

# Teachers' Self-efficacy and their Choice of Continuous Professional Development Strategies in Trained Graduate Teachers of NCT Delhi

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## Abstract

*The 21st century skills need commitment from professionals to update their knowledge on their own which will in turn help in the development of the students. The Indian government started Massive Open Online Courses (MOOCs) on Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) portal based on transformative model which is the need of the hour. These types of programmes require motivation for self-learning. Therefore, the researcher administered self-efficacy scale and questionnaire to achieve the objectives of the research on 30 Trained Graduate Teachers (TGTs) teaching in secondary/senior secondary schools (both government and private) of NCT Delhi. The findings show that no autonomy is given to teachers in choosing the Continuous Professional Development (CPD) programme. The self-efficacy test shows that they are capable enough to take the responsibility for their own Professional Development (PD). Time issues and lack of supportive environment in school caused major hurdles in effective implementation of the CPD strategies.*

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## INTRODUCTION

In this globally and digitally interconnected world, change is constant and learning never stops. Changes in the global demand for skills have profound implications for the competencies which teachers themselves need to acquire to effectively teach 21st century skills to their students. It is mandatory for the teachers to update themselves to be at par with the changing knowledge. But for updating their knowledge, they cannot merely rely on government programmes rather they themselves should take up the responsibility of their professional development. Teachers must be so intrinsically motivated that they autonomously enroll in various Continuous Professional Development programmes for the purpose of updating their knowledge as per the dynamic needs of the current times. Here, teachers' self-efficacy plays a major role.

Heutagogy (Self-determined learning) can provide the optimal approach to learning in the twenty-first century, particular in capability development. Capable people are also described as those who know how to learn, are creative, have a high degree of self-efficacy, can apply competencies in novel as well as familiar situations, and can work well with others (Eberle, 2013).

Generally, teachers' self-efficacy is understood with the self-belief of teachers that they can make positive effects on students' success.

So, teachers' self-efficacy may be conceptualised as individual teachers' beliefs in their ability to plan, organise, and carry out activities that are required to attain educational goals. Perceived self-efficacy is concerned with people's beliefs in their capabilities to exercise control their own functioning and events that affect their lives. Beliefs in personal efficacy affect life choices, level of motivation, quality of functioning, resilience to adversity and vulnerability to stress and depression. Choosing a professional development strategy is a life changing decision. So, teachers' perceived self-efficacy will also affect their choice to choose the PD strategy autonomously or attend the strategy which is forced upon them.

When teachers' have high self-efficacy, they will be more confident to take control of their learning. They will become self-learners. Only then, teachers can adopt self-determined learning in CPD. Teachers have to come forward on their own.

## MODELS OF CONTINUOUS PROFESSIONAL DEVELOPMENT

Aileen Kennedy (2005) has provided different types of models for CPD under three different purposes. This helps to critically examine the existing models in use to determine models for futuristic needs and advancements.

### 1. Transmission

- (a) The training model: It supports a skills-based, technocratic view of teaching.

- (b) The award bearing model: It relies on, or emphasises the completion of award-bearing programmes of study.
- (c) The deficit model: CPD can be designed specifically to address a perceived deficit in teachers performance.
- (d) The cascade model: It involves individual teachers attending 'training events' and then cascading or disseminating the information to colleagues.
- (b) The transformative model: It involves the combination of a number of processes and conditions, aspects of which are drawn from other models. The key characteristic is its effective integration of the range of models, together with a real sense of awareness of the issues of power, i.e., whose agendas are being addressed through the process.

## 2. Transitional

- (a) The standards-based model: It represents a desire to create a system of teaching and teacher education, that can generate and empirically validate connections between teacher effectiveness and student learning.
- (b) The coaching/mentoring model: The main characteristic of this model is the importance of the one-to-one relationship, generally between two teachers.
- (c) The community of practice model: It recognises that learning within a community of practice happen as a result of that community and its interactions.

