

**ATTITUDE, OPPORTUNITIES AND CHALLENGES OF CONTINUOUS
PROFESSIONAL DEVELOPMENT AMONG PRIMARY SCHOOL
TEACHERS OF KERALA**

Thesis
Submitted for the degree of
DOCTOR OF PHILOSOPHY IN EDUCATION

By
RACHANA M V

Supervised By
Dr. MEERA K P
Professor

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT**

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DECLARATION

I, **RACHANA M.V.**, do hereby declare that this thesis entitled “**ATTITUDE, OPPORTUNITIES AND CHALLENGES OF CONTINUOUS PROFESSIONAL DEVELOPMENT AMONG PRIMARY SCHOOL TEACHERS OF KERALA**” is a bonafide record of the research work done by me under the supervision of Dr. K.P MEERA, Professor, Department of Education, University of Calicut and that no part of this thesis has been submitted before for the award of any Degree, Diploma or Associateship in any other university.



RACHANA M.V.

Place: C.U. Campus,

Date: 02.08.2023

Dr. K.P. MEERA

Professor (Rtd.)

Department of Education

University of Calicut

Calicut University (PO)

Pin - 673635

meera_jayaprakash@yahoo.com

CERTIFICATE

This is to certify that the thesis entitled “**ATTITUDE, OPPORTUNITIES AND CHALLENGES OF CONTINUOUS PROFESSIONAL DEVELOPMENT AMONG PRIMARY SCHOOL TEACHERS OF KERALA**” is an authentic record of research work carried out by **RACHANA M.V** for the degree of **Philosophy in Education, University of Calicut**, under my supervision and guidance and that no part thereof has been presented before for any other Degree, Diploma or Associateship in any other university.

I also hereby certify that the suggestions from the adjudicators have been incorporated into the revised thesis. Soft copy attached is the same as that of the revised copy.

Place: C.U. Campus,

Date: 02.08.2023



Prof. (Dr.) K.P Meera
(Supervising Teacher)

Dr. K. P. MEERA
Professor of Education (Retd.)
University of Calicut
Malappuram Dist., Kerala

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RACHANA M.V.

With utmost love and admiration,
this work is dedicated to all the teachers
who have the power to impact the lives of thousands
and positively influence the world through
their commitment to be lifelong learners.

Attitude, Opportunities and Challenges of Continuous Professional Development among Primary School Teachers of Kerala

Rachana M.V
Research Scholar


Prof (Dr) K.P Meera
Supervising Teacher

ABSTARCT

Continuous professional development (CPD) is vital for improving the quality of education and enhancing student achievement, as emphasized in the National Education Policy (NEP) 2020. However, the existing professional development programs in Kerala lack coherence and appear limited. This study aims to explore the attitude, opportunities, and challenges of CPD among primary school teachers in the state. The research adopted a mixed research design with an explanatory sequential model. Quantitative surveys were conducted with 600 primary school teachers, and qualitative data were collected through focused group discussions and in-depth interviews with 26 teachers and 6 educational officers.

The findings revealed that district-based differences influenced teachers' attitudes towards CPD, while age and experience impacted the opportunities available to them. A significant correlation was identified between attitude and CPD opportunities. Teachers expressed a desire to actively participate in planning CPD sessions. Challenges reported include limited application of learning, difficulties in balancing professional and personal responsibilities, gender disparities in accessing CPD, and the lack of performance evaluation and effective monitoring during CPD implementation. The study's educational implications suggest the need for well-planned professional development activities that inform teachers about available opportunities to promote a positive attitude towards CPD. Integrating CPD into school accreditation and performance appraisal can enhance teacher accountability and encourage engagement in professional development. Establishing a well-defined CPD policy in the state will provide teachers with access to current research and best practices in education. Moreover, promoting communication and collaboration among stakeholders will foster shared goals and address incongruence in the perception of CPD.

Keywords: CPD, Primary Teachers, Self-Initiative CPD, Action Research.


Dr. K. P. MEERA
Professor of Education (Retd.)
University of Calicut
Malappuram Dist., Kerala

കേരളത്തിലെ പ്രൈമറി സ്കൂൾ അധ്യാപകർക്കിടയിൽ നിരന്തരമായ പ്രാഥമിക വികസനത്തോടുള്ള മനോഭാവവും, അതിനുള്ള അവസരങ്ങളും നേരിടുന്ന വെല്ലുവിളികളും

രചന എം.വി
ഗവേഷക വിദ്യാർത്ഥി
വിദ്യാഭ്യാസ പഠന വകുപ്പ്
കാലിക്കറ്റ് സർവകലാശാല

പ്രൊഫ(ഡോ) കെ. പി. മീര
മാർഗദർശക
വിദ്യാഭ്യാസ പഠന വകുപ്പ്
കാലിക്കറ്റ് സർവകലാശാല

സംഗ്രഹം

ആമുഖം

അധ്യാപകർക്കിടയിലെ പ്രൊഫഷണൽ വികസന വിദ്യാഭ്യാസ മേഖലയുടെ ഗുണമേന്മയെ നിർണ്ണയിക്കുന്ന സുപ്രധാന ഘടകമായി പരക്കെ അംഗീകരിക്കപ്പെട്ടിട്ടുള്ളതാണ്. 2020ലെ ദേശീയ വിദ്യാഭ്യാസ നയവും ഇതിന്റെ പ്രസക്തി ഉറപ്പിച്ച് പഠിപ്പിക്കുന്നുണ്ട്. സേവനകാല പരിശീലനം എന്ന പരമ്പരാഗത ആശയത്തിൽ നിന്ന് ബഹുദൂരം മുന്നോട്ടുപോയി കണ്ടിന്യൂസ് പ്രൊഫഷണൽ ഡെവലപ്മെന്റ് (CPD) എന്ന പദം ഉപയോഗിക്കുന്നത് വഴി അധ്യാപകരുടെ തുടർ പഠനത്തിന്റെ ഔദ്യോഗികവും അനൗദ്യോഗികവുമായ പഠന അവസരങ്ങളെ തിരിച്ചറിയുന്നതിനും അഭിസംബോധന ചെയ്യുന്നതിനും സാധിക്കുന്നു. സി.പി.ഡി എന്നത് ആസൂത്രീയവും നിരന്തരവും ആജീവനാന്തവുമായ ഒരു പ്രക്രിയയാണ്. അതിലൂടെ അധ്യാപകർ അവരുടെ വ്യക്തിപരവും തൊഴിൽപരവുമായ ഗുണങ്ങൾ വികസിപ്പിക്കാനും അവരുടെ മനോഭാവവും അറിവും കഴിവും മെച്ചപ്പെടുത്തുക വഴി അവരുടെ ശക്തികരണത്തിലേക്കും അവരുടെ വിദ്യാലയത്തിന്റെയും വിദ്യാർത്ഥികളുടെയും അക്കാദമിക പുരോഗതിയിലേക്കും നയിക്കുന്നു.

ഗവേഷണ പ്രസക്തി

കേരളത്തിൽ നിലവിലുള്ള പ്രൊഫഷണൽ വികസന പരിപാടികൾ പലപ്പോഴും പരിമിതമായ ദിവസങ്ങളിൽ മാത്രം നടക്കുന്ന സേവനകാല പരിശീലനങ്ങളിൽ ഒതുങ്ങിപ്പോകുന്ന അവസ്ഥയാണ് ഉള്ളത്. ഇരുപത്തിയൊന്നാം നൂറ്റാണ്ടിന്റെ പഠിതാക്കളെ അഭിസംബോധന ചെയ്യാൻ ഇത് അപര്യാപ്തമാണ്. വിദ്യാഭ്യാസ വകുപ്പും മറ്റു വിദ്യാഭ്യാസ ഏജൻസികളും പ്രൊഫഷണൽ വികസനത്തിനായി നിരവധി പരിശീലനങ്ങൾ നടത്തുന്നുണ്ടെങ്കിലും അധ്യാപകർ അതോടൊപ്പം സ്വയം സന്നദ്ധരായി ഏറ്റെടുക്കേണ്ട നിരവധി പ്രവർത്തനങ്ങളുമുണ്ട്. കണ്ടിന്യൂസ് പ്രൊഫഷണൽ ഡെവലപ്മെന്റിനോടുള്ള അധ്യാപകരുടെ മനോഭാവവും പ്രൊഫഷണൽ വികസനത്തിന്റെ പാതയിൽ അവർക്ക് ലഭ്യമാകുന്ന വിവിധ അവസരങ്ങളും മനസ്സിലാക്കേണ്ടത് നിർണ്ണായകമാണ്. കൂടാതെ ഈ അവസരങ്ങൾ പ്രയോജനപ്പെടുത്തുന്നതിൽ അധ്യാപകരും ഫലപ്രദമായി നടപ്പിലാക്കുന്നതിൽ വിദ്യാഭ്യാസ ഓഫീസർമാരും നേരിടുന്ന വെല്ലുവിളികളും പഠിക്കപ്പെടേണ്ടതാണ്.

പഠന ലക്ഷ്യങ്ങൾ

കേരളത്തിലെ പ്രൈമറി സ്കൂൾ അധ്യാപകർക്ക് കണ്ടിന്യൂസ് പ്രൊഫഷണൽ ഡെവലപ്മെന്റിനോടുള്ള മനോഭാവം, അവർക്ക് ലഭിക്കുന്ന അവസരങ്ങൾ, നേരിടുന്ന വെല്ലുവിളികൾ എന്നിവ പഠിക്കുകയും പര്യവേക്ഷണം ചെയ്യുകയും ആണ് ഈ പഠനത്തിന്റെ മുഖ്യ ലക്ഷ്യം. അധ്യാപകരുടെ മനോഭാവവും നിരന്തരമായ പ്രാഥമിക വികസനത്തിനുള്ള അവസരങ്ങളും തമ്മിൽ ബന്ധമുണ്ടോ എന്ന് കണ്ടെത്തുക; ഫലപ്രദമായ സി.പി.ഡി. ഉറപ്പുവരുത്തുന്നതിൽ നേരിടുന്ന വെല്ലുവിളികൾ തിരിച്ചറിയുകയും അവയെ അതിജീവിക്കാനുള്ള തന്ത്രങ്ങൾ നിർദ്ദേശിക്കുകയും ചെയ്യുക എന്നത് ഈ പഠനത്തിന്റെ പ്രധാന ഉപലക്ഷ്യങ്ങളാണ്.

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പ്രധാന കണ്ടെത്തലുകൾ

- നിരന്തരമായ പ്രാധാന്യം വികസനത്തോടുള്ള മനോഭാവവും, അതിനുള്ള അവസരങ്ങളും തമ്മിൽ കാര്യമായ ബന്ധമുണ്ട്.
- വിഭാഗം, മാനേജ്മെന്റ്, പ്രാദേശിക വ്യത്യാസം, ലിംഗ ഭേദം എന്നിവയെ അടിസ്ഥാനമാക്കിയുള്ള ഉപസാമിളകളിൽ സി.പി.ഡി.യോടുള്ള മനോഭാവത്തിലും സി.പി.ഡി.ക്കുള്ള അവസരങ്ങളിലും കാര്യമായി വ്യത്യാസമില്ല. എങ്കിലും ജില്ല, പ്രായം എന്നിവ അടിസ്ഥാനമാക്കിയുള്ള ഉപ സാമിളകളിൽ കാര്യമായ വ്യത്യാസമുണ്ട്.
- സ്വയം ഏറ്റെടുക്കുന്ന പ്രൊഫഷണൽ വികസന പ്രവർത്തനങ്ങളിൽ അധ്യാപകരുടെ പങ്കാളിത്തം താരതമ്യേന കുറവാണ്
- അധ്യാപകരുടെ പ്രൊഫഷണൽ ആവശ്യങ്ങൾ വേണ്ട രീതിയിൽ വിശകലനം ചെയ്യപ്പെടുന്നില്ല.
- മറ്റ് അധ്യാപകരുമായി സഹകരിച്ച് നടത്തേണ്ട പ്രൊഫഷണൽ വികസന പ്രവർത്തനങ്ങൾക്ക് മികച്ച സ്വീകാര്യതയുണ്ട്.
- അധ്യാപകരുടെ പ്രകടനം വേണ്ട രീതിയിൽ വിലയിരുത്തപ്പെടാത്തത് പ്രൊഫഷണൽ വികസന പ്രവർത്തനങ്ങൾ ഏർപ്പെടുമ്പോൾ നിന്ന് അവരെ നിരസാഹ്വേദിപ്പിക്കുന്നു.
- വ്യത്യസ്ത വിദ്യാഭ്യാസ ഏജൻസികൾ നടത്തുന്ന ശാക്തീകര പരിപാടികൾക്ക് ഏകോപനം ഉണ്ടാകേണ്ടത് അനിവാര്യമാണ്.
- ശാക്തീകരണ പരിപാടികളുടെ ആസൂത്രണഘട്ടത്തിൽ അധ്യാപകരുടെ പങ്കാളിത്തം കുറവാണ്.
- പ്രൊഫഷണൽ വികസന പ്രവർത്തനങ്ങളിൽ ഏർപ്പെടുന്ന അധ്യാപകരുടെ അസാന്നിധ്യം വിദ്യാലയത്തിൽ വലിയ പ്രശ്നങ്ങൾ സൃഷ്ടിക്കുന്നു.
- അധ്യാപകരുടെ വ്യക്തിപരമായ ഉത്തരവാദിത്തങ്ങൾ പ്രൊഫഷണൽ വികസനത്തിനുള്ള അവസരങ്ങൾ ഉപയോഗപ്പെടുത്തുന്നതിന് വിഘാതം സൃഷ്ടിക്കാറുണ്ട്

ഉപസംഹാരം

സുസംഘടിതമായ അധ്യാപക പരിവർത്തന പദ്ധതി ആവിഷ്കരിക്കേണ്ടതായി ഉണ്ട്. പ്രൊഫഷണൽ വികസനത്തിന്റെ വിപുലമായ സാധ്യതകളെക്കുറിച്ചും ആവശ്യകതയെക്കുറിച്ചും അധ്യാപകരിൽ അവബോധം സൃഷ്ടിക്കേണ്ടത് അനിവാര്യമാണ്. അധ്യാപക പ്രകടന മാനദണ്ഡങ്ങളുടെയും വിദ്യാലയത്തിന്റെ നിലവാര സൂചികയുടെയും ഭാഗമായി പ്രൊഫഷണൽ വികസനപ്രവർത്തനങ്ങളിലുള്ള അധ്യാപകരുടെ പങ്കാളിത്തം പരിഗണിക്കപ്പെടേണ്ടതാണ്.

താക്കോൽവാക്കുകൾ: നിരന്തരമായ പ്രൊഫഷണൽ വികസനം, പ്രൈമറി സ്കൂൾ അധ്യാപകർ, ആക്ഷൻ റിസർച്ച്, സ്വയം സന്നദ്ധമായ പ്രൊഫഷണൽ വികസനം.

Dr. K. P. MEERA
Professor of Education (Retd.)
University of Calicut
Malappuram Dist., Kerala

K.P. Meera

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
BPC	Block Programme Coordinator
BRC	Block Resource Centre
CPD	Continuous Professional Development
CPO	Chief Planning Officer
DIET	District Institute of Education and Training
DPC	District Programme Coordinator
FGD	Focused Group Discussion
GTC	General Teaching Council
HM	Head Master/Mistress
INSET	In-service Education and Training
KITE	Kerala Infrastructure and Technology for Education
NCERT	National Council of Educational Research and Training
NCF	National Curriculum Framework
NCFTE	National Curriculum Framework for Teacher Education
NEP	National Education Policy
OECD	The Organisation for Economic Co-operation and Development
PD	Professional Development
PLC	Professional Learning Community
PRG	Permanent Resource Group
RO	Research Officer
RP	Resource Person
SCERT	State Council of Educational Research and Training
SIEMAT	State Institute of Educational Management and Training
SRG	School Resource Group
SSK	Samagra Siksha Kerala

Chapter I

INTRODUCTION

- ❖ *Need and Significance of the Study*
- ❖ *Statement of the Problem*
- ❖ *Definition of Key Terms*
- ❖ *Variables of the Study*
- ❖ *Objectives of the Study*
- ❖ *Hypotheses of the Study*
- ❖ *Methodology*
- ❖ *Scope of the Study*
- ❖ *Organization of the Report*

Education around the world is witnessing unprecedented and tremendous transformation. The entitlement to education encompasses both the opportunity to receive education and the provision to receive education of high quality. Education must be accessible, affordable, acceptable, and dynamic. Apart from these general principles, there are other primary elements that establish the basis for a quality education. These include having access to competent teachers, access to excellent teaching resources and materials, and providing a supportive and healthy environment for learning, along with continuous professional development opportunities for teachers. While learners should surely be the core of any educational setting, teachers occasionally require some attention as well. Their professional development is vital because of the nature of their profession and the changing role of teachers. Professional development of teachers has been a central focus in the field of education around the world despite the fact that student achievement has been closely linked to the teacher quality (Cordingley et al., 2005; Guskey, 2002).

The quality of teaching is arguably the single most important thing that teachers and school leaders can focus on to make a difference in children's learning. The difference between really good teaching and less effective teaching makes more difference to learning than any other factor within school. Exceptional teaching has the potential to close the achievement gap. Importantly, it is a modifiable factor, meaning that all educators have the ability to improve and become better teachers (Wiliam, 2016). It is commonly believed that teacher's academic and professional efficiency are vital components for creating the effective learning conditions which are needed to achieve the goals of a nation. The way in which a teacher teaches is extremely important in ensuring that pupils receive high-quality education. A good

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teacher should have a certain goal in mind. Because teaching is an activity, the teacher should have a clear idea of what he or she wants to accomplish in addition to the school's broader goal of providing high-quality education. To put it another way, a successful teacher is one who is skilled and competent in the classroom. His or her instruction has an impact on the students. As a result, the teacher's efficacy influences the total standard of learning in order to reach the desired outcome, which is quality education (Hafees, 2017; Holloway, 2006; Kent, 2004; Mizell, 2010).

In most of the professions in the world, CPD or Continuous Professional Development is related to the right to continue in the profession. At its core, it is the personal responsibility of professionals to keep their knowledge and skills up-to-date in order to provide high-quality service that meets the stakeholder's expectations, and meets the requirements of their profession (Padwad, 2011). It is also beneficial because of its emphasis on high-quality Continuous Professional Development (CPD) programmes that are strongly aligned with individual and institutional needs. But talking about the profession of teachers, CPD has not gained much attention so far.

One of the main goals of professional development is to promote positive change in the educational system, as well as in the theoretical and practical knowledge and attitudes of the people who make up the system. Professional development is seen as a way of empowering teachers and administrators by allowing them to update and enhance their knowledge and qualifications, in addition to bringing about the possibility for change (Ling & MacKenzie, 2001).

There has been substantial discussion about the use of formal and informal learning opportunities for teachers in international education research. The powerful idea that teachers are not only teachers, but also learners underpins teacher learning. Teachers are engaged in learning to build their professional knowledge while preparing to teach, interacting with students, colleagues, and other professionals, and teaching. This emphasizes that the concept of being a lifelong learner does not end with our students. We, as educators must encourage our colleagues and thereby inspire ourselves to aspire lifelong learning. Learning can become more deliberate

and proactive, rather than passive and reactive, with CPD. CPD refers to a professional's broad commitment to improving their personal skills and proficiency throughout their career.

Teachers' roles are evolving rapidly due to the political, pedagogical, and social trends, which imply that more and better Continuous Professional Development (CPD) programmes are needed to stay up with the changes and remain relevant in the teaching profession. Teachers' quality is critical since changing requirements impose increased strain on them, such as needing to cope with huge classrooms and learners with diverse characteristics. This increases the need for teachers to be supported more than ever before, and therefore the necessity to increase teacher CPD, which is an often overlooked factor in most developing nations like India (Jaiswal 2017).

Teachers' talents and attitudes in the classroom may certainly be affected by programmes focused on high-quality and relevant teacher development, hence improving the standard of education that the learners receive. What happens in teachers' life has a big impact on them, thus their priorities are vital. Each teacher has a unique career path (Slepkov, 2008) that determines their motivation and readiness to participate in professional development activities. What teachers think, as well as what they know, has a big impact on their perceptions and behaviours when it comes to improving and refining their teaching. Continuing professional development is essential since it guarantees that one remains competent in one's career. It is a continuous process that lasts throughout a professional's career. The end result of well-planned continuous professional development is that it benefits the society, the organization, the professional, and the professional's vocation, and it supports in the pursuit of academic achievement of the learners. Continuous professional development that is well-designed and implemented is vital because it helps the person, their field, and the public in general.

Professional development for teachers perhaps has the most impact on teachers' performance in the classroom by giving them access to novel ideas, methods, resources, and instructional strategies that they use to engage and relate

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with their students. Teachers require regular opportunities to enhance their professional knowledge and abilities, often recognized as professional development opportunities. Teachers must be able to participate in activities such as self-reflection and evaluation extending their knowledge base on research, theory, and challenges in teaching taking on new roles and duties, such as supervisor or mentor teacher, teacher-researcher, or materials writer creating collaborative relationships with other teachers (Richards and Farrell, 2005). This stresses the relevance of teacher autonomy which involves teachers having the necessary skills and confidence to construct and implement their teaching approaches that are tailored to their unique educational settings and open to the opportunities of their social and political circumstances. This is influenced by the combination of their professional and personal knowledge base, which is developed through both formal and informal educational experiences (Kumaravadivelu, 2001).

The context in which professional education operates today is changing on a regular basis. Because of technological advancements, globalisation of education, expanding specialisations, and the complex nature of the educational process, each profession is distinguished by an explosion of information and skills. The conditions and advancements need a greater emphasis on continuous professional development among teachers. There is a growing agreement that CPD assumes a greater importance since the schools aspire to become learning organisations. This idea of learning organisation has gained popularity in recent years. This is because the organisation came to realize that there is an urgent need for innovativeness and effectiveness which pave the way for the adaptability to change.

The importance of professional development in establishing excellent teaching practices cannot be overstated. Those associated with the teacher development programme, including teachers themselves, must realize that professional development for teachers is neither straight, one-time, nor recurring. It is a comprehensive and ongoing process that lasts forever. Teachers must be aware of the possibilities for learning and growth that exist in the accessible resources.

Teachers explore globally the ideas and use formal and informal activities to enhance and broaden their perspectives if they have a choice. Teacher's learning process are being refined and transformed by the contemporary trends in professional development which impact classroom practice around the world. Our evolving learning objectives, along with changes in the focus of the curriculum and a greater awareness of teacher learning and student achievement, have produced new insights on the effects of teacher professional development and the most effective ways to refine teachers' abilities. Professional development that focuses classroom practices and is grounded in research, both in terms of content and methodology, is productive. Effective professional development provides teachers with research-based understanding about how students learn while also engaging them in the given subject they teach.

In different forums and studies, the necessity of consistency between initial teacher preparation programmes and continuous professional development has been examined and disputed. The need of the hour is to make it meaningful by integrating the various phases of teacher training programmes in a practical manner. Initial teacher education programmes may help a teacher build a firm foundation of the information and abilities they will need for their job, and continuing education programmes can help them modify and adapt that foundation to changes in the teaching environment. The process of revision and modification is influenced by both the teacher and the programmes they are given (Singh, et al., 2019).

Every teacher must be provided with opportunities to learn and experiment with new ideas. They need a kind of professional enrichment which must be able to address the demands and questions by utilizing the recent research findings. Teachers, as leaders of learning communities, must, of course, have possibilities to learn and develop as professionals, and these possibilities must be according to their specific requirements. Professional development integrated in the curriculum enables educators to become the most confident leaders of teaching. Teachers must recognise how important this is, since providing teachers with all they need to succeed is the best way to make sure they will do the same for their learners. More

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than ever, teachers need a lot of help in their professional development as they navigate the murky depths of education in the after-math of Covid-19 (Brown, Correll & Stormer, 2021).

Creative teacher professional development is critical for improving teaching methods in India. In recent years, India has placed a greater focus on teaching quality, partially as a result of the realisation that rapid increases in school enrolment and attendance are not translating into gains in students' learning outcomes and achievements. India's education system has a number of flaws when it comes to teacher professional development. In India, current teacher professional development approaches largely prevent teachers from taking control of their own learning through teacher intervention and cooperation. Innovative technology, particularly online settings, can play a critical role in assisting instructors in adopting improved professional development methods. Professional learning networks, both within and outside of schools, can provide broad possibilities for professional development by allowing teachers to learn from and with one another. Teacher professional development using learning networks may thus be leveraged to maximise its potential for increasing India's educational quality (Khan, 2017).

