

TEACHERS' PERCEPTION ON CONTINUING PROFESSIONAL DEVELOPMENT AFTER COVID-19 PANDEMIC

Fajrinur¹, Ivvon Septina Bella², Cut Santika³, Reza Novianda⁴

^{1,2,3,4}Universitas Islam Kebangsaan Indonesia, Bireuen, Indonesia

fajrinur14@gmail.com, Ivvonseptinabella93@gmail.com, cutsantika1992@gmail.com,

noviandareza@gmail.com

ABSTRACT

Article Info

Received: 29/10/2022

Revised: 07/11/2022

Accepted: 17/11/2022

The researcher investigated two research questions on the teachers' perception towards continuing professional development in Bireuen Regency at the time of covid-19. The first research question was the opinion on continuing professional development in general and the second one was going more in-depth to find out how this opinion differs after the time of Covid-19. 30 teachers from the six schools in Bireuen Regency were included in this research. All participants were asked to provide responses to questionnaires and interviews. This study used mixed methods as its research methodology in order to make the data obtained more comprehensive, valid, reliable and objective. As a result, among Continuing Professional Development (CPD) programs, 'Network of Teachers Formed Specifically for the Professional Development' had the greatest impact on teacher work before or after pandemic, with more than half of the respondents were found to be participating in the 'Network of Teachers Formed Specifically for the Professional Development' and they believe it has had a great impact on them.

Keywords: Continuous Professional Development; Teacher's Perception

1. INTRODUCTION

Teaching is a profession and teachers are professionals, it is stated in the Law on Teachers and Lecturers Number 14 of 2005. As professionals, teachers have the right to have the opportunity to develop continuous professionalism. Continuous professional development or usually shortened to CPD is competency development carried out by teachers on an ongoing basis in order to improve their professionalism.

Based on this, various kinds of continuous professional development have been provided to teachers by the government, ranging from seminars, workshops, mentoring and so on. Every year, abundant amount of funds are disbursed by the government to provide such professional development. With the provision of professional development, it is hoped that the four teacher competencies will develop and become better. Various forms of professional development can increase new teachers' effectiveness, address shortcomings in their initial education, and support teachers as they confront the many challenges of classroom teaching (Jensen, 2012). However, many teachers in Indonesia do not yet have basic competencies; this can be seen from the results of the Teacher Competence Test which show alarming results. One of the evidences of the weak competence of teachers in office is the low teacher test results (Revina, 2019). Teacher Competence Test is a test that evaluates two of the four teacher competencies. The overall results of the test did not meet the standards. It is expected that the result will reach 80, but the national average of 29 million teachers in 34 provinces in Indonesia only reached 53.02, teachers in Aceh province only reached 48.33 and Bireuen district only reached 47.38 (Kemendikbud, 2021).

The low competence result is always followed by continuous professional development to improve it, but even though the average competence test result increases every year, it still does not



meet the specified standards. This indicates that the continuous professional development program provided is inappropriate or that there are other obstacles felt by the teacher. The results of the preliminary survey show that, teachers feel that CPD is not useful, there are many problems in applying what is learned and the CPD is boring.

The main purpose of this study was to determine the opinions or perceptions of teachers about continuing professional development in Bireuen Regency at the time of covid-19. In order to do so, the researcher has investigated two research questions regarding the teachers' perception about continuing professional development. The first research question was addressed to all teachers about their opinion on continuing professional development in general and the second one was going more in-depth to find out how this opinion differs at the time of Covid-19.

2. LITERATURE REVIEW

2.1. Continuous Professional Development

Continuous professional development (CPD) generally means the skills and knowledge needed or acquired for personal development and one's career advancement (Braun, 2013). Professional development is the result of career planning and includes aspects that enrich or enhance one's abilities with the aim of achieving goals in the organization (Carrubi, 2020). In the world of education the definition of professional development is more or less the same, professional development means the process of improving and increasing teacher capabilities by attending conferences, workshops, and other informal learning opportunities (Olurinola, 2020). So teacher professional development or often referred to as teacher professional development is an activity that refers to the efforts made to improve the professional career growth of a teacher. In other words, an activity carried out to find out whether the abilities, expertise and skills of teachers with current educational demands are appropriate or not.

