
Teachers' Understandings of The Effect of Continuous Professional Development Activities on Improvement of Quality of Teaching and Learning. A Review Study

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ABSTRACT: This review study includes 30 articles from 2016 and 2024 focusing on teachers' perception on the impact of professional development, as headed by the following twofold research questions: What are the teachers' perceptions on the impact of CPD activities in teaching and learning process? And what is the role of the school administration on the implementation of CPD for teachers? The review indicates that teachers' professional growth has to be developed if they are ones to lead to school change and innovation in terms of improvement. Researchers in their investigation should not only focus on teachers learning process in schools and left behind the impact of it to the students learning as measurable variable in terms of performance rather they should conduct formative intervention studies that can be assessed empirically and provoke a desirable transformation and includes stakeholders, school leaders and teachers in the whole school as learning environment.

Findings from this review suggest that more researches on impact of CPD are needed to deep dig its impact on students learning through teachers' collaboration, teacher-student collaboration and teacher-school leader collaboration as a smart solution to overcome the challenges that hinder CPD effectiveness.

KEYWORDS: Teachers continuous professional development, Pedagogical content knowledge, school leaders, Teachers collaboration, Continuous professional development activities and students' performance.

1. INTRODUCTION

Many researches done, showed that teachers' professional development is an essential tool to bring changes in instructional process and improving schools (Borko, 2004). Teachers are the first to undertake an important task to bring change to any education systems (Vandenberghe, 2006),(Jónasson, 2016). Moreover, according to OECD (2012), the quality of education cannot go beyond the quality of the in service teachers and school leaders since student learning is the harvest of what goes on in classroom.

According to many scholars, teachers and their continuous professional development (CPD) programs are crucial in determining the success of any educational reform directly, promote quality of teaching practice and the future of the society indirectly (Serkan, 2017). School leaders can create a conducive learning environment at school through helping teachers to identify the challenges and their needs, by providing needed materials to support teachers learning and encouraging experimentation and research. (Postholm and May Britt, 2018).

This article emphasises on teachers' perceptions of the impact of continuous professional development on promoting quality teaching and learning process and continuous professional development activities that is job-embedded, contextualized, and sustained over time. It does not concentrate on isolated activities like workshops; rather, the review takes a hard look at workplace learning characterized by dynamic, ongoing interactive exchange between teachers (Postholm and May Britt, 2018). According to Matriano (2019) in general context Continuing professional development (CPD), before known as continuing professional education (CPE) in Education domain, was described as lifelong learning of professionals on specialized knowledge, skills, attitude and ethical and moral values after the initial registration and admission to the any profession. In Education especially at school level where teachers are paramount for this concept, CPD describe all the activities in which teachers engage during the course of a career which are designed to enhance their work and lead to improve students' performance (Ucan, 2016). Those CPD activities are categorized into formal for instance courses, workshops, qualification programs, coaching, mentoring, peer observation and lesson study, Informal like self-study and engaging in informal dialogue with peers and Non-form for example seminars and school visit (Iwona Maciejowska, Hana Čtrnáctová and Pawel Bernard, 2015), (Postholm and May Britt, 2018).

According to Rwanda Education Board (2018), Continuous professional development for teachers is about working together, by advising each other, being respectful and supportive and not critical and by reflecting on the own practice for the purpose to grow

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professionally in teaching career. This displays that CPD activities can be planned for regular basis and its impact in bringing smart solutions be risen up during daily teaching activities (Liston, Whitcomb, & Borko, 2006).

The importance of teachers' professional development is to enhance the quality of teaching and learning in all educational establishments (Opfer & Pedder, 2011).

In so doing, this review article takes the perspective of teachers' perception of the impact of professional learning as emphasizing schools as the environment for teacher development (Vescio, Ross & Adams, 2008). Fullan, (2007) argue that professional learning in context is the only ongoing learning path for teachers that ultimately changes classroom practices. Moreover, there is strong evidence that professional development of teachers is best when embedded in the teachers' specific subject areas and among teachers with in the same department where sharing experiences is very easy (Darling Hammand, 2009). Meanwhile, schools with strong teacher community of practices (COPs) seem to have higher student achievement hence good quality of teaching and learning (Bryk, Sebring & Allensworth, 2010). (Hattie, 2008), found out that in 150 factors which influence learning, CPD is ranked at 19th. However, Hattie states that many reviews in their results showed that many CPD activities tend to bring the impact on teachers rather than on learner performance. Though, according to the Teaching and Learning International Survey (TALIS) from the OECD (2009), the concept of a school as a learning environment is becoming more popular in education hence Teachers who use more diverse teaching practices and who participate more actively in professional learning communities also report higher level of self-efficacy, they get more feedback and appraisal on their teaching and learning processes.