## 3. Transformative

- (a) The action research model: It is the study of the social situation as researchers, with a view to improve the quality of decisions and action.

## REVIEW OF RELATED LITERATURE

PD is not a new area of concern. It has been prioritised since a long time, though not in the shape as it is now. The researcher wants to study previous initiatives taken by the Government of India and other literature related to CPD to understand the changes in the model of CPD with time.

On the recommendation of Secondary Education Commission (1952–53), 100 extension services department in teacher training colleges were established to impart in-service education to teachers (Ministry of Human Resource Development, 2012). Kothari Commission (GoI, 1966) recommended allocation of more funds for teacher preparation, better salaries and improved service conditions for teachers and their educators to attract competent people to the profession (Kaur, 2013). National Policy on Education 1986 recommended the establishment of DIET in each district, and upgradation of 250 colleges of education as Colleges of Teacher Education (CTE)

and strengthening 50 of them as Institute of Advanced Studies in Education (IASE) (Ministry of Human Resource Development, 2012). *Vision of Teacher Education in India: Quality and Regulatory Perspective* (Ministry of Human Resource Development, 2012) recommended that all the existing teacher training institutions imparting in-service teacher education need to be strengthened. NEP 2020 recommended that teachers will be expected to participate in at least 50 hours of CPD opportunities every year for their own PD, driven by their own interests.

Schunk (1991) defined teaching as teacher's personal beliefs about capabilities to help students to learn. These beliefs may in them influence the teachers' activities, effort, and persistence. He found that teachers who had higher self-efficacy were more likely to have a positive classroom environment, support students' ideas, and meet the needs of all students. Organisation for Economic Co-operation and Development (OECD) report (2009) discusses the barriers of PD during 2007–2008 academic year as conflict with work schedule, no suitable PD, family responsibilities, too expensive, lack of employer support, and not meeting the pre-requisites. Darling-Hammond, et al., (2010) researched the CPD strategies of various countries and found out some effective strategies like lesson study (Japan), establishment of grants to pursue long-term course (Sweden), fixed number of hours for

CPD (South Korea), action research project and master's degree from National University (Singapore), funding to improve PD (Australia), and school-based PD (Finland). Stefani and Elton (2002) discussed the importance of active involvement of teachers for CPD as it should be experiential, problem-based, research-based, self-initiated, and should take place at the learner's location. Blaschke and Hase (2016) defined heutagogy as a learner-centered educational theory founded on the key principles of learner agency, self-efficacy, capability, metacognition (knowing how to learn), and reflection.

### **NEED FOR THE STUDY**

Teachers have an important responsibility in shaping the future of the students. They are responsible not only for the development of themselves but also of their students. The need for PD of teachers has been felt and given due importance since a long time and therefore, various agencies such as DIETs, State Council of Educational Research and Training (SCERTs), IASEs etc., have been conducting refresher programmes and orientation programmes for the teachers. But researches show that not many of these efforts have been successful in bringing positive results and report a lot of issues and problems. In India, the in-service teacher education programmes are not democratic in nature as they are based on the deficit

model and bring the teachers under an extremely intense a hierarchical structure (Ministry of Human Resource Development, 2012). Instead of benefitting from that model of PD, the teachers feel overburdened as those programmes were made compulsory for them and mostly took part in them reluctantly or for the sake of getting a certificate. Thus, it becomes necessary to shift the focus from the age-old ways of CPD training to more contemporary ways.

Now in India, the government has taken initiatives to start MOOCs on SWAYAM portal, which is based on transformative model rather than standards-based model, which is the need of the 21st century. The programmes like NISHTHA also require motivation to be learned on their own. However, it is very important to know whether our teachers have confidence to take initiatives, take control of their learning, have intrinsic motivation, and whether they want to take onus of their own learning. Therefore, the researcher proposed to undertake the study on self-efficacy of teachers and their choice of CPD strategies.

### RESEARCH QUESTION

How does teachers' self-efficacy influence their choice of Continuous Professional Development strategies?