2.2. Types of Continuous Professional Development

There are various types of continuous professional development proposed by experts that can be carried out by teachers. Formal continuous professional development includes workshops, educational conferences, seminars, qualification programs, observation visits to other schools, participation in teacher networks that are specifically formed for teacher professional development, individual or collaborative research on topics of interest to teachers professionally, mentoring and/or peer observation and coaching, which is officially arranged by the school (OECD, 2014). While less formal continuous professional development are, for example reading literature, engaging in informal dialogue with colleagues on how to improve teaching, writing reflections and so on (OECD, 2014).

a. Perception

Perception is an internal process that individuals go through in selecting and regulating stimuli that come from outside. Stimuli are captured by the senses, our thoughts and feelings will spontaneously give meaning to these stimuli (Suranto, 2011). In simple terms, perception can be said to be the result of a person's process of understanding stimuli. A teacher can receive stimulation from anywhere, from the way they used to study, from the way other teachers teach, from the books they read or from the CPD they followed.

Some experts distinguish perception and belief into two different things, they state that perception is something that is superficial or just on the surface while belief is something that is deeper and affects a teacher in the teaching and learning process. While some other experts consider that teacher's beliefs are assumptions and perceptions of teachers about the teaching and learning process (Farrel, 2005). Teacher beliefs are values held by teachers that act as filters that filter new experiences to be understood (Kagan, 1992). In this study, no distinction was made between the two; everything that the teacher thinks and affects the teaching and learning process will be categorized as perception.

b. The Influence of Perception on Profession

Changing teacher perceptions is one way to change learning, because teacher perceptions greatly affect the way teachers perceive learning, play an important role in how teachers teach, and improve teaching in general (Braun, 2013; Carrubi, 2020).



Teachers' perceptions and beliefs about their profession affect teaching in many ways. Teachers' beliefs affect the way teachers view their work, their job satisfaction, self-efficacy, their assessment and feedback, as well as their beliefs about professional development (OECD, 2014).

Based on the explanations of the experts above, it can be concluded that the teacher's perception is very important because, perception affects everything the teacher does. One way to improve the quality of teachers is to change the perception or way of thinking of teachers, which is one of the things that are done in continuing professional development.

3. METHOD

This research is a mixed research or also called mixed method. Mixed research is a procedure for collecting, analyzing, and mixing quantitative and qualitative methods in a study or a series of studies to understand and solve research problems (Creswell, 2010). Mixed research is a type of research that combines qualitative and quantitative research methods in a research activity so that more comprehensive, valid, reliable, and objective data will be obtained (Sugiono, 2016).

The research was conducted in six senior high schools in Bireuen district. These schools were chosen to represent high schools in Bireuen district. Some schools are located in rural areas; others are located in urban areas. The research subjects were 30 teachers from the six schools. The research instruments used in this study were questionnaires and interviews.

3.1. Data Collection Technique

A. Questionnaire

Data collection will be carried out using a questionnaire. The data in this study are primary data obtained from the Teaching and Learning International Survey (TALIS) (OECD, 2014) which has been adapted. The questionnaire consists of several written questions covering the necessary data requirements related to teachers' perceptions of continuous professional development. The questionnaires distributed consist of 5 questions in the form of close-ended and open-ended questions

B. Interview

The interview guide used is only an outline of the problems to be asked, so the researcher will interview 6 teachers representing each school to get more in-depth data related to the problems of this research.

3.2 Data Analysis

Data analysis in this study will use two ways. The data obtained from the questionnaire results are first converted into quantitative data; analyses using a percentage pattern, namely using quantitative data analysis methods. Meanwhile, the data from the interviews will be analyzed using descriptive qualitative method which aims to obtain in-depth results from the interviews.

4. RESULT AND DISCUSSION

This chapter comprises the research findings that have been found from the questionnaire and interview. Results from interview were used to support result from questionnaire and at the same time explaining the difference between teachers' opinion on Continuing Professional Development before and after the pandemic.

