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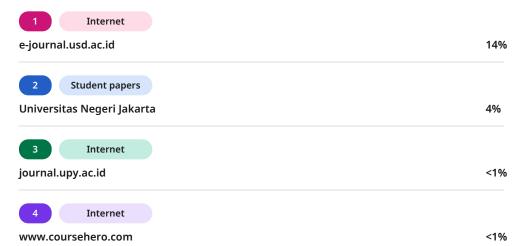
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BENEFITS AND CHALLENGES OF TEACHER PROFESSIONAL DEVELOPMENT PROGRAM IMPLEMENTATION: ENGLISH TEACHERS' PERSPECTIVES

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Abstract

This paper aims to discover benefits and challenges faced by English teachers along their involvement in Teacher Professional Development (TPD) programs in Yogyakarta. There were 73 senior high school English teachers in Yogyakarta city and Sleman regency as the participants in this research. The data were obtained through both quantitative and qualitative methods, distributed questionnaires and followed by in-depth interviews to five participants. The results of this paper firstly showed that some TPD programs were found to be beneficial perceived by the English teachers. Secondly, there were two major challenges faced by the participants, namely teachers' workload & time management and also the lack of effective follow up programs.

Keywords: challenges, English teacher, teacher professional development

Introduction

Teacher professional development is one of significant phases of teachers to function in the educational field. According to Bredeson and Johansson (2000) teacher professional development is an essential part to enhance education through advancing the quality and expertise of teachers. The quality of teachers, however, can be examined by the process of teacher professional development program in educational institutions.

Teacher professional development program is not only growing into educational focus of government, public and private schools, but also education faculty in university. Liu (2012) states that along this period, university teacher education programs have long been focus on teacher professional development, particularly in providing graduates and continuing education credit that are used for maintaining the quality (p. 709). This teacher professional development concern is related to some purposes, which are to improve teachers' knowledge, classroom practice, and students' learning outcomes (Murphy, Smith, Varley & Razi, 2015). Besides, Guskey (2002) also argues that the main goal of





professional development is to generate significant transformation in teachers' attitudes and beliefs, their teaching learning practice, and the learning outcomes, students.

Nevertheless, teachers' journey on professional development program may generate particular challenges. Hence, this paper is focusing the research on benefits and challenges faced by the teachers and possible solutions to overcome the challenges as proposed by the teachers that are involved in TPD programs. This paper aims to answer the following research questions: 1. What are the benefits of TPD programs perceived by English teachers? 2. What are major TPD challenges experienced by English teachers? The discussion on research results will be provided in findings and discussion part.

Various understandings or perceptions from scholars on professional development are prevalent mainly in educational field. Murphy et al. (2015) define professional development as a process of improving teachers' knowledge, classroom practice, and students' learning outcomes. However, sustainability of the program is primarily related to characteristics of the school organization (Gaikhorst, et al., 2016). Murphy et al. (2015) also emphasize that the objective of professional development is to generate transformation in teachers' classroom practice, teachers' attitudes and beliefs, and the learning outcomes (p. 4).

Willemse, Boeil, and Pillen (2016, p.90) argue that there are two significant ideas on professional development concerns: the focus is on the educators' development as professional occupation and individual development. Some studies revealed that professional development interventions positively affected the teachers' quality in knowledge and competences aspects of teaching. Professional development programs help teachers to improve knowledge in their subjects and also can contribute to teachers' self-efficacy (Gaikhorst et al., 2016). Gaikhorst et al. (2016) also argue that teachers, who are being involved and participated in teacher professional development program, indicated that theywere more involved in the process of school development, more engaged intheory and educational transformation, and collaborated more with colleagues after joining the program (p. 136).

Guskey (2002) suggests three fundamental principles to formulate effective professional development programs: (a) acknowledge that change is a continuing and intricate process, (b) ensure that teachers collect frequent feedback on students' learning progress and (c) provide continued follow-up and support (referred from Murphy et al., 2015). Besides, in the context of teacher-centered, lecture-based instruction, interactive, and constructivist learning, the combination of teacher professional development and the use of technology is the best way to be introduced (Hennessy, Dragovic, & Warwick, 2017, p. 4).

