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The impacts of in-service teacher professional training on the development of teachers' pedagogical content knowledge: insights from junior high school teachers in Mataram, Lombok,Indonesia

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Abstract: This paper reports the evidence of the teachers' change of practice concerning the implementation of a national program known as In-service Development and Improvement of Teacher Profession for high school teachers in Mataram, Lombok. The study borrowed Shulman's pedagogical content knowledge (PCK) principles as a lens to frame the phenomenon under investigation concerning teachers' change of professional practices. The study aims to (a) assess the growth of English teachers' pedagogical content knowledge and (b) reveal their perceived change of practice after participating in the professional developments. The study employed a qualitative method and the data were mainly drawn from in-depth interviews with 10 teachers from 5 junior schools in Mataram. The findings of the study identify that the in-service professional development had given the teachers positive impacts concerning the development of their pedagogical content knowledge. The study also reveals evidence of various change of practice that occurred among individual teachers.

Keywords: Professional Development, Pedagogical Content Knowledge, In-service Teacher Professional Training.

Introduction

The Regulation of the Minister of National Education Number 16 Year 2007 regarding Academic Qualification and Teacher Competence Standards was released by the Government of Indonesia (GOI) in order to carry out the development and improvement of teachers' competence, professionalism, and academic qualifications in Indonesia. As the follow up, a so-called Teacher Professional Education and Training Program (TPETP a.k.a. PLPG) was launched. This training program aims to equip teachers with knowledge and skills based on 2 basic competences: pedagogical and professional competences. By joining this program teachers are expected to improve and develop their professional competence so that they can meet the national standards of educational services. For that reason, in the TPETP Program teachers are focused on developing an up-to-date teaching and learning modelsto solve the pedagogical and professional problems they face in the field.

With the Enactment of the 2013 Curriculum, the present TPETP program starts to integratediscovery learning, project-based learning and scientific approach into the training materials. This is a strategic effort of the TPETP program to introduce the Curriculum 2013 gradually to teachers participating in TPETP.In this manner, teacherswould eventually be able to integrate the three learning domains that characterize the Curriculum 2013: i.e. cognitive, psychomotor and affective, into their teaching practices. Although the integration of the Curriculum 2013 into the TPETP has been running for 4 years, so far little is known about its impact on the teachers' ability to apply the pedagogical content knowledge after they return to their respective schools. Thus, the effectiveness of TPETP has not been widely known.

As regards the issue of the effectiveness of teacher professional training, a number of publications have widely discussed various research results pertaining to the impact of professional development (PD)programs on

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teachers' change of practices across disciplines (see Karagiorgi&Symeou, 2006; Forde, McPhee, McMahon& Patrick, 2006; Gibson & Brook, 2011; Tournaki et al. 2011; Ciarocco, et.al 2016; Soebari& Aldridge, 2016). Drawn from these publications, the professional training and development generally aims to (a) equip teachers withgoodknowledge of curriculum change,(b) update their pedagogical knowledge and skillsto respond to challenges of new curriculum and (c) change their pedagogical practicesto meet the demand of new curriculum.

Apart from such ideal aims, a number of relevant studies have reported that PD training oftentimes brings about little significant effects on teacher performance in the classroom (see Lieberman & Pointer Mace, 2008; Phillips, 2008). These authorsargue that the failure of PDoften happens because teachers lack commitment to implement what they learned from PD. Thus, attending PD is often seen only as a contractual obligation.

Theproblem of PD undertaking above is congruent with the present condition in Indonesia. For example, astudy on the impact of TPETP on teachers' teaching performanceconducted by Murdadi&Sulastri, (2015) reported that many returnees of TPETPin Pelita Vocational High School Salatigawere found to struggle implementing the new teaching approaches they gained from PD. They tended to go back to their old pedagogical practices because of the lack of opportunity to develop the pedagogical knowledge and skills they received from TPETP. Similar studieswere reported byFirman&Tola (2008), and Kusumawardhani (2017).

The problem ofprofessional development undertaking, according to Guskey (2003),occursto some extent due toteachers' pedagogical preconceptions. A number of studies on PD support this proposition. Phillips (2008) and Taylor et.al (2011), for example,reported that teachers' pedagogical preconceptionshighly contributed to their resistance to change. To deal with such a problem, Guskey suggest that the on-going PDbe required to help teachers improve their professional practices. Thus, eventually they will understand their own learning needs and the learning needs of their students.

Based on the above literature works, the aims of the present study are formulated as follows: (1) to assess the growth of English teachers' pedagogical content knowledge and (2) reveal their perceived change of practice after participating in the TPETP. Through this study, the researchers wanted to see how TPETP impacted on teachers' acquisition of pedagogical content knowledge and its application in the classroom.