a. Formal Continuing Professional Development

Table 1. Impact of Formal Professional Development

| No | Activities | Participation | Impact | | | |
|----|--|---------------|-----------|-------|----------|-------|
| | | | No Impact | Small | Moderate | Big |
| 1 | Courses/workshops (e.g. on subject matter or methods | 93.4 % | 10 % | 50 % | 33.4 % | 6.7 % |



and/or other education-related topics);

| | | | | | | |
|---|---|--------|--------|--------|--------|--------|
| 2 | Education conferences or seminars (where teachers and/or researchers present their research results and discuss educational problems) | 33.3 % | 20 % | 40 % | 36.6 % | 6.7 % |
| 3 | Qualification program | 20 % | - | - | 30 % | 70 % |
| 4 | Observation visits to other schools | 40 % | 26.7 % | 33.4 % | 30 % | 10 % |
| 5 | Participation in a network of teachers formed specifically for the professional development of teachers (PGRI, MGMP). | 100 % | - | - | 30 % | 70 % |
| 6 | Individual or collaborative research on a topic of interest to teachers professionally. | 13.4 % | - | - | 70 % | 30 % |
| 7 | mentoring and/or peer observation and coaching, which is officially regulated by the schools | 60 % | 10 % | 36,7 % | 26,7 % | 26,7 % |

The first question in the questionnaire is about impact of formal professional development programs. This question consists of seven sub-questions. From table 1, it can be seen that 100 % of teachers participated in the 'Network of teachers formed specifically for the professional development', followed by 'Courses/workshops' by 93.4 %, 'Mentoring and/or peer observation and coaching' by 60 %, 'Observation visits to other schools' by 40 %, 'Education conferences or seminars' by 33,3 %, then 'Qualification program' by 20 % and the last is 'Individual or collaborative research on a topic of interest to teachers professionally' by 13,4 %.

In term of impact, 50 % of teachers answered that 'Courses/workshops' had a small impact, 40 % of teachers answered that 'Education conferences or seminars' had small impact, 70 % of teachers answered that 'qualification program' had big impact, 33, 4 % answered that 'Observation visits to other schools' had small impact, 70 % of teachers answered that 'participation in a network of teachers formed specifically for the professional development' have the big impact, 70 % of teachers answered that 'Individual or collaborative research on a topic of interest to teachers professionally' has moderate impact, 36,7 % of teachers answered that 'Mentoring and/or peer observation and coaching had small impact.

Being asked about how these answers differ before and after the Covid-19 pandemic in the follow-up interview, teachers believe that there is no differences in the way they see the importance or impact of those professional development programs. But the importance of continuity is what came up as an issue, since during the pandemic, half of the professional developments programs were ceased to be held. As can be seen in the following excerpt:



(E1^a) sebenarnya sama aja, sebelum pandemi atau setelah pandemi kan, cuma terasa kali karena biasanya ada, tiba-tiba hampir satu tahun nggak ada pertemuan guru atau seminar. Kita mau tanya-tanya ma kawan kan gak bisa secara langsung, karena kalau ada pertemuan pun pasti online. (R2^b)
(= Its actually the same before or after the pandemic, it just, teachers already get used to them, but suddenly almost a year we do not have teachers meeting or seminars. When we want to discuss things with colleagues, we cannot do it directly, because, even there was meeting being held, it must be in online form or virtually) (R2)

^a E refers to Excerpts from the interviews. E1 is excerpt one and so forth.

^b R refers to the respondents. R1 is respondent 1 and so forth.

It can be concluded that the formal professional development programs being participated mostly among the seventh is 'Network of teachers formed specifically for the professional development', most of teachers even believe that it had big impact on teachers' work. Meanwhile 'Individual or collaborative research on a topic of interest to teachers professionally' was the least participated in, although most of teachers believe that it had moderate impact. Teachers also believe that there are no differences in the way they see the importance or impact of those formal professional development programs, before or after the Covid-19 pandemic.

b. Less Formal Continuing Professional Development

Table 2. Impact of Less Formal Professional Development

| No | Activities | Participation | Impact | | | |
|----|---|---------------|-----------|--------|----------|------|
| | | | No Impact | Small | Moderate | Big |
| 1 | Reading professional literature (e.g. journals, papers, thesis) | 33,4 % | 10 % | 20 % | 50 % | 20 % |
| 2 | Engaging in informal dialogue with your colleagues on how to improve teaching | 96, 7 % | - | 13,4 % | 36,7 % | 50 % |
| 3 | Writing teaching reflection | 30 % | - | - | 50 % | 50 % |

The second question in the questionnaire is regarding less formal professional development. There are three sub-questions. From table 2, it can be seen that 96, 7 % of teachers participated in an 'Informal dialogue with colleagues on how to improve teaching', followed by 'Reading professional literature' by 33,4 % and 'Writing teaching reflection' by 30 %. In term of impact, 50 % of teachers answered that 'Engaging in informal dialogue with colleagues on how to improve teaching' had big impact, 50 % of teachers answered that 'Reading professional literature' had moderate impact and 50 % of teachers answered that 'writing teaching reflection' had the big impact, while the other 50 % answered that it had moderate impact.