In order to keep abreast with new developments in their fields and to get continuous support for the progress of their teaching techniques, teachers should not only receive initial teacher education but also in-service training and professional development. It takes a lifetime to learn how to teach. There is always a chance that a teacher may become caught in the past, delivering the same style of teaching year after year, despite the fact that human knowledge is advancing and facts are evolving. Neither the pupils nor the teachers find this scenario to be satisfactory. The assistance required for classroom instructors to look for new ways, test new methods, and find new approaches must be provided. To accomplish this in-service training and professional development aimed at assisting teachers in their investigation of novel teaching approaches are essential.

The National Education Policy (NEP) 2020, which was announced by the Government of India in July 2020, has emphasized the importance of continuous

professional development (CPD) for teachers. The NEP 2020 recognizes that the quality of education depends largely on the quality of teachers, and therefore, it is essential to invest in the professional development of teachers to enhance their knowledge, skills, and competencies. Under the section on Teachers, the NEP 2020 has included a subsection titled 'Continuous Professional Development.' This subsection highlights the need for teachers to engage in lifelong learning and professional development to keep up with the latest developments in their field and improve their teaching practices. It also emphasizes the use of technology to deliver CPD programmes and the need for collaboration between teachers and educational institutions for effective implementation of CPD programmes. By using the globally accepted terminology 'CPD,' the NEP 2020 has moved away from the traditional concept of 'in-service education' for teachers. The use of the term 'CPD' is more inclusive and recognizes the diverse learning needs of teachers, including formal and informal learning, and different modes of delivery. This change in terminology reflects the shift towards a more learner-centric approach to professional development, where teachers are seen as active participants in their own learning and development.

Section 5.2 of National Policy on Education presents some practical ways to make CPD effective for the teachers in India. It envisions the development of a common guiding set of National Professional Standards for Teachers (NPST) by 2022. The NPST will be developed by the National Council for Teacher Education (NCTE) in consultation with the National Council of Educational Research and Training (NCERT) and coordinated by the NCERT, State Councils of Educational Research and Training (SCERTs), teachers from across levels and regions, expert organizations in teacher preparation and development, and higher educational institutions. The NPST will cover the expectations of the role of the teacher at different levels of expertise/rank and the competencies required for that rank. It will also comprise standards for performance appraisal for each rank that would be carried out on a periodic basis. The NPST will inform the design of pre-service teacher education programmes and could be adopted by states to determine all teacher career management, including tenure (after the probationary/tenure track

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period), professional development efforts, salary increases, promotions, and other recognitions. Promotions and salary increases will not occur based on the length of tenure or seniority, but only on the basis of performance appraisal. The professional standards will be reviewed and revised nationally in 2030 and thereafter every ten years, based on a rigorous empirical analysis of the efficacy of the system. The development and implementation of the NPST are expected to raise the standards for teachers in India, promote excellence in teaching, and ensure that teachers are equipped with the skills and knowledge needed to meet the needs of 21st-century learners.

The NEP 2020 emphasizes the importance of continuous professional development (CPD) for teachers and aims to provide them with various opportunities to improve their skills and knowledge. To ensure flexibility, a modular approach to CPD will be adopted, and teachers will have access to local, state, national, and international teaching and subject workshops, online modules, and platforms for sharing ideas and best practices. Teachers will be expected to participate in at least 50 hours of CPD opportunities every year, which will be driven by their own needs and choice. The CPD opportunities will focus on the latest pedagogies, including foundational literacy and numeracy, formative and adaptive assessment of learning outcomes, individualized and competency-based learning, and related pedagogies, such as experiential learning, arts-integrated, sports-integrated, and storytelling-based approaches.

The schools in India function under an 'expert culture,' in which teachers are expected to follow the recommendations of experts and authorities rather than relying on their own knowledge and abilities, according to the report. To put it another way, teachers work in adverse circumstances with little autonomy (Bolitho & Padwad, 2015). The constrained view of existing teacher professional development practices in India overlooks an important goal: the need for teachers to take responsibility of their own learning and the role of teachers' intervention and collaboration in this process (Khan, 2017).

Kerala is reinvesting heavily in public education to ensure that its students are prepared for a changing world, equipped with information, knowledge and skills, which will help them to compete with fellow students from around the world. Every student has a right to an excellent education. Interventions made in public education in Kerala are intended to guarantee that students' rights to high-quality education are ensured. Through the mission, *pothu vidyabhyasa samrakshana yajnam* (Public education rejuvenation mission), schools are expected to be centers of excellences by uplifting them into international benchmark. It aims to restructure education which suits the making of 'navakerala' (Varma, 2018). There is a fundamental question. Without continuous professional development, how can teachers learn to cope with the needs of 21st century learners? The mission is setting ambitious goals for teachers because changes that have to be taken place in our classrooms completely depend on our teachers. The vision demands a great deal of learning on the part of the teachers. This highlights the demand of professional development of teachers which helps them enrich their profession and enrich their skills. Learning and innovation skills such as communication, creativity, collaboration and critical thinking (the 4Cs) are vital for our students' success in life and work in the 21st century. Teachers must equip themselves with these skills and facilitate the environment and learning for children to acquire them. Consequently, professional development should inspire educators to try out novel approaches or technologies in the classroom, think about how they affect students' learning, take further actions to fulfill their goals, and then share their experiences. Reflective discussion sessions based on prior and present classroom experiences, collaborative learning, reflective diaries/journals or portfolios, and teacher-led activities that offer ample opportunities for teachers' decision, individual freedom, participatory learning should all be included as its components.

For a successful change in the public education rejuvenation mission, it is imperative that teachers are equipped with skills and knowledge which allow them to develop the competencies that are sufficient to cater the diverse expectations of students, parents and the society. The general education in Kerala is currently undergoing unprecedented reform that is posing immense challenges as well as

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opportunities for teacher development. Even if our schools have excellent infrastructure in the form of various equipment, buildings, textbooks, and curricula that are appropriately and adequately adapted to the needs of the community, if the teacher is inadequate or insufficient in her responsibilities, the entire system is likely to be ineffective and wasteful. The important premise that the quality of education is the primary predictor of diversity in student success underlies the requirement for professional development that focuses on quality. A competent and efficient teacher is one of the most vital factors in any educational setting. The teacher is defined as the professional force and the most directly accountable person in the learning process; he/she is in responsibility of ensuring that pupils learn and prosper or suffer as a result of the grade of his teaching. Considering this, the teacher and the effectiveness of teaching are constantly debated and given prominent relevance in education.

When educators learn new teaching tactics through professional development, they could come to the classroom and modify their teaching styles and curriculum to better meet the needs of their students. However, because these modifications are often applied gradually, they are difficult to assess. Professional development for teachers improves the efficiency of their preparation, presentations and programme evaluations by introducing educators to innovative delivery techniques, evaluation styles, and record-keeping tactics (Guskey, 2002).

Thousands of teachers are rethinking every aspect of their role, including their interactions with students, colleagues, and the public, the methods and strategies they use, their rights and obligations, the structure of the curriculum, what benchmarks to set, and how to determine whether they are being met, as well as their initial preparation as teachers and ongoing professional development. In a nutshell, teachers are, redefining both themselves and their profession in order to serve schools and students in a better manner. So the teachers should be provided with a range of in-service training opportunities. Those who want to enhance their teaching skills, as well as those who want to learn more about the subjects they teach, must seek appropriate opportunities. There must also be opportunities for teachers to

develop their skills and knowledge in order to be competent to teach in other disciplines or at different levels of the school system. The teacher must be provided a lot of flexibility in deciding what form of training is best for him or her (Fredriksson, 2004).

Need and Significance

CPD is commonly associated with in-service training programmes, which are typically one-time, isolated, short-term, and occasional training activities. According to Bolitho and Padwad (2013), CPD is correlated to teachers' capacity to 'effectively' teach specified courses, manage their classrooms, and assure satisfactory performance of students in examinations by administrators and school managements. However, seeing CPD as In-service Education and Training (INSET) is a very limited perspective. It should be viewed broadly as a lifelong process of teacher growth after entering the profession. It is a process of both formal and informal lifetime learning that involves both volunteer teacher efforts and programmes that are externally designed and imposed by authorities.

CPD initiatives other than formal INSET programmes are not received ample support. The other forms of CPD like attending conferences, publication in journals, acquiring higher qualifications, have not been generally acknowledged and appreciated for long. Most schools in India officially recognise and support only those professional development activities that are approved, governed, and managed by the central and state governments, whereas professional learning activities or programmes based on teachers' own aspirations and initiatives are not identified or supported. (Padwad & Dixit, 2015). The restricted view of CPD as only comprising INSET programmes has led to a lack of recognition and support for other forms of CPD activities. This has a number of consequences for professional development.

Primarily, the exclusive focus on INSET programmes may lead to a lack of diversity in professional development opportunities. INSET programmes are typically designed by educational institutions or organizations and may not reflect the specific needs and interests of individual teachers or professionals. By recognizing and supporting a wider range of CPD activities, there is greater

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opportunity for individuals to engage in professional development that is tailored to their own needs and interests.

It is also to be noted that the limited view of CPD as only INSET programmes may create an unequal playing field for professional development opportunities. Only those who have access to official INSET programmes may be able to receive recognition and support for their professional development efforts. This can be particularly disadvantageous for individuals in remote or disadvantaged areas who may not have easy access to such programmes.

In conclusion, recognizing and supporting a broader range of CPD activities is important for promoting diverse and inclusive professional development opportunities that meet the needs and interests of individual professionals. It is important to acknowledge the value of attending conferences, obtaining additional qualifications, and forming learning communities alongside official INSET programmes because attending conferences, obtaining more qualifications, and establishing learning communities can be valuable avenues for professional development. Conferences provide opportunities for individuals to gain new insights, share their own knowledge, and network with other professionals. Obtaining additional qualifications allows individuals to acquire new skills and knowledge in a structured way, while forming learning communities enables professionals to collaborate and learn from one another.

However, occasional signs of hope have begun to emerge, like the teachers voluntarily undertake action researches, participation in academic events, forming teachers' forums and thereby adding to their professional competency.

Several institutions in Kerala are actively engaged in planning and implementing in-service programmes for primary school teachers. These institutions have a common goal of enhancing teachers' professional development and improving the quality of primary education. Here are some key institutions involved in these initiatives.

The Directorate of General Education (DGE) in Kerala plays a key role in the professional development of teachers, including primary teachers, by collaborating with various agencies to organize different types of professional development initiatives.

The State Council of Educational Research and Training (SCERT) is a government organization in Kerala that holds responsibility for the academic and curriculum development of schools. It plays a crucial role in organizing in-service training programmes for primary school teachers. SCERT is responsible for designing and conducting workshops, seminars, and training sessions aimed at enhancing teachers' knowledge, pedagogical skills, and teaching methods. These initiatives are intended to keep teachers updated and improve their overall effectiveness in the classroom.

In addition to its broader objectives, Samagra Shiksha Kerala (SSK) also focuses on the professional development of teachers through in-service training programs. It recognizes the importance of professional development for teachers and emphasizes the role of in-service training in enhancing their capabilities. By providing targeted and well-designed training programmes, Samagra Shiksha Kerala aims to empower teachers and improve the quality of education in primary schools across the state.

District Institutes of Education and Training (DIETs) play a crucial role in teacher education and professional development at the grassroots level. DIETs play a pivotal role in equipping teachers with the requisite skills and knowledge to excel in their profession. They offer comprehensive training programmes that empower teachers to enhance their teaching methodologies, pedagogical approaches, and subject-specific expertise. By conducting workshops and training sessions, DIETs promote the adoption of effective teaching practices among educators. They introduce innovative methods, modern educational technologies, and assessment techniques that enable teachers to create engaging and inclusive learning environments.

Kerala Infrastructure and Technology for Education (KITE) is indeed an important agency in Kerala that focuses on promoting technology-enabled education in schools. In addition to integrating technology into classrooms, KITE also plays organizes CPD programs specifically designed to help primary teachers integrate technology effectively into their teaching practices. These programs aim to familiarize teachers with various educational technologies, software applications, digital content, and online resources that can enhance the learning experience for students.

However, the prevailing professional development programme in Kerala is seemed to be very narrow, restricted and very often confined to mere in-service trainings which are broken and isolated. They are insufficient to meet the demands of the teachers who address the needs of 21st century learners. Professional preparation includes TTC/ D.Ed / D.El.Ed/ B.Ed with relatively very little field experiences. Eventhough D.El.Ed course has 100 days and B.Ed has 80 days school internship programme, they are not sufficient to excel in the profession. It is felt that they are not adequate to provide a practical experience in pedagogy and methodology. Effective, research-based professional development can help to bridge the gap between pre-service teacher education and advanced practice. More significantly, high-quality professional development may lead to increased student success and school effectiveness (Holloway, 2006).

The quality of primary education has a decisive role in determining the quality of a nation. The quality of teachers is the crucial factor in deciding the quality of primary education. This itself implies the need of the hour to focus on the professional development of primary teachers. The importance of having a professional attitude when it comes to increasing the quality of elementary education cannot be overstated. As a result, primary school teachers demand special attention in the study since basic education is the cornerstone of all education system of education.

Substantial research should be conducted in the area of teacher professional development. Furthermore, teachers must be well informed about the results of such

research studies. This will be claimed to have a significant impact on education, highlighting the fact that teachers should be in continuous interaction with research for potential future teaching innovations, as well as integrating latest research into their teaching practices, in order to enhance learning and ensure high-quality teaching.

A study on CPD among primary school teachers is of great significance in the context of Kerala for several reasons. Firstly, CPD programmes offer teachers valuable opportunities to update their knowledge and skills, ensuring they stay well-informed about the latest pedagogical techniques and teaching methodologies. In Kerala, where education is highly valued and the literacy rate is among the highest in India, providing teachers with access to quality CPD programmes significantly enhances the overall teaching standards in primary schools. Secondly, the curriculum and educational policies undergo regular revisions to align with evolving societal needs and global trends. Conducting a study on CPD helps identify specific areas where primary school teachers may require additional training to effectively implement these changes. By ensuring that teachers are equipped with the necessary knowledge and skills, the study can contribute to the successful delivery of the curriculum in Kerala's primary schools. Moreover, Kerala has a diverse student population with varying needs, including students from different socio-economic backgrounds, varying academic abilities, and those with special needs. CPD programmes assist teachers in developing strategies to address this diversity and provide inclusive education. By understanding the specific needs of students in Kerala, the study can guide the development of tailored CPD programs that effectively cater to the diverse student population.

Furthermore, CPD helps them stay motivated, improve their teaching practices, and develop a reflective approach to their work. By conducting a study on CPD among primary school teachers in Kerala, the findings inform the design of targeted professional development initiatives that address the unique needs and aspirations of the teachers. This, in turn, enhances their job satisfaction and retention, ultimately contributing to the overall quality of education. Additionally, a

study on CPD enables the identification of gaps in teacher knowledge or skills, leading to potential improvements in the quality of education. By investing in effective CPD programmes, Kerala enhances the overall educational experience for students, resulting in improved learning outcomes.

Overall, conducting a study on CPD among primary school teachers in Kerala is crucial to understanding the specific challenges and requirements within the local context. It can serve as a foundation for the development and implementation of tailored CPD initiatives, ultimately improving the quality of education and supporting the professional growth of teachers throughout the state.

As for the researcher, the study stemmed from her general interest in engaging CPD. Improving herself in general and professionally is an essential thing that makes her feel alive. The experience of the researcher as a student, teacher, teacher educator and a faculty member in District Institute of Education and Training has provided numerous opportunities to understand the field of education in general and teacher education in particular. Besides her interaction with educational experts, administrative officers, policy makers etc. have also provided a vivid picture of the prevailing system. Moreover, a deeper analysis of theories and practices on CPD gave understanding and insight in the research area.

It highlights the neglect that has been shown for giving due consideration to teachers' opinions and their perceived requirements in terms of professional development. The outcomes have impacted on how we approach and organise professional development programmes and provide a guideline for initiating to highlight improving the quality of educational support we provide teachers while continuing to expect them to deliver high-quality learning experiences for children.

It becomes critical to understand the attitude of primary teachers towards CPD and the different professional development opportunities they do receive during their professional development journey. It is also imperative to consider the challenges these teachers come across while pursuing their professional development. Likewise, it is also important to go in-depth to understand continuous professional development experiences of primary school teachers of Kerala and to

identify and explore the challenges experienced by educational officers during the implementation of continuous professional development programmes among primary school teachers of Kerala. This will obviously help to suggest strategies on the basis of research experience to overcome the challenges of Continuous Professional Development implementation among primary school teachers of Kerala.

Despite the fact that the researcher initiated her investigation prior to the Covid-19 outbreak, the study encountered numerous unforeseen conditions while the pandemic was spreading over the globe. At multiple levels, the pandemic altered the responsibilities of teachers and educators. With e-learning being the sole option for schooling to continue, teachers' roles underwent a significant shift. The change was abrupt and unexpected for everyone involved in the education environment, and it accompanied with it its own host of concerns. This, in fact necessitated the researcher to add a few more research questions during her journey of investigation.

The present study tries to explore primary school teachers' attitude towards Continuous Professional Development (CPD) in Kerala as well as the opportunities they receive and challenges encountered by them in participating in CPD programmes and the barriers faced by the educational officers.

Statement of the Problem

The present study is entitled as “Attitude, Opportunities and Challenges of Continuous Professional Development among Primary School Teachers of Kerala”.

Definition of Key Terms

Attitude

“An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related.” (Allport, 1933)

In the present study, Attitude is defined as the way in which a person responds to the self-initiated professional development activities and system providing opportunities in a consistent way.

Opportunities

“...an occasion or situation that makes it possible to do something that you want to do or have to do, or the possibility of doing something”. (Cambridge Dictionary, n.d.)

In the present study, Opportunities refer to various situations, programmes, or resources that enable individuals to enhance their skills, knowledge, and abilities related to their profession.

Challenges

"...something that requires great effort to achieve or overcome, such as a difficult problem or obstacle". (Merriam-Webster, n.d.)

In the present study, Challenges refer to the difficulties or barriers that the teachers face during professional development activities and the obstacles faced by educational officers during the implementation of professional development programmes.

Continuous Professional Development

Continuous Professional Development is an ongoing process encompassing all formal and informal learning experiences that enable all teachers in schools, individually and with others, to think what they are doing, enhance their knowledge and skills and improve ways of working so that the pupil learning and well-being are increased as a result. It should...encourage a commitment to professional and personal growth; and increase resilience, self-confidence, job satisfaction and enthusiasm to work with pupils and colleagues (Bubb and Early, 2007)

It “...is a process by which individuals take control of their own learning and development, by engaging in an on-going process of reflection and action. This

process is empowering and exciting and can stimulate people to achieve their aspirations and move towards their dreams.” (Megginson & Whitaker, 2004, p.5).

“Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives.” (Day, 1999, p.4)

The OECD Teaching and Learning International Survey (TALIS) conducted in 2009 defined Continuous Professional Development (CPD) as a process that includes a range of activities designed to improve a teacher's skills, knowledge, expertise, and other qualities. The main goal of CPD is to help teachers enhance their effectiveness and continuously improve their performance in the classroom.

In the present study, CPD refers to the continuous self-initiated learning and development activities that professionals engage in to enhance their skills, knowledge, and competencies throughout their career and the professional development opportunities provided by the system.

Primary School Teachers

Primary school teachers refer to the group of teachers teaching from STD 1 to STD 7 of Government and Aided schools of Kerala.

Variables of the Study

Variables selected for the study are

Attitude

Opportunities

Challenges

Continuous professional development

Primary school teachers of Kerala

Classificatory Variables

- 1) District
- 2) Section in school
- 3) Type of management
- 4) Locale
- 5) Gender
- 6) Age
- 7) Years of service
- 8) Educational qualification

Objectives of the Study

The investigator fixed the following objectives for the present study

Main Objective

To study and explore the attitude, opportunities and challenges of Continuous Professional Development among primary school teachers of Kerala

Specific objectives

1. To find out the level of attitude towards Continuous Professional Development among primary school teachers of Kerala.

2. To find out the level of opportunities for Continuous Professional Development among primary school teachers of Kerala.
3. To find out whether there exists any significant relation between the attitude towards Continuous Professional Development and the opportunities for Continuous Professional Development among primary school teachers of Kerala.
4. To find out whether there exists any significant difference in attitude towards Continuous Professional Development among primary school teachers for relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.
5. To find out whether there exists any significant difference in the opportunities for Continuous Professional Development for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and academic qualification.
6. To go in-depth to understand continuous professional development experiences of primary school teachers of Kerala.
7. To identify and explore the challenges experienced during the implementation of continuous professional development programmes among primary school teachers of Kerala.
8. To suggest strategies on the basis of research experience to overcome the challenges of Continuous Professional Development implementation among primary school teachers of Kerala.

Hypotheses

1. There exists a significant relation between the attitude towards Continuous Professional Development and the opportunities for Continuous Professional Development among primary school teachers of Kerala.

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2. There exists a significant difference in attitude towards Continuous Professional Development among primary school teachers for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.
3. There exists a significant difference in the opportunities for Continuous Professional Development for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.

Method

Research Design

The study used a mixed-method design. A mixed method design uses a plan of enquiry that involves data collection both quantitative and qualitative at the same time or one after another to have a better understanding of the research problem (Creswell, 2006). Mixed methods allow qualitative findings to explain quantitative results, increasing the study's validity and dependability. As a result, the potential limitation of one method is outweighed by the strength of the other method. This study adopted Explanatory Sequential Mixed Methods Design (Ivankova, 2002). The method is called 'explanatory' as the quantitative data results are explained with the qualitative data and sequential as one phase follows the other (Creswell, 2009).

The study carried out in two phases. The quantitative data collection stage using survey instrument preceded the qualitative data collection phase which utilised Focused Group Discussions and in-depth semi-structured interviews.

Sampling

In the quantitative phase, the sample selected was 600 primary teachers from government and aided schools. The teachers included both male and female from rural and urban schools. During the qualitative phase 26 primary teachers were selected for focused group discussion and six educational officers representing

various educational agencies that coordinate and implement continuous professional development programmes for primary teachers were selected for in-depth interview.

Tools and Techniques used for Data Collection

1. Continuous Professional Development Assessment Scale (Rachana and Meera, 2020)
2. Schedule for Focused Group Discussion to assess the attitude, opportunities and challenges of Continuous Professional Development Programmes (Rachana and Meera, 2021)
3. Semi-structured Interview schedule (Rachana and Meera, 2022)

Statistical Techniques

- Descriptive statistics
- Inferential statistics
- Thematic analysis

Scope of the Study

The study will yield a plethora of benefits for the education system and research. At the outset it detects and highlights gaps in CPD programmes, thus paving the way for the development of more effective and targeted CPD programmes that cater to the specific needs of primary school teachers. The study can also uncover valuable insights into the attitudes of primary school teachers towards CPD, leading to a better understanding of how to motivate them to engage in professional development activities. By doing so, the study can contribute to the improvement of teacher motivation and performance, leading to better classroom outcomes for students. The study's insights into primary school teachers' attitudes towards CPD can also contribute to the development of new theoretical frameworks that can help to explain the role of CPD in teacher development and the factors that influence teacher engagement in CPD. By deepening our understanding of the underlying mechanisms that drive CPD, the study can help to inform the

development of more effective CPD programmes that are suited to the needs of primary school teachers.

This study allows us to evaluate and comprehend what drives teacher participation in Kerala public education system. The analysis of the data allows us to investigate how individual teachers and broader school-level factors as well as state or national level agencies and opportunities influence teacher CPD participation. The study expects that the result and the information will be valuable for anyone who is interested in, as well as responsible for an improvement and implementation of continuous professional development programmes. It is hoped that the study has the potential to contribute significantly to the ongoing effort to improve teacher quality and student outcomes, and its findings can inform the design and implementation of effective CPD programmes. This study will serve as a compelling reminder that we can always do something better in the better way. Through ongoing research and evaluation, we can continue to identify areas where CPD programmes may be lacking or insufficient and work towards developing new and better approaches to teacher development. By embracing a growth mindset and committing to continuous improvement, we can ensure that our primary school teachers have the support they need to provide the highest quality education for our students.

Organization of the Report

Chapter 1

This chapter of the report contains need and significance of the study, statement of the problem, definition of key terms, variables, objectives, hypotheses, methodology in brief, scope of the study, delimitations of the study, and organization of the report.

Chapter 2

It gives the theoretical overview and review of related studies on Continuous Professional Development . A brief summary of related studies is also presented.