### OPERATIONAL DEFINITIONS

- **Teachers' Self-efficacy:** Teachers' beliefs in their capabilities and competencies to improve their

skills to achieve positive outcomes in students' learning.

- **Continuous Professional Development:** CPD is a continuous learning process throughout one's professional career. It should consist of formal as well as informal activities which will help to update oneself with the changing needs and demands globally.

### OBJECTIVES OF THE STUDY

1. To study the level of self-efficacy of teachers.
2. To study the various sources (namely Performance Accomplishments, Vicarious Experience, Verbal Persuasion, and Emotional Arousal) of self-efficacy of teachers.
3. To compare the self-efficacy of teachers with respect to the mode of acquiring professional qualification and their reasons for joining teaching profession.
4. To study the perception of teachers towards various CPD strategies.
5. To examine the influence of teachers' self-efficacy on their choice of CPD strategies.

### HYPOTHESES

The given null hypotheses were tested: There is no significant difference in the self-efficacy of teachers with respect to their—

1. Mode of acquiring professional qualification

## 2. Reason for joining teaching profession

### **DELIMITATION**

The present study is confined to the TGTs of Secondary/Senior Secondary Schools of NCT Delhi.

### **METHODOLOGY OF THE RESEARCH**

The following methodology was adopted by the researcher in order to fulfill the above stated research objectives.

#### **Population**

The population of the present study comprised all the Trained Graduate Teachers (TGTs), teaching in Secondary/Senior Secondary Schools (both government and private) of NCT Delhi, who have attended at least one in-service programme.

#### **Sample**

The sample of the present study comprised 30 TGTs, teaching Classes VI–VIII in private and government schools.

#### **Selection of Sample**

The self-efficacy scale and questionnaire were administered only on those teachers who had attended at least one in-service programme, as the intricate details relevant and required for this study could have been obtained only through them.

#### **Selection of Teachers**

From amongst the teachers who were teaching Classes VI–VIII and

had attended at least one in-service programme, 30 TGTs were selected randomly using proportionate random sampling technique, from two Government and six Private senior secondary schools chosen on convenience basis. Those schools were selected which allowed to collect data.

### **Description and Development of Tools**

#### **Self-efficacy Scale**

- Aspects of self-efficacy scale: The career decision self-efficacy scale 'Career Decision Self-Efficacy Scale-Short Form (CDSES-SF)' by Taylor and Betz, (1981) was adapted. The changes were made according to the objectives of this study.
- Formulation of the statements of the self-efficacy scale: Some statements which fulfilled the purpose of the study were chosen from the CDSES-SF related to initiatives, making plans, determining steps, etc., but the statements were changed from career focused to general self-efficacy.

The scale is divided into four sources of self-efficacy, i.e., Performance Accomplishment, Vicarious Experience, Verbal Persuasion, and Emotional Arousal and has 6, 2, 1, and 5 statements, respectively. The scoring was done on a 5-pointer likert scale, i.e., No confidence at all (1), Very little confidence (2), Moderate

confidence (3), Much confidence (4), and Complete confidence (5).

**Questionnaire**

- Aspects of questionnaire: The fine dimension that were chosen for the CPD questionnaire include the need of CPD, the CPD strategies teachers would prefer to adopt with reasons and challenges for making such strategic choices. The questionnaire also tries to comprehend the teachers' perception towards teaching as a carrier.
- Formulation of questions of questionnaire: On the basis of the dimensions selected, the questions were formulated. For each dimension, questions were formulated to inquire about the same. Both closed and open-ended questions were included.

**ANALYSIS OF THE DATA**

The analysis of the data through the self-efficacy scale was analysed quantitatively, and the data through the questionnaire was collected qualitatively.

**Self-efficacy of Teachers**

Self-efficacy is all about the belief in one's own abilities as it pertains to deal with various situations. The basic principle behind self-efficacy theory is that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those in which they do not have self-efficacy.