Research also shows that teachers can develop their own leadership as part of responsibility in their working schools typical example is that Alexandrou and Swaffield (2014) in their research mentioned that teacher leadership can facilitate broader professional development within school communities. They are five principles for teacher leaders in their work: First, they have to focus on the learning of everybody in the school. Second, they should design and sustain environment that favour learning to occur. Third, they should engage in explicit, transparent, and inquiry-based dialogue. Fourth, they should let everybody to influence school operations; and fifth and finally, they should keep internal and external accountability in order to assess how the outcomes align with their school's goals and principles (Postholm and May Britt, 2018).

The aforementioned studies are taken as a beginning point for the current review of recent research focusing on related to the Teachers' perception of the impact of continuous professional development on promoting quality of teaching and learning, ultimately direct to a two research questions:

What are the teachers' perceptions on the impact of CPD activities in teaching and learning process? And what is the role of the school administration on the implementation of CPD for teachers?

This research aims to describe the most recent research findings focusing on teachers' perceptions of the impact of continuous professional development on promoting quality of teaching and learning process in school and to analyse and discuss these findings with regard to learning improvement. First, the following sections present the rationale for the included research studies. The methodology section also includes how the analysis was conducted. Discussing the findings while focusing on teachers' perceptions of the impact of continuous professional development on promoting quality of teaching and learning. The analysis and discussion section includes theories and research that illuminate, support, and elaborate on the presented findings. Finally, the article ends with some concluding remarks.

2. METHODS

2.1 literature search rationale

To answer the twofold research questions, I conducted a search on subject of Pedagogical content knowledge in Google and Google scholar using searching strings "Teacher's perception on the impact of CPD," "Impact of CPD activities on PCK of teachers," "role school leaders in implementation of CPD for teachers" and "how CPD activities are planned at school".

The search focused between the period of years 2016 and 2022 for the purpose to work with the new trending research related to CPD. Intending to get the overview of the previous related research about teachers' perception of the impact of CPD on promoting quality of teaching and learning processes, I obtain 450 results from browsing for all of the search strings, after narrowing to reach the focus from CPD in general up to CPD in Education lastly to the teachers' perception of the impact of CPD and its promotion to quality of teaching and learning process for teachers. Heterogeneous Mosaic of articles and Thesis from different area around the world which provide enough information about the two research questions were collected purposively and the for the criteria basis, the exclusion approach were applied to make screening of articles to be reviewed.

Based on criterion basis and abstracts of the identified articles, after reading the all articles 45 articles from the package of read articles were selected to be on heart of this study. 35 were used qualitative research design, 7 used mixed methods while 3 were used quantitative. The used articles are carried out from all area of the world USA, Europe, Asia, Australia and Africa. In advance none of them was done as a reviewed article.

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Better more, all mentioned papers had been done in both breadth and depth so as to generate perception about the two leading research questions of what characterizes the teachers' perception on the impact of continuous professional development on promoting quality of teaching and learning process and Impact of CPD activities to the teacher's practices in classroom.