In real situation of education, teacher professional development communities are influenced by internal and external politics (Liu, 2012). Kosnik, Menna, Dharamshi, Miyata, Cleovoulou & Beck (2015) also highlight that educators' professional development is mostly fostered by informal forms such as communities of practice. Along with communities of practice, they are indicated as groups of people who share the same concern, a set of problems, or a passion about an issue, and who deepen their knowledge and expertise.



There are some models of TPD proposed or introduced by researchers. Guskey (2000) as referred from Shabani (2016) categorizes the models of professional development into seven types, which are training, observation/assessment, mentoring, inquiry/action research, individually guided activities, involvement in a development process and study groups. These types of professional development consider the school setting as community of learning in which teachers and students are simultaneously involved in the learning process (pp. 4-5). Other forms of collaborative professional development are teachers give demonstrations and teachers observe other teachers. These forms can be used to improve teachers' teaching practice and students' performance (Chien, 2017).

There are three steps of teaching implementation that can be used as part of continuous professional development program: pre-observation conferences, observation, and post-observation conferences. Those steps could provide a great opportunity for teachers to share effective teaching practice, to share learning and collaborative improvement, to develop particular or innovative teaching techniques and methods, or to construct capabilities together with other teachers within professional learning community. Therefore, observations can be used as effective professional development for teachers when they are implemented with the skills of classroom observation and competence in giving professional and effective feedback on those observation (Chien, 2017, p. 17).

Method

Researchers used both quantitative and qualitative methods (mixed-method) as data gathering technique. Mixed-method in this paper enabled researchers conducted two phases of research. First, the researchers prepared questionnaires to the participants. Second, the answers from the questionnaires were followed up with in-depth interviews to certain participants, purposive sampling. As explained by Mills, Harrison, Franklin & Birks (2017), mixed-method used to collect and analyze data since it was found to be mutually informative in qualitative research and they are synergistic each other giving a comprehensive perspective of the topic. Questionnaire used in this paper provided empirical basis to the background and the core of information needed. As stated by Schedler & Mudde (2010), the significant part in quantitative method is data driven. In practical terms, it could be said that questionnaire provides empirical works of the study.

Furthermore, qualitative method had important role in this paper since it provided broader understanding on the participants' contexts and experiences. Migliorini and Rana (2016) pointed out the form of social relation could be seen from qualitative approach. They stated qualitative approach is concerning on social intricacy by understanding the process of individuals and communities build a harmony, know the priorities, and create the resources to face the phenomena in society. It encourages a long-term involvement in building a significant view in society.

There were two research areas used in this paper, though this paper will not be going to compare the topic in both areas. Moreover, the two areas were chosen and described separately in which they are enriching data and research results. These areas are Yogyakarta city and Sleman regency, where researchers could





find two communities of English teachers called English Teacher Network (Musyawarah Guru Mata Pelajaran Bahasa Inggris).

Research Participants

In order to understand the personal experiences, opinions, and beliefs of the participants, the researchers used purposive sampling in determining theparticipant groups who might be the most suitable sampling that enables researchers to answer the research questions (Kuswandono, 2013). Purposivesampling or non-random sampling determined specific groups of participantssince they are considered more suitable to provide certain information needed for this paper, e.g., experiences, beliefs, and opinion which appeared during teaching in schools. Researchers considered purposive as the appropriate sampling in this paper because according to Neuman (2000) purposive sampling can beimplemented in three situations of action: selecting unique cases that are informative, selecting specialized population or difficult-to-reach members, and willing to identify particular cases for in-depth investigation. This paper, however, meets those three categories of situations.

