research. School directors also helped and facilitated classroom action research since it is part of the school policy. Classroom action research is considered a scientific approach to finding solutions to classroom problems. This corresponds to the development trend and the improvement of education quality initiated by The Office of the Basic Education Commission (2011) which indicates that its important mission is to create more education opportunities for school-age population in order to develop them to become knowledgeable, competent and have qualities corresponding to the education standard. Therefore, the Office of Basic Education Commission (OBEC) has set a research policy to promote classroom action research as a framework and research approach as follows 1) all educational institutions under OBEC have to conduct research and develop education innovations to solve teaching problems, improve the quality of teaching, and teaching and learning management, 2) the development of a new generation of researcher, a research network and mentors working cooperatively from different sectors and organizations and the mutual and concrete utilization of research results are encouraged, 3) Educational Services Areas offices are encouraged to conduct research cooperatively in order to successfully develop teachers and educational officers' learning management based on the education reform, 4) research on changing social, economic and environmental situations to find possible education management methods to respond to changes in the present and the near future is necessary and 5) Educational Services Areas are encouraged to study effective school management method.

3) Research sources and tools for classroom action research

It was found that most schools had research sources, internet search systems, and tools to promote cooperative work among teachers. However, quality computers which could be used to conduct classroom action research and as research sources, supporting systems that provide and analysis tools for classroom action research are insufficient. This agrees with S cuiduang K. (2014) who supports classroom action research in high schools in Nonthaburi Province under The Secondary Educational Service Area Office 3. It was found that the quality of management resources and learning sources of classroom action research is in a moderate level. Also, schools didn't not give sufficient support classroom action research by providing budget and research funding sources and materials to facilitate such research. Therefore, schools should support classroom action research by allocating budget and providing supportive environment to promote classroom action research, for example a provision of a
research corner where sufficient research tools are available to enable teachers to conduct research effectively. Additionally, they should encourage teachers to participate in a research training workshop to enhance their research skills and develop a supportive system for classroom action research so that it can be done to solve classroom problems quickly and effectively.

4) The desired situation of classroom action research

It was found that most schools need a network of research experts where they work together and share their knowledge and guidelines to conducting classroom action research. The data gained from the contributed questionnaire reveals that some government teachers and student teachers lacked research skills and true understanding about classroom action research. They learned how to conduct such research by observing past classroom action research studies done by other government teachers. This cannot truly help them find the solutions to problems. Furthermore, if there should be a system or tool to support classroom action research as another option for teachers to learn more about research process and approaches. This corresponds to the research policy set by the Office of the Basic Education Commission or OBEC (Office of the Basic Education Commission, 2011) which encourages its educational offices to conduct research as follow 1) officers under OBEC are learners and have to apply what they learn as a tool to develop their responsible duties, 2) officers are required to conduct research corresponding to the direction, policy, emphasis and needs of OBEC, educational services areas, schools and apply the research results to solve classroom problems, 3) educational services areas and schools are learning organizations, 4) students have higher learning achievement, and 5) students have important abilities as required by the Basic Education Core Curriculum B.E. 2551. For example, they are required to possess the abilities to communicate, to think and to solve problems and possess life skills and abilities to use technology.

Recommendations

Recommendations for the application of research results

1) Schools should encourage teachers to have the same basic body of knowledge about classroom action research in order to mutually understand research methods and process.

2) Schools should have a policy to provide research sources for classroom action research since the current research results show that there are not enough analysis tools such as computers or software packages used for data analysis for teachers in most schools.
3) School directors should lay emphasis on observing and evaluating classroom action research skills of teachers in order to learn about problems and their needs which will lead to a way to improve the efficiency of classroom action research for teachers.

**Recommendations for further studies**

1) There should be further studies on the situation of research schools and the behaviors of learning school teachers and officers to determine a policy to further develop learning and teaching in schools.

2) There should be qualitative research on factors affecting the situation and classroom action research problems to enhance the efficiency of classroom action research.

3) There should be further studies on skills and abilities of teachers to use tools for classroom action research as guidelines to design, promote and develop classroom action research skills for teachers.

**References**


หมายเหตุ: งานวิจัยนี้ได้รับการสนับสนุนทุนการศึกษาหลักสูตรดุษฎีบัณฑิต “100 ปี จุฬาลงกรณ์มหาวิทยาลัย” (The 100th Anniversary Chulalongkorn University Fund for Doctoral Scholarship)