Being asked about how these answers differ before and after the Covid-19 pandemic in the follow-up interview, teachers believe that there is no differences in the way they see the importance or impact of those less formal professional development programs. They still believe that 'Engaging in informal dialogue with colleagues on how to improve teaching' and 'Writing teaching reflection' had the most impact on their work, as can be seen in the following excerpt:

(E2) Informal dialog ini sama menulis refleksi ya memang paling sering kita buat, dan terasa ada manfaatnya. Kita pun gak terlalu malu untuk sharing karena gak formal (R6)

(= Informal dialogue and writing reflection are what we often do, and we felt the impact. We do not feel too embarrassed to share (problems) because it is not formal) (R6)



It can be concluded that the less formal professional development programs being participated the most are ‘Engaging in informal dialogue with colleagues on how to improve teaching’ and ‘Writing teaching reflection’. Teachers believe that both have moderate and big impact on their work. ‘Reading professional literature’ was the least participated in, although most of teachers believe that it had moderate impact. Teachers also believe that there are no differences in the way they see the importance or impact of those less formal professional development programs, before or after the Covid-19 pandemic.

c. Teachers Need to Continuing Professional Development

Table 3. Teachers Need to Professional Development

| No | Activities | Need | | | |
|----|--|---------|------------|---------------|-----------|
| | | No need | Small need | Moderate need | High need |
| 1 | Knowledge of learners' and learning evaluation. | - | - | 16.6 % | 83.4 % |
| 2 | Classroom management | - | - | 10% | 90% |
| 3 | Internet and computer skills for teaching | - | - | 33,4 % | 66,7% |
| 4 | Knowledge and understanding of the main subject field. | - | - | 26.6 % | 73.3 % |
| 5 | Knowledge and understanding of methods in teaching. | - | - | 13.3 % | 86.7 % |
| 6 | Student discipline and behavior problem. | - | - | 30% | 70% |
| 7 | Knowledge and understanding in Curriculum. | - | - | 10% | 90% |

The third question in the questionnaire is regarding teachers’ need to continuing professional development programs. There are seven sub-questions. From the table 3, it can be seen that teachers had the highest need on ‘Classroom management’ and ‘Knowledge and understanding in Curriculum’, followed by ‘Knowledge and understanding of methods in teaching’, ‘Knowledge of learners’ and learning evaluation’, ‘Knowledge and understanding of the main subject field’, ‘Student discipline and behavior problem’ and ‘Internet and computer skills for teaching’.

Being asked about how these answers differ before and after the Covid-19 pandemic in the follow-up interview, teachers believe that the least needed CPD before the pandemic, which is ‘Internet and computer skills for teaching’, became the most needed CPD after the pandemic. As can be seen in the following excerpt:

(E3) Sebelum pandemi kan kita pake computer waktu presentasi aja atau waktu ada pake PPT, tapi gak pernah belajar cara mengajar online, siswa juga gak pernah kita ajarin cara akses materi online. Jadi pas pandemic kita baru terasa sangat butuh kemampuan pake internet dan aplikasi computer (R3)

(= Before pandemic we use computer only when we have presentation or using power point, but we never learn to teach online, we also never teach our students on how to access the material online. So at the time of pandemic, we realized how important it is to be able to use internet and computer software) (R3)

It can be concluded that in term of need to continuing professional development programs, teachers had the highest need on ‘Classroom management’ and ‘Knowledge and understanding in Curriculum’, but had the lowest need on ‘Internet and computer skills for teaching’. Teachers believe that the least needed CPD before the pandemic, became the most needed CPD after the pandemic.



d. What Prevented Teachers to Get More Professional Development

Table 4. Reasons That Prevented Teachers to Get More CPD

| No | Reasons | Time |
|----|--|------|
| 1 | I do not have prerequisites. | 3 |
| 2 | I could not afford it. | 7 |
| 3 | There was lack of employer support. | 2 |
| 4 | Professional development conflicted with my work schedule. | 16 |
| 5 | I didn't have time because of family responsibilities. | 14 |
| 6 | There was no suitable professional development offered | 0 |

The fourth question in the questionnaire is regarding what prevented teachers to get more CPD. There are six reasons that prevented teachers to get more continuous professional development programs then they already did. Teachers may choose more than one answers. From table 4 it can be seen that 'Professional development conflicted with my work schedule', came up 16 times, followed by 'I didn't have time because of family responsibilities' 14 times, followed by 'I could not afford it', 'I do not have prerequisites', 'there was lack of employer support', 7 times, 3 times and 2 times.