**Table 1**  
**Mean, Standard Deviation of Sample, and Confidence Intervals for Population Mean**

N	Mean	Standard Deviation	Confidence Interval (at 95% confidence)
30	54.3	9.48	50.91 to 57.69

Table 1 shows that the mean scores of the sample are 54.3. The standard deviation is 9.48. The true mean of the population will lie between 50.91 and 57.69 (95% confidence). It can be interpreted that there is a large variation in the population in terms of teachers' self-efficacy of the teachers that can be moderate/high. Had the sample size been larger it could have been possible to be more conclusive about the level of self-efficacy of teachers in the population.

**Table 2**  
**Self-efficacy of Teachers**

Self-efficacy scores of teachers	No. of teachers	Per centage
14-28	1	3.33%
28-56	15	50%
56-70	14	46.66%

From table 2, it can be interpreted that most of the teachers (50%) have moderate self-efficacy. The self-efficacy affects the amount of efforts individuals apply to a given task. A teacher with moderate self-efficacy has moderate confidence in making the relevant goals and completing them.

**LEVEL OF SELF-EFFICACY**

In order to find the level of self-efficacy, it has been divided into three categories, i.e., the scores between 14 and 28 reflect low self-efficacy, the scores between 28 and 56 reflect moderate self-efficacy, and the scores between 56 and 70 reflect high self-efficacy of teachers.

It is evident from Figure 1 that 50 per cent of teachers have moderate level of self-efficacy and 47 per cent of teachers have high level of self-efficacy, whereas negligible number of teachers (3 per cent) have low self-efficacy. Bandura (1977) hypothesised that self-efficacy affects

an individual’s choice of activities, efforts, and persistence. Teachers with moderate self-efficacy show that they are not sure about their choices but on the other hand, teachers with high perceived self-efficacy show that they have complete confidence about their choices and they make relevant plan to meet their goals.

**Hypothesis 1:** There is no significant difference in the self-efficacy of regular and distance mode B.Ed. School teachers.

To compare the self-efficacy of teachers who have done B.Ed. from regular and distance mode, t-ratio was calculated (Table 3).

**Table 3**  
**Self-efficacy of Regular and Distance Mode B.Ed. School Teachers**

B.Ed.	N	Mean	Standard Deviation	df	t-value	Table value (at 0.05)
Regular mode	16	53.5	8.13	24	-0.48	2.06
Distance mode	14	55.21	11.07			

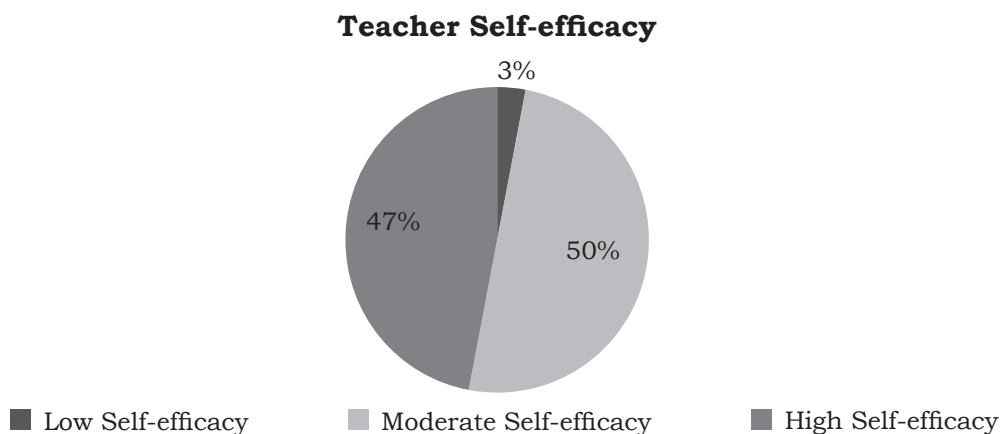


Fig. 1: Pie Chart showing Teachers’ Self-efficacy



From Table 3, it can be seen that self-efficacy mean score of the teachers who have done B.Ed. from regular mode (53.5) is less than those who have done B.Ed. from distance mode (55.21). This difference is real as there is apparent difference in standard deviation as well. The calculated t-value -0.48 is less than the table value at 0.05 (2.06). Therefore, the null hypothesis is accepted.