2.2. Analysis strategy.

When reading and rereading the transcripts of all articles, I pinpointed all my insight on their core finds. I layout and squeezed the articles by respecting the literature of grounded theory applied in qualitative research of coding and categorizing the texts in selective, open, and axial analysis processes (W.Creswell, 2014), (Urquhart, 2001). This kind of discerning analysis approach enables to select the main needed category in this study, the main category had been selected putting into consideration the teachers' perception on the impact of CPD on promoting quality of teaching and learning process (Strauss, 1990). The content from core categories are paramount and are got from constant comparative method of analysis which is rooted in grounded theory (Boeije, 2014). This wide open analysis sorted out 4 main categories of the same focus level: (1) Role of school leaders in planning an effective CPD activities at school level, (2) Main CPD activities mostly carried out by teachers through CPD and their effect on teacher's practices, (3) teachers' perception towards impact of CPD activities in improving teaching process, (4) Challenges faced by teachers in participating in CPD activities. Furthermore sub-categories were developed through series of question by asking "what", "How" headed through axial coding (Strauss, 1990). These interrogative words describe the information captured from the series of chosen articles. For instance, this study focuses on teachers' perception of the impact of CPD activities on teacher's practices at school. In this regard "how" was decided to be used. Those core categories show the foundation of this study's presentation of the articles and their results from data analysis. The discussion of articles also includes study sample, geographical location, the authors and the year of publication. The next section of this study is going to make a description based upon the core provided categories.

3. FINDINGS ABOUT TEACHERS' PERCEPTIONS OF THE IMPACT OF CONTINUOUS PROFESSIONAL DEVELOPMENT ON PROMOTING QUALITY TEACHING AND LEARNING PROCESS

3.1 Role of school leaders in planning CPD activities at school level.

To provide the answers about the twofold questions leading this study about teachers' perception of the impact of CPD on promoting quality teaching and learning process, five core categories were developed among them the first is the role of school leaders in planning any effective CPD activity. In qualitative research design carried out in England by David Pedder and Darleen Opfer (2011) about Planning and organization of teachers' Continuous Professional Development in schools, the results showed that there is a lack of strategic planning of CPD provision to balance effectively between individual and organizational learning needs and national policy priorities however the data point to a wide difference of perception among staff at different levels of the school organization about CPD planning. In four of the 12 snapshot schools' informants declared that their school had a strategic plan for CPD. Three schools were perceived as not having a strategic plan, and teachers in the remaining schools expressed mixed views. Furthermore, there was wide variation in what was understood by teachers and school leaders as constituting a strategic approach to CPD. Meaning that there is no common consensus about how CPD is perceived. Furthermore other research done in Hong Kong by Cheng, E.C.K in 2017 researcher and employee in Department of Curriculum development, Hong Kong Institute of Education, it assessed a framework based on the input of 103 CPD coordinators who undergone in a quasi-experimental approach through survey where the structural Equation model (SEM) technique were used, the findings from SEM enrich that principal support has a predictive effect on CPD policy and a collaborative learning culture, while the effectiveness of a CPD plan is predicted by collaborative culture and management strategy with in the school.

Abraham Tulu 2019, focused on the practice and challenges of school-based teachers' continuous professional development in case study of Government Secondary Schools of Hawassa City in Ethiopia, a descriptive survey design with both quantitative and qualitative method was incorporated and 101 teachers (31 females and 70 male), four department heads, four college principals, and four continuous professional development facilitators were participated voluntary to get data document analysis through questionnaires, interview. The findings from the study showed that school leaders do not provide enough support to the planned CPD activity and affect implementation of CPD because schools do not provide the needed resources, absence of effective management, absence of collaboration and negative attitudes towards the CPD program due to unawareness of its impact by some principals however on other side results showed that Most of the research participants agreed that the CPD program is essential as it focuses on the core issue teacher professional development and improving the quality of teaching and learning.

In qualitative research conducted by Annette Hilton, Geoff Hilton, Shelley Dole and Marilyn Goos 2015 Titled "*School Leaders as Participants in Teachers' Professional Development: The Impact on Teachers' and School Leaders' Professional Growth*" in Australia, they used approximately 70 middle school teachers (Years 5-9) from 18 schools in four school clusters located in diverse socioeconomic areas where Two clusters were in large provincial cities and the schools were located in low socio-economic areas. The schools in the other two clusters were located in mid – high

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Socio-economic areas, one in the inner city and the other in the outer suburbs of the same city.

Data collected through surveys, school visits, informal discussions, and workshop sharing and reflection sessions from school leaders and teachers showed that leaders has a great impact on implementing CPD activities. Results of the study showed that the co-participation of both school leaders and teachers in CPD activities help leaders to create a whole school culture, provide the support based of teachers' needs, enhance collaboration or team work and bring an exposure to new perceptive through sharing experiences.