Being asked about how these answers differ before and after the Covid-19 pandemic in the follow-up interview, teachers believe that their fear of contagious disease became one of the reasons they do not participate or participate less in CPD during the pandemic. Other teachers believe that online CPD are boring and had less benefit, so they participate less in CPD during the pandemic. As can be seen in the following excerpts:

(E4) Selama pandemi kan kita takut ikut seminar, padahal ada yang diadakan secara offline, kalau kita ikut pun yang penting-penting kali. (R1)

(= During pandemic we are afraid to participate in offline seminars, unless they really necessary.) (R1)

(E5) Sebelum pandemi kan kita hari-hari ngajar jadi gak bisa terlalu sering ikut program keprofesian berkelanjutan ini. Tapi pas Covid kan, PKB ni diadakan online, jadi kita cepat bosan dan mengantuk. Jadi gak focus dan kurang bermanfaat. (R3)

(= Before pandemic we teach everyday so we rarely had time to participate in continuing professional development. But at the Covid-19 pandemic time, these CPD were held online, so they were boring and make you sleepy. At the end, it was hard to focus and they became less useful) (R3)

It can be concluded that, before pandemic, 'Professional development conflicted with my work schedule', is the number one reason teachers deal with but after the pandemic teachers believe that their fear of contagious disease and that online CPD are boring and had less benefit became the reasons they do not participate or participate less in CPD.

e. What Need to be Improved in Future Professional Development.

Table 5. What Need to be Improved in Future Professional Development

| No | Reasons | Times |
|----|-------------------------------------|-------|
| 1 | Teachers' self-efficacy | 9 |
| 2 | How to overcome anxiety | 8 |
| 3 | Teachers' ability in using computer | 11 |



The fifth question in the questionnaire is regarding what need to be improved in future professional development. There are three answers that came up from an open-ended questionnaire; 'Teachers' ability in using computer' 11 times, 'Teachers' self-efficacy' 9 times, and 'How to overcome anxiety' 8 times. Being asked about how these answers differ before and after the Covid-19 pandemic in the follow-up interview, teachers believe that there are no differences on what need to be improved in future continuing professional development, as can be seen in the following excerpt:

(E6) Guru tidak pernah diperkenalkan cara untuk menanggulangi kecemasan atau cara supaya percaya diri. Seminar yang ada focus pada materi, kurikulum dan regulasi. Pernah saya tanyakan hal ini namun katanya untuk menambah percaya diri harus bisa materi. Mungkin cara ini adalah salah satu cara, namun apakah ada cara lain agar guru merasa percaya diri, terutama guru baru. (R4)

(=) Teachers were never been introduced to ways to overcome anxiety and feel confidence. Seminar mostly focused on material being taught, curriculum and regulation. I had asked about it, and it said that in order to feel confidence, we have to master the material. Maybe it is one way, but is there any other way so teacher will feel confidence, especially for novice teachers.) (R4)

It can be concluded that 'Teachers' ability in using computer' is what mostly need to be improved in future professional development and teachers believe that there are no differences on what need to be improved in future continuing professional before or after the pandemic.

Discussion

This study was to determine the opinions or perceptions of high schools teachers about continuing professional development in Bireuen Regency before Covid-19 pandemic and after Covid-19 pandemic. The researcher has investigated two research questions regarding the teachers' perception towards continuing professional development. The first research question was addressed to all teachers about their opinion on continuing professional development in general and the second one was going more in-depth to find out how this opinion differs after the time of Covid-19.

Based on the results of the questionnaire above, it can be concluded that among the formal CPD programs, that have the most impact on teachers work is 'Network of teachers formed specifically for the professional development', included in this are MGMP and PGRI. More than half of the respondent had participated in 'Network of teachers formed specifically for the professional development' and they believe that it had big impact.

This 'big impact' may work depend on how teachers value the quality and usefulness of the activities in which they participate in and how the school environment and teachers work together to give these professional development programs, the time and space to work (OECD, 2013). This discrepancy seem to be problems for a lot of teachers, where schools and teachers have different view on how to apply what teachers learnt from CPD.