Thus, it can be concluded that there is no significant difference in the self-efficacy of teachers who have done B.Ed. from regular and distance mode.

**Hypothesis 2:** There is no significant difference in the self-efficacy of teachers who perceive teaching career as simply a job or by choice.

To compare the self-efficacy of teachers who perceive teaching career as simply a job or by choice, t-ratio was calculated (Table 4).

From Table 4, it can be seen that self-efficacy mean score for the teachers who perceive teaching as simply a job (50.2) is less than that of the teachers who opted teaching profession by choice (55.12). But the apparent is not 'real'. The calculated t-value -0.842 is less than the table

value at 0.05 (2.57). Therefore, the null hypothesis is accepted.

Thus, it can be concluded that there is no significant difference in the self-efficacy of teachers who perceive teaching as simply a job or by choice.

**Sources of Self-efficacy**

Bandura (1977) outlined four sources of information that individuals employ to judge their efficacy: performance outcomes (performance accomplishments), vicarious experiences, verbal persuasion, and physiological feedback (emotional arousal). These components help individuals determine if they believe they have the capability to accomplish specific tasks. Zimmerman (2000) has defined the sources of self-efficacy from most to least influential:

1. Performance accomplishments
2. Vicarious experience
3. Verbal persuasion
4. Emotional arousal

In Table 5, the statements of self-efficacy scale are categorised according to the sources of self-efficacy: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal.

**Table 4**  
**Self-efficacy of Teachers' Perception towards Teaching Career**

Teaching perceived as	N	Mean	Standard Deviation	df	t-value	Table value (at 0.05)
Simply a job	5	50.2	12.44	5	-0.842	2.57
By choice	25	55.12	8.87			

**Table 5**  
**Statement wise Self-efficacy of Teacher**

Sources of Self-efficacy	How much confidence do you have so that you could	Total scores	Self-efficacy scores									
			No confidence at all (Low self-efficacy)		Very little confidence		Moderate confidence (Moderate self-efficacy)		Much confidence		Complete confidence (High self-efficacy)	
			N	%	N	%	N	%	N	%	N	%
Performance Accomplishment: Previous successes in similar situations	find information in the library about the works you are interested in	120	-	2	6.66	8	26.66	8	26.66	12	40	
	find out/search the relevant materials to learn	124	-	2	6.66	3	10	14	46.66	11	36.66	
	make relevant plan for your goals	118	-	2	6.66	7	23.33	12	40	9	30	
	determine the steps you need to take to successfully complete your goals	119	-	3	10	5	16.66	12	40	10	33.33	
	determine the steps to be taken if you are having trouble in achieving our goals	106	1	4	13.33	10	33.33	8	26.66	7	23.33	

	find information about educational or professional institutions	131	-	-	2	6.66	3	10	7	23.33	18	60
Vicarious experience: Modeling on others in the same situation	talk with a person who has already mastered the skill/ knowledge which you want to achieve	118	-	-	3	10	4	13.33	15	50	8	26.66
	identify different sources relevant to your career possibilities	119	-	-	3	10	6	20	10	33.33	11	36.66
Verbal persuasion: Undergoing verbal persuasion by powerful, trustworthy, expert, and other people	persistently work at your goal even when you get frustrated	108	1	3.33	4	13.33	9	30	8	26.66	8	26.66

Emotional arousal: When physiologically aroused and experiencing negative emotions, our self-efficacy may be undermined, whereas such arousal paired with positive emotions heightens the sense of self-efficacy.	determine what you want to learn	128	-	-	1	3.33	3	10	13	43.33	13	43.33
	accurately assess your abilities	114	-	-	3	10	8	26.66	14	46.66	5	16.66
	change your plans if the previous plans did not work to achieve your goals	115	-	-	4	13.33	5	16.66	13	43.33	8	26.66
	make a decision and then not worry about whether it was right or wrong	114	-	-	4	13.33	8	26.66	8	26.66	10	33.33
	figure out for what you are ready and not ready to sacrifice to achieve your goal	108	1	3.33	4	13.33	8	26.66	10	33.33	7	23.33