Participants' privacy is kept by using pseudonyms in this research especially for participants who were being interviewed. Reminded by Neuman (2000), social researchers should take precautions to protect participants' privacy. By this way, researchers were not disclosing participant's identity after the information is gathered. The given names that is called pseudonyms in this chapter and further chapters for interview part are Bowo, Hastuti, Indah, Kemal, Gita, and Sari. Researchers intentionally gave pseudonyms as a way to ease the process of coding, analyzing, and writing the data analysis results. However, the table 2 below is a short description of participants' information and number in total.

Table 2: Group of Participants

Category	Participant	Number	Note
Group 1	MGMP English teachers in Yogyakarta City	32	Participating in questionnaires distribution.
Group 2	MGMP English teachers in Sleman Regency	41	Participating in questionnaires distribution.
Group 3	Senior high school English teachers in Yogyakarta (Bowo, Hastuti, Indah and Kemal).	4	Participating in in-depth interviews.
Group 4	Senior high school English teachers in Sleman (Sari and Gita).	2	Participating in in-depth interviews.

Researchers divided participants' classification into four groups: two groups are from quantitative research and two other groups are from qualitative research. This classification was based on research areas and also the instrument of data gathering technique. Group 1 and group 2 consist of 73 participants from both Yogyakarta City and Sleman Regency in which they participated in answering the questionnaires at different times. Whereas, group 3 and group 4 consisted of 6



participants also from both research areas that participated in in-depth interviews at different times.

Research Instruments

Since survey gives researchers a picture of people's perception and action, this paper was using survey as data gathering technique. Neuman (2000) stated that in the survey researchers begin the research with theoretical or particular problem and ends with empirical data basis. In survey, researchers conceptualized theories or variables into questions.

The questionnaire was adapted from Teaching and Learning International Survey (TALIS) by the Organization for Economic Cooperation and Development (OECD). In the questionnaire, researchers used eleven closed-ended questions that consist of general information about teachers' backgrounds and teacher professional development programs implementation. There were also two openended questions that dig out the information related to challenges faced by the participants and suggestions for the government in implementing further professional development programs.

Data Analysis Technique

Data analysis techniques were divided into two separated parts: quantitative and qualitative. Providing questionnaire as quantitative technique engaged researchers to involve in technical procedures of analyzing data. When all the data were collected in form of questionnaires, researchers input the answers from every question into separated tables in Microsoft Excel and categorized them based on main topic of questions. After that, researchers combined general information and created charts from tables. Answers from open-ended questions were also formulated in general summary of teachers' challenges and suggestions on professional development programs. At last, researchers input those data both charts and brief description from open-ended questions into results and discussion part in chapter 4.

In qualitative method, researchers conducted interview first to participants. The interviews were recorded and researchers directly transcribed the conversation from the recording. The process of transcription took some periodsof time because the interview could spend two hours per participant or even more. After got all the transcriptions, researchers encoded the answers based on theoretical framework about teacher agency. The process of encoding data invited researchers to categorize the answers based on coding from framework, input them in most suitable places. At last, researchers translated the coding from Bahasa Indonesia to English and input them in results and discussion part as descriptive account.

Results and Discussion

Participants Background

This section consists of two significant categories to describe teachers' background, namely gender and teaching experience. The explanation will also be





categorized into two different areas of study in Yogyakarta: Yogyakarta city and Sleman regency.

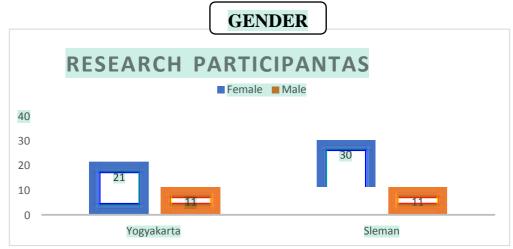


Figure 1. Research participant gender

As the preliminary data, gender was found to be constructive to enrich researchers' knowledge and interpretation. The chart above shows that female is the dominant gender of English teachers in both Yogyakarta City and Sleman Regency. This phenomenon, however, could bring us to some understanding that women hold important role in TPD programs implementation process. Culturally, the majority of female teachers in Indonesia hold double jobs: as professional teachers and as mothers or even housewives in the family. Generally, female teachers are still working on mothers' duties in their houses. So, they should workon professional duties in the morning and continue work on family matters in the afternoon. Like it or not, this condition brings significant impact to TPD implementation process. Female teachers are already tired of some responsibilities they should do. It may influence their performance in compulsory TPD programs conducted by the government and also, they become reluctant to join TPD programs suggested by the school to improve skills and knowledge.