On the other hand, teachers feel that qualification program had big impact but there are very few of them that participated in the program, because it is expensive and time consuming. The qualification program is a must for a teacher as stated in the Law on Teachers and Lecturers no. 14 of 2005. Before teaching teachers have been provided with qualification education, but for teachers who do not have the specified qualification n education, for example still D3 then must meet the requirements by going back to college and getting an S1 title, as well as teachers who hold certain positions and must meet the requirements certain teachers or teachers who wish to deepen their pedagogic knowledge and subjects knowledge, they must return to college and get a master's degree.

The issue of continuity arises in the interview; teachers believe that it is important for any CPD programs to be held continuously. Since the three core features of teacher professional development



that have a positive association with teachers' self-reported increases in knowledge and skills and changes in classroom practices are: collaboration and active learning; continuity across time and activities; and differentiation (Garet et al, 2001).

Among the three less formal CPD 'Engaging in informal dialogue with colleagues on how to improve teaching' and 'Writing teaching reflection' are the most teacher participated in. It may because teachers feel at ease because of the informality of these activities. Informal dialogue where the teacher can casually convey the problems he faces in teaching, will help teachers solve complex problems such as naughty students, how to solve difficult problems and help teachers recall material that may be forgotten. Situations that are informal and relaxed are proven to make dialogue more useful than when activities are formal.

Jensen & Reichl (2011) said that this dialogue works both ways, when the teacher has a dialogue, both of them will get new information called appraisal and feedback. This is in line with Freeman, O'Malley & Eveleigh (2010) research analysis, it said that Informal dialogue with colleagues can improve teachers' teaching and was reported as having a moderate or large impact on their development than any other method of professional development.

Writing teaching reflection is one of the teacher's efforts to document the problems faced in daily teaching. These problems will accumulate and can be discussed with other teachers, can be used as a background for a research or basic material for writing a book. For some teachers, experience is the main source of new teaching strategies, some new strategies may work, and some others may not work (Richard & Lockhard, 2005).

In term of teachers' need to professional development, they had the highest need on 'Classroom management' and 'Knowledge and understanding in Curriculum'. Teachers had the lowest need on 'Internet and computer skills for teaching', which, became the most needed CPD after the pandemic. This is in line with Freeman, O'Malley & Eveleigh (2010) research, where 'Internet and computer skills for teaching' is the highest need.

Before pandemic, 'Professional development conflicted with my work schedule', is the number one reason that prevented teachers to get more professional development but after the pandemic teachers believe that their fear of contagious disease and that online CPD are boring and had less benefit became the reasons they do not participate or participate less in CPD. 'Conflict with work schedule' may also account for the apparent burden that is placed on a school in terms of the inconvenience caused to colleagues and school routine when teachers are absent for a cause perceived to be non-essential (OECD, 2014)

Regarding what need to be improved in future professional development, teachers mostly believe that 'Teachers' ability in using computer' need to be improved. Teachers said that there is no differences on what they believe need to be improved in the future, before or after the pandemic, but this answer might be related to question number 2 in the questionnaire, where without realizing they said that teachers need to get more internet and computer knowledge. This thought may stem from difficulty teachers face in online teaching during the pandemic.

It is interesting to note that 'Teachers' self-efficacy' came up as the answer on what need to be improved in the future CPD since teachers' self-efficacy is a key competency for educators. Bandura (1994) define self-efficacy as peoples' beliefs about their capabilities to produce designated level of performance. Teachers with higher self-efficacy seem to work harder and seem more willing to work with students with difficulties (Woolfok, et al, 2009). Teachers' beliefs about their capabilities affect how they deal with students, this belief also indirectly affect students to perform better in the classroom (Jordan, et al, 2010).

5. CONCLUSION

Through questionnaire and interview, it was found that formal professional development program which highly participated before or after pandemic is 'Network of teachers formed specifically for the professional development', while less formal professional development program which highly participated before or after pandemic is 'Engaging in informal dialogue with colleagues on how to



improve teaching'. In term of teachers' need to CPD, they had the highest need on 'Classroom management' and 'Knowledge and understanding in Curriculum' and the lowest need on 'Internet and computer skills for teaching', which, became the most needed CPD after the pandemic.