Chapter 3

This chapter presents the description of methodology of the study. Variables, tools, sample, data collection procedure and statistical techniques used in the study are presented.

Chapter 4

This chapter presents the detailed results of Preliminary analysis, , Mean difference analysis, correlation analysis and One-way ANOVA. It also gives a detailed picture of the analysis and discussion of focused group discussions and in-depth interview.

Chapter 5

The last chapter provides a summary of the study along with major findings, conclusion, educational implications, limitations and suggestions for further research.

Chapter II

REVIEW OF RELATED LITERATURE

- ❖ *Theoretical Overview of Continuous Professional Development*
- ❖ *Review of Related Studies*

A literature review is vital for generating a research concept, synthesizing what is previously known about a subject, and identifying any knowledge gaps and how our study may add to deeper understanding (Xiao & Watson, 2019). A review of relevant literature is a written summary of articles, books, and other documents that summarises the historical and current level of knowledge on a topic, classifies the literature into categories, and establishes the necessity for a suggested research. This review serves to illustrate the necessity for a research as well as the fact that previous studies have not explored the same problem in the same way (Baumeister, & Leary, 1997).

The investigator reviewed relevant literature from numerous sources concerning the current study and attempted to offer a concise outline of it. The present study is an attempt to study the attitude of primary teachers towards continuous professional development, the opportunities available to them and the challenges these teachers as well as the educational officers face during their journey of CPD. The investigator has reviewed a number of studies and they are summarized and presented under the following sections.

- Theoretical overview of Continuous Professional Development
- Studies related to Continuous Professional Development

Theoretical Overview of Continuous Professional Development (CPD)

Continuous Professional Development (CPD) - Definitions

Different scholars have defined CPD in various ways. Some relevant definitions are highlighted here.

Day's (1999) definition of CPD includes any behavior which brings about considerable impact on classroom change. According to him, "Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives." (Day, 1999, p.4)

Kelchtermans (2004) defines CPD as "a learning process resulting from meaningful interaction with the context (both in time and space) and eventually leading to changes in teachers' professional practice (actions) and in their thinking about that practice." (p. 220)

In the definition of Padward and Dixit (2011) CPD is viewed broadly as a much deeper, broader, and longer-term process in which professionals continuously improve not only their knowledge and skills, but also their thinking, understanding, and maturity; they grow not only as professionals, but also as people; and their advancement is not confined to their occupations, but may also extend to novice roles and responsibilities. CPD is considered to be "...a planned, continuous and lifelong process whereby teachers try to develop their personal and professional qualities, and to improve their knowledge, skills and practice, leading to their empowerment, the improvement of their agency and the development of their organisations and their pupils." (Padwad and Dixit, 2011, p.10)

CPD is a continuing activity of education, training, learning, and support activities that are taking place in either external or work-based settings; engaged in by qualified, educational professionals; aimed primarily at promoting learning and development of their professional expertise, skills, and values; and to assist in determining and integrating valued changes in their teaching and learning behaviour

so that they will always educate their students more effectively, thus achieving an approved benchmark (Bolam,2002).

For Bubb and Earley (2009), CPD is an ongoing process encompassing all formal and informal learning experiences that enable all staff in schools, individually and with others, to think about what they are doing, enhance their knowledge and skills and improve ways of working so that pupil learning and wellbeing are enhanced as a result... creating opportunities for adult learning, ultimately for the purpose of enhancing the quality of education in the classroom

Difference between CPD and INSET

CPD and INSET are terms which tend to be used interchangeably. CPD is a broad term that encompasses a range of activities and approaches to professional learning and development. Teachers often view CPD as limited to attending courses, conferences, and whole-school INSET days to meet state and national requirements, while on-the-job learning is seen as separate from CPD and simply part of their job. However, research suggests that effective CPD encompasses several aspects beyond one-off events, which deviates from the commonly-held perception of CPD. Studies by Edmonds and Lee (2002), Hustler et al. (2003), and Robinson and Sebba (2004) highlight different dimensions of effective CPD. INSET activities delivered by external agencies are just one part of CPD, which also includes on-the-job training, coaching and mentoring, self-directed learning, and participation in professional associations and communities of practice, among other things. Traditional types of INSET's limitations plainly point to the need for a more diverse repertoire of professional development options for teachers (Joyce and Showers, 1988). The National Curriculum Framework for Teacher Education (NCFTE), which is an important policy document of the National Council for Teacher Education (NCTE), uses the terms INSET and CPD interchangeably. However, the NCFTE does provide various methods through which CPD can be dealt with. The limited perspective of CPD as only being INSET programmes has resulted in only these official INSET programmes being acknowledged and assisted, while other types of CPD activities

like attending conferences, obtaining more qualifications, or establishing learning communities are mostly not acknowledged (Bolitho & Padwad, 2015).

Aims and Outcomes of CPD

The aims and outcomes of Continuing Professional Development can vary depending on the context and goals of the individual or organization involved.

According to OECD (2009), professional development activities help in

- to enhance individual's understanding of a topic in light of current developments in the field;
- to update people's abilities, attitudes, and methods in light of current educational research, situations, and instructional methods and objectives;
- to enable schools to create and implement new techniques regarding the curriculum and other parts of teaching practice;
- to enable schools to create and execute new techniques regarding the curriculum and other areas of teaching practise;
- to share knowledge and skills among teachers and others, such as academics and industrialists;
- to support in the transformation of weaker teachers.

NCFTE (2009) has rightly observed the broad goals of teacher continuing professional development programmes. They are to:

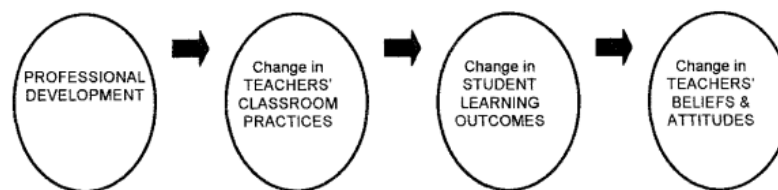
- Explore, reflect on, and improve one's own practice.
- Strengthen and refresh one's understanding of one's academic discipline or other areas of school curriculum.
- Investigate and reflect on students and their learning.

- Understand and keep up to date on educational and social topics. Prepare for additional careers in education/teaching, such as teacher education, curriculum development, or counselling.
- Break out from intellectual isolation by exchanging experiences and thoughts with others in the field, including teachers and academics working in specialised fields, as well as intellectuals in the immediate and global society.

Change in teachers' classroom practices, change in their attitudes and beliefs, and change in students' learning outcomes are the three main objectives of professional development programmers, according to Guskey (2002).

Figure 1

A model of professional change



Note. Adapted from Professional Development and Teacher Change by Guskey, T.R (2002), p. 183.

However, the order in which these objectives are achieved can be critical in promoting meaningful and sustainable reform. The aim of professional development programmes is to support the growth and development of teachers, which in turn can lead to improved student learning outcomes. By focusing on these three objectives, professional development programmes can help teachers improve their instructional practices, develop a positive attitude towards ongoing learning and professional growth, and ultimately support the success of their students.

Harland and Kinder (1997) suggested the following nine possible types of outcomes of CPD:

Materials outcomes—They are physical resources produced as a result of participating in CPD programmes. Instructional aids such as worksheets or activities are examples.

Informational outcomes — The condition of being informed or aware of background facts and news concerning curricular and managerial advancements, including their consequences for practise, is characterised as informational outcomes. It differs from new knowledge and skills, which are meant to suggest a more critical and in-depth understanding. Factual information, such as new policies or programmes are examples.

New awareness (a term frequently used by teachers) is described as a perceptual or conceptual change from past assumptions about what constitutes adequate material and delivery of a certain curricular area. A perceptual change, with teachers becoming aware of new concepts and ideals are included here.

Value congruence – Value congruence outcomes imply the individualised versions of curriculum and classroom management that shape a practitioner's teaching, as well as the extent to which these 'individuated codes of practice' correspond with the INSET providers' messages about 'excellent practice.' the proportion to which teachers' personal values and attitudes align with those promoted by the CPD.

Affective outcomes – Affective outcomes recognise that all learning circumstance involves an emotional experience. It affirms how teachers feel emotionally well after CPD, which can be unpleasant (e.g. demoralised) or favorable (e.g. confidence).

Motivation and attitude - Motivational and attitudinal outcomes refer to increased excitement and motivation to apply concepts learned through CPD events into action. For example, a teacher may be 'motivated' to emulate an advising teacher's working style after observing it. Changes in teachers' views regarding their self-concept, occupational identity, professional development - and the CPD process itself - can also result in this sort of outcome. Passion and drive to make changes are examples.

Curricular and pedagogical knowledge and abilities, as well as awareness, adaptability, and critical thinking. The development of deeper levels of understanding, critical reflexivity, and theoretical rationales in relation to both curricular material and knowledge and skills are included here.

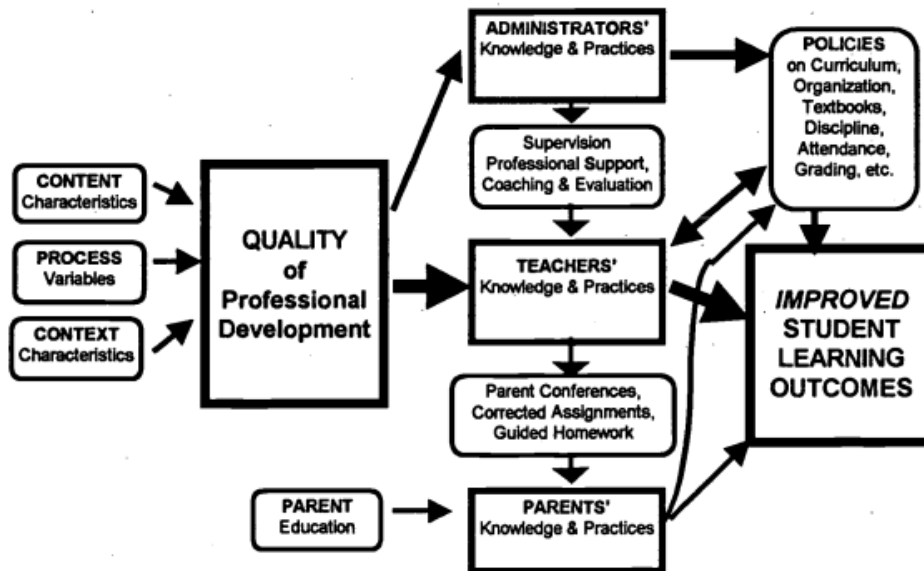
Institutional outcomes on teacher groups, such as consensus, collaboration, and support. Professional development can have a significant collective impact on groups of teachers and their practice, according to institutional outcomes. When attempting curriculum innovation in the classroom, the benefits of consensus, shared meanings, collaboration, and mutual support are well established in the research literature. School-based programmes or the work of school curriculum leaders were frequently targeted at achieving institutional outcomes.

Relationship between CPD and Students' Learning

The proposed theoretical model of the relationship between professional development activities and improvements in student learning is illustrated in Figure 2. Content characteristics, process variables, and context characteristics are the three primary groups of those regarded to have the most immediate and direct impact on professional learning. The "what" of professional growth is referred to as content characteristics. They are about acquiring new skills, information, and understandings, which are the core of every professional development programme. The "how" of professional growth is referred to as Process Variables. Context variables include "who," "when," "where," and "why" of professional growth. They include the characteristics of the specific group of educators engaging in professional development activities, their organizational climate, and the pupils they serve (Guskey, and Sparks 2002).

Figure 2

Model of the relationship between professional development and improvements in student learning



Note: Adapted from *Linking Professional Development to Improvements in Student Learning* by Guskey, T.R. and Sparks, D. (2002), p.3

Training and development of the school personnel is linked to effective instruction, motivating students, and improving student achievement. The positive outcomes for students are also discussed by Cordingley et al. (2005). According to them effective CPD resulted in improvements in performance, including better test scores, increased decoding skills, and improved reading fluency, as well as demonstrable increases in student motivation to learn, better work organisation, the use of collaboration as a learning strategy, more sophisticated question-answering, and the creation of a wider variety of learning activities and strategies for students, all contribute to students' positive attitudes toward particular subjects.

Stages of Professional Development

The CPD Framework developed by the British Council (2015) is intended for teachers, teacher educators, or anyone else interested in or committed for teacher

professional development. The book shows the four relevant stages of professional development

Awareness: At this stage, the teacher has heard about the professional practice, but does not necessarily know much about it. They may have a general idea of what it is, but may not understand its importance or how to use it effectively.

Understanding: In this stage, the teacher has a deeper understanding of the professional practice and why it is important. They can explain it to others and may have started to use it in their teaching practice.

Engagement: At this stage, the teacher is actively using the professional practice in their work and is demonstrating competency in its use. They may have received training or support to help them develop their skills in this area.

Integration: This is the highest stage of development, where the teacher has a high level of competency in the professional practice and consistently uses it in their work. It has become a natural part of their teaching approach and is integrated into everything they do.

Overall, the framework emphasizes the importance of ongoing professional development and the need for teachers to continuously improve their knowledge and skills to enhance their teaching practice.

Steffy and Wolfe (2001) developed a six-phase career life cycle, in which progress is fueled by reflection and renewal mechanisms or slowed by retreat. The earliest stages are as follows: When pre-service teachers first face the praxis experience as part of their teacher education degree, they are in the novice phase. Apprenticeship Phase- when teachers are given responsibility for preparing and delivering instruction to students on their own - generally throughout the induction phase and into the second or third year of teaching – until integration and synthesis of knowledge, pedagogy, and confidence develop. Professionals in their mid-career fall into the next two or three phases. Professional Phase- As teachers' confidence rises, they begin to use student feedback to improve their abilities, closely tying their own learning and progress to those of their student groups. Expert Phase- at this

stage, teachers achieve the highest standards set in professional standards frameworks. Distinguished Phase occurs when particular “gifted” educators begin to influence decisions at city, state and national levels . It is suggested that professional development for these three stages should include collaboration and personalization through activities such as study teams, peer coaching, professional development seminars to examine assumptions, and serving as a mentor or coach; and the final phase following a career characterized by learning and renewal is the Emeritus Phase: retirement after a lifetime of achievement in education.

Models of CPD

Various scholars have identified different models of CPD amongst which the framework developed by Aileen Kennedy (2005) is widely discussed. Kennedy gives a framework for identifying and categorising the primary characteristics of a variety of CPD models. It analyses the circumstances under which each model may be implemented and investigates the type(s) of knowledge that can be created using that model. In general, nine models have been identified, which have been classified as follows:

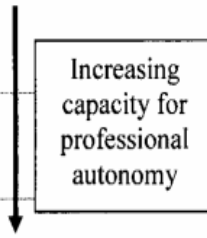
1. The Training Model- It is usually 'delivered' to the teacher by an 'expert,' with the deliverer setting the agenda and the participant playing a passive role. While the training can take place in the participant's current workplace, it is most usually offered off-site, and it is frequently criticised for its lack of relevance to the participants' existing classroom environment.
2. The Award-bearing Model- An award-bearing CPD model is one that depends on, or emphasises, the completion of award-bearing study programmes — frequently, but not always, certified by universities. Such external validation can be considered as a signal of quality assurance, but it can also be perceived as the validation and/or financing bodies exerting control.
3. The Deficit Model- Professional development can be tailored to overcome a perceived performance gap in teachers. This may be placed in the context of

performance management, which is already debatable in terms of its primary aim.

4. The Cascade Model-Individual teachers attend 'training sessions,' then cascade or disseminate the learning to colleagues, according to the cascade model. It is often used in circumstances where resources are very few.
5. The Standards-based Model-This is rigid in terms of teacher learning and presumes the existence of an efficient teaching system. Although it could be quite constrained and restricting, it might be helpful for creating a common language.
6. The Coaching/Mentoring Model- The coaching/mentoring model encompasses a number of CPD techniques built on a variety of philosophical foundations. But what distinguishes this approach is the significance of the one-on-one interaction, usually between two teachers, which is intended to encourage CPD.
7. The Community of Practice Model- Even if they have the potential to be successful by merging the knowledge bases of members, they may prevent active and creative innovation of practice.
8. The Action Research Model-Action research has been recognised as an effective form of CPD for helping teachers to raise critical questions about their practices. Furthermore, an action research methodology offers a lot of potential for transformational practise and professional autonomy.
9. The Transformative Model-The transformational model's defining feature is its effective integration of the many models discussed above, as well as a true understanding of power concerns, i.e. whose goals are being met through the process.

Figure 3*Spectrum of CPD model*

Model of CPD	Purpose of model
The training model The award-bearing model The deficit model The cascade model	Transmission
The standards-based model The coaching/mentoring model The community of practice model	Transitional
The action research model The transformative model	Transformative



Note: Adapted from *Models of Continuing Professional Development: a framework for analysis* by Kennedy, A (2005). p.248.

Professional development programmes, according to Guskey (2000; 2002), usually aim to modify three things: teachers' classroom practises, teachers' attitudes and beliefs, and students' learning outcomes. He offered seven primary models of professional development for teachers, which are briefly summarised below:

1. Training- The most prevalent kind of professional growth is training. Typically, one or more presenters would communicate their ideas with a group of participants through a variety of group activities such as discussions, workshops, role acting, skill modelling, and coaching.
2. Observation/assessment: Observing others or being observed by others is an essential sort of professional growth since it provides for feedback, reflection, and analysis of the data gathered after the observation. Observation may be beneficial to both the observer and the observed since it stimulates collaboration.
3. Participation in curriculum development and improvement: Teachers can collaborate on initiatives such as developing curriculum, building new programmes, developing instructional methodologies, or fixing a specific problem. This work requires planning, reading, and research, as well as discussion and observation.

4. Study groups: This sort of professional development entails the entire school staff working together in small groups – as a learning community – to solve a shared problem in the classroom. Each group would choose a component of the problem and then collaborate to discover solutions.
5. Inquiry/action research: This sort of professional development allows teachers to participate in research activities in which they frame research questions related to their own teaching methods, gather and analyses data, analyses outcomes, and draw conclusions.
6. Individually guided activities: Self-directed and self-initiated learning are the foundations of this professional development activity. Teachers here set their own personal objectives and endeavor to accomplish them in a disciplined manner.
7. Mentoring: Mentoring is a practice that involves teaming a more experienced teacher with a less experienced colleague. They both collaborate on shared tasks that allow the less experienced to learn from the more experienced mentor through a wide range of activities.

According to Gaible and Burns (2005) the CPD models can be categorized into three, that is, programmes that are standardized, school level programmes and self directed one. These concentrate on the quick transmission of certain skills and material, frequently through a "cascade" or "train-the-trainer" strategy. Professional development programmes at the school level focus on longer-term change processes, typically through locally organised activities that foster on-site communities of practice. Individual or self-directed professional development programmes emphasize personalised, self-directed teacher professional development with little formal framework or assistance.

In 2001, Ruth proposed three models of professional development which teachers can follow. The first model is focused on academic studies at a higher level. The second organisational model is mostly school-based and school-focused, with professional development for teachers linked to school improvements. The third

paradigm is the teacher's own path to professionalism, which is typically backed by teacher unions and is taken and directed by the teacher individually in his or her classroom.

Principles of CPD

Some broad concepts about content and pedagogy would need to be kept in mind during the planning and implementation of various CPD programmes.

In their article entitled *Continuous professional development: a panacea for teachers*, Gartia and Sharma (2013) discusses Ferguson's (2006) principles of Continuous Professional Development. The first one is that CPD activities must be child centred because the true objective of CPD for educators is to make a difference in the learning and lives of students. Any effective CPD system must emphasise this point and assist participants in integrating their learning to student outcomes. Another important principle is that the programme should be educator centred. The educator must be "in charge" of designing their own CPD experiences in ways that benefit their own learning, application and reflection. The programmes should be designed in such a way that it must be in-depth so that learning can be effectively integrated in ways that benefit both educators and students. Continuity is another important principle because CPD don't ever stops. Continuous learning and growth are pursued by effective educators. CPD systems should be designed in such a way that educators can review and redesign CPD experiences that support their continued growth on a regular basis. Another relevant principle for designing CPD programme is that it should be context sensitive since every educator has a unique professional experience. To be most effective and responsive, CPD experiences should be according to the specific educator's students, school, and district. Group work should be prioritised as teachers do not work on its own. Meeting the needs of urban children and youth increasingly necessitates collaboration among educators and others to design effective learning. CPD should encourage and provide opportunities for this type of mutually dependent group learning and purpose. Research oriented CPD programmes should be entertained. At correct intervals, the educator gathers evidence of the impact of continuing professional development, which is then

validated by "friendly critics" who represent a larger constituency of professionals and stakeholders.

The principles put forwarded by NCFTE (2009) is given herewith.

- Programmes must be based on the premise of establishing "spaces" for communities of teachers to exchange their experiences in order to develop a better common professional foundation of individual experiences and ideas. It is critical to provide teachers with opportunities to develop and hear their own voices.
- Programmes must be created with a clear understanding of their objectives and how their methods will help them to realise these objectives. When programmes are executed, this alone may assure that they stay on course and feel "alive" rather than monotonous. This may also call for each group of trainers to actively contribute to the creation of the programme while bearing in mind a particular group of teachers or to modify an existing programme to suit a particular group of teachers. Programmes must also contain a strategy for post-programme assistance and train, orient and support faculty in the same.
- With regard to whether they require such a programme and why they should attend it, all programmes must get the support of the teachers' organisation concerned. For in-service programmes, especially those that are lengthy and aim to have an impact on practice, the principle of choosing the programmes to attend based on the teacher's own assessment of what he or she needs or is advised based on some valid assessment of professional requirement would provide a sound basis.
- On any account, interaction cannot be compromised.
- Programs' material must be such that teachers may connect with personal experience and find chances to consider these experiences.

- It is important to recognise the structural problems that have an impact on teachers' daily practices in order to address them as part of the motivating for change strategy. Additionally, supervisory structures and personnel must get training to support and create an environment that encourages teachers to plan and practice independently.
- Programmes that aim to advance or change standard practice must be designed to involve the same resource group extensively over time.
- Teachers already have a strong professional identity, teaching experiences, and views about students, themselves as teachers, and the teaching-learning process. Any in-service programme must recognise and respect the teacher's professional identity and expertise and work with and from it, whether its goal is to introduce new concepts, question established notions and presumptions, or simply impart subject knowledge.
- Teachers must be respected as professionals in any endeavor to improve their professional practice. This encompasses areas with training strategy and content, as well as with how trainings are advertised and carried out.
- Teachers are critical observers of the topics covered in in-service programmes because they are adults and professionals. Their evaluation of the training's quality and how closely it relates to their requirements will determine how much they learn from it.
- Without the development of an accompanying framework or theory on the process of learning and the goals of education, the practise of a teacher cannot be developed by quick-fix tactics and activities.
- Cynicism and training weariness are caused by overtraining, routine training, and superficial training.

Beavers (2009) put forward certain guidelines which will help in designing professional development programmes and considering teachers as adult learners. According to him teachers must be allowed to offer feedback on professional

development themes; make use of teachers' diverse experiences as learning opportunities; and keep issues practical and useful rather than theoretical and philosophical. It is important to facilitate peer-to-peer problem-solving discussion; provide options and alternatives to accommodate varied learning types are some other suggestions. Rather of having administrators coordinate learning events, encourage teachers to facilitate them. It is relevant to create a system-wide environment that values variety, transparency, and criticism. For everything from instructional practices to board policies, support alternative perspectives and views are also significant.

RMSA (2015), India proposes certain principles for professional development programmes. They are given below.

- Face-to-face sessions should be limited in number and should concentrate on CPD methods and classroom practices. It is not ideal to remove many teachers out of the classroom for a long period of time for training since this generates learning gaps in the classroom. Long training programmes are also costly and ineffective in terms of learning outcomes.
- CPD should concentrate on improving classroom practice. Subject training and refresher courses will not fix substantial teacher knowledge gaps. CPD, including content knowledge enhancement, should become self-sustaining through fostering self-learning, professional learning communities, various types of peer assistance, clubs, ICT-assisted distance learning courses, and so on.
- The 'cascade' in-service training model paves for the possibility of significant transmission loss. If these are adopted, they should be balanced by collaborative learning techniques and good training materials. The flaws of the cascade technique can be mitigated by strong and effective roles of resource persons, facilitators, school management, proper monitoring and feedback, and so on.