For each statement, the lowest score is 30 and the highest score is 150. The scores are categorised into three levels: 30–60 show low self-efficacy score, 60–120 show moderate self-efficacy scores, and 120–150 show high self-efficacy score. In majority of the statements, teachers have moderate self-efficacy and a substantial number of teachers has high self-efficacy.

### **CONTINUOUS PROFESSIONAL DEVELOPMENT OF TEACHERS**

All the teachers have some experience of in-service programmes conducted by institutions. CPD programme vary from school to school. The programmes attended by teachers were: workshop on happiness curriculum, super teacher seminar, workshop on 3D printing, workshop on classroom management and so on.

There are five themes under which questionnaires were analysed:

1. Teachers' perception towards teaching as a career
2. Need of continuous professional development
3. Continuous professional development strategies that the adopted by teachers
4. Continuous professional development strategies that the teachers would prefer to adopt and the reasons behind it.
5. Barriers faced by teachers while adopting continuous professional development strategies

### **Influence of Teachers' Self-efficacy on Their Choice of Continuous Professional Development Strategies**

Self-efficacy has influence over people's ability to learn, their motivation and their performance, as people will often attempt to learn and perform only those tasks for which they believe they will be successful. CPD is one of those tasks which needs their high perceived self-efficacy, because if teachers believe in themselves then they will be successful in it, will be able to learn, have motivation to participate in it, and try to perform well.

As 50 per cent of teachers have moderate self-efficacy and 46.66 per cent of teachers have high self-efficacy, it shows that teachers have belief in their own abilities to make relevant plan for their goals, find information in the library, find relevant material, accurately assess their abilities, change plans if needed, etc. The moderate and high self-efficacy shows that they have the ability to choose the PD programme for themselves as per their own needs.

So, here if a person has belief in oneself, one can acquire the skills which one wants to as majority of the teachers (93%) feel the need of CPD in their teaching career. Also majority of them have at least moderate self-efficacy (96%), which represents that these teachers are able to take initiative for their own CPD. And when asked about the efforts they make for their own PD, majority of the teachers (86%) mentioned making efforts for it.

And those who do not make any effort end up facing hurdles (time issue and no support from school).

There were different types of strategies mentioned when asked about the strategies which teachers want to adopt. These strategies can be differentiated in two categories—formal (workshop, faculty exchange, conference and meeting) and informal (library, researches, enrolling in short term course, long term course, distance course, online course). Majority of teachers (75%) who perceive their self-efficacy as high want to adopt informal type of CPD, mainly, library and researches. Teachers with moderate self-efficacy choose both type of strategies (informal and formal) equally.

To conclude, teachers are willing to make efforts for their PD but they face barriers, mainly related to time and support from school.

## **MAJOR FINDINGS**

The major findings of the study undertaken by the researcher are reported as follows:

### **Major Findings Related to Self-Efficacy of Teachers**

Majority of the teachers have moderate level of self-efficacy, which shows that majority of the teachers have moderate level of confidence to pursue PD on their own. The analysis of every statement of self-efficacy scale shows that teachers have moderate level of self-efficacy. The statements of self-efficacy scale were grouped on

the basis of sources of self-efficacy (performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal). The findings were as follows:

#### ***Performance accomplishments***

All teachers have moderate or high level of self-efficacy in the statements related to performance accomplishments. This shows that teachers have positive outcomes of their previous experiences, and that is why, they have moderate or high level of self-efficacy.

#### ***Vicarious experience***

Teachers have moderate or high level of self-efficacy in the statements related to vicarious experience, which shows that they have people around them who have the same capabilities to master the skills which raises their belief in themselves.