Yaqoob Mohammed Al Ghatrifi in 2016 conducted a case study focused on the Professional Development of Teachers in Higher Education in Oman. In this study, a researcher used English Teachers, Program Director, Deans, Head of Departments (HOD), and Coordinators. The researcher found among of many factors that influence the implementation of CPD, school leader has a fundamental role in implementation of CPD by encouraging teachers to engage in collective learning and providing dedicated slots of time for discussion; by making CPD opportunities available to teachers according to their needs; allotting time for professional development by redistributing workloads within professional development plans; and by encouraging the notion of professional development as an ongoing process.

3.2 CPD activities mostly carried out by teachers and their effect on teaching practices.

Many researchers conducted through this perspective showed that CPD activities are categorized into two hybrids and each shows its importance in changing teacher's ways of teaching and help them to grow professional in bringing positive change. For example, in the study done by Nabhan Al-Lamki in 2009 about beliefs and Practices Related to Continuous Professional Development in Oman. 336 English teachers and 7 Ministry officials were used in both quantitative and qualitative approach and the findings showed that formal and informal ways of growing professional are the most attended.

Nabbahan Al-Lamki showed again that peer-observation is the most CPD activity which help teachers to share experiences and talk together about the challenges facing in classroom and find the smart resolutions as team (Nabhan, 2009).

M. K. Abreh in 2018 conducted an exploratory study on Heads of departments' perception of teachers' participation in continuous professional development programmes and its influence on science and mathematics teaching in Ghanaian secondary schools and 170 secondary schools were sampled from a possible 875 senior high schools in Ghana as at the first quarter of 2017.

Abreh found that the most CPD activities attended in schools are peer observation for the first hand, workshop about different items and conferences. At the last the results from this research emphasis that Continuous Professional Development (CPD) provides a link to improved professional practices of teachers' teaching as well as a window for improved learning outcomes of students. However, rarely are the voices of heads of departments of science and mathematics heard about the CPD opportunities offered to teachers in their department and the perceived influences that the CPD they attend make on their practice.

Rose Jo & Reynolds in 2002 in their research about teacher's continuous professional development a new approach after data analysis , they found out that peer observation or group focus observation with in the same department constitute a crucial tool for teachers. That kind of observation help teachers to assess by their own and finally the sit together in conversation which provide a constructive feedback for improvement. One participant teacher in one school said "The feedback was good, I always like getting feedback. That was the best practice of peer observation." Other teacher in other school enriched the first and said "The conversation with my colleague was used not only to discuss what went on in the lessons, but also to exchange ideas, and to provide a basic level of peer coaching. In this way the observations could be seen as a crucial CPD event for us".

In a case study including 30 teachers and 4 school managers in Education College in the West Midlands England in 2018 about teachers' perceptions of the impact of continuing professional development on their professional practice, finds showed that the most useful CPD activities are collaborative activities like peer observation and the sharing of good practice were identified as the most beneficial strategy in responses given by 23 participants how ever workshops, lectures and seminars were highlighted from the questionnaires as the least beneficial of CPD strategies (Bartleton, 2018). On other side some literature shows that the benefits of CPD are triangulated on teachers but not contribute to the students improvement in class set up.(Pedder, 2010).

In his qualitative study Seemuwemba Enock (2017) which was in charge to discover the effect of CPD practice on teacher's performance in Kigali Rwanda , 439 teachers from 50 public secondary schools were under gone through direct interview. The results from the corrected data showed that the most CPD activities at school level as are mentioned in Teacher Development and Management policy (Ministry of Education, 2007) are implemented through trainings , workshops , pedagogical meeting to share the best practices or Community of practice , peer observation and model lesson and lesson study. The research showed that once those CPD models was explained to teachers, many of them reported that they occurred occasioned means that are not planned regularly. For example, one teacher of Entrepreneurship at Kagarama Seconadry School said "*At my school we do peer-to-peer learning once a term. I think we would like it to be once a term, but it does not always happen.*"

3.3 Teachers 'perception towards impact of CPD activities in improving teaching process.

Abreh (2018) conducted an exploratory study on Heads of departments' perception of teachers' participation in continuous professional development programmes and its influence on science and mathematics teaching in Ghanaian secondary schools. 170

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secondary schools were sampled from a possible 875 senior high schools in Ghana. Results from data analysis showed 55% of responses indicated that the CPD activities that teachers undertook influenced their teaching positively and 55% feedback received were explaining that CPD activities brought about improvement in their professional practice.