The term pedagogical content knowledge in this study is referred to teacher's knowledge in transforming the content of lessons and the knowledge of psychology of learning into deliverable pedagogical strategies (Shulman, 1986). This definition entails that pedagogical content knowledge has three important components, namely (1) knowledge of how teachers plan and deliver the content of teaching materials to students; (2) knowledge of the teaching process and the problem of student learning; and (3) knowledge of teaching and learning strategies that suit students' level of understanding.

To evaluate the impact of professional development program on teachers' change of practice, the researchers borrow four components of PD evaluation suggested by Kirkpatrick & Kirkpatrick (2008), i.e., (1) teacher reactions toPD models and procedures; (2) learning resulted from PD, (3) application of knowledge/skill obtained from PD, and (4) student achievement. These postulates would be adapted and used as guiding principles to explain the phenomenon being studied.

Method

The present study employed a qualitative research method. The population of this study was all certified English teachers who had attended TPETP in Mataram City in 2017.The rationale for this was two-fold. First, the 2013 Curriculum underwent a substantial revision and thus it would impact on its implementation. Second, the mode of TPETP 2017 undertaking was different from that of the previous years. Teachers participating in the TPETP of 2017 were required to be computer-literate as initially they had to follow online mentoring before attendingonsiteTPETP training. The change of TPETP undertaking was predicted to have

impact on participants' learning experiences and outcomes.

Out of the total population, 10 certified teachers from 5 schools were taken purposively as samples of the study. The use of Purposive sampling aimed to select the participants based on pre-defined characteristics, i.e. teachers whohadattended TPETP and received professional certification. For this purpose, the researchers employed semi-structured interviews to capture the intended data with criteria and aims relevant to problem studied (Creswell, 2003).

Subsequently, the researchers conducted interviews with the selected participants to (1) to assess the growth of their pedagogical content knowledge and (2) reveal their perceived change of practice as a result of participating in the TPETPto provide high privacy and comfort, all interviews with study participants were conducted informally for 30 to 40 minutes and the confidentiality of their identity was guaranteed not to be disclosed publicly.

After the data were collected, they were transcribed.The resulted transcripts were reread, coded and grouped according to the category or theme that appeared from the data. The subsequent data analysis involved data reduction, data presentation, conclusion drawing and verification as suggested by Miles and Huberman (2005). The results were then further summarized and labelled according to the emerging themes.

Findings

1. The growth of English teachers' pedagogical content knowledge

The data analysis yields three major themesconcerningthe growth of teachers' pedagogical content knowledge: (1) Teachers' preconceptionsabout professional development, (2) teachers' experiences participating in theTPETP program, and (3) teachers'evaluations on the TPETP program.

1. Teachers' Preconceptions about ProfessionalDevelopment. Data from interviews revealed that participants had attended a number of PDprogramsother thanTPETP,which were

organized by the local education authority and Association of English Teachers. Prior to participating in the programs, participantsof the study expected that they would be trained important strategies to deal with the new curriculum of their subject area. However, they found that some of the contents ofthe training were not relevant to their subject area and thus they experienced difficulties to translate what they learnt into the actual teaching practices.Participant'scommentmay represent all other participants' views about the program: "*The professional development programs I attended beforeare focused more on the completion of (training) modules than the facilitation of our needs.*"

They were of the opinion that the PD programs run by the local educational authority did not address their concerns regardingtheir difficulties to implement the new curriculum. These participants felt that they did not maximize their mastery of teaching materials, lesson planning and use of teaching approaches because the trainers were not well equipped with good knowledge of methods, strategies and approaches that scaffolded them to apply the new curriculum. The following quotes represent participants' feeling about the program:

"*We expected that we would learn how to teach English using discovery learning and scientific approach. However, in the training our instructor just discussed examples of how to teach biology using scientific approach. Thus, we, teachers, find it difficult to applythem for the teaching of English*"

"*In my opinion our instructor lacks confidence in delivering the training materials. He just came back from a training of trainer program in one week then was assigned to train us immediately.In the end, he distributed soft copies of templates of ready-made lesson plans to us with no further explanation*"

It is clear from these quotes that the PDprovided by the local education authority did not meet their expectations. This obviously became the source of participants' pessimism and apprehension about the benefits of taking part in the PD