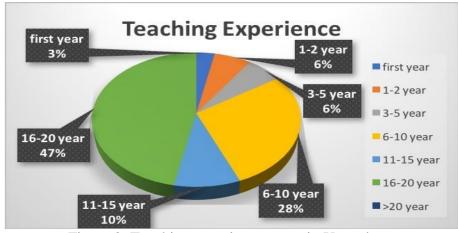


Figure 2. Teaching experience range in Yogyakarta



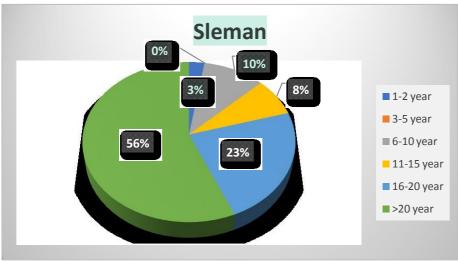


Figure 3. Teaching experience range in Sleman

The teaching experience duration is also influencing TPD journey. From the results of teaching experience duration from both Yogyakarta city and Sleman regency, they have shared similar results; the majority of teachers have experienced teaching for more than 16 (sixteen) years and some others even more than 20 (twenty) years. The long period of teaching impacts in some teachers' conditions related to personal and professional development. First, duration of teaching experience above ten years indicates teachers' identity construction relatively fixed. It means that teachers tend to feel comfortable or sufficient with all the methods they have, their capabilities tend to be fixed, and hold old-fashioned of teaching or drawing more past experiences rather than exploring new ideas from external factors. Besides, a growing body of research shows that the most significant moment for teacher development takes place within the first four or five years when new teachers were firstly recruited. So, teacher professional development is highly influenced by the accompaniment process in school from principal, peers, mentors and students.

Perceived Benefits by the English Teachers in Yogyakarta

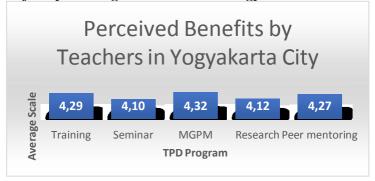


Figure 5. Perceived benefits in Yogyakarta





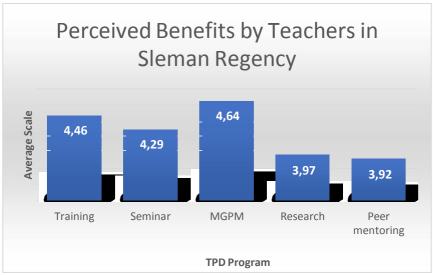


Figure 6. Perceived benefits in Sleman

This paper pointed out that there are at least five TPD programs conducted and experienced by senior high school English teachers in Yogyakarta City. Those programs are workshop, seminar, English Teacher Network (MGMP), research, and peer-mentoring. Specifically, MGMP is an organization consists of English teachers who usually work together in developing their professional learning. Indonesian Law Number 14, 2005 about Teacher and Lecturer has mandated that teacher should develop competence and academic qualification continuously. This regulation, thereupon, has supported teachers to establish a community namely English Teacher Network (MGMP) to help them share knowledge and challenges they faced on teaching English in schools.

The survey data showed that the big majority of participants (87%) admitted to have attended various seminars. In addition, they claimed to have learned much from the seminar (4.10 of 5.0). After the researchers distributed questionnaires, the result reveals that majority of English teachers in Yogyakarta City have participated TPD programs. The data presents high significant numbers of the participants. Therefore, the result also shows that there are some numbers of the participants stated that they have never been experienced conducting research in schools (18,75%). One of participant, moreover, also stated that conducting research is burdening for teacher to be implemented.