- Effective CPD necessitates a considerable level of planning and organisation. Given the variety of factors and procedures necessary for effective CPD creation – including requirements analysis, design, mobilising technical/academic help, materials, piloting, assessment, redesign, and capacity building – at least a year and a half to two years is required. In a transitional period, such development can occur concurrently with prevalent traditional approaches to teacher in-service training, and states and districts can use the time to obtain in - depth information about the teacher population and identify and plan for the most relevant target group.
- Effective CPD must strike a balance between fulfilling specific needs and making optimal use of resources. It is acknowledged that current teaching ability and requirements differ widely between schools and districts, and that CPD should be targeted to individual needs. Simultaneously, there is a need to standardise CPD programmes to some degree since a certain scale is required for material production, quality assurance, and successful trainer development.

O'Sullivan and Deglau (2006) developed certain principles for CPD which will assist to design and develop professional development projects. For them, teachers should be considered as "active learners," creating their own meanings and understandings by actively engaging in the professional development programme, rather than as passive consumers of ideas and curriculum. Teachers should be given authority and be viewed as professionals and leaders. This means individuals have real control over the content of the professional development session, including the opportunity to share ideas and learn from one another. Teachers must be able to participate in particular meaningful activities connected to their everyday job as teachers, some of which pertain to the specific material they provide their pupils, as well as how and why that content is structured and delivered in the manner that it is. Balance the demands of the teachers with a programme vision for the CPD is to be kept. Teachers must be accepted teachers as they are and endeavour to meet their needs while advancing the aims of a Professional Development (PD) programme.

Types of CPD Activities

The CPD Framework developed by the British Council (2015) is intended for teachers, teacher educators, or anyone else interested in or committed for teacher professional development. The council discusses 12 professional practices which will help a teacher to involve themselves as active learners and to improve their practice. They are:

Figure 4

Continuous professional development activities



Note: Adapted from Continuing Professional Development (CPD) Framework by British Council (2005), p.5

1. Planning lessons and courses- Defining aims/learning outcomes that fulfill learners' requirements and the course objectives by describing the learners in respect to their learning needs. This includes selecting and designing activities, resources, and materials that interest students and relate to the

lesson's objectives, as well as arranging lessons into phases with realistic time estimates. During the lesson, plan board work, pick and describe interaction patterns for various activities. Organizing learners into groups and preparing for customized instruction are possible.

2. Understanding learners-This entails making teaching and assessment decisions based on an understanding of learner characteristics such as level of achievement, age, interests, preferred learning styles, group dynamics, motivation to learn in general and in relation to specific subjects, educational, social, cultural, and linguistic background, any special educational needs, level of autonomy, personality, and so on. Exploring and implementing learning theories, as well as conducting needs assessments and applying the outcomes, are all important.
3. Managing the lesson- This involves controlling the rate and sequence of events, making optimal use of resources and equipment, as well as reacting to unexpected classroom situations. In order to keep learners motivated, keep track of their participation. Creating classroom activities with a range of interaction patterns, reflecting on lesson management, evaluating strengths and shortcomings, and making necessary modifications
4. Knowing the subject- To offer a positive model for learners, we must develop and demonstrate competency in the target language. It is also crucial to choose the right methods and tools for introducing and practicing certain aspects of the target language. It is vital to understand language acquisition theories and how they relate to various teaching contexts.
5. Managing resources- This requires picking resources while being aware of a variety of accessible sources, tools, and so on. Creating and customising materials and resources, using them in the classroom with suitable pedagogical practices, and assessing the materials' and resources' efficacy
6. Assessing learning- It comprises using assessment ideas and practices to develop activities that evaluate a learner's progress. Evaluation at various

points in the learning process to check learners' knowledge is also required, as is the use of a variety of different sorts of assessment and feedback.

7. Integrating ICT- Developing effective strategies for locating appropriate digital content, using technology for administrative tasks in accordance with data protection guidelines, promoting autonomous learning by utilising digital content and technologies both inside and outside of the formal learning environment, and promoting collaborative and participatory learning by utilising online communities, tools, and platforms are all instances.
8. Taking responsibility for professional development- Understanding professional requirements, interests, and learning preferences, as well as defining short-, medium-, and long-term career objectives, are all part of this process. It is also important to be aware of the many developmental paths that might be taken to achieve certain professional objectives. It is also necessary to get updated regarding the modern trends in education
9. Using inclusive practices- It is inevitable to employ pedagogical practices that promote inclusive education in a supportive learning environment. It will be carried out to assist learners in identifying, addressing, and assessing realistic individual learning goals based on reasonable adaptation. Creating an inclusive learning environment through instilling good attitudes about diversity in students and involving parents, students, and other relevant persons.
10. Using multilingual approaches- This entails appreciating and recognising the multilingual aspect of societies, schools, and classrooms, as well as employing pedagogical practices that promote inclusive education in a multilingual learning environment that is supportive. It is also important to create awareness of prejudices towards speakers of various languages and how they might affect the creation and maintenance of an inclusive learning environment.

11. Promoting 21st century skills- Finding adequate approaches and resources for introducing, developing, and assessing learners' abilities in the 21st century skills such as critical thinking and problem solving, collaboration and communication, creativity and imagination, citizenship, digital literacy, student leadership, and personal development
12. Understanding educational policies and practice- Finding current and relevant information regarding educational policy at the national, regional, and institutional levels. And finding current and relevant information regarding educational practice at the worldwide, national, regional, and institutional levels are also relevant.

In 2006, Broad and Evans reviewed some relevant studies on professional development programmes and highlighted the findings of Guskey (2000). He examined seven key professional development activities, identifying benefits and drawbacks for each. In the training mode presentations, workshops, demonstrations, simulations, discussions, seminars, and colloquia are all examples of types of events. These types of events are useful for disseminating information to huge groups and evident of a shared vocabulary and body of knowledge. But there is minimal individual autonomy or choice; comments and mentoring are frequently required to enhance. Another prominent method is observation and assessment where beneficial effect on the observer and observed, as evidenced through discussions and feedback decreases isolation. At the same time it is to be noted that this requires time, trust, and the ability to distinguish between observation and evaluation. Programmes to establish or revise curriculum/programmes design, to adopt new educational practices, or to solve difficulties are also conducted as part of professional development activities. One of the important advantages of these is that it improves knowledge and collaboration capacity. But it has some drawbacks like only small number of people may be involved and is blamed to have a proclivity for tradition rather than innovation. Study Groups studying some common issue or concern also play the role of professional development activities. It reduces isolation and improves learning attention and coherence but at the same time there is a chance to

become opinion-driven rather than research-driven. Inquiry or Action research can be cited as other instance of professional development activity. It tends to develop problem-solving knowledge and skills, empowering teachers in their learning and practicing. Professional development activities can be taken in the form of individually directed programmes which offer flexibility, choice, individualization, personal reflection etc. As always Mentoring is also identified another mode of professional development where mentors become more meta cognitive, both individuals learn.

Ann Lieberman (1995) presents an extended vision of professional learning, placing CPD in three contexts: 1. Direct instruction (through conferences, workshops, consultations). 2. Education at school (through peer coaching, mentoring, critical friendships, active research, team planning and assessment, appraisal) and 3. Learning outside of the classroom (through school-led renewal or reform net-works, school-university partnerships, subject or phone-specific net-works, professional development centres). Teachers will need to connect with all of these in today's world and in the years ahead if they are to stay up with and adapt to changes in society, the demands of governments' results-driven standards agendas, and maintain their energy, excitement, and dedication to high-quality teaching.

NCFTE (2009) made some recommendations related to different activities as part of teachers' CPD.

- Short and Long Term Courses: Some short term courses for a period of 4-5 days and other long term courses for 1-4 months could be created and made available to teachers to take throughout the year to enable teachers to develop a specific core area in which they need to strengthen their knowledge-base and professional skills with a pre-announced schedule and content. Such courses could award certificates.
- Distance media may be utilised effectively to connect teachers with other professionals in the area and to provide access to experts in both education and in primarily academic subjects.

- **Vacation for Study and Research:** Teachers may be given a choice of taking a year off (either paid or unpaid) to pursue a course of study or to spend time at another school, university, or NGO. The outcome of this study and learning may be tied to a report or even a publication that is produced in the end for wider release.
- **Conferences and meetings for professionals, Professional Fora, Resource Rooms, and Materials:** Providing professional fora such as meetings in the school and in the cluster to share and review one's practice, as well as to discuss with colleagues, the school academic head, and resource persons resources in the form of reference materials, access to internet resources, and resource persons may be quite beneficial.
- **Faculty Visits, Exchanges, and Fellowships:** A few exchange teacher fellowships might be made available for each district, allowing selected educators to travel for three months to an entire academic year to teach and learn at a school in a different state or even abroad.

Kwakman (2003) identified different professional learning activities in a study conducted among secondary school teachers. A set of 32 various activities produced from the qualitative analysis were used to measure involvement in professional learning activities. They are classified into four categories namely Reading, Experimenting, Reflecting and Collaborating. Some activities come under miscellaneous. The activities in each category are enlisted in the table 1

Table 1

Professional learning activities categorized

Categories	Professional learning activities
Reading	Reading subject matter literature
	Reading professional journals
	Studying teaching manuals
	Reading literature

Categories	Professional learning activities
Experimenting	Helping students learning study skills
	Preparing lessons individually
	Experimenting with new teaching methods
	Constructing study materials
	Constructing tests
Reflecting	Working with new methods
	Supervising student teachers
	Receiving coaching or guidance
	Coaching colleagues
Collaborating	Receiving pupil's feedback
	Story telling
	Help (asking for help, giving help)
	Sharing (materials, ideas, instructional issues)
Not fitting into categories	Joint work (coordination, preparing lessons, innovation)
	Counseling pupil
	Executing non curricular tasks
	Performing management tasks
	Organizing extra-curricular tasks for pupils
	Classroom interaction with pupils
	Teaching in itself

Note: Adapted from Factors affecting teachers' participation in professional learning activities by Kwakman, K. (2003). p. 155

Gray and Leaton (2005) listed out the different types of professional development programme after analysing the various frameworks from different organizations. It comprises whole-school training days, individual teacher induction, mentoring, and evaluation, peer observation, collaborative planning and evaluation, self-evaluation etc. Teachers can create networks outside of their own school by visiting other schools, attending conferences, participating in joint training exercises with other schools, joining teacher networks, and connecting with specialized

subject groups. Teachers may participate in examination procedures, attend short courses offered by commercial and non-profit sources, study for higher degrees approved by universities, participate in short term contracts, and exchanges; or study utilising online courses. Finally, teachers may participate in outreach initiatives, and occasionally give chances for community learning.

After a brief overview of professional development in adult basic education in the United States, Smith and Gillespie (2007) have gone through two CPD methods in depth: traditional and job-embedded. Workshops, conference sessions, seminars, lectures, and other short-term training activities constitute the traditional model. Job-embedded model, which gained popularity in the 1990s, places training within the framework of a school, programme, or community. Study circles and inquiry groups, for example, allow teachers to have a stronger say in designing the content of teaching while also allowing them to research student learning difficulties that are more strongly connected to their own settings.

OECD (2009) has identified some activities as part of teacher CPD. It includes Courses and workshops, Education conferences and seminars, Qualification programmes, Observation visits to other schools, Professional development network, Individual and collaborative research and Mentoring and peer observation.

- Courses and workshops: These are structured learning opportunities that provide teachers with knowledge and skills related to a particular topic or subject.
- Education conferences and seminars: These events offer teachers the opportunity to learn about new developments in their field and to network with other professionals.
- Qualification programmes: These are formal programmes of study that lead to the attainment of a recognized qualification, such as a master's degree or a teaching certification.

- Observation visits to other schools: Teachers can learn from observing the teaching practices of their colleagues in other schools or countries.
- Professional development network: Teachers can participate in a professional development network, which provides opportunities for collaboration, sharing of best practices, and ongoing learning.
- Individual and collaborative research: Teachers can engage in research activities, either individually or collaboratively, to deepen their knowledge and understanding of their subject area or teaching practice.
- Mentoring and peer observation: Teachers can participate in mentoring and peer observation programs, which provide opportunities for feedback, support, and growth.

These activities are designed to support teachers in their ongoing professional development and to enhance their knowledge, skills, and effectiveness as educators.

Jaiswal (2017) recommends several activities for CPD for teachers. These include self-study methods such as exploratory practice, action research, and teacher research, which allow teachers to thoroughly examine the teaching-learning process in their classrooms. Reading clubs, where teachers gather to discuss what they have read and its relevance to their teaching, are also recommended. Lesson study, which involves repeated cycles of cooperative lesson design, teaching, and reflection, can also be helpful. Reflection groups, where educators gather to discuss their pedagogical practices and review instructional materials, can also be effective. Peer observation involves teachers working in pairs to observe each other's classrooms and then having an informal discussion about them. Professional learning communities are forums where teachers can gather to discuss key aspects impacting their schools and classrooms. Curricular study groups, where teachers work together to deepen their knowledge of a certain topic they teach, and writing collaborative materials, where teachers collaborate to develop modules of teaching for targeted student groups, are also recommended. A mentoring scheme can be implemented

where adequately skilled and more experienced teachers support the development of those with less experience and expertise. Finally, personal learning networks can be established, in which professional growth is achieved through social media contacts.

Retooling, remodeling, and revitalizing are three building metaphors used by Sachs (2007) to represent methods to teacher continuing professional development. CPD as retooling is based on a practical approach to teaching, with a focus on relevance and rapid application in the classroom. CPD as 'remodeling' focuses on reinforcing a practical teaching style rather than altering teacher' ideas or beliefs. Because teachers are frequently viewed as performers, the purpose of the teacher in this approach is to entertain pupils. Teachers are connected to other teachers and to the needs of students through CPD as a 'revitalizing' activity. It may be found in teacher networks and professional practice groups (Sachs, 2007). This type of CPD differs from the previous two in that it focuses largely on teacher learning, specifically professional renewal through chances to examine and review methods, and therefore become reflective practitioners (Mansour et al., 2014).

Characteristics of Effective CPD

There is a huge array of worldwide research on enhancing education quality, with a focus on continuing professional development (CPD) to enhance professional and pedagogical advancement. Effective CPD is widely acknowledged as a crucial component of educational achievement from the perspective of practitioners (Hammond, 2006). As a result, it is predictable that academic interest in this field has increased.

Sims and Fletcher-wood (2018) discuss the characteristics of effective CPD after converging several influential reviews and one meta-review. According to them CPD is effective when it is sustained, collaborative, buy-in, subject specific, involving outside expertise and ensures chance for application.

Westbrook et al. (2013) attempted a comprehensive idea on some key factors that influence effective CPD such as professional development that is associated with classroom teaching, comprising lesson modelling, constructive comments on

performance, and discussion; peer assistance in clusters or schools, both official and informal; support for the implementation of new classroom methods and innovation takes the form of joint or reciprocal observation, collaborative lesson preparation, and resource sharing. Another essential supportive aspect is head teacher support, which includes raising awareness of and offering support for new and creative teaching approaches, as well as engaging with the school community for further assistance. Effective professional development is connected with curriculum and evaluation within the school and is regulated by district, state, and national policy (RMSA, 2015).

Hunzicker (2010) proposes certain key characteristics of effective CPD which will help the administrators to design a comprehensive professional development programme. The primary factor is sufficient support. Effective professional development involves teachers in learning opportunities that are job-integrated, instructionally focused, collaborative, and ongoing once support for teacher commitment and intrinsic motivation is established. Job embedded professional development for teachers is effective because it is genuine and relevant. It encourages teachers to take the time to think through alternatives, test out new concepts, and evaluate the outcomes of their actions. It involves engaging teachers in learning via their everyday tasks and duties. He claims that effective teacher professional development is instructionally focused because it places an emphasis on both the content and pedagogy of and the learning objectives of the students. For him Effective teacher professional development is collaborative because it stresses both active and interactive learning experiences, which are commonly achieved through involvement in learning communities. Finally, successful teacher professional development is continual, involving a blend of contact hours, duration, and continuity. School administrators can develop opportunities to develop skills for all teachers when guided by these principles.

Leaton Gray (2005), differentiates the good quality and poor quality provision for CPD:

Figure 5*Characteristics of good versus poor quality CPD*

Good quality provision	Poor quality provision
Economical in terms of time and money	Wasteful in terms of resources such as time, money and teacher enthusiasm
Carefully researched, in terms of teacher needs	Insufficient planning and tailoring to teacher needs
Well-presented, preferably by a teacher or a cutting-edge research scientist with relevant teaching experience	Poor presentation skills; presenter not familiar with current classroom practices or curriculum content
Giving plenty of fresh, relevant information	Duplicated or irrelevant information
Offering opportunities during the day for reflection upon what was being learnt	Overloading teachers with information; teachers unclear about quality and relevance of information to them
Likely to have immediate impact upon their return to the classroom	Unclear or dubious relevance to classroom practice
Likely to improve general subject knowledge and understanding	Duplicates teachers' initial teacher training
Offering scope for later follow-up, support and networking	Isolated event with no subsequent opportunities for discussion or communication
Offering scope for feedback both during the session and later on, beyond the feedback form usually provided on the day	Teachers have little 'ownership' of process via their own input

Note: Adapted from *An enquiry into continuing professional development for teachers* by Leaton Gray (2005), p.20

Richardson (2003) proposed a list of characteristics of effective CPD. According to her the programme must be implemented the school-wide and it must ensure the continuity and follow up. Some other factors include promoting collaboration among participants, encouraging participant agreement on goals and vision; have a supportive administration; provision for adequate funds for materials and outside speakers, substitute teachers etc. She also affirms that it must be able to foster participant buy-in; recognise participants' current beliefs and behaviours; and engage an outside facilitator.

Studies (Porter et al., 2003; Supovitz & Turner, 2000) suggest that traditional professional development can be more effective if it is longer in duration and includes a strong link between what the teacher learns and their personal work environment. It is important for professional development to assist teachers in planning for application and strategizing for barriers they may encounter. Content knowledge should also be emphasized, with a focus on evaluation and reflection. A range of activities should be included, such as theory, demonstration, practice, feedback, and classroom application. Collaborating with other teachers from the

same school, grade, or department can also enhance the effectiveness of professional development. Rather than focusing on the format or type of professional development, it is important to prioritize its quality and aspects.

Langer (2000) found that professional development contributes to high performance when it focuses not on individual teachers but on groups of teachers within schools, especially where school culture supports the "professional lives" of the teachers. Facilitators can assist in organising job-related professional development. Many teachers require support to overcome their natural inhibition to sharing their problems and their own and students' work with other teachers in a sharing or inquiry group since job-embedded professional development is a new experience for them. Facilitators also require training and assistance in order to facilitate the group's progress throughout time.

According to Borg (2015), Continuing Professional Development (CPD) for teachers can have positive and long-lasting effects on teachers, learners, and organizations if certain conditions are met. These include teachers perceiving CPD as relevant to their needs and those of their students, having a say in the content and process of CPD, fostering collaboration and sharing of expertise among teachers, having support from schools and educational systems for CPD, having access to internal or external expertise, conducting CPD at schools and in classrooms, recognizing CPD as an essential part of teachers' work, valuing inquiry and reflection as important professional learning processes, revising beliefs based on student learning, viewing CPD as an ongoing process, and having strategic leadership within the institution.

Factors Affecting CPD

Bell et al. (2012) rightly observe the decisive factors of effective CPD. In their view successful CPD will be collaborative in nature. Ample support from specialist experts must be ensured. Effective CPD obviously focus on aspirations for students. Another significant characteristic is that CPD should be sustained over time as professional development programme have more impact than shorter

engagements. In order to transfer new approaches and practices to multiple context, sufficient room must be provided for trying out new things.

Wan and Lam (2010) identified the key factors that contribute CPD. Their study presented the teachers' perceptions of facilitating and inhibiting factors affecting CPD. The facilitating factors included school factor, personal factor, financial factor, time, CPD provider, family factor, relationship with others and government factor. The inhibiting factors consisted of time, heavy workload, financial factor, CPD provider, school factor and personal factor.

Mushayikwa and Lubben (2008) analysed the teachers' perception and found that when it came to self-directed professional development, teachers' opinions suggested that they were motivated by seven key issues. The first worry was on professional identity. This arose out of a concern for both professional well-being (i.e. self-esteem, self-respect, and self-confidence) and professional recognition (i.e. commanding respect, trust and credibility from students, colleagues and society). The desire for career development, i.e. keeping up with innovations in their teaching field, receiving assistance for lifelong learning, and paths to higher credentials and job transitions, was the second worry. Thirdly, teachers employed self-directed professional development to address their own concerns regarding topic matter understanding. The fourth area of concern was practical knowledge and professional abilities, such as acquiring teaching tools to aid in the organisation of teaching, such as for diversifying assessment; building skills to integrate new teaching methodologies; and enhancing classroom relationships. A large number of teachers mentioned using self-directed professional development to improve their pedagogical content knowledge in adapting subject content to the local context, such as adapting content to the syllabus depth required and to different student abilities; adapting content to the local environment, taking into account students' language and numeracy proficiencies; and adapting content to the social and historical context of study. The requirement for peer networking, such as the practice of comparing and exchanging experiences and abilities, was the sixth issue underlying self-directed professional growth. Peer help, such as peer coaching, mentoring, and

tutoring, was an equally significant part, which was commonly done through professional discussion groups. Finally, the perceived advantages for teachers and students, i.e. the teacher's concern for improving students' performance, attitudes, and classroom involvement, was a major motivating factor for self-directed professional development. Teachers also expressed a desire to be more thoughtful and critical of their teaching methods.

Desimone et al. (2002) analyze six essential characteristics of CPD to evaluate the quality of training and determine its effectiveness as a learning experience for teachers. The features examined include the organization of the activity, its duration, the level of participation by the group, the degree to which it is an active learning experience, its ability to promote coherence in teachers' professional development, and its focus on specific predetermined content.

Mann (2005) discusses core themes of teacher professional development which are enlisted here. Teacher development is a bottom-up process that can be contrasted with top-down staff development programmes; it values the insider view rather than the outsider view; it is independent of the organisation but often functions more successfully with its support and recognition; it is a never-ending process of becoming; it is a process of articulating an inner world of conscious choices made in response to the outer world of the classroom; it is a process of articulating an inner world of conscious choices made in response to the outer world professional development resulting to change in teaching practice may occur more quickly, if there is a dynamic interaction between three components, namely the professional development programme and providers, the school as an organisation, and the teacher as a unique individual.

Evaluating CPD

There are several ways of evaluation, just as there are numerous forms of professional development. Guskey (2002) put forwarded five levels of evaluating a professional development programme. The reactions of participants to the event will be the first level of professional development evaluation. This is the most common, easiest, and most practiced type of professional development evaluation among

teachers. The questions at this level are concerned with whether or not participants enjoyed it. Did they feel their time was well spent when they left? Did the content make sense to them? Were the activities valuable? Was the teacher well-informed and beneficial? Do they think what they've learnt will be useful? Questions such, "Was the coffee hot and ready on time?" are also significant. Were the refreshments nice and fresh? Was the temperature in the room appropriate? Were the chairs relaxing? Such questions may appear frivolous and insignificant to some. However, experienced professional developers understand the need of responding to these basic human requirements.

Level 2 aims at assessing participants' knowledge, abilities, and maybe attitudes. Measures must be based on the learning objectives established for that specific programme or activity. This means that clear criteria and indications of effective learning must be defined before the professional development experience begins. Openness to "unintended learnings," whether favorable or unfavorable, should also be examined.

At Level 3, he shifts the emphasis to the organisation, especially knowledge on organisational support and transformation. Level 3 questions focus on the organisational features and attributes required for success. Was the proposed modification in line with the organization's mission? Was individual change promoted and supported at all levels? Did the programme or activity have had an impact on the organisational atmosphere and procedures? Was administrative assistance open and obvious? Were issues resolved fast and efficiently?

According to Guskey, the evaluation process then investigates whether participants are applying their new knowledge and abilities in their workplace. The fundamental inquiry at Level 4 is, "Did the participants learned make a difference in their professional practise?" Measures of usage must be taken when participants have had enough time to adjust to the new ideas and behaviours in their environment. Because implementation is sometimes a lengthy and uneven process, measurements may be required at various time intervals. This is especially true if there is a desire to continue or continue using the product. This data analysis gives

evidence on current levels of use and may be used to reorganise future programmes and activities to promote substantially better execution.

Level 5 is student learning outcome in which we have to address what is commonly referred to as "the bottom line" in education: What effect did it have on students? Was the professional development programme or activity worthy to students? The specific outcomes of interest will, of course, be determined by the aims of that individual professional development endeavor.

Guskey has rightly affirmed that any of these five levels of evaluation can be done successfully or poorly, impressively or humorously. The data acquired at each level is critical and may be used to improve professional development programmes and activities. However, as many have learned, monitoring efficiency at one level provides little insight into success at the next.