2. Teachers' experiences participating in theTPETP program.

When commenting on the experience taking part in 2017 TPETP, participants across schools provided convergent comments about the TPETP. Most of them viewed that the 2017 TPETP was congruent with their expectations. They identified that the most beneficial aspects of TPETP were the inclusions of new instructional approaches, procedural strategies and student-focused teaching techniques. Participant H who had two years of experience of teaching, expressed her thought, "*....the presence of a clear training framework and trainers' expectations stimulatesus to learn more from the training*". Participant A added, "*Our instructors helped me understand the basic principles and rationale for a lesson plan used inthe new curriculum. Each part of the lesson plan is explained in detail through online communication. Their explanations are concrete and fit in our needs*"

Most participants also indicated that TPETP had a significantly positive influence on their pedagogical practices. Participant A explained in detail the reason for this: "*Wereceived relatively adequate instructional knowledge and skills from TPETP instructors because we gotintensive exposures from our university mentors prior to meeting them in the classroom. This pre-program activities enabled me to connect with my supervisor and my colleagues to discuss the new curriculum, its approaches and teaching activities*"It is evidence from the above data that teachers participating in TPETP had developed not only better understanding about the theoretical explanation of pedagogical processes but also pedagogical practices.

3. Teachers' evaluations on the TPETP program.

Most participants specifically appraised that now they better understoodmethods and approaches to teaching English, especially genre-based reading materials. They mentioned that the TPETPinstructors had helped them break down the content of the English curriculum into sequential teachable units; put them into lesson plans; and try them out more interactively in the micro-teaching activities. They learnt how to integrate all of theseinto the teaching of English in the classroom. To sum up, Participant J,

asserted, "*Now I know how to run fun and enjoyable reading activities. The training really helps me understand not only the content of the curriculum but also methods of delivering English lessons to my students*"

Teachers' perceived change of practice after participating in the TPETP

Most participants admitted that they experienced a change of practicein teaching English compared with the time before they took part in the TPETP. Theyfelt that their pedagogical knowledge and skills were enriched afterattending TPETP. The accrual of their pedagogical knowledge and skills had enabled them to shift their teacher-focused teaching to student-focused learning. Thismade them more confident to try out a variety ofnew approaches pertaining to student-focused learning activities. The following comment from participant-Cmay sum up all participants' thoughts about their change of practice:

"*The practicality and usefulness of thetraining materials given by TPETP instructors have stimulated me to develop more student-based learning activities for my students after I came back from the training*"

Regardless of such positive comments, the findingsalso reveal that several participants did not develop their pedagogical competence maximally because of two reasons. First, there were too many training materials that they had to learn in a short time. In this regard, Participant G commented, "*We had to attend classes with different courses one full day, sometimes the time was extended till late evening. How can we learn in such a pressing time?*"

Second, participants considered that the training materials were too excessive and thus they considered these materials needed to be sorted out. Participant H contended, "*Some of the training materials werereally useful for classroom practices, but the rest, such as the ministerial regulations and the government educational policy, wasnot reallyrelevant to our real needs in the field*" This statement represented the opinion of the majority. They therefore expected that TPETP provided further on-going PD to address these two problems.

Discussion

Results of the present study have indicated that to some degree the development of teachers' pedagogical content knowledge contributedpositively to their professional practices. Teachersin this studyshowed their positive responsesto the PDmodel introduced by TPETP as it facilitated their learning endeavours. As a result of this, they were stimulated to expand their horizon of understanding and at the same time to learn to apply what they received fromTPETP for the classroom practice. This is indicative that participants had experienced a change of attitude in the teaching practices due to the acquisition of pedagogical content knowledge they received from TPETP.

This study also revealsthatthe success of teacher changes ofpractice occurred due to their positive perceptiontoward TPETP. This on-going professional developmenthad indeed enabledthe teachersto integrate the curricular knowledge and pedagogical content knowledge intotheir teaching practices inthe classrooms. This change of attitude represents an example of successful on-going PDthatmet teachers' real needs in the classroom. It appeared from the data that the intense interaction between teachers and their mentorshad facilitated teachers to learn, to adjust and to change their preconceptions about the PD program. The current study has obviously provided robust evidence of the impact of on-going professional development on teachers' change ofpedagogical practices. Despite such an achievement, however, problems were still identified concerning the unbalance of training time and the training materials to be learnt.

Conclusion

The present study reports the successful implementation of In-service Development and Improvement of Teacher Profession. The growths of teachers' pedagogical content knowledge in this study were attributed to teachers' positive perception about TPETP anddifferent mode of TPETPdelivery that fit in their expectations.This becomesa springboard for themto change their professional practices. This paper concludes that should similar PDprograms be developed, factors such as the length of training time and numbers of

materialswere consideredin order that teachers couldmaximisetheir learning gains.

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FINAL GRADE

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GENERAL COMMENTS

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