"Never conduct a classroom action research before because it is so burdening and have to manage our time wisely, we have many things to do related to teaching activities and administrations" (Hastuti).

Hastuti emphasized that teacher research is burdening in the midst of instrumentality works as teacher. She was concerned more in administration works and teaching activities as the obligation from the government, so this made her never conducted any research in school. However, research is very important to teacher in developing professionalism. Zeichner (2003) stated that conducting research will help teachers to be better in teaching, develop the quality of learning for students, stimulate positive culture and productivity of schools, and teacher



necessarily will produce knowledge about teaching and learning that will be useful. By that phenomenon, it is necessary for teachers to have more opportunity in conducting research as a part of professional development in education but withless administration workload.

Majority of the participants got positive impact from workshop, seminar, and peer-mentoring. These data from questionnaires can present positive impact to teachers. However, data from the interviews reveal different perception. There are two categories of the involvement in English Teacher Network program based on researchers' findings: positive and negative perception. Hastuti was actively participating in English Teacher Network, she shared the activities and positive impact of it to her professional teaching.

"When there is a need of discussion on certain topics, we will meet to discuss together. For example, in the previous meeting we discussed on writing and collecting lesson plans of Kurikulum 2013 to each English teacher because it is difficult to be made by ourselves" (Hastuti).

Hastuti mentioned programs organized by English teacher network. Her statements are indicating that the program like collecting lesson plan of the newest curriculum helps her reducing the workloads. Meanwhile, Indah and Bowo share different perspectives on English teacher network.

"I have lack of information about the program, because there is no invitation that I got from English Teacher Network. I don't know what the problem is, whether in the technical procedures or others, I am not sure" (Indah).

"For me English Teacher Network did not give any contribution at all to us as teachers, nothing" (Bowo).

Indah explained that she has very limited information about the programs, she did not receive any invitation from English teacher network, so she cannot participate in the programs. Besides, Bowo stated differently. He thought English teacher network did not provide any contribution to his teaching development. From the interview with Indah, she explained English teacher network cannot run the organization well, it has inconsistency in regular meeting.

Indah expected this organization can be a space for teachers to share knowledge and help each other in many ways. One of them is collecting lesson plan. She was excited with this program because collecting lesson plan will be useful for teachers to teach English in the classroom. However, she found that there was no follow up from this program, there was no result progress in collecting lesson plan between the members. She, then, questioned the commitment of this program and also this organization. Indah was disappointed to his organization as one of TPD program because he saw this program is far away from his expectation.





TPD Challenges in Indonesia

1. Workload and Time Management

Workload is one of the factors that affect TPD process. When teachers hold such workloads and burdens, they cannot participate actively and continuously in TPD because they have to manage the time and priority effectively. This is the challenge faced by the teachers when they have dual role in education system. As explained by Petrie & McGee (2012) the challenge faced by the teachers is how to negotiate this dual role, teachers as educators for the students and teachers as the learners in professional development. Besides, they are also challenged to deal with pressures related to workload, cover all the curriculum areas, and deal with constantly changing demands from the policy makers.

Furthermore, this paper revealed that majority of participants were burdened by the workload they dealt with as the obligation from the stakeholders or policy makers on education. Teacher workload directly impacted to time management they would handle as teachers and learners. These teachers had lack of time to administer their dual role. 56,5% of the participants stated time as the biggest challenge they faced in order to participate in TPD program. This result shared the similar idea with the previous study conducted by Thorpe and Tran (2015) who stated that time to undertake the task and complexity of teacher role carries a heavy burden to teachers and create dilemma for them on how they should relate to their surroundings.