Lisa Bartleton in 2018 founds in the case study that school leader figured out that teaching staff view the benefits of CPD activities a little bit negative due to the fact that they are (CPD activities) not useful to their everyday teaching practice however over a half of respondents from teaching staff (teachers) stated that CPD is useful to develop teaching practice hence has a positive impact in teaching and learning.

F. Ravhuhali, A.P. Kutame and H.N. Mutshaeni (2015) in south Africa , they investigated the teachers 'perception on the impact of CPD in promoting quality of teaching and learning, a mixed method approach using both quantitative and qualitative research designs was employed. Data was collected through Closed-ended self-administered questionnaires and interview schedule. Sample of 200 teachers were used to answer questionnaires while 10 teachers did face to face semi structured interviews. The findings showed that teachers know the impact of CPD in widening their pedagogical content knowledge, teaching skills and strategies to enhance students 'performance. Results again showed that teachers undergone CPD initiatives for the purpose to gain financial rewards. Finally the study took a conclusion that teachers have a positive perceptions towards their CPD however the difficult is that CPD activities are not supported adequately by their schools and Department of Basic Education. Alharbi (2011) in his research about development and implementation of CPD Programme for new qualified teachers in Saudi Arabia. The results showed that after Newly Qualified Teachers (NQTs) were integrated in various CPD activities, they introduced different strategies in lesson planning, communication skills and integration of technology aids in their lessons. They perceived that CPD programme influenced them positively to undergo into Educational paradigm shift from more didactic style of teaching to more interactive style of teaching that encourage teacher to student and student to student interactions.

Liston, Whitcomb, & Borko, (2006) in their research found that newly qualified teachers are not performing better than the senior teachers with more than 4 years of experience. This is due to the fact that newly qualified teachers possess only the theoretical knowledge from college, they struggle with the emotional intensity of teaching activity and lastly the environment which is not friendly.

Different researchers have showed that teachers' professional development is essential to changing classroom practice, improving schools, and ameliorating pupils' learning outcome (Borko, 2004). the professional development is perceived as activities that develop a person's skills, knowledge, expertise and other meaning as a teacher in form of courses, workshops, education conferences and seminars, qualification programmes, observation visits to schools, participation in networks of teachers, individual or collaborative research, and mentoring and/or peer observation and coaching (O'Sullivan, McConnell, & McMillan, 2012).

A.Supovitz et al, (2000) conducted a research on the Effects of Professional Development on Science Teaching Practices and Classroom Culture in United State of America, the study employed hierarchical linear modelling design and the data from National Science Foundation Teacher Enhancement program called Local systematic change initiative was used. The results showed that there is a linear correlation between the amounts of professional development undergone by teachers and both inquiry based teaching practice and high levels of investigative classroom culture.

3.4 Challenges faced by teachers in participating in CPD activities.

Many researches done to investigate the challenges for teachers in implementation of CPD at school level showed that some are related to teachers themselves but others are from school administration.

In research conducted by KOKEBE in 2013 about practices and challenges of continuous professional development implementation in schools in Ethiopia and the findings showed that major challenges are lack of training manuals, irrelevance and un clarity of the available training manuals, lack of trained facilitators, insufficiency of supports provided for teachers growth, insufficient allocation of budget, and school administration do not plan and support the training needs of teachers.

Bernadine, 2019 conducted a research on Challenges Faced by Educators in the Implementation of Continuing, Professional Teacher Development in South Africa. Results showed that challenges that teachers faced and hinder the implementation of CPD are Lack of interest by some teachers, Poor planning of CPD activities by school administration, Lack of support by school management, Lack of reporting, Lack of explicit relationship between CPTD and other existing developmental programmes, Lack of or poor ICT skills.

In a survey conducted by BRHANE (2012) using survey questionnaires, related to factors that affect school based teachers continuous professional development (CPD) in Mai-Ambesa Primary School in Woreda Tselemti, Tigray Region, 31 teachers and 3 school leaders were employed. The finds showed that challenges which can inhibit teachers to implement CPD at their schools are Time constraint on the parts teachers, lack of well-trained facilitators, lack of well-trained mentors, lack of commitment and awareness on the part of teachers, and unclear direction of CPD by school leaders.