Before pandemic, 'Professional development conflicted with my work schedule', is the sole reason not to participate in CPD, but after the pandemic teachers believe that their fear of contagious disease and boredom became the reasons they do not participate or participate less in CPD. that 'Teachers' ability in using computer' is what mostly need to be improved in future professional development and teachers believe that there are no differences on what need to be improved in future continuing professional before or after the pandemic

After understanding which CPD programs provide great benefits and which programs have small benefits, then programs with greater benefits can be prioritized and teachers will be more frequently followed. For programs that have moderate benefits and small benefits, these programs need to be improved, upgraded and their effectiveness tested again.

REFERENCES

- [1]. Bandura, A. 1994. Self-efficacy in encyclopedia of Human Behaviour. edited by V.S.
- [2]. Braun, P. 2013. Handbook of Research on ICTs and Management Systems for Improving Efficiency in Healthcare and Social Care. Diakses 13 Maret 2021 di <https://www.igi-global.com/chapter/clever-health-study-adoption-impact/78018>
- [3]. Carrubi, D, B. 2020. Analyzing the Relationship Between Innovation, Value Creation, and Entrepreneurship. Diakses 13 Maret 2021 di <https://www.igi-global.com/chapter/talent-revolution/240371>
- [4]. Creswell, J.W. 2010. Research Design: Pendekatan Kualitatif, Kuantitatif, Dan Mixed. Yogyakarta: Pustaka Pelajar.
- [5]. Farrel, T. S. C. 2005. Conceptions of Grammar Teaching: A case study of Teachers' Beliefs and Classroom Practices. TESL-EJ. Volume 9, Number 2.
- [6]. Freeman, Chris; O'Malley, Kate; and Eveleigh, Frances. 2010. Australian teachers and the learning environment: an analysis of teacher response to TALIS 2008: final report <http://research.acer.edu.au/talis/>
- [7]. Garet, M.S., et al. 2001. What makes professional development effective? Results from a national sample of teachers. American Educational Research Journal. No. 38, pp. 915-945, www.jstor.org/stable/3202507.
- [8]. Jensen, B., et al. 2012. The Experience of New Teachers: Results from TALIS 2008, OECD Publishing. <http://dx.doi.org/10.1787/9789264120952-en>
- [9]. Jensen, B., J. Reichl. 2011. Better Teacher Appraisal And Feedback: Improving Performance. Melbourne: Grattan Institute.
- [10]. Jordan, A., C. Glenn, & D. Mcghie-Richmond. 2010. The supporting Effective Teachers (SET) Project: The Relationship of Inclusive Teaching Practice to Teachers' Beliefs about Disability and Ability and About Their Roles as Teachers. Teaching and Teacher Education. 26 (2).
- [11]. Kagan, D. M. 1992. Implications of research on teacher belief. Educational psychologist.
- [12]. Kemendikbud. Neraca Pendidikan Daerah. Diakses 12 Maret 2021 dari <https://npd.kemdikbud.go.id/>
- [13]. OECD. 2014. TALIS 2013 Results: an international Perspective on Teaching and learning, OECD Publishing. <http://dx.doi.org/10.1787/9789264196261-en>
- [14]. OECD. 2013. Creating Effective Teaching and Learning Environments: First Results from TALIS. Canada: Organization of Economic Collaboration and Development.
- [15]. Olurinola, O. 2020. Handbook of Research on Software for Gifted and Talented School Activities in K-12 Classrooms. Diakses 13 Maret 2021 di <https://www.igi-global.com/chapter/computer-driven-technologies-for-effective-teaching-in-k-12-classrooms-in-nigeria/239651>



- [16]. Revina, S. 2019. Menyoroti Upaya Pemerintah Memperbaiki Rapor Guru SD. Kompas.com. diakses 20 Maret 2020 dari <https://edukasi.kompas.com/read/2019/07/30/15363801/menyoroti-upaya-pemerintah-memperbaiki-rapor-guru-sd?page=all>
- [17]. Richards, J. C. & Lockhart, C. 2005. Reflective Teaching in Second Language Classrooms. New York: Cambridge University Press.
- [18]. Sugiyono. 2016. Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R & D. Bandung: Alfabet.
- [19]. Suranto, A. W. 2011. Komunikasi Interpersonal. Jakarta. Graha Ilmu.
- [20]. Woolfolk, H., Hoy, W. K. & Davis, H. 2009. Teachers' Self-Efficacy Beliefs in Handbook of Motivation in School, edited by Kathryn Wenzel and Allan Wigfield, 627- 654. Mahwah, NJ. Erlbaum.