2. The Absence of Follow Up Program

Teacher professional development programs are expected to develop teacher's skills and knowledge through particular content-based activities. These activities require instructors to adjust the content so it will be integrated with teacher's needs in their profession. Besides, it is necessary to also monitor the program implementation to know the impact to teachers through designing follow up program. Follow up will be useful to figure out the extent to which theprogram run and find its strengths and weaknesses. Willemse, Boei & Pillen (2015) emphasize that follow up program is needed to prevent the results of the activity become fading away. In addition, Sinha & Hanuscin (2017) also proclaim that feedback as part of follow up program offers teachers an access to suggestions and strategies to overcome difficulties. Therefore, aside from types of activities, TPD program implementation should have follow up activity to monitor the program from the beginning to the end as well as obtain new strategies and suggestions.

However, this paper exposed follow up program as one of the biggest challenges in implementing TPD. For instance, workshop on conducting classroom research done by teachers remained only workshop without any follow up or feedback to both teachers and instructors. This indicated that workshop as one of TPD program in Indonesia, was implemented as single program instead of continuous program. Whereas, single program particularly workshop has commonly little follow up, and as the consequence, it also has little effect on teacher growth and understanding (Loucks-Horsley & Matsumoto, 1999; Pianta, 2011; Spillane, 2002; Whitworth & Chiu (2015). Previous study conducted by



Whitworth & Chiu (2015) pointed out that TPD program which is typically delivered short in-service workshop has little or even no follow up at all. Compared to this research, researchers found the similarity with that previous study in terms of 'one-shot' or single program which affects to follow up. Hastuti shared her experience when she joined a single workshop on writing and conducting classroom research held by the government. She said there was no feedback and follow up after the program was successfully implemented.

"My research was about reading text explanation for grade twelve in senior high school. There was no feedback or follow up, I got the certificate from this workshop was more than enough. To get the certificate, the officer had toask my writing supervisor first whether I can get it or not because it was an uneasy process. Fortunately, I got the certificate because I was already in the second consultation stage, I finished chapter 2" (Hastuti).

As stated by Hastuti, there was no follow up program or feedback she got after the workshop primarily in monitoring further research, such as gatheringdata and analyzing them to attain research findings. Thus, TPD program implementation is assumed to be unready and not well managed by the authority when there is an absence of follow up program, especially feedback. In other words, this type of TPD is likely to be ineffective to teacher's growth. Bowo also shared the same opinion towards follow up program of TPD.

"I think it was only a program, when I met the difficulties during the program, I asked the instructor about the solution and he had no idea. It turned out that the instructor only transferred the materials he got to teachers in Yogyakarta City" (Bowo).

Bowo emphasized that TPD program he experienced did not provide any follow up related to content mastery. It led the teachers face confusion during and after the program implemented because it was a 'one-shot deal' program. Therefore, it is considered that the program did not focus on content knowledge material as the main goal, instead, it accentuated the goal in instrumentality level. One-shot program tends to often address administrative, management, and discipline issues; so that the results will be ineffective and lack of coherence (Whitworth & Chiu, 2015). Otherwise, TPD of a longer duration is likely more effective in changing teacher's practices, especially in content mastery. Whitworth & Chiu (2015) also add the general characteristic of TPD lies on the content knowledge coherence. Additionally, effective TPD should not only help teachers develop content knowledge, but also help them integrate their learning, pedagogy, and students to teaching practice. Content focused in TPD program will generate positive effect to teaching and learning process in the classroom (Firestone, Mangin, Martinez & Polovsky, 2005).



Conclusion

This paper pointed out that there are at least five TPD programs conducted and experienced by senior high school English teachers in Yogyakarta City. Those programs are workshop, seminar, English Teacher Network (MGMP), research, and peer-mentoring. Specifically, English teacher network (MGMP) is an organization consists of English teachers who usually work together in developing their professional learning. Indonesian Law Number 14, 2005 on Teachers and Lecturers has mandated that teacher should develop competence and academic qualification continuously. This regulation, thereupon, has supported teachers to establish a community namely English Teacher Network (MGMP) to help them share knowledge and challenges they faced on teaching English in schools. There were at least four factors affecting the challenges on TPD implementation, namelyworkload and time management, follow-up program, supervisory function, and lack of socialization.