Shaha et al. (2004) observed that professional development programmes should be structured to accomplish three sorts of impacts: learning, attitude, and resource impacts and they should be assessed accordingly. The best professional development will also result in demonstrable advances in student learning. Learning outcomes are perhaps the most significant single indicator and area of educational decision making for assessing programme performance. The best professional development programmes will make teachers and their students feel better about themselves in terms of attitude, and about the school experience, and the subject area for which the programme is created. Best resource information often includes costs to individuals, such as participation time, preparation time, or missed productivity.

Challenges of CPD

To implement effective professional development (PD), it is necessary to address system-level obstacles beyond the school and classroom. A report by Tooley and Connally (2016) identified four overarching areas for improvement: identifying PD needs, choosing effective approaches, implementing with quality and fidelity, and tracking and analyzing the impact of PD. Identifying PD needs requires a shared vision of excellent teaching and effective preparation and training for principals and

instructional leaders to identify and organize needs-based PD. Without this, PD will not meet teachers' needs. Choosing effective approaches involves prioritizing evidence-based approaches over "one-off" workshops, which are easier to schedule but less effective. Implementing approaches with quality and fidelity requires considering the many variables that affect the effectiveness of a program, such as the coach's expertise and authority, time and accountability for teachers to follow through with recommendations, and an integrated, coherent approach to instruction. Finally, tracking and analyzing the impact of PD is necessary to adopt evidence-based professional learning that addresses potential obstacles. Many systems lack good tracking and analysis systems, which makes it difficult to adopt effective PD.

Teachers frequently participate in professional learning in a passive manner, without access to long-term opportunities to interact with colleagues or instructional coaches, observe expert teachers, or exercise professional autonomy in directing the focus, timing, and method of their professional learning. This lack of agency and choice can limit their motivation to fully engage in PD, according to studies by Darling-Hammond et al. (2009) and Coldwell (2017).

Time is a significant barrier to teachers' participation in professional development and the subsequent implementation of new practices (Bates & Morgan, 2018). Teachers often have packed schedules, leaving them with limited time to engage in professional development activities. If teachers perceive that the practices being explored in PD sessions will not fit into their already busy schedules, they may not participate in the sessions or may not fully engage in the learning. This barrier to participation can be particularly problematic if teachers are not given enough notice or flexibility in scheduling PD activities. In some cases, teachers may feel that they cannot spare the time to participate in PD without falling behind on other important responsibilities. This can lead to a lack of implementation of new practices and a missed opportunity to improve student outcomes.

A negative attitude and lack of motivation can be a significant barrier to effective professional development for teachers according to many reviews (Johns & Sosibo, 2019). When teachers do not see the value in the PD activities or do not

believe that they will be able to effectively implement new practices, they may become disengaged or even resist participating in PD opportunities. Van der Klink et al. (2017) argue that contextual barriers, such as time constraints and lack of resources, are not the only reasons why teachers may be hesitant to engage in professional development activities. The authors identify two individual barriers that can hinder teachers' participation and engagement in PD: fear of change and lack of interest. Fear of change refers to a natural resistance to new ideas or approaches that can come with a sense of uncertainty or risk. Teachers may be hesitant to try out new teaching strategies or technologies if they feel they do not have the necessary skills or if they fear that their existing methods may be called into question. Lack of interest refers to a lack of motivation or enthusiasm for the PD topic or activity. Teachers may not see the relevance of the PD to their own teaching practice or may not find the topic engaging or stimulating.

According to Snoek, et al. (2011), several factors can hinder teachers' participation and engagement in professional development. These factors include a shortage of time, an excessive workload, a lack of necessary resources, a lack of attention and support from school management to reinforce the importance of PD, and a passive working climate that does not encourage or support active engagement in PD. In simpler terms, teachers may not be able to participate in PD opportunities if they do not have enough time, feel overwhelmed with their workload, lack the resources needed for PD, do not receive enough support and encouragement from their school leaders, or work in an environment that does not prioritize PD.

CPD in Indian Scenario

Several commissions and committees in India have offered valuable recommendations for the improvement of the country's education system. The University Education Commission (1949) suggested that teachers should adopt the role of a student periodically to ensure their minds stay active and refreshed. This recommendation highlighted the importance of in-service teacher education, which is crucial for maintaining the quality of teaching.

Similarly, the Secondary Education Commission (1952-53) recommended that teacher training institutes should offer continuous in-service education programmes to facilitate ongoing professional development. The suggested programmes included refresher courses, short courses in specific areas, practical training in workshops, and professional conferences. This recommendation also paved the way for institutes to be held accountable for providing quality in-service education to teachers. During the years 1964-66, the Education Commission of India put forth a resolute recommendation that all colleges and teacher education institutes, regardless of level, should organize extensive in-service teacher education programmes every five years, spanning two to three months. This suggestion reflected the Commission's commitment to ensuring that teachers received adequate and regular training to maintain high standards of education.

Subsequently, in 1968, the government introduced policy changes aimed at enhancing the quality and effectiveness of teacher in-service education programmes. These changes led to significant structural modifications in the systems and activities related to such programs, emphasizing the importance of authentic, rigorous training for teachers. Overall, these initiatives reflect a concerted effort to improve teacher training and promote the continued professional development of educators in India. It was also suggested that teacher training should incorporate components such as continuous evaluation, remedial teaching, physical education, and moral education, as well as upgrading the teacher's expertise in his or her subject(s) of teaching. The lack of defined policies and priorities for in-service education, as well as the lack of systematic assessment of training requirements, were addressed by the National Commission on Teachers-1 (1983). The Commission focused on in-service education and training (INSET) for teachers, among other things. In-service teacher education was viewed as a continuation of pre-service teacher education in the National Policy on Education (1986). The policy emphasised the importance of teacher education as a continuous process with pre-service and in-service components that are inextricably linked. The Government of India established a system known as "Programme of Mass Orientation of School Teachers" (PMOST) to inform teachers on the policy's emphasis areas shortly after

it was adopted. Approximately 17 lakh teachers were trained as a result of this programme. As a first step toward educational reorganisation, the Programme of Action (POA, 1992) recommends overhauling teacher education. SCERT will design, sponsor, monitor, and evaluate in-service education for all instructors and other educational employees at the school level, according to the statement. In-service Education, Field Interaction, and Coordination (IFIC) was envisioned as a separate branch in a DIET, with the mission of organising in-service education for 600 teachers each year. The National Curriculum Framework for School Education (2000) suggested that teachers be continuously sensitised to new/emerging curricular problems, issues, and transactional methods via cascade and teleconferencing modes. Although a network of institutions such as DIETs, IASEs, and CTEs was established/strengthened to provide In-service education to primary and secondary school teachers, many of them have yet to serve as resource centres, according to NCF, 2005. Under the District Primary Education Programme, in-service training was offered at the sub-district level through Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs).

Exploring Indian Teachers' beliefs and practices in Continuing Professional Development Yadav (2020) presented CPD landscape in India, according to the new National Education Policy 2020. The most current National Education Policy has included vital measures supporting the CPD plan for teachers. These include regulations such as a modular approach to CPD, which requires each teacher to complete a total of 50 hours of CPD modules every year. These sessions will encompass content as well as pedagogical knowledge and teaching abilities. These courses will also be available online, allowing teachers to study at their own schedule and exchange best practices with other teachers in the community.

Keeping this view The National Council of Educational Research and Training (NCERT) has designed a set of Continuing Professional Development (CPD) guidelines for teachers, head teachers, and teacher educators with a focus on holistic development. The recommendations suggest the general objectives listed below for setting up CPD programmes.

- Train teachers to exhibit and instill ethical values and constitutional principles such as empathy, respect, cleanliness, democratic spirit, service, scientific temper, liberty, responsibility, pluralism, equality, and justice among students.
- Enable teachers to re-imagine citizenship education in terms of human rights and critical teaching methods, emphasize environmental protection and promote skills for a peaceful and democratic way of life.
- Equip teachers to be first-level counselors and respond to the social, emotional, and psychological needs of students.
- Teach teachers to use art as a teaching tool to enhance creativity and personal-social qualities for holistic student development.
- Help teachers create an inclusive and enriching classroom environment and a healthy and safe school environment.
- Orient teachers towards multidisciplinary and holistic education across the sciences, social sciences, arts, humanities, and sports for the unity and integrity of all knowledge.
- Provide orientation on competency-based learning, experiential learning, art-integrated learning, sports-integrated learning, toy-based learning, and ICT for teaching, learning, and assessment to improve student learning outcomes.
- Promote multilingualism and the power of language in teaching and learning processes.
- Facilitate teachers in promoting life skills, such as communication, cooperation, teamwork, and resilience in student interactions.
- Sensitize teachers to respect diversity, such as gender, caste, religion, socio-economic status, and local context for lifelong learning.

- Prepare teachers to adopt activity-based teaching-learning processes and move away from rote learning to competency-based learning.
- Equip teachers to develop stress-free school-based assessments focused on the development of competencies.
- Educate teachers and school heads on new initiatives in school education and implement them in their schools.
- Transform heads of schools into academic and administrative leaders to foster new initiatives.
- Develop teacher competency to explore, reflect on, and improve their own practice.
- Orient teachers to deepen their knowledge and update themselves on their academic discipline and other areas of the school curriculum, including twenty-first-century teaching skills and competencies.
- Enable teachers to research and reflect on learners and their education to improve student learning outcomes.
- Prepare teachers for other professionally-linked roles, such as developing e-content and other digital resources, curriculum and textbook development, and community engagement activities.
- Encourage teachers to share experiences and insights with others in the field through academic participation via offline and online modes.
- Provide orientation to teachers on innovative child-centric teaching-learning strategies aimed at enabling students to learn ‘how to learn’ and construct knowledge based on their own observations, experiences, analysis, and reflection.
- Motivate teachers and head teachers to engage in self-regulated professional development practices.

- Upgrade teachers on educational and social issues of local and global concern and encourage them to act accordingly.

Types of CPD in India

The most popular models of CPD prevalent in India are discussed in Shweta Tewari's (2016) article. Her important observations are given here. The most popular model following in many states is Cascade model. Here a group of teachers attends the professional development programme in this model. The training provided is intensive and focuses on a few skills in general. It is delivered by teacher educators from institutions such as DIETS, SCERTs, and others who are known as the programme's master trainers. Later, the participants or trainees return to their workplaces as "champion teachers" or "a vanguard team," providing the same training to their peer teachers. Reflective Teaching Model: This model is based on constructivist principles. In this model, teachers work in pairs to develop a teaching model through discussions and then reflect on their own practise. This is followed by a round of questions and answers, as well as a discussion of the topics. This type of co-teaching or shared teaching encourages reflection in planning and debriefing. The British Council's CPD programmes in India are based on this principle. The split model is similar to the reflective model. Training is first provided at the block level, and then it is transmitted to schools. A group of teachers participates professional development workshops or seminars for a week, then implements the ideas or practises learned for two to three months before attending a follow-up programme. Site-based models: As the name implies, this professional development model is used in schools among teachers. In general, this model involves local providers and teachers in facilitation, instruction, content, curriculum assessment, and technology. A common example of such a model is the system of action research conducted in schools by teacher educators. In many schools, SCERTs conduct action research using the same principle. Self-directed model: In this model, teachers attempt to develop themselves as teachers through their own efforts such as reading books, joining various libraries, using ICT such as accessing online programmes, and so on. However, in our country, it mostly exists in a poorly

organized form due to a lack of databases and evaluation procedures. She also outlines the agencies providing professional development training. The main professional development agencies in India are DIETs, SCERTs, IASEs, NUEPA, NCERT, KVS, and Extension Education Centres. Etc. Professional development modes in India according to Shewta are centred around workshops, seminars, conferences, study groups, experimental schools, certificate courses, radio broadcasts, films, extension activities, field activities etc.

The professional development in India is not free from flaws. Sweta Tiwari has rightly pointed out serious faults in the current system of Continuous Professional Development after reviewing some prominent studies. The current cascade model of CPD's top-down approach has failed to provide beneficial outcomes. In continuous professional development programmes, feedback and assessment are inadequate. It is difficult and demotivating for teachers who are already subjected to a strict hierarchy and administrative rather than academic difficulties to attend professional development programmes. Nothing tries to ensure that what the instructors learn in these programmes impacts the schools and students (Vadaya, 2014). Some other issues identified were the following. Teachers are less involved in evaluation and planning. They are poorly satisfied in most of the professional development programmes. Another grave issue was that the special education needs are not met by the programmes. Feedback and follow-up of each programme are insufficient so that there is not adequate measures to assess the effectiveness. Most programmes were reported to fail to include reflective practice. Constructivism as envisioned by (NCF 2005) has not come to fruition is yet another problem identified. Multiple intelligence concept does not seem to exist and dealing with learning challenges was regarded as a low priority (Duggal, 2005; Yadav, 2012).

Bolitho and Padward (2013) observed that CPD scenario in India faces two major challenges. Firstly, there is inadequate support from state policies and programmes, as well as administrators and school management, for CPD beyond INSET (In-Service Education and Training). This implies that most of the

professional development opportunities available to teachers are those that are designed and delivered by state agencies. These opportunities are often limited in scope and fail to provide teachers with the full range of options for professional development. Secondly, there are few instances of bottom-up initiatives and efforts by teachers to take responsibility for their own CPD. This implies that teachers are not actively seeking out alternative options for professional development beyond what is provided by state agencies. This lack of initiative from teachers can be attributed to various factors such as lack of time, lack of resources, lack of awareness of alternative options, and a general reluctance to take on additional responsibilities.

Studies Related to CPD

Studies related to Attitude and perception towards CPD

Utami et al. (2019) conducted a study which attempted to investigate the relationship between the involvement of CPD and the alignment of teachers' perceptions and practices concerning effective English teaching. Six Indonesian teachers who teach English as a Second Language participated in this study. The primary data gathering tools were qualitative approaches such as in-depth interviews and observations. The data suggested that there is a link between CPD participation and teacher's views and practices. The study's findings show that more conscious raising is needed to boost teachers' professional interest since it leads to a better congruence of perceptions and practices of effective teaching.

Calleja (2018) conducted a study to investigate the motives of a group of Maltese secondary school mathematics teachers who participated in a continuous professional development programme aimed at assisting them in Learning to Teach Mathematics via Inquiry (LTMI). Qualitative research methods, such as thematic analysis, were used to analyze the teachers' ideas, experiences, and descriptions of the LTMI elements that they found useful for their professional learning. The data were gathered through three interviews with the same teachers before, during, and after their participation in the CPD, as well as a focus group discussion with teachers at the end of the programme. The study found that the teachers' intrinsic motivation

to participate in the CPD was driven by three factors: their desire to learn more about teaching, their belief in the value of inquiry, and their need to change their teaching methods.

The aim of the study conducted by Al Asmari (2016) was to examine the attitude and opinions of English language teachers regarding their professional development, the activities they engage in, and any obstacles that may prevent them from advancing or improving. A questionnaire was given to participants in a CPD programme, and the data collected indicated that teachers recognize the importance of professional development as crucial to their academic and management skills. The majority of teachers reported setting goals to improve professionally and reflect on their teaching practices, and they also believed in collaboration and teamwork. Overall, the CPD programmes was viewed as a learning opportunity, a chance to think creatively and critically, and an opportunity to learn from and with colleagues.

Avidov-Ungar (2016) conducted a study with an objective to assess how teachers perceive their professional development process. The research involved 43 teachers from schools in Israel, and a semi-structured interview was used to gather data on their perceptions of their professional development. The analysis of the data revealed two dimensions that the teachers discussed in their professional development experiences: their motivation for professional development (whether it was intrinsic or extrinsic) and the types of aspirations they had (whether they were lateral or vertical).

Alibakhshi and Devhari (2015) undertook a study to find out how Iranian English Language teachers perceive professional development. The key professional development activities of 20 Iranian English teachers were identified in this study, which looked into their perceptions of continued professional advancement. A phenomenological research design was used in this study. A total of twenty English teachers were interviewed. The participants' perceptions of continued professional development included skill improvement, persistent learning, keeping updated, learning for pleasure, and professional renewal. They also grew professionally as a

result of their work, formal education, and attendance and presentation at continuing professional development programmes.

The aim of the study conducted by Hürsen (2012) was to evaluate the attitudes of high school teachers towards professional development activities in the Turkish Republic of Northern Cyprus (TRNC). The study involved 448 teachers within the region. The findings indicate that the effectiveness of professional development activities varies among teachers and is inconsistent. The results further suggest that the attitudes of teachers towards professional development activities are influenced by their gender, age, and length of service. Female teachers exhibit more positive attitude towards professional development activities than male teachers. Additionally, younger and less experienced teachers have a more positive attitude towards professional development activities.

Ahmad et al. (2013) studied with a purpose to find out what teachers think about the link between their professional attitude and their performance. Data was collected using a questionnaire from 250 instructors randomly selected from 50 boys' secondary schools in the district. According to the findings, there is a strong link between teachers' professional attitudes and their performance. Teachers with a good professional attitude, according to the study's findings, perform better in the teaching and learning process. They are more enthusiastic about their work. They are always on time to school. They have deep respect for their students and colleagues. They are enthusiastic learners. However, the study revealed that teachers in the sample schools had fewer possibilities for professional development, which might lead to a serious gap in their existing practices. As a result of this research, it is suggested that teachers' professional attitudes be further developed by instituting continuous professional development programmes in the schools. Teachers will have more opportunity to bring about a paradigm change in their views toward teaching and learning as a result of this.

Masuda et al. (2013) conducted a qualitative study which involved interviewing 16 teachers at different stages of their careers to understand their attitudes towards and willingness to participate in professional development. The

results revealed that the teachers' intent, perceived value, and preferred topics for professional development varied based on their career stages. However, all teachers expressed the need for practical applications of what they learned, as well as relevance to their teaching contexts. The teachers' attitudes were also affected by constraints such as time, financial resources, and accountability issues.

The aim of the study conducted by Ifanti and Fotopoulou (2011) was to investigate the perceptions of in-service primary teachers in Greece regarding professionalism and professional development. An empirical study was conducted at the In-Service Teachers' Training School of the Department of Primary Education at the University of Patras, Greece. Questionnaires were used to collect data anonymously. The findings indicated that the teachers in the study were familiar with the concept of professionalism and sought ways to improve their professional development. They also emphasized the need for more opportunities for lifelong learning.

O'Sullivan et al. (2011) investigated the perspectives, experiences, and motivational characteristics of teachers from two different jurisdictions: Northern Ireland (NI) and the Republic of Ireland (ROI). It explored the personal, school, and system circumstances that encourage or discourage teachers from participating in CPD, as well as the impact of involvement on their practice. A mixed methodological approach was used. The findings revealed a high level of agreement between ROI and NI teachers. Teachers in both jurisdictions stated that the in-service model of compulsory CPD was the most common type of CPD they had. They agreed that the fundamental goal of CPD is to improve one's skills, and that it is, in general, their personal obligation to participate in CPD. In terms of impact, they said that obtaining approved, higher-level certifications that were relevant, appropriate, and provided opportunity for reflection had the most influence on their profession.

Wan (2011) conducted a study to explore teachers' perceptions of continuing professional development in Hong Kong as well as their professional development requirements, and the factors that influence their involvement in CPD. The study

was carried out in three primary schools and it adopted a mixed-method approach. The data was gathered through a self-developed survey questionnaire for teachers, as well as focus groups and individual interviews with teachers. The following were the study's principal findings: 1. Teachers favoured higher academic study the most, while production of articles for CPD came in second. 2. The most successful CPD activities for teachers were higher academic study and peer class observation, however publication is still a lowly acknowledged CPD activity. 3. The analysis yielded four CPD domains for teachers' stated needs: School Development, Teaching and Learning, Student Development, and Professional Relationships and Services. In the 'Student Development' category, teachers had the most CPD needs. 4. School factor, personal factor, financial factor, time, CPD provider, family factor, relationship with others, and government factor were all characterised as facilitating factors. 5. Time, excessive workload, financial factor, CPD provider, school factor, and personal element were all identified as inhibiting factors.

Van Eekelen et al., 2006 attempted to investigate teachers' willingness to learn in the workplace. A small-scale qualitative study was conducted utilising a semi structured interview, observation, a retrospective interview, and a phenomenographic approach to data processing. The following behaviours were found to be indicative of a desire to learn among teachers: the desire to learn new practices, being open to new experiences and people, being proactive, attributing successes and mistakes to internal causes, questioning after performance, taking action to learn, and acknowledging learning processes and results. The findings also revealed three distinct expressions of the desire to learn that characterised the teachers in this study. Teachers may indeed be divided into three categories: those who do not perceive the need to learn, those who are unsure how to learn, and those who are eager to learn. The findings of this study add to the disciplines of teacher education and motivational elements of learning.

Hustler et al. (2003) found that complex interactions between local, cultural, and structural elements as well as teachers' career, stage, age, and topic affiliations influenced teachers' attitudes toward CPD. Between younger or early career stage

teachers and late career stage teachers, there were noticeable overall disparities. Across the country, many older teachers appeared to have come to terms with the fact that CPD could not speak to their particular professional requirements. Younger teachers demonstrated a more open-minded approach toward CPD.

Karaaslan (2003) conducted a study to explore teachers' perception towards professional self-development. The study investigated the attitudes of the participants towards professional development, their perception regarding professional development activities, and the factors that hinder professional growth and development. The researcher used a questionnaire that included both close and open-ended questions. The results indicated that teachers understand the importance of professional development and the activities needed to grow professionally. However, they do not implement these activities to the extent that matches their perceived importance. The study also found that female teachers, younger teachers, and those with less experience in teaching consider professional development activities to be of great importance compared to their peers. The study identified several factors that may impede professional development, including a high workload, lack of self-motivation, and lack of institutional support for teachers.

Studies related to self-initiated professional development

A self-initiated professional development generally refers to a “process in which a learner assumes primary responsibility for planning, implementing, and evaluating the learning process where an education agent or resource often plays a facilitating role in the process” (Guskey, 2000. P.57). It includes a number of activities such as collaborative learning, reading and researching, mentoring and coaching, reflective teaching, keeping reflective journal and professional development portfolio, material development and practicing innovation, pursuing additional academic qualification, education conferences and seminars, peer observation, lesson study, visiting other schools, acquiring pedagogic content knowledge, updating oneself in ICT and strategies for responding to critical situations etc.

Cordingley et al. (2005) made a systematic review of studies that examined whether and how collaborative Continuing Professional Development (CPD) influenced both teaching and learning. Collaborative CPD was defined by the reviewers as teachers working on a consistent basis with at least one other related professional. The review delves into a variety of aspects of collaborative CPD, such as observation and feedback, collaborations between external specialists and teachers, building on existing knowledge and practice, and peer support. The review discovered that collaborative CPD was associated with significant improvements in both teaching and learning. The following potential benefits for teachers were reported in the studies: greater teacher confidence, for example, in taking risks; improved teacher beliefs in their ability to influence their students' learning; the emergence of enthusiasm for collaborative working, despite initial concerns about being observed and obtaining feedback; a higher commitment to changing practice and desire to explore things; and improved knowledge and practice etc. The reviewers outlined a series of key features of the CPD that were linked to positive outcomes when blended, including external expertise linked to school-based activity; possibilities for teachers to understand their own CPD focus such that they can concentrate on issues that are important to them; processes for promoting, extending, and structuring professional dialogue opportunity for teachers to identify their own starting points and learning requirements; the application of peer support; observation, especially of teachers observing and learning from one another; feedback (generally gained through observation) etc.

The advantages of teacher professional learning communities are acknowledged by many scholars. Teacher professional learning communities, also known as communities of practise, are places in which teachers communicate and cooperate on a daily basis regarding concerns of teaching and learning, as well as generate and consume knowledge about better student learning practices (Bullough, 2007). The links between professional learning and teachers' current needs have been enhanced via professional learning communities (Berry et al., 2005).

The research undertaken by Ghan (2021) aimed to investigate how a collaborative professional development approach, which combined online and in-person components, could impact high school teachers' efficacy, collaboration, and collective efficacy in South Carolina. A mixed-method approach was utilized, with both qualitative and quantitative data collected. The quantitative data came from surveys measuring teachers' self-efficacy and collective efficacy, while the qualitative data came from interviews, online discussions, and participant reflections. The findings demonstrated that there was a notable improvement in both individual teacher efficacy and collective teacher efficacy following their participation in the collaborative professional development. Teachers were able to collaborate and reflect on their learning through active learning opportunities.