#### ***Verbal Persuasion***

Teachers have moderate level of self-efficacy in the statements related to verbal persuasion, which shows that teachers have influential people in their lives who can strengthen their beliefs in their own capabilities to do a certain task.

#### ***Emotional Arousal***

Most of the teachers have moderate level of self-efficacy and some teachers have high-level of self-efficacy, which shows that most of the teachers have positive emotions which boost their confidence in their skills.

There is no significant difference in self-efficacy of teachers with respect to professional qualification, and how teachers perceive teaching as a career.

### **Major Findings Related to Continuous Professional Development of Teachers**

#### ***Teachers' perception towards teaching as a career***

The Majority of the teachers chose teaching as a career, well demonstrated through their commitment towards by teaching career. As productivity and job engagement get affected 'if a person chooses a specific carrier for themselves' or else 'they consider it just as a job'.

#### ***Need of CPD***

Majority of the teachers feel the need of in-service teacher training. They stated that CPD helps to update knowledge, attitude, and skills.

#### ***CPD strategies adopted by teachers***

While adopting CPD strategies, majority of the teachers participate in workshops as they are compulsory in schools. Most teachers do not get the choice for CPD strategies. The least chosen option was enrolling in a long-term course, as the job does not allow them and schools do not support this. Majority of the teachers adopt CPD strategies to update themselves and the negligible number of teachers who cannot adopt the strategies were due to lack of support from school and time constraints.

#### ***CPD strategies that the teachers would prefer to adopt and the reasons behind it***

There were many options from which the most chosen option was 'library' as a strategic source to update their knowledge, attitude and skills as teachers are not willing to adopt long term course as a CPD strategy.

#### ***Barriers faced by teachers while adopting CPD strategies***

For all the strategies, two barriers are common—time constraint, and no support from school. As the researcher has also analysed teachers' engagement in school in teaching or non-teaching activities, it can be interpreted that in schools, teachers spend more time on teaching and remaining time on non-teaching activities. But the tasks during non-teaching time are always allotted for different activities like assembly duty, in charge of different clubs, or notebook checking (which is a never-ending task in schools). Teachers get no time for PD activities.

#### ***Influence of Teachers' Self-efficacy on Their Choice of Continuous Professional Development Strategies***

To find their choice of CPD strategy, to understand their autonomy to choose activities for themselves and the choice of activities they want to adopt if autonomy is given to them, the data was collected through self-efficacy scale and questionnaire. So, the self-efficacy of teachers affects

the CPD strategies that they want to adopt. Majority of the teachers who perceive their self-efficacy as moderate, wanted to adopt informal PD strategies which shows their willingness to adopt CPD strategies for themselves.

### CONCLUSION

CPD is an important aspect of a teachers' career, but it is the most neglected one. The programmes are made compulsory, and the needs of teachers are not catered. Most of the programmes are also isolated in nature. No autonomy is given to teachers in choosing a relevant programme for themselves. Previous researches on CPD show that autonomy should be given to teachers and they are responsible for their own CPD. When autonomy is given to teachers, they will choose the CPD strategy of their choice and as per their needs. But with autonomy, one important aspect comes along, i.e., capability. The results showed that teachers are capable enough

to take the responsibility for their own PD. But self-efficacy is not static in nature, so with appropriate environment, a person's self-efficacy can increase as well. Furthermore, the research also showed that teachers were willing to adopt CPD strategies, which show that they can choose CPD strategy according to their needs. Most teachers faced barriers related to time and lack of supportive environment. As teachers are capable of choosing the appropriate strategy for themselves, teachers should adopt self-determined learning and schools should support it.

Teachers should be given enough opportunities to take their own decisions. Teachers should get autonomy to choose CPD strategies as job-embedded by ensuring that they get enough time in school or schools should provide specific time for PD. Also, school teachers must be aware about self-determined learning, where in teacher educators will act as facilitators and provide support to teachers, if needed.

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