References

- Chien, C.W. (2017). Elementary school English teachers' professional learning from teaching demonstrations as professional development. *Cogent Education*, 4(1), 1–20.
- Firestone, W. A., Mangin, M. M., Martinez, M. C., & Polovsky, T. (2005). Leading coherent professional development: A comparison of three districts. *Educational Administration Quarterly*, 41(3), 413-448.
- Gaikhorst, L., Beishuizen, J. J., Zijlstra, B. J., & Volman, M. L. (2017). The sustainability of a teacher professional development programme for beginning urban teachers. *Cambridge Journal of Education*, 47(1), 135-154.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and teaching*, 8(3), 381-391.
- Hennessy, S., Dragovic, T., & Warwick, P. (2017). A research-informed, school-based professional development workshop programme to promote dialogic teaching with interactive technologies. *Professional Development in Education*, 1-24.
- Kosnik, C., Menna, L., Dharamshi, P., Miyata, C., Cleovoulou, Y., & Beck, C. (2015). Four spheres of knowledge required: An international study of the professional development of literacy/English teacher educators. *Journal of Education for Teaching*, 41(1), 52-77.
- Kuswandono, P. (2013). The journey of becoming a teacher: Indonesian preservice teachers reflecting on their professional learning (Doctoral dissertation, Monash University).
- Liu, K. Y. (2012). A design framework for online teacher professional development communities. *Asia Pacific Education Review*, *13*(4), 701-711.
- Loucks-Horsley, S., & Matsumoto, C. (1999). Research on professional development for teachers of mathematics and science: The state of the scene. *School Science and Mathematics*, 99(5), 258-271.
- Migliorini, L., & Rania, N. (2017). A qualitative method to "make visible" the world of intercultural relationships: the photovoice in social psychology. Qualitative research in Psychology, 14(2), 131-145.





- Mills, J., Harrison, H., Franklin, R., & Birks, M. (2017). Case study research: Foundations and methodological orientations. In Forum Qualitative Sozialforschung/Forum: Qualitative Social Research (Vol. 18, No. 1, p. 17). DEU.
- Murphy, C., Smith, G., Varley, J., & Razi, O. (2015). Changing practice: An evaluation of the impact of a nature of science inquiry-based professional development programme on primary teachers. Cogent Education, 2(1), 1–19.
- Neuman, W.L. (2000). Social Research Methods: Qualitative and Quantitative Approaches. United States of America: Pearson Education Company.
- Petrie, K., & McGee, C. (2012). Teacher Professional Development: Who Is the Learner? Australian Journal of Teacher Education, 37(2), 59-72.
- Pianta, R. C. (2011). Teaching Children Well: New Evidence-Based Approaches to Teacher Professional Development and Training. Center for American Progress.
- Schedler, A., & Mudde, C. (2010). Data usage in quantitative comparative politics. Political Research Quarterly, 63(2), 417-433.
- Shabani, K. (2016). Applications of Vygotsky's sociocultural approach for teachers' professional development. Cogent Education, 3(1), 1–10.
- Sinha, S., & Hanuscin, D. L. (2017). Development of teacher leadership identity: A multiple case study. *Teaching and Teacher Education*, 63, 356-371.
- Spillane, J. P. (2002). Local theories of teacher change: The pedagogy of district policies and programs. Teachers college record, 104(3), 377-420.
- Thorpe, A., & Tran, D. T. H. (2015). Understandings of the role of subject leaders in the professional development of beginning teachers within a school department: a Vietnamese perspective. International Journal of Educational Research, 71, 108-117.
- Whitworth, B. A., & Chiu, J. L. (2015). Professional development and teacher change: The missing leadership link. Journal of Science TeacherEducation, 26(2), 121-137.
- Willemse, T. M., Boei, F., & Pillen, M. (2016). Fostering Teacher Educators' Professional Development on Practice-Based Research Through Communities of Inquiry. *Vocations and Learning*, 9(1), 85–110.
- Zeichner, K. M. (2003). Teacher research as professional development for P-12 educators in the USA [1]. Educational action research, 11(2), 301-326.