This study carried out by Gutierrez and Kim in 2017 aimed to examine the reflections of in-service teachers who participated in a year-long research-based collaborative professional development activity with university science researchers. The purpose of this qualitative study was to gain insights into the critical factors of the activity to support its development and design as it was still in its early stages of implementation. The data was collected through audio and video-taped transcripts and formal interviews. The researchers used the constant comparison method of Grounded Theory to formulate themes from the data transcripts. The study's findings suggest that collaboration, sustainability, trust, and commitment were essential factors in teachers recognizing the benefits of classroom-based research for improving their instructional skills.

Wood et al. (2017) made an attempt to investigate teacher learning through collaborative subject-based professional development groups. The study employs a model of teachers' conceptions of teaching developed from phenomenography to determine the essential features of teaching that must be present for effective learning to occur. The study also uses a variation theory of learning to explain how teachers learn. The groups engage in lesson study action research cycles to improve their students' learning outcomes. The authors aim to explore the relationship between the research lesson's enactment and educational outcomes by encouraging

the teachers to examine their own and their students' experiences. The study collected extensive data, including video recordings of teachers' meetings, follow-up interviews, and lesson observations. The authors analyzed the transcripts to identify the dimensions of variation that were discussed and provided opportunities for learning. The study concluded that any member of the group can facilitate the necessary conditions for teacher learning through collaborative subject-based professional development groups. The facilitator or coach can play a crucial role in sustaining the group's focus on the critical features of the object of learning.

The study by Forte and Flores (2014) is focused on exploring how teacher collaboration and professional development are related to each other in a workplace setting, specifically in a school in northern Portugal. To gather data for the study, the researchers used a combination of quantitative and qualitative methods, such as questionnaires, interviews, and reflective essays. Based on the findings, the study highlights that there are certain critical moments in a teacher's professional development that can significantly impact their growth and learning. The study also suggests that there are opportunities for both collective and individual learning in the workplace, which can help teachers, enhance their skills and knowledge. Additionally, the study reveals that there are different perspectives and experiences regarding teacher collaboration, which can affect the effectiveness of collaboration efforts.

In 2014 a qualitative study undertaken by Park and So aimed to explore how the characteristics of a collaborative professional learning activity could support or hinder teacher learning and growth. The research was conducted through the experiences of three Korean secondary teachers who participated in a collaborative teacher learning project initiated by their school. The study found that this learning opportunity facilitated teachers' professional growth in several ways. Firstly, teachers experienced growth by collaborating with their colleagues. Secondly, teachers learned to self-reflect on their classes. Finally, the programme promoted an inquiry-based approach to teaching. However, the study also identified obstacles

encountered by the teachers, such as time constraints, psychological barriers, and a lack of discussion culture.

The study by Seo and Han (2013) investigated how teachers interact and collaborate with each other in online environments, specifically looking at a teacher-created online community. The researchers gathered data through various methods, such as conducting interviews with teachers, observing their behavior in the online community, and analyzing the content they posted. The study found that teachers engage in various forms of collaboration online, such as sharing personal stories, asking and answering questions, providing peer support, exchanging teaching materials, and organizing online workshops. Among these, the sharing of teaching materials was the most common form of collaboration. Teachers shared their teaching materials with others, and the materials were improved collaboratively through feedback and suggestions from other teachers. However, the study also found that only a small group of teachers contributed teaching materials, while the majority of teachers utilized these shared resources. This resulted in the widespread distribution of teaching resources, but it also highlighted the limited number of teachers actively contributing to collaborative development.

Peer observation is generally preferred by teachers over other types of observation, as it is viewed as a means of fostering critical friendships and personal development, rather than being used for assessment purposes by school administrators or supervisors. Some teachers engage in reciprocal peer observation to enhance their own teaching practices and to support the professional growth of their colleagues (Bell, 2005)

Walker, et al. (2022) investigated teachers' experiences with peer observation in a post-primary context. It was started by reading about peer observation of teaching, teacher professional development, professional learning communities, and reflective practice. Four pairs of teachers took part in the study. Data was gathered via a questionnaire, semi-structured interviews, and reflective journals. The information was analysed thematically. According to the findings, peer observation leads to reflective practice, which results in individualised learning for the

participants. Peer observation tends to improve staff collegiality, assist the formation of a professional learning community, and boost individual teacher self-efficacy.

Dos Santos (2017) explored how a peer observation training programme might support the professional development of East Asian English teachers. The study's objectives were to improve teaching practice, investigate how teachers interpret the peer observation programme after participating in it, and propose alternative approaches. Interviewing three teachers who took part in a peer observation programme at a language school in Hong Kong, the data were collected. The study discovered that peer observation can be a useful tool for teachers' continuous professional development to improve their teaching strategies. According to the findings, most teachers seem to be wary of the practicalities of peer observation due to the sensitivity that it entails. The study also discovered that teachers believe that if the peer observation approach is well established, it has the potential to be interesting or exciting to them. It can assist teachers in delivering their best practices. Participants generally agreed that certain aspects of a teacher's performance can only be accurately assessed by colleagues in the same or closely connected disciplines.

In their study Rose and Reynolds (2008) made some important findings on observation as an effective tool for CPD. Teachers were trained in the use of a classroom observation system as part of a pilot project to develop evidence-based professional development, and they used it as a basis for peer observation and discussion to help them decide on an area to focus on within their CPD. The majority of teachers who participated in focus groups and individual interviews believed that the process of organised, non-hierarchical peer observation and discussion was beneficial in establishing a personal CPD focus and as an activity in and of itself.

It is no doubt that teachers play a vital role in any endeavor related to curriculum and material development because of their field experience, knowledge and abilities. Because they are the most informed about the practice of teaching and

are in charge of delivering the curriculum in the classroom, better teachers facilitate greater learning (Alsubaie, 2016).

Nyamai (2020) in his study examined the present level of teacher involvement in curriculum development in Kenya through an examination of case studies undertaken in Kenya. The investigation is a desktop study that used qualitative data gathering and methods of analysis. The primary data collecting technique utilised to examine case studies to be used in the study was documentary analysis. The study discovered that teachers in Kenya were not effectively involved during the curriculum building process, and the majority of them were dissatisfied with the present curriculum development strategy.

The purpose of the study conducted by Oloruntegbe (2011) was to examine how involved, committed and innovative Nigerian science teachers are when it comes to developing, implementing and changing the curriculum. The author aimed to determine whether Nigerian teachers were always included in the development and implementation of the national curriculum. The study surveyed 630 secondary school teachers from the six southwestern states of Nigeria using a questionnaire called Teachers' Involvement, Commitment and Innovativeness (TICIQ). The data collected was analyzed using frequency counts and percentages. The author found that teachers often resist and lack commitment to the implementation of curriculum reforms because they are rarely involved in the development process and are not consulted on how best to implement them. The author recommended the adoption of a grassroot approach to curriculum development, involving all stakeholders, including teachers who will eventually implement the curriculum.

In 2003 Collopy conducted a study which focused on the learning of two upper-primary teachers as a result of their usage of potentially educational mathematics curricular materials without any additional professional development. From October to May of an academic year, 41 observations of teachers' mathematics sessions and 28 interviews with teachers were gathered. According to the case study analyses, it was found that curriculum materials can be a successful professional development tool, but not for all educators.

Mentoring is widely being recognized as a helpful technique for CPD. The process promotes both personal and professional development because the mentor acts as a 'trusted adult,' advising, collaborating, and providing feedback on practical aspects of the teaching-learning process, as well as assisting mentees in identifying personal goals and aligning them with professional ones. The coaching and mentoring model of Kennedy (2005) highlights the significance of the individual relationship between two teachers, and involves elements of counseling and professional friendship. This approach suggests that one teacher, who is considered a novice in a specific skill area, can receive support and guidance from another teacher who is considered an expert in that area. This model emphasizes that professional development can occur within the school environment, but is strengthened through social interaction and dialogue between teachers.

Ali, et al. (2018) attempted to examine the evolution of the teacher coaching and mentoring strategy in the educational sector, as well as the underlying principles and execution for teachers' Continuous Professional Development. The purpose of this study was to clarify the conflicting views and concerns about the teacher coaching and mentoring strategy. A library search of mainstream journals was conducted to find recent reviews and meta-analyses of teacher coaching and/or mentoring, empirical studies, and was supplemented by an online search of the websites of leading coaching and professional development organisations, as well as expert experts, including researchers and authors of key studies. The research revealed steady trends of expansion of teacher coaching and mentoring approaches that are appropriate for a variety of educational reasons. The review also disclosed that teacher coaching and mentoring is a promising method for teacher learning, teacher transformation, and overall improvement in student success.

Spanorriga, et al. (2018) reported that E-mentoring has attracted more attention recently in terms of teachers' professional development since it creates new opportunities for teacher support and guidance from a distance that get around time and location limitations. E-mentoring is also supposed to foster a collaborative, adaptable, supportive, and reflective atmosphere for teachers' professional growth.

In their study, the design and execution of an eleven-week e-mentoring programme for primary teachers with little teaching experience are discussed. Eight mentors who had extensive teaching experience and advanced degrees offered advice and assistance to 18 in-service teachers. E-learning techniques were used to assist the whole endeavour using the Elgg online platform. Three weeks after the e-mentoring programme was finished, interviews with both mentors and mentees were undertaken to gather qualitative data. Important information on the design of e-mentoring programmes and the essential elements of successful e-mentoring programmes for teacher professional development were discovered through the analysis of interview data.

Geeraerts et al. (2015) studied about the Peer-group mentoring (PGM) which was a new approach created in Finland to assist teachers in developing their profession. This study looked at the experiences of mentees taking part in PGM. As it related to the professional, personal, and social elements of professional development, it also discussed how the mentees see the outcomes of PGM. Methods of quantitative research were employed. 69 general education teachers and 47 vocational education teachers responded to an online survey. The findings demonstrated that participants saw PGM as a crucial tool for professional growth during their whole teaching careers.

Abetang, et al. (2020) investigated whether mentoring has a positive impact on teachers' work and whether it should be widely implemented. The method used in this study is research synthesis, which involves gathering and analyzing existing research knowledge and findings. The results indicate that both new and experienced teachers who have not participated in mentoring experience low self-esteem, stress, frustration, dissatisfaction, and feelings of incompetence, which may lead them to leave their teaching jobs. In contrast, teachers who have undergone mentoring develop confidence, leadership and communication skills, empathy, a sense of value, and the ability to function independently as classroom teachers. Therefore, the research suggests that teacher mentoring should be introduced and sustained worldwide to promote effective teaching and learning.

The phrase 'teacher researcher' refers to a professional who is self-reflective and driven to discover and address challenges in his practice. Teachers develop their own theories of teaching, serve as curriculum designers, and make informed judgments in their classrooms as a result of conducting research in the classroom. Teacher-led research may be used to help teachers improve their ability to make autonomous and professional judgements and decisions regarding their classroom practice. Teachers acquire increased confidence in their ability to enhance their teaching. Teachers function as curriculum designers, adjusting their practices in response to the study's findings. Teachers may use research to make more informed judgments in the classroom (Ilisko & Micule, 2010).

Hassen (2016) attempted to investigate the professional development for teachers through action research practice. The study's participants were 23 English Language Teachers who taught in high schools, preparatory schools, and colleges in 2014. The data was gathered through teacher reflection and an in-depth interview. The ELT teachers felt that participating in Action Research helped them advance in their careers. They changed their perception of research and their roles as teachers and researchers as a result of their participation in the inquiry. As they had conducted the research, their interest in action research had grown. Action research, according to the teachers, provided opportunities, particularly for female teachers who have other responsibilities at home and in the community. In-service action research is a cost-effective, efficient, and effective method of professional development. To supplement their research, the teachers read and explored literature. This implies that some sort of push factor should be present to break the silence of teachers who have grown accustomed to what they have. Research encouraged teachers to read academic literature, stay current, write, and contribute to the intellectual world by adding knowledge backed by experience and expertise.

Ado (2013) conducted a study that attempted to focus on how participation in teacher-led, semester-long action research projects influence early career teachers' attitudes of support and learning. As a result of the administration's attempts to modify the school's approach to professional development to better meet the

teachers' needs, all teachers at an urban, newly developed, small high school participated in action research projects. Two cycles of action research projects were carried out, with teachers providing feedback via an end-of-project evaluation. Participant observation and informal interviews were also used to collect data. The findings show that teacher-led action research projects, as a professional development structure, help to develop a supportive professional culture, feelings of context-specific support, and feelings of empowerment and belonging.

Chou (2011) set out to examine how a group of in-service elementary English teachers learned to conduct action research while participating in a professional learning community. It investigated whether action research is an effective approach for teacher professional development and how a teachers' learning community could help teachers develop. The research data included interviews with each teacher, reflective journals from the teachers, discussion data from this research group, and action research papers from the teachers. Data was gathered over the course of two semesters. The study validates teachers' action research as a method to help teachers understand their practice and improve student achievement, and it discovers that a professional learning community exists to serve as an inevitable platform for teachers to exchange knowledge, interact, and learn from one another.

According to the study conducted by Savoie-Zajc and Descamps-Bednarz (2007), different types of participatory research contribute differently to professional development. The main objective was to investigate the various contributions that action research and collaborative research can make. School personnel participated in one action research and one collaborative research. They were assessed midcourse on various aspects of professional development, such as the learning that was taking place, changes made to professional practices, and the development of collective competencies. Group interviews were held, and each participant wrote a summary. The result disclosed that individual competencies of participants are strengthened, and collective competencies emerge, such as the development of a common vocabulary and a shared vision of the school's mission and mathematics curriculum.

The purpose of workshops and seminars for educators is to keep them informed about the latest developments in education. It is essential for teachers to comprehend how children learn, and since the educational system is constantly evolving, professional development workshops are necessary to assist teachers in creating innovative teaching methods that promote learning and engagement in the classroom.

The aim of the study by Lizette Neng and Cheo (2022) was to explore the impact of teachers' attendance at seminars on their effectiveness in teaching in secondary schools in Tubah Sub Division. The study employed a cross-sectional survey research design and utilized quantitative methods for data analysis and presentation of findings. The results indicated that there was a significant positive relationship between teachers' participation in seminars and their effectiveness in teaching. In other words, attending seminars had a beneficial effect on the teachers' teaching effectiveness.

The purpose of the study conducted by Ollor (2021) was to investigate the impact of teachers' participation in workshop and seminar programmes on the quality of instructional delivery in secondary schools in Rivers State. The research used a descriptive research design, and the population of the study comprised 5,216 respondents, including principals and teachers in Secondary Schools in Rivers East Senatorial Zone. The study revealed that attendance in workshops and conferences is highly significant and essential in enhancing the quality of instructional delivery by teachers in secondary schools. The reason for this is that such workshops and conferences can develop teachers' teaching methods, knowledge, and skills, thereby improving their overall effectiveness. Based on the findings of the study, it was recommended that school principals should encourage teachers by nominating them to participate in workshops to enhance the quality of instructional delivery in schools.

Rahyasih, et al. (2020) in their study focused on analysing the needs of teachers for continuing professional development through scientific publications. This aims to improve teachers' science mastery and skills in carrying out lifelong

learning. The study used a qualitative approach with a case study focused on the need for teachers' continuing professional development in scientific publications, taken purposefully among 40 teachers. Questionnaires, interviews, observation, and documentation were used to collect qualitative and quantitative research data. Based on the findings of this line of research, the current study discovered that scientific publications training is an important part of continuing professional development for teachers, particularly in preparing ideal modules or guidebooks and writing skills in scientific articles from Classroom Action Research (CAR). According to the study's findings, continued professional development for teachers through scientific publications still needs to be enhanced and has garnered significant attention from both individuals (teachers) and institutions

Lee (2011) conducted a study which aimed to investigate how EFL teachers might be encouraged to take a more active role by engaging as presenters at CPD seminars, as well as how such a means of CPD can enhance teacher learning. By using questionnaire and email interview data from 166 seminar attendees and 4 teacher presenters, respectively, the study revealed that avenues for teachers' knowledge sharing and creation at CPD seminars can increase teacher learning. The study suggested that a more comprehensive type of teachers' CPD should allow teachers to play a much more active role than is typically allowed in CPD activities dominated by the traditional training paradigm based on the knowledge consumption.

The main objective of the study by Broemmel et al. (2019) was to contribute to the existing literature on teachers' professional reading habits by inviting teachers from randomly selected schools across the United States. The findings indicated that many teachers engage in reading for professional development, with the majority of their reading being done outside of regular work hours. The study did not find any significant differences in reading preferences or behaviors based on degree level or years of experience. However, limited time and perceived lack of relevance were identified as common barriers to professional reading. The study provides insights that can inform the design of effective professional development programmes.

Waris (2013) undertook a study in Bihar which aimed to determine the extent to which using the library can help teachers improve professionally and enhance their teaching skills. The study involved 72 teachers from 24 secondary or senior secondary schools and ten school librarians. Data was collected through a questionnaire and face-to-face interviews. The preliminary findings indicate that public school libraries are operating under severe constraints, which limit teachers' access to the latest developments in classroom teaching. On the other hand, private school libraries are better managed and equipped. The study also found that approximately half of the teachers rarely visited the library and showed minimal interest in reference books, despite acknowledging the usefulness of the library in improving their professional competence. Overall, the study suggests that there is a need to address the challenges faced by public school libraries and encourage teachers to make better use of the available resources to enhance their professional development.

The purpose of the study conducted by Burgess, et al. (2011) was to examine the connection between elementary school teachers' reading habits, understanding of children's literature, and application of literacy best practices in the classroom. A survey of 141 kindergarten through fifth grade teachers was conducted to analyse literacy instruction techniques and leisure reading habits. Teachers' reported usage of best literacy practices was pretty similar across the board, regardless of how many books they read or how much TV they watched, although those with higher knowledge of children's literature were more likely to employ best practice techniques. Several potential explanations for these diverse findings are suggested.

McKool and Gespass (2009) investigated the association between teachers' personal reading habits and their instructional methods. Teachers completed a questionnaire that indicated their reading attitudes, the amount of time they spent reading each day, and the literacy strategies they utilised in their classes. The findings show that while most teachers value reading as a leisure activity, only about half read for pleasure on a daily basis; teachers who read more than 30 minutes per day use a greater number of best practice strategies; teachers who value reading the

most tend to share insights from their own personal reading and teachers who read for pleasure use both intrinsic and extrinsic motivation.

Rudland and Kemp (2004) examined the existing literature on the reading habits of teachers, with a focus on those working with students with special education needs. The study looks at the importance of professional reading, the amount of reading undertaken by teachers in Australia and other countries, the types of reading materials that teachers prefer, and the factors that influence their reading habits. According to the literature, teachers tend to engage in relatively little professional reading, particularly when compared to other professionals. The reading that does occur is mainly from practical and informative periodicals. The paper also explores the implications of these findings, identifies current obstacles in promoting professional reading among teachers, and provides research-based suggestions for improving low levels of professional readership.

A professional development portfolio is a tool that helps professionals to document and reflect on their experiences, achievements, and areas for growth throughout their career (Hall, 1992). In the context of teaching, a professional development portfolio can be used to record and reflect on a teacher's learning journey, including their participation in training courses, conferences, workshops, and other forms of professional development.

Hamilton (2020) examined the role of collaborative, cross-sectoral, and cross-contextual teacher professional development in evidence-based teaching portfolios. The discussion includes qualitative data analysed from teachers with experience working in higher education, a national teacher support service, post-primary education, and teacher preparation. This paper's central thesis is that many process and practice results obtained throughout the portfolio construction process are beneficial for teachers collaborating across sectors, and as a result, beneficial for teachers and students along the whole educational continuum. According to key results, a cross-sectoral group may produce information that is personalised and contextualised to each teacher's teaching philosophy while being educated by practitioners from many sectors. The teachers were able to demonstrate their own

professional growth throughout and after the study process by creating a personalised and contextualised written teaching portfolio.

The study conducted by Chakrakodi (2013), examined the use of professional development portfolios in an in-service teacher education context. The portfolios were constructed by teachers participating in a program, and included written pieces produced by them over a one-month period, as well as lesson plans, classroom observation notes, and reflective essays. The study conducted in Karnataka finds that portfolios are effective as learning tools in developing teachers' writing skills and reflective thinking ability. They are also useful as teaching tools in developing the knowledge and skills needed to teach writing in English as a second language. The study further suggests that portfolios have a positive impact on teachers' professional attitudes and competencies, and contribute positively to their professional development. Overall, the study underscores the value of using portfolios as a means of fostering ongoing professional growth and development among educators.

Chetcuti, et al. (2011) explored the use of portfolios for the professional development of teachers. Pre-service teachers at the University of Malta's Faculty of Education create a Professional Development Portfolio that comprises artefacts and reflective writings. Student teachers can learn and develop professionally as a result of the process of establishing their PDP. This article investigates whether teachers' pre-service education reflective learning skills are retained in their first year of teaching. According to the study, teachers internalised these abilities and utilised them informally to help them deal better with their new job as competent teachers.

Milman and Kilbane (2005) in their article presented the findings of a qualitative investigation on the use of digital teaching portfolios in classroom training and professional development for teachers. The participants, who were all educators, took part in a formal course where they created an online teaching portfolio. According to the research, the steps taken to create digital teaching portfolios encouraged participants' genuine professional growth and served as a

catalyst for their continued professional development. Additionally, these teachers' participation in portfolio creation was crucial to their development and self-discovery.

Dinham and Scott (2003) explored the use of a professional development portfolio among 29 teachers who received an award for quality teaching across different education sectors. The award was based on a set of professional teaching standards and involved the development of a portfolio, classroom observation, and interviews. Six months after receiving the award, the teachers completed a survey that asked open-ended questions about their experience with the portfolio. The study outlined the benefits associated with the portfolio, which went beyond being just a summative exercise. The portfolio was found to be a valuable learning and affirming process, providing opportunities for reflection and discussion within a well-structured framework. Overall, the process of developing the portfolio was seen as extremely valuable for the teachers' professional development.

Tucker et al. (2003) undertook a study to ascertain the effectiveness of portfolios in the evaluation of teacher performance for both accountability and professional development objectives, a multiyear study of a small school district that had adopted the usage of portfolios as a component of a new evaluation system was done. It was discovered that the portfolio system was especially helpful in recording teachers' performance in the areas of assessment and professionalism—areas that were difficult for administrators to easily observe during classroom visits. The introduction of portfolios let administrators make more precise judgments about the caliber of teacher performance based on the findings of summative evaluations. Data from surveys and focus groups showed that although teachers and administrators believed portfolios were fair and reliable performance indicators, they were skeptical about their viability due to the time requirements for preparation.

Reflective teaching is fundamental for the professional development of any educator. Larrivee (2008) asserts that a reflective practitioner must possess the skills to contemplate their everyday teaching practices, examine their personal beliefs, and

scrutinize the relevance and significance of their objectives. These qualities are essential for effective reflective practice.

The goal of the study by Kharlay, et al. (2022) was to examine the extent and quality of reflective practice in the field of English Language Teaching (ELT) in contemporary Ukraine. The study surveyed 56 EFL teachers using both quantitative (questionnaire) and qualitative (interview) methods to gain a comprehensive understanding of reflective practice in the country. Results indicate that Ukrainian EFL teachers use reflective practice consistently, but not systematically in their teaching. However, the study also reveals a significant difference in the perception of reflective practice between experienced and novice teachers. Teaching experience appears to be a critical factor in using reflection to improve professionalism. Teachers prefer peer sharing and observations over journaling or organized notes, which are seen as time-consuming and interfere with a busy schedule. The development of reflective teaching could be facilitated by easier access to modern recording media.

The study conducted by Pokhrel (2022) investigated how reflective practices shape the professional lives of English language teachers. It presents the experiences of these teachers in developing a reflective mindset to address the gap between theory and practice in classroom teaching, understanding pedagogical practices, using various strategies in EFL classes, and building self-efficacy as reflective practitioners. The study employs reflective practice as a method and highlights its importance in enhancing pedagogical skills, teachers' efficacy, and critical thinking in the teaching profession, thus motivating teachers for professional development. Despite some social constraints that impede reflective practice, the aims to inspire English teachers to cultivate a sense of willingness and responsibility, which will enable them to reflect on their teaching practice and transform into professional teachers.

Farrell and Macapinlac (2021) made a case study on the reflections of two novice teachers of English to speakers of other languages (TESOL) in South Korea. The study used a framework that includes reflections on philosophy, principles,

theory, practice, and beyond practice. The results showed that the teachers' reflections on the hidden aspects of teaching, such as philosophy, principles, and theory, were consistent with their practices. Two main categories emerged from their reflections: the acknowledgement of teacher roles and the importance of their students' success.