Sally Wai-Yan WAN and Patrick Hak-Chung Lam from Hong Kong in the small-scale survey, they investigated on factors affecting teachers' participation in continuing professional development. Teachers from two primary schools were used and mixed methods

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research design were utilized. Questionnaires and group discussions interviews were used to collect data. The findings emphasize that factors that can affect teachers in implementation of CPD are numerous and distinct among them showed by this study are lack of school support, lack of motivation on side of teachers, family responsibility of both teachers and school leaders, much workload for teachers, lack of time to do CPD, poor school planning of CPD activities (Sally Wai-Yan WAN, 2010).

In qualitative study conducted by Haftu Hindeya and Yalew Endawoke in 2013 to investigate Factors affecting CPD's Implementation in Primary Schools in Ethiopia. Interviews, focus-group discussions, open ended questionnaires and informal discussions were employed to collect data. Sample of the study were teachers, principals and supervisors and were purposively selected. From the results, it was found that lack of ownership by teachers, inconsistencies on CPD provision, disparity of knowledge among teachers, and supervisors and principals, and conceptual problems about CPD were identified as the main factors that hindered CPD effective implementation (Hindeya & Endawoke, 2013).

Pramastiwi Priska et al (2018) investigated on Challenges and Resources in CPD for In-Service Teachers in Indonesia, in-depth analysis of 15 Indonesian teachers at differing professional stages was used. From results, it was founded that time management and lack of access to wider learning community are the biggest challenges in addition to the comments said by small number of teachers that they do not get access to the available resources and indulge them positively due to a possible overreliance on the top-down structured CPD scheme within the school management which enrich that lack of support from school leaders is another deniable challenge.

Weiner (2000) investigated the Challenges to and innovations in continuing professional development in Sweden, this finds from this study showed another challenge which is very unique compared to other existing literature. This study found that teachers loose concentration in participating CPD because what they expect to do as employees to develop professional contradicts to professional conceptions of teaching as a profession with its attendant characteristics of professional autonomy, shared knowledge, vocational commitment and ethical norms. The findings showed that the gap band between government policymaking and teacher's conceptions of their CPD is the biggest challenge that hinder its implementation at school level.

Enoch Ssemuwemba in 2017 conducted a research about the Effect of Professional Development Practices on Teacher Performance in Public Secondary Schools in Kigali, Rwanda. 30 semi-structured and 15 key informant interviews in 15 schools in the three districts were used to collect data. From the results, it was observed that all 45 participants agreed that CPD has positive impact to help teachers to grow professionally however, Despite of the government's effort, the challenge of lack of time reserved for CPD activities in their weekly time table, lack of CPD management and planning by school leaders and the inconsistency of the CPD program are the high righted challenges to CPD implementation (Seemuwemba, 2017).

4. CONCLUSION AND RECOMMENDATION.

This review study has provided an overview of Teachers' Perceptions of the Impact of Continuous Professional Development on Promoting Quality Teaching and learning process, illustrating that teacher always need to improve and grow in pedagogical content knowledge if they need to lead to quality of teaching and bring up to school improvement and outcomes. this review indicate that it is insufficient for researchers to investigate only teachers perception of the impact of CPD rather the they need to deep investigate its impact empirically on students'performance (Steyn, 2005). Results from the research done by Haftu Hindeya and Yalew Endawoke in Ethiopia showed that teachers and stakeholders of CPD program declared that CPD as a concept is crucial for teachers but its effectiveness is still debatable (Gebremeskel & Endawoke, 2013). This was emphasized by Lisa Bartleton 2018 that CPC activities have a significant benefit for teachers in terms of pedagogical content knowledge, sharing of good practice and the opportunities through collaboration, reflection and future progression however the strength and potential that has in raising school achievement in terms of students'performace is not largely defined. As recommendation, many challenges that hinder the effectiveness of CPD at school have been showed by many research findings like challenges linked to school leaders and challenges associated with teachers themselves. CPD has to be planned, managed and monitored by all concerns of its implementation for assuring its observable change in schools for both teachers as well as students learning as indicator of its effectiveness.

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