The study by Gheith and Aljaberi (2018) aimed to examine the levels of teachers' reflective practices and their attitudes towards professional self-development, taking into account variables such as gender, experience, and the number of workshops attended. The sample comprised 162 teachers working in private schools in Amman, who completed two scales. The first scale, consisting of 28 items, measured teachers' reflective practices across six dimensions, while the second scale, comprising 18 items, measured their attitudes towards professional development. The results revealed that teachers' reflective practices, as measured by the scale as a whole, were at an acceptable level. However, their practices in the "appreciating criticism" subcategory fell below acceptable levels. The findings also indicated that teachers had positive attitudes towards professional development. Additionally, a strong correlation was found between teachers' reflective practices and their attitudes towards self-development.

In 2018, Olaya examined 23 national and international research reports on reflective teaching with the aim of exploring the potential for reflective teaching to be used as a professional development strategy for language teachers. The study uses content analysis to identify four main topics: (a) reflective teaching as a means of improving the language profession; (b) the impact of reflective teaching on teachers' performance; (c) the support, time, and effort needed to implement reflective teaching; and (d) the use of reflective teaching in in-service professional development programmes. The study concludes that reflective teaching can be an effective way to raise awareness about English language teaching, encourage teachers to update their teaching methods, and make adjustments to their lessons. It is seen as a valuable alternative to traditional professional development strategies.

In 2013, Mathew conducted a study on using diary writing as a tool for reflective practice among ten teachers and a teacher educator in a university in India. The study spanned over five months and involved several activities such as writing diaries, reading and responding to diaries, dialoguing in group meetings, presenting a paper at an international conference, and writing up the study for publication. The study demonstrated that involving the teachers in all aspects of the study proved to be an effective means of communication, built a relationship of trust, and provided participants with the opportunity to critically reflect on ideas without the fear of being judged. The use of diary writing helped the participants think and reflect on their experiences and learning in a structured and organized manner. Moreover, the collaborative nature of the study enabled the participants to share their insights and learn from one another. Ultimately, the study highlights the value of reflective practice in promoting professional development among educators.

Tok and Dolapçioğlu (2013) conducted a study on primary school teachers in Turkey to investigate the prevalence of reflective practices in their teaching. They utilized qualitative and quantitative research methods to collect data. Their findings revealed that teachers employed several reflective practices inside the classroom but did not use practices that encouraged students to express their thoughts and deliver their opinions or criticisms of the teacher's classroom practices orally or in writing. Furthermore, the study found that teachers did not maintain a daily record to document their professional development and effectiveness in teaching science.

Lesson study proved to be an effective strategy for CPD. The teacher is placed in the central role and they are enthusiastic to better their practice to impact on student' learning. The concept is based on a simple idea where a group of teachers having similar interest come together, plan a lesson to make student's learning visible, watch their performance and discuss after that. This provides an effective platform for teachers to share what they have observed and suggest changes for better results (Murata, 2011).

The professional development of beginning and experienced teachers collaborating in Lesson Study teams is central to the study conducted by Coenders and Verhoef (2019). A chemistry team and a multidisciplinary team from a high school participated. Each team was made up of a new and experienced teacher. Both teams completed the Lesson Study cycle twice. A qualitative multiple case study using interviews, reflective journals, and recordings was conducted to investigate what and from what new and experienced teachers learned, differences in teacher learning, and what Lesson Study elements contributed to this learning. The findings show that two Lesson Study teams were formed, in which participants shared their teaching and learning experiences, thoughts, and ideas. Lesson Study aided both new and experienced teachers' Pedagogic Content Knowledge (PCK) development. This PCK development was aided by the combination of two phases in this professional development programme: a development phase in which participants met new pedagogies, discussed these in the context of student learning, designed a lesson plan, and prepared for class use. Following that is a class enactment phase in which the designed lesson is enacted, students are observed, salient results are discussed, and the lesson plan is revised.

The purpose of the study by Vermunt et.al (2019) was to gain a better understanding of the impact of Lesson Study (LS) on the quality of teacher learning. It is based on longitudinal and cross-sectional data from three waves of data collection from 214 teachers who participated in LS for an entire school year. Lesson Study had a positive effect on meaning-oriented and application-oriented teacher learning, but a negative effect on problematic learning, according to the findings. Less experienced teachers demonstrated the greatest improvement in meaning-oriented learning. The study extends our theoretical understanding of teacher learning by providing evidence of mechanisms by which professional development influences teacher learning.

Shome (2017) attempted to assert the concept of PCK by understanding its components, the implications of these components in structuring in-service teacher

professional development, and finally proposed a teacher professional development model satisfying the three components of PCK viz (a) knowledge of multiple representations, (b) knowledge of students existing ideas, (c) knowledge of pedagogic strategies to build upon the concepts on students' existing ideas.

Van Driel, et al. (2012) observed that since pedagogical content knowledge (PCK) includes teachers' understanding of how students learn, or fail to learn, specific subject matter, it is an important objective to highlight in professional development programmes. The research literature clearly demonstrates the complex nature of PCK as a type of professional knowledge held by teachers that is highly topic, person, and situation specific. This implies professional development programmes aimed at improving teachers' skills. PCK cannot be limited to providing teachers with input, such as examples of expert subject matter teaching. Instead, such programmes should be closely aligned with teachers' professional practice and, in addition to providing teachers with specific input, should include opportunities for teachers to implement specific instructional strategies and to reflect on their experiences, both individually and collectively.

In 2010 Goldschmidt and Phelps studied about the influence of teacher professional development on knowledge acquisition and subsequent knowledge retention. Researchers employed teachers' content and pedagogy assessment to see if the California Professional Development Institutes significantly increase teacher content knowledge and if teachers retain that knowledge six months after the courses. The findings show that teachers differ considerably in their pre-training knowledge on the four tested areas, show considerable knowledge increase, but only retain nearly half of what they learned during the programme. Additionally, pre-existing knowledge gaps are not systematically addressed, and teacher ratings of training quality are unrelated to knowledge development and retention.

Guzey and Roehrig (2009) investigated how four in-service secondary science teachers developed their technology, pedagogy, and content knowledge

while participating in a professional development programme concentrating on technology integration into K-12 classrooms to promote science as inquiry teaching. Proeware, mind-mapping tools, and Internet applications — computer simulations, digital photos, and videos — were presented to science instructors as part of the initiative. To follow teachers' improvement throughout the course of the year-long programme, a descriptive multicase research methodology was used. Data sources included interviews, questionnaires, classroom observations, technology integration plans for teachers, and action research study reports. The curriculum was shown to have various degrees of beneficial influence on teachers' development. Contextual variables and teachers' pedagogical reasoning influenced teachers' potential to apply in their classrooms of what they had learned in the programme.

The integration of ICT in CPD of teachers is essential for improving teaching and learning experiences and promoting the development of digital literacy skills. Teachers must continue to develop their ICT skills and knowledge to effectively integrate technology into their teaching and prepare students for the digital world.

Fitri and Rifa'at (2022) made a study which focuses on how to enhance English Language Teaching (ELT) by empowering teachers through the use of ICT. In Indonesia, not all English teachers are proficient in ICT, with 54.2% having computer literacy, 51.4% having internet literacy, and typing skills. The article highlights the benefits of ICT in ELT, such as keeping up with the world, providing variety in work, breaking the routine, gaining new experiences, encouraging creativity, and enabling better teacher-learner interactions. Empowering teachers through ICT means giving them the ability to engage, control and influence events and institutions that affect their lives using any communication device or application. This can be achieved through professional development opportunities such as workplace training, seminars, and professional meetings, as well as through technology management training for teachers.

Aprianti (2017) undertook a study to find out how EFL teachers consider ICT for continuing professional development, which domain competencies they generally build with the use of ICT, and which ICT tools they primarily employed during continuing their professional development. This study took a qualitative approach and used a case study design. Participants were 16 EFL teachers from five different West Java schools. Questionnaires and interviews were used to collect data. The findings revealed that teachers utilised ICT as a platform for continuing professional development. The survey also found that teachers mostly utilise ICT technologies to increase their subject matter comprehension and pedagogical knowledge.

The COVID-19 pandemic turned upside down the entire life across the globe and the system of education was of no exception. Teachers faced many unexpected professional challenges and surprisingly many of them turned these challenges into opportunities. It is interesting to examine the continuous professional development teachers undertook formally and informally during the pandemic and in the new normal.

Bergdahl (2022) undertook a design research based intervention in which professional development was designed using the Blended Learning Adoption framework to assist teachers in developing their online teaching practices. The intervention, which lasted six months, involved 26 teachers. Thematic analysis was used to analyse the data. Key findings revealed that the pandemic had sparked change in many teachers, but not in all. Inviting special needs pedagogues in parallel breakout rooms, as well as grouping and re-grouping students when facilitating varied collaboration, were examples of emerging teaching practices in synchronous online learning.

Kim, et al. (2022) conducted a study since the COVID-19 pandemic has called into question many presumptions in education, including those concerning the qualities most essential to being an effective teacher. They asked 23 state primary

and secondary school teachers what it takes to be a great teacher during a pandemic. Two themes emerged: concern for student well-being and dealing with uncertainty. Teachers reported that, while demonstrating these qualities has always been important, it has become even more during COVID-19. These findings suggested that recognising and assisting teachers in developing these qualities may benefit teacher education and professional development programmes.

Cortezano et al. (2021) conducted a study to investigate and capture the essence and meaning of educators engaged in continuing professional development in the new normal. The study employed a qualitative research design and transcendental phenomenological processes. As per the testimonies gathered from participants from seven different countries—the Philippines, the United States, Panama, Peru, Pakistan, Nigeria, and Morocco—they demonstrated adaptability and innovation as a result of the Continuing Professional Development during the pandemic. They have done their best to maintain a balance of digital and life skills as the push transitioned from face-to-face interaction to remote learning. Participants also engaged in CPD in order to increase their creativity and resourcefulness in to provide and meet students' learning needs in the midst of a pandemic. They had seen the relation and collaboration established with educators all over the world during Covid-19 as a blessing and a great opportunity. Through CPD, they also achieved a passion for an ever-learning mindset and satisfaction. Participants agreed that teachers' mindfulness and well-being should be prioritised in their CPD engagement in the new normal. During this time, the researcher suggests that policymakers assess and reconsider their programme for teacher CPD training.

The goal of the study by Dolighan and Owen (2021) was to examine secondary teachers' efficacy for teaching in a fully online teaching environment during the COVID-19 pandemic's sudden transition to online teaching. The purpose of this study was to determine how specific variables, such as teaching experience, PD experience, and teaching supports, might correlate with self-efficacy perceptions of teachers transitioning to online teaching during a pandemic in the domains of

student engagement, instructional strategies, classroom management, and computer skills. A web-based 32-item survey was administered to Ontario secondary teachers in a greater Toronto district school board to assess teacher efficacy for online teaching. Higher online teaching efficacy scores were found to be associated with having taken online Additional Qualification (AQ) courses and online professional development sessions. The highest online teaching efficacy scores were associated with prior use of the board-provided learning management system (LMS) and the use of virtual technology supports. These indicators are associated with higher levels of online teaching efficacy, but more research is needed to determine how they can better support teachers in online learning environments.

Saboowala and Manghirmalani (2020) attempted to study on incorporating the blended learning approach into professional development training courses for school teachers, which will allow for the integration of educational programmes across disciplines in both Indian and global communities. The study included 169 in-service Indian school teachers. To collect data, a simple random sampling technique was used. The attitude of teachers toward blended learning and its six dimensions, namely learning flexibility, online learning, study management, technology, classroom learning, and online interaction, had also been investigated. The effect of gender and the location of educational institutes where they teach were also taken into account. The findings revealed that both male and female teachers have similar attitudes toward blended learning, but their attitudes differed when the six dimensions were considered. It was also discovered that school teachers in urban areas had a more positive attitude toward blended learning and its dimensions than those in rural areas. Implementing blended learning for professional development of school teachers following the pandemic will expand the scope of learning by generating opportunities for collaboration of diverse educational societies around the world, strengthen constructivist learning, and assist in adhering to social norms set to fight COVID-19.

Factors affecting continuous professional development of teachers

The study by Abakah (2023) examined the factors that influenced junior high school teachers' decisions to participate in CPD activities. The research involved 522 teachers from the Central region of Ghana, and data were collected through surveys and in-depth interviews. The study found that teachers were more likely to participate in informal CPD activities than in organized ones. Additionally, the motivation to participate in CPD activities was influenced by more than just intrinsic and extrinsic factors, with socio-cultural factors like the nature of their identity and agency also playing a role. These factors were shaped by the existing contextual conditions in teachers' professional practice and increased their expectations of resources from CPD participation. As a result, educators engaged in professional development activities only when they believed that the benefits they would gain from participating would outweigh the expenses they had to incur to take part in such programmes.

Darling-Hammond, et al. (2017) made a detailed review to identify the factors that influence effective professional development. Effective professional development is a structured professional learning programmes that leads to improvements in student learning outcomes and changes in teacher practices. After conducting an extensive search of literature over the last 30 years and reviewing studies that met methodological criteria, seven key features of effective professional development were identified. These include being content-focused, using active learning techniques, promoting collaboration among teachers, providing models of effective teaching practices, offering coaching and expert support, encouraging feedback and reflection, and being of sustained duration.

Subhan Zein's (2016) study examined the viewpoints of 23 teachers, 14 teacher educators, and 3 school principals on the effectiveness of in-service professional development in preparing elementary English teachers. The study found that a lack of competent teacher educators was a factor in the unsatisfactory nature

of in-service professional development. Additionally, interference from educational administrators had a negative impact on the planning and management of teacher preparation programs, leading to inadequate training management and unclear selection of training participants.

The scholarly article by Patton, et al. (2015) reviews professional development literature and presents core features of effective professional development. The article highlighted that effective professional development should focus on addressing participant-identified needs and transforming them into new knowledge, skills, values, and beliefs. The article also emphasizes that professional development should recognize that learning is a social process and should provide collaborative opportunities within learning communities of educators. Effective professional development should be ongoing and sustained, treat teachers as active learners, enhance their pedagogical skills and content knowledge, and be facilitated with care. Furthermore, professional development should focus on improving learning outcomes for students.

Quattlebaum (2015) conducted a case study which aimed to investigate teachers' perceptions of professional development (PD) programmes offered by their district and to identify the best practices for PD programmes. The study was based on Knowles' adult learning theory and used a conceptual framework to explore teachers' preferences for PD programmes. The research questions focused on the format, content, and process of PD programmes and how teachers applied the knowledge and skills acquired in their training. The study collected data from six elementary teachers through a case study design. The findings revealed that teachers preferred PD programmes that were relevant, collaborative, and customized to their grade level. The study's positive social implications include improved district PD programmes that align with best teaching practices and promote effective student instruction, leading to increased student achievement.

The objective of the study by Bayar (2014) was to define effective professional development activities and to identify the key components that make them effective. The study involved interviews with 16 elementary school teachers (8 males and 8 females) from a major city in Turkey who had participated in professional development activities over a 12-month period. The teachers were asked to identify the essential elements that should be included in any effective professional development activity. In addition, the study included an analysis of reports from the Ministry of National Education trainings. The study found that effective professional development activities should include the following components: 1) addressing the needs of teachers, 2) addressing the needs of the school, 3) teacher involvement in the design and planning of the professional development activities, 4) opportunities for active participation, 5) long-term engagement, and 6) high-quality instructors.

In 2012, Whitehouse and Pollitt analysed the effectiveness of CPD for teachers is typically evaluated based on improvements in teachers' subject content knowledge, pedagogical content knowledge, self-efficacy in teaching, and changes in classroom behaviors and teaching and learning activities. However, it is challenging to establish a direct cause and effect between teacher CPD and student outcomes, so student achievement is not commonly used as a measure of effectiveness. Despite this, there is a general consensus among several reviews that there are six characteristics of effective CPD for teachers. These are a) Based on identified learning needs of both students and teachers; b) Sustained over time; c) Subject-specific; d) Based in the classroom, e) Collaborative, particularly through establishing professional learning communities; f) Uses external expertise etc. Effective CPD is iterative, allowing for personal teaching theories to be challenged and for teaching practices to be changed through participation in professional learning communities.

Hunzicker (2010) attempted to summarise the current research on effective professional development for teachers and provides a checklist for school leaders to

follow when designing learning opportunities for their teachers. Effective professional development should have certain characteristics, including being supportive, job-embedded, instructionally-focused, collaborative, and ongoing. Being supportive means providing teachers with resources and assistance to help them learn. Job-embedded professional development is integrated into teachers' everyday work to make it relevant and useful. Instructionally-focused professional development helps teachers improve their instructional practices to benefit student learning. Collaborative professional development provides opportunities for teachers to work with colleagues and share their learning experiences. Ongoing professional development is a continuous process rather than a one-time event.

CPD – Challenges

There are numerous challenges in the path of effective professional development. Eroglu and Kaya (2021) studied about different barriers of professional development. Data was collected from secondary school teachers. According to the study's findings, teachers' professional development hurdles included insufficient in-service training, challenges with school functioning, individual problems, and other issues. Participants also emphasised professional development barriers such as negative attitudes toward in-service training courses, inconvenient course time, and monotony of course content, inefficiency of course trainers, lack of content knowledge, unsatisfactory performance evaluation, heavy workload, financial problems, and a lack of professional development opportunities. The study's findings are similar with those of other research on teacher professional development in the literature. The researchers stressed that professional development programmes should be designed based on the features of successful professional development programmes, and that stakeholders should support teacher professional development in order to overcome these hurdles.

Szelei, et al. (2020) explained how context-based professional development (PD) for cultural diversity in a Portuguese school cluster facilitated transformation

for justice and equity. Teachers recognised the value of professional development and had a desire and interest in learning. Several teacher learning possibilities were identified, including formal seminars, the formation of small collaborative groups, and teachers' self-directed informal learning activities. However, a very fragmented nature of PD appeared to emerge in terms of content on cultural diversity and learning modes. There were conflicting goals, sporadic instructor collaboration and commitment, and little student and community engagement in scheduled PD. Furthermore, there appeared to be contradictions between present PD and teachers' demands and situations; teachers want more particular information and pedagogical answers, as well as greater collaboration and organisational support in PD.

The goal of the study by Can (2019) was to identify the roadblocks to teachers' professional growth and make recommendations to overcome them. The research data was collected from 24 participants using open-ended questions with written responses. The data was evaluated utilising qualitative research methodologies and content analysis. Obstacles to teachers' professional growth, according to teachers and administrators, are based on legal, educational, administrative, and social factors. Teachers' professional growth is hindered by the inadequacy of selection, placement, and employment of teachers, the instability of educational politics, the constant transformation of the education system, the inadequacy of teachers' organisations, and teachers' lack of a mission and motivation.

Tooley and Connally (2016) identified important barriers to PD's potential for increasing teachers' knowledge and abilities in service of their pupils. These hurdles, according to the authors, hinder four components of a fruitful PD cycle from occurring: (1) recognising teachers' development needs; (2) selecting aligned, evidence-based PD techniques; (3) implementing ways with consistency; and (4) measuring outcomes. According to the authors, these barriers are exacerbated by issues in the professional culture that many teachers face. They also highlight how federal, state, district, and school-level actors, as well as educator preparation

programmes, all play a role in contributing to these challenges and professional culture barriers.

Geldenhuys and Oosthuizen (2015) undertook a qualitative interpretive study on the challenges that impact on teachers' participation in continuous professional development, as seen from a South African perspective. Questionnaires and interviews were used to obtain data from primary school teachers. Insufficient contribution of school management to teachers' CPD, teachers' reluctance to participate in CPD activities, issues preventing teachers from participating effectively in CPD events, and inadequate knowledge offered by CPD programmes were the four themes that emerged. Teachers' participation in the planning, implementation, and evaluation of CPD programmes were found to be relevant in productive teacher professional development.

Mohamed (2008) observed that while successful, high-quality CPD is dependent on a variety of factors, including organisational support and the availability of teacher learning opportunities, teacher attitude toward CPD appear to be important as well. Based on interviews with 30 non-native English teachers, this paper discusses teachers' perspectives on professional development and the activities they participate in to learn and improve their craft. According to the findings, only a few teachers recognised the need for CPD in this context. They, too, lacked the knowledge of how to change. The vast majority of teachers did not value CPD and saw little need to engage in learning. The reasons for teachers' disinterest in their own CPD are investigated.

Sandholtz and Scribner (2006) in a case study, examined the professional development component of a standards-based reform initiative launched by a school district in the United States using a consensus model as a framework. They analyzed the district's activities, assessed the model's adherence, and pinpointed the causes for what happened. Despite administrators' best intentions, certain implementation tactics undercut and contradicted core design principles of effective professional

development. As a result of growing bureaucratic restrictions at the state and national levels, they responded by expanding regulation and control at the district and school levels, which ironically limited the very qualities they intended to develop.

In their study Gray and Leaton (2005) discuss CPD challenges like travel difficulties, timetabling events to allow for individual teacher preferences, willingness to sacrifice 'own time' for CPD, teachers' feelings of 'social exclusion' etc. Teachers staying outside London said it was difficult to find time and money to attend courses in the capital, and they preferred locally based training. When it came to scheduling CPD activities, some providers were deemed non sensitive to teachers' preferences. Training was frequently provided in the middle of the school year, during busy periods, and at a great distance from the schools. When things were quieter at school, teachers preferred to engage in training. This was especially true at the beginnings and ends of school terms. Some teachers were willing to sacrifice one or two days of their holiday each year to attend conferences or training sessions. Others needed the holiday to recover from the pressures of the school year or to care for dependents. To cater these different preferences, all of the teachers highlighted the significance of providers offering a variety of courses throughout the year. Some teachers favoured online learning because it allowed them to take part in training at their own pace and based on their personal preferences. This was especially beneficial to some teachers with dependents, who described feeling "overlooked" and "left out" of career-related training due to time and financial constraints imposed by family life. Throughout the study, teachers at all levels expressed a desire to participate in a variety of professional development activities. Subject-based CPD is one of the most highly regarded forms of professional development, according to them, because it allows teachers to engage in experiential learning and discuss teaching with their subject peers, providing them with a lot of mental stimulation. Continuous professional development gave the job a sense of forward acceleration, which had an immediate impact on classroom life. Teachers found subject-based

professional development to be a rewarding activity in this regard. It aided their professional development and had an impact on their teaching.

According to Marzano (2003), some institutions ignore best practices for professional development since the sessions are unrelated to content areas and do not address the transition of generic strategies into specific content areas. Schools frequently do not provide teachers with the chance to put ideas taught during professional development to the test, and instead provide only a few irrelevant and disconnected faculty development sessions.

For Peery (2002) programmes that overlook individual learning requirements are distinguished by a one-size-fits-all approach to curriculum comprehension. When school districts require that every teacher be mass-trained, many teachers will be uninterested in the training topic. Peery proposed that training becomes a passive experience because, with little opportunity to connect with colleagues, teacher participation in applying acquired tactics is restricted.

Table 2

Summary of studies related to attitude and perception towards CPD

Author	Title	Year	Major Findings
Utami, I. L. P., Prestridge, S., Saukah, A., & Hamied, F. A.	Continuing Professional Development and teachers' perceptions and practices-A tenable relationship.	2019	There is a link between CPD participation and teacher's views and practices.
Calleja, J.	Teacher participation in continuing professional development: Motivating factors and programme effectiveness.	2018	The teachers' intrinsic motivation to participate in the CPD was driven by three factors: their desire to learn more about teaching, their belief in the value of inquiry, and their need to change their teaching methods.

Author	Title	Year	Major Findings
Al Asmari, A.	Continuous professional development of English language teachers: Perception and practices.	2016	Teachers reported setting goals to improve professionally and reflect on their teaching practices, and they also believed in collaboration and teamwork.
Avidov-Ungar, O.	A model of professional development: Teachers' perceptions of their professional development.	2016	The teachers in this study discussed two dimensions of their professional development experiences: their motivation for professional development and the types of aspirations they had
Alibakhshi, G., & Dehvari, N.	EFL teachers' perceptions of continuing professional development: A case of Iranian high school teachers.	2015	The participants' perceptions of continued professional development included skill improvement, persistent learning, keeping updated, learning for pleasure, and professional renewal.
Hürsen, Ç.	Determine the attitudes of teachers towards professional development activities.	2012	The effectiveness of professional development activities varies among teachers and is inconsistent. The results further suggest that the attitudes of teachers towards professional development activities are influenced by their gender, age, and length of service.
Ahmad, I., Said, H., Zeb, A., & Rehman, K.	Effects of professional attitude of teachers on their teaching performance: Case of government secondary school teachers in Malakand Region, Khyber Pakhtunkhwa, Pakistan.	2013	Teachers with a good professional attitude perform better in the teaching and learning process. They are more enthusiastic about their work.

Author	Title	Year	Major Findings
Masuda, A. M., Ebersole, M. M., & Barrett, D.	A qualitative inquiry: Teachers' attitudes and willingness to engage in professional development experiences at different career stages.	2013	The teachers' intent, perceived value, and preferred topics for professional development varied based on their career stages.
Ifanti, A. A., & Fotopoulou, V. S.	Teachers' Perceptions of Professionalism and Professional Development.	2011	The teachers were familiar with the concept of professionalism and sought ways to improve their professional development.
O'Sullivan, H., McConnell, B., & McMillan, D.	Continuous professional development and its impact on practice: a north-south comparative study of Irish teachers' perceptions, experiences and motivations.	2011	The fundamental goal of CPD is to improve one's skills, and that it is, in general, their personal obligation to participate in CPD. Obtaining approved, higher-level certifications that were relevant, appropriate, and provided opportunity for reflection had the most influence on their profession.
Wan, W. Y. S.	Teachers' perceptions and experiences of continuing professional development (CPD): opportunities and needs in Hong Kong primary schools.	2011	School factor, personal factor, financial factor, time, CPD provider, family factor, relationship with others, and government factor were all characterised as facilitating factors. Time, excessive workload, financial factor, CPD provider, school factor, and personal element were all identified as inhibiting factors.
Van Eekelen, I. M., Vermunt, J. D., & Boshuizen, H. P. A.	Exploring teachers' will to learn.	2006	Teachers may be divided into three categories: those who do not perceive the need to learn, those who are unsure how to learn, and those who are eager to learn.

Author	Title	Year	Major Findings
Hustler, D.	Teachers' perceptions of continuing professional development.	2003	Complex interactions between local, cultural, and structural elements as well as teachers' career, stage, age, and topic affiliations influenced teachers' attitudes toward CPD.
Karaaslan, A.D.	Teachers' Perceptions of Self-initiated Professional Development: a Case Study on Başkent University English Language Teachers.	2003	Teachers understand the importance of professional development and the activities needed to grow professionally. However, they do not implement these activities to the extent that matches their perceived importance.

Table 3

Summary of studies related to self-initiated CPD

Author	Title	Year	Major Findings
Ghan, B.	Mix It Up: Blended Collaborative Professional Development to Impact High School Teacher Efficacy.	2021	There was a notable improvement in both individual teacher efficacy and collective teacher efficacy following their participation in the collaborative professional development. Teachers were able to collaborate and reflect on their learning through active learning opportunities.
Gutierrez, S. B., & Kim, H. B.	Becoming teacher-researchers: Teachers' reflections on collaborative professional development.	2017	Collaboration, sustainability, trust, and commitment were essential factors in teachers recognizing the benefits of classroom-based research for improving their instructional skills.

Author	Title	Year	Major Findings
Wood, K., Jaidin, H., Jawawi, R., Perera, J. S. H. Q., Salleh, S., Shahrill, M., & Sithamparam, S.	How and what teachers learn from collaborative professional development.	2017	Any member of the group can facilitate the necessary conditions for teacher learning through collaborative subject-based professional development groups. The facilitator or coach can play a crucial role in sustaining the group's focus on the critical features of the object of learning.
Forte, A. M., & Flores, M. A.	Teacher collaboration and professional development in the workplace: A study of Portuguese teachers.	2014	There are opportunities for both collective and individual learning in the workplace, which can help teachers enhance their skills and knowledge. Additionally, the study reveals that there are different perspectives and experiences regarding teacher collaboration, which can affect the effectiveness of collaboration efforts.
Park, M., & So, K.	Opportunities and challenges for teacher professional development: a case of collaborative learning community in South Korea.	2014	Teachers experienced growth by collaborating with their colleagues. Secondly, teachers learned to self-reflect on their classes.
Seo, K., & Han, Y. K.	Online teacher collaboration: A case study of voluntary collaboration in a teacher-created online community.	2013	Teachers engage in various forms of collaboration online, such as sharing personal stories, asking and answering questions, providing peer support, exchanging teaching materials, and organizing online workshops. Among these, the sharing of teaching materials was the most common form of collaboration.

Author	Title	Year	Major Findings
Walker, D., Patten, T., & Stephens, S.	Peer observation of teaching in a post-primary context.	2022	Peer observation leads to reflective practice, which results in individualised learning for the participants. Peer observation tends to improve staff collegiality, assist the formation of a professional learning community, and boost individual teacher self-efficacy.
Dos Santos, L. M.	How do teachers make sense of peer observation professional development in an urban school.	2017	Peer observation can be a useful tool for teachers' continuous professional development, most teachers seem to be wary of the practicalities of peer observation due to the sensitivity that it entails. Teachers believe that if the peer observation approach is well established, it has the potential to be interesting or exciting to them.
Rose, J., & Reynolds, D. International	Teachers' continuing professional development: rooting practice in the classroom.	2008	Process of organised, non-hierarchical peer observation and discussion was beneficial in establishing a personal CPD focus and as an activity in and of itself.
Nyamai, D. V.	Teachers' influence in curriculum development in Kenya .	2020	Teachers in Kenya were not effectively involved during the curriculum building process, and the majority of them were dissatisfied with the present curriculum development strategy.
Oloruntegbe, K. O.	Teachers' involvement, commitment and innovativeness in curriculum development and implementation.	2011	Teachers often resist and lack commitment to the implementation of curriculum reforms because they are rarely involved in the development process and are not consulted on how best to implement them and recommended the adoption of a grassroots approach to curriculum

Author	Title	Year	Major Findings
			development, involving all stakeholders, including teachers who will eventually implement the curriculum.
Collopy, R.	Curriculum materials as a professional development tool: How a mathematics textbook affected two teachers' learning.	2003	Curriculum materials can be a successful professional development tool, but not for all educators.
Ali, Z. B. M., Wahi, W., &Yamat, H.	A review of teacher coaching and mentoring approach.	2018	Teacher coaching and mentoring is a promising method for teacher learning, teacher transformation, and overall improvement in student success.
Spanorriga, C., Tsiotakis, P., &Jimoyiannis, A.	E-mentoring and novice teachers' professional development: Programmes design and critical success factors.	2018	Opportunities for teacher support and guidance from a distance that get around time and location limitations. E-mentoring is also supposed to foster a collaborative, adaptable, supportive, and reflective atmosphere for teachers' professional growth
Geeraerts, K., Tynjälä, P., Heikkinen, H. L., Markkanen, I., Pennanen, M., &Gijbels, D.	Peer-group mentoring as a tool for teacher development.	2015	Participants observed peer group mentoring as a crucial tool for professional growth during their whole teaching careers.
Abetang, M. A., Oguma, R. N., & Abetang, A. P.	Mentoring and the difference it makes in teachers' work: A literature review.	2020	Both new and experienced teachers who have not participated in mentoring experience low self-esteem, stress, frustration, dissatisfaction, and feelings of incompetence, which may lead them to leave their teaching jobs. In contrast, teachers who have

Author	Title	Year	Major Findings
			undergone mentoring develop confidence, leadership and communication skills, empathy, a sense of value, and the ability to function independently as classroom teachers.
Hassen, R.	Female Teachers' Professional Development through Action Research Practice.	2016	In-service action research is a cost-effective, efficient, and effective method of professional development. To supplement their research, the teachers read and explored literature. Research encouraged teachers to read academic literature, stay current, write, and contribute to the intellectual world by adding knowledge backed by experience and expertise.
Ado, K.	Action research: Professional development to help support and retain early career teachers.	2013	Teacher-led action research projects, as a professional development structure, help to develop a supportive professional culture, feelings of context-specific support, and feelings of empowerment and belonging
Chou, C. H.	Teachers' Professional Development: Investigating Teachers' Learning to Do Action Research in a Professional Learning Community.	2011	The study validates teachers' action research as a method to help teachers understand their practice and improve student achievement, and it discovers that a professional learning community exists to serve as an inevitable platform for teachers to exchange knowledge, interact, and learn from one another.
Savoie-Zajc, L., & Descamps-Bednarz, N.	Action research and collaborative research: Their specific contributions to professional development.	2007	In participatory research, individual competencies of participants are strengthened, and collective competencies emerge, such as the development of a common vocabulary and a shared vision of the school's mission and mathematics curriculum.

Author	Title	Year	Major Findings
Lizette Neng, S., & Cheo, N.	The Effect of Teachers' Participation in Seminars on Their Teaching Effectiveness in Secondary Schools in Tubah Sub Division	2022	There was a significant positive relationship between teachers' participation in seminars and their effectiveness in teaching. In other words, attending seminars had a beneficial effect on the teachers' teaching effectiveness.
Ollor, A. N.	Teachers' participation in workshop and seminar for quality instructional delivery in secondary schools in rivers state.	2021	Attendance in workshops and conferences is highly significant and essential in enhancing the quality of instructional delivery by teachers in secondary schools.
Rahyasih, Y., Hartini, N., & Syarifah, L. S.	Continuous professional development for teacher through scientific publications.	2020	Scientific publications is an important part of continuing professional development for teachers, particularly in preparing ideal modules or guidebooks and writing skills in scientific articles from Classroom Action Research
Lee, I.	Teachers as presenters at continuing professional development seminars in the English-as-a-foreign-language context: 'I find it more convincing'	2011	Avenues for teachers' knowledge sharing and creation at CPD seminars can increase teacher learning .
Broemmel, A. D., Evans, K. R., Lester, J. N., Rigell, A., & Lochmiller, C. R.	Teacher reading as professional development: Insights from a national survey	2019	Limited time and perceived lack of relevance were identified as common barriers to professional reading.

Author	Title	Year	Major Findings
Waris, H.	School libraries as a CPD resource- A case from Bihar.	2013	Approximately half of the teachers rarely visited the library and showed minimal interest in reference books, despite acknowledging the usefulness of the library in improving their professional competence
Burgess, S. R., Sargent, S., & Smith, M.	Teachers' leisure reading habits and knowledge of children's books: do they relate to the teaching practices of elementary school teachers?	2011	There is a relation between elementary school teachers' reading habits, understanding of children's literature, and application of literacy best practices in the classroom.
McKool, S. S., & Gespass, S.	Does Johnny's reading teacher love to read? How teachers' personal reading habits affect instructional practices.	2009	while most teachers value reading as a leisure activity, only about half read for pleasure on a daily basis; teachers who read more than 30 minutes per day use a greater number of best practice strategies; teachers who value reading the most tend to share insights from their own personal reading
Rudland, N., & Kemp, C.	The professional reading habits of teachers: Implications for student learning	2004	Teachers tend to engage in relatively little professional reading, particularly when compared to other professionals
Hamilton, M.	Evidence-based portfolios: A cross-sectoral approach to professional development among teachers.	2020	many process and practice results obtained throughout the portfolio construction process are beneficial for teachers collaborating across sectors, and as a result, beneficial for teachers and students along the whole educational continuum
Chakrakodi, R.	Teacher Portfolios as a Powerful Tool	2013	Portfolios have a positive impact on teachers' professional attitudes

Author	Title	Year	Major Findings
	for CPD		and competencies, and contribute positively to their professional development.
Chetcuti, D., Buhagiar, M. A., & Cardona, A.	The professional development portfolio: Learning through reflection in the first year of teaching	2011	Teachers internalised abilities for writing artefacts and reflections and utilised them informally to help them deal better with their new job as competent teachers.
Milman, N., & Kilbane, C.	Digital teaching portfolios: Catalysts for fostering authentic professional development.	2005	The steps taken to create digital teaching portfolios encouraged participants' genuine professional growth and served as a catalyst for their continued professional development.
Dinham, S., & Scott, C.	Benefits to teachers of the professional learning portfolio	2003	The portfolio was found to be a valuable learning and affirming process, providing opportunities for reflection and discussion within a well-structured framework.
Tucker, P. D., Stronge, J. H., Gareis, C. R., & Beers, C. S.	The efficacy of portfolios for teacher evaluation and professional development: Do they make a difference?	2003	Although teachers and administrators believed portfolios were fair and reliable performance indicators, they were skeptical about their viability due to the time requirements for preparation.
Kharlay, O., Wei, W., & Philips, J.	How do I teach? Exploring knowledge of reflective practice among in-service EFL teachers in Ukraine	2022	Teaching experience appears to be a critical factor in using reflection to improve professionalism. Teachers prefer peer sharing and observations over journaling or organized notes, which are seen as time-consuming and interfere with a busy schedule.
Pokhrel, V.	Reflective Practice and Professional Development as an English Language Teacher.	2022	Reflective practice is a method which helps in enhancing pedagogical skills, teachers' efficacy, and critical thinking in the teaching profession.

Author	Title	Year	Major Findings
Farrell, T. & Macapinlac, M.	Professional Development Through Reflective Practice: A Framework for TESOL Teachers.	2021	Novice teachers' reflections on the hidden aspects of teaching, such as philosophy, principles, and theory, were consistent with their practices. Two main categories emerged from their reflections: the acknowledgement of teacher roles and the importance of their students' success.
Gheith, E., & Aljaberi, N.	Reflective Teaching Practices in Teachers and Their Attitudes toward Professional Self-Development	2018	A strong correlation was found between teachers' reflective practices and their attitudes towards self-development.
Olaya Mesa, M. L.	Reflective teaching: An approach to enrich the English teaching professional practice.	2018	Reflective teaching can be an effective way to raise awareness about English language teaching, encourage teachers to update their teaching methods, and make adjustments to their lessons. It is seen as a valuable alternative to traditional professional development strategies.
Mathew, R.	Diary writing as a tool for reflective practice.	2013	The use of diary writing helped the participants think and reflect on their experiences and learning in a structured and organized manner.
Tok, Ş., & Dolapçioğlu, S. D.	Reflective teaching practices in Turkish primary school teachers.	2013	teachers employed several reflective practices inside the classroom but did not use practices that encouraged students to express their thoughts and deliver their opinions or criticisms of the teacher's classroom practices orally or in writing
Coenders, F., & Verhoef, N.	Lesson Study: professional development (PD) for beginning and experienced teachers.	2019	Lesson Study aided both new and experienced teachers' PCK development.

Author	Title	Year	Major Findings
Vermunt, J. D., Vrikki, M., van Halem, N., Warwick, P., & Mercer, N.	The impact of Lesson Study professional development on the quality of teacher learning.	2019	Lesson Study had a positive effect on meaning-oriented and application-oriented teacher learning, but a negative effect on problematic learning.
Shome, S.	Re-structuring in-service teacher professional development: focusing on pedagogical content knowledge.	2017	Asserted the concept of PCK by understanding its components, the implications of these components in structuring in-service teacher professional development, and finally proposed a teacher professional development model
Van Driel, Jan H., and Amanda Berry.	Teacher professional development focusing on pedagogical content knowledge.	2012	PCK programmes should be closely aligned with teachers' professional practice and, in addition to providing teachers with specific input, should include opportunities for teachers to implement specific instructional strategies and to reflect on their experiences, both individually and collectively.
Goldschmidt, P., & Phelps, G.	Does teacher professional development affect content and pedagogical knowledge: How much and for how long?	2010	While in-service professional development can bring about changes in the knowledge that teachers utilize for elementary reading instruction, the acquired knowledge tends to erode after teachers return to the classroom.
Guzey, S. S., & Roehrig, G. H.	Teaching science with technology: case studies of science teachers' development of technological pedagogical content knowledge	2009	Contextual variables and teachers' pedagogical reasoning influenced teachers' potential to apply what they learned in the programme in their classrooms.

Author	Title	Year	Major Findings
Fitri, A., & Rifa'at, A. A.	The Use of ICT in ELT: How Teacher Should Be Empowered?	2022	Knowledge in ICT helps in ELT, such as keeping up with the world, providing variety in work, breaking the routine, gaining new experiences, encouraging creativity, and enabling better teacher-learner interactions.
Aprianti, F.	EFL Teachers' perceptions on ICT use for continuing professional development	2017	Teachers mostly utilise ICT technologies to increase their subject matter comprehension and pedagogical knowledge.
Bergdahl, N.	Adaptive Professional Development during the Pandemic	2022	Pandemic had sparked change in many teachers, but not all.
Kim, L. E., Oxley, L., & Asbury, K.	What makes a great teacher during a pandemic?	2022	Concern for student well-being and dealing with uncertainty has become even more during COVID-19.
Cortezano, G. P., Maningas, R. V., Yazon, A. D., Buenvenida, L. P., Tan, C. S., & Tamban, V. E.	Lived Experiences of Educators Engaged in Continuing Professional Development in the New Normal	2021	Teachers engaged in CPD in order to increase their creativity and resourcefulness in to provide and meet students' quality learning needs in the midst of a pandemic.
Dolighan and Dolighan, T., & Owen, M.	Teacher efficacy for online teaching during the COVID-19 pandemic	2021	Specific variables, such as teaching experience, PD experience, and teaching supports, correlated with self-efficacy perceptions of teachers transitioning to online teaching during a pandemic in the domains of student engagement, instructional strategies, classroom management, and computer skills.

Author	Title	Year	Major Findings
Saboowala, R., & Manghirmalani-Mishra, P.	Embracing blended learning approach for professional growth of in-service school teachers post pandemic of COVID-19.	2020	Implementing blended learning for professional development of school teachers following the pandemic will expand the scope of learning by generating opportunities for collaboration of diverse educational societies around the world.

Table 4

Summary of studies related to factors affecting continuous professional development

Author	Title	Year	Major Findings
Abakah, E.	Reframing motivation as 'investment' in teacher continuing professional development	2023	Teachers were more likely to participate in informal CPD activities than in organized ones.
Darling-Hammond, L., Hyler, M. E., & Gardner, M.	Effective teacher professional development.	2017	Seven key features of effective professional development were identified. These include being content-focused, using active learning techniques, promoting collaboration among teachers, providing models of effective teaching practices, offering coaching and expert support, encouraging feedback and reflection, and being of sustained duration.
Zein, S.	Factors affecting the professional development of elementary English teachers.	2016	lack of competent teacher educators as well as interference from administrators were factors in the unsatisfactory nature of in-service professional development.

Author	Title	Year	Major Findings
Patton, K., & Parker, M.	“I learned more at lunchtime”: Guideposts for reimagining professional development	2015	Effective professional development should focus on addressing participant-identified needs and transforming them into new knowledge, skills, values, and beliefs.
Quattlebaum, S. F.	Designing professional development for elementary school teachers	2015	Teachers preferred PD programmes that were relevant, collaborative, and customized to their grade level. The study's positive social implications include improved district PD programmes that align with best teaching practices and promote effective student instruction, leading to increased student achievement
Bayar, A.	The Components of Effective Professional Development Activities in Terms of Teachers' Perspective	2014	Effective professional development activities should include the following components: addressing the needs of teachers, addressing the needs of the school, teacher involvement in the design and planning of the professional development activities, opportunities for active participation, long-term engagement, and high-quality instructors.
Whitehouse, C., & Pollitt, A.	Centre for Education Research and Policy	2012	There are six characteristics of effective CPD for teachers. These are: Based on identified learning needs of both students and teachers; Sustained over time; Subject-specific; Based in the classroom; Collaborative; Uses external expertise etc
Hunzicker, J.	Characteristics of Effective Professional Development: A Checklist	2010	Effective professional development should have certain characteristics, including being supportive, job-embedded, instructionally-focused, collaborative, and ongoing.

Table 5*Summary of studies related to the challenges of CPD*

Author	Title	Year	Major Findings
Eroglu, M., & Donmus Kaya, V.	Professional Development Barriers of Teachers: A Qualitative Research.	2021	Emphasised professional development barriers such as negative attitudes toward in-service training courses, inconvenient course time, and monotony of course content, inefficiency of course trainers, lack of content knowledge, unsatisfactory performance evaluation, heavy workload, financial problems, and a lack of professional development opportunities
Szelei, N., Tinoca, L., & Pinho, A. S.	Professional development for cultural diversity: the challenges of teacher learning in context	2020	Very fragmented nature of professional development appeared to emerge in terms of content on cultural diversity and learning modes. There were conflicting goals, sporadic instructor collaboration and commitment, and little student and community engagement in scheduled PD
Can, E.	Professional development of teachers: Obstacles and suggestions.	2019	Teachers' professional growth is hindered by the inadequacy of selection, placement, and employment of teachers, the instability of educational politics, the constant transformation of the education system, the inadequacy of teachers' organisations, and teachers' lack of a mission and motivation
Tooley, M., & Connally, K.	No Panacea: Diagnosing What Ails Teacher Professional Development before Reaching for Remedies	2016	The study highlights how federal, state, district, and school-level actors, as well as educator preparation programmes, all play a role in contributing to these challenges and professional culture barriers.

Author	Title	Year	Major Findings
Goldenhuis, J. L., & Oosthuizen, L. C.	Challenges influencing teachers' involvement in continuous professional development: A South African perspective.	2015	Insufficient contribution of school management to teachers' CPD; teachers' reluctance to participate in CPD activities; issues preventing teachers from participating effectively in CPD events; and inadequate knowledge offered by CPD programmes were the four barriers identified.
Mohamed, N.	I Have Been Doing Things This Way for So Many Years; Why Should I Change?" Exploring Teachers' Resistance to Professional.	2008	The vast majority of teachers did not value CPD and saw little need to engage in learning.
Sandholtz, J. H., & Scribner, S. P.	The paradox of administrative control in fostering teacher professional development.	2006	Growing bureaucratic restrictions at the state and national levels, expanding regulation and control at the district and school levels, ironically limited the scope of development.
Gray, L., & Leaton, S.	An enquiry into continuing professional development for teachers.	2005	Identified challenges like travel difficulties, 'Timetabling events to allow for individual teacher preferences', 'Willingness to sacrifice 'own time' for CPD', 'Teachers' feelings of 'social exclusion'
Marzano, R. J.	What works in school: Translating research into action.	2003	Schools frequently do not provide teachers with the chance to put ideas taught during professional development to the test, and instead provide only a few irrelevant and disconnected faculty development sessions.
Peery, A.	Beyond in-service.	2002	Programmes overlook individual learning requirements are distinguished by a one-size-fits-all approach to curriculum comprehension

Conclusion

Eventhough there were many studies related the different aspects of CPD, no studies have been found on the three interrelated areas of attitude, opportunities and challenges associated with CPD. Although there is a wealth of research on various aspects of CPD for teachers, such as its impact on teacher knowledge and skills, the effectiveness of different CPD interventions, and the use of technology in CPD, there is still a gap in the literature when it comes to understand how the three interrelated factors of attitude, opportunities and challenges influence CPD. This gap in the literature is important to be identified because they are closely linked and can have a significant impact on the effectiveness of CPD for teachers. By exploring the interrelationship between these three factors researchers can gain a more comprehensive understanding of how to support the continuous professional development on teachers, which can ultimately lead to enhanced teacher performance and better student outcomes.

Moreover, the vital point observed by the researcher is that studies related to CPD is often a neglected areas of research in the country as she could hardly find studies related to CPD in India. It highlights the essential need for indepth and exploratory research in the field CPD emphasizing the decisive factors such as attitude of teachers, the opportunities they are provided with and the relation between the too. It is also imperative to give due importance in studies related to the challenges and hurdles experienced by the educational officers while implementing programmes in CPD. By identifying and addressing these challenges, CPD programmes can be made more effective and accessible for teachers, ensuring that they can fully engage in the learning process. The lack of studies on the challenges experienced by educational officers in implementing CPD programmes is a significant gap in the current literature as these officers play critical role in ensuring the success of CPD programmes. Without proper implementation even the well designed programmes may fail to achieve their intended outcomes. Understanding the challenges and obstacles faced by the officers and teachers can provide valuable insight into how to improve the design and implementation of these programmes. The current study seeks to bridge the gap in existing literature, which will serve as an essential resource for other investigators and authorities to introduce new plans and policies to empower the teacher community through professional development.

Chapter III

METHODOLOGY

- ❖ *Variables of the Study*
- ❖ *Objectives*
- ❖ *Tools used for Data Collection*
- ❖ *Sample for the Study*
- ❖ *Data collection Procedure*
- ❖ *Statistical Techniques used*

The present study is intended to explore primary school teachers' attitude towards continuous professional development as well as the opportunities they receive and the challenges they encounter in engaging CPD. The study also tried to identify and explore the barriers faced by the educational officers in implementing the CPD programmes in the state of Kerala. This necessitates a systematic description of the methodology adopted for the study. Methodology is a process that describes all the methods and techniques used by the researcher while conducting the research. Any research project's effectiveness is greatly influenced by the adequacy of the methods, tools, and techniques used for data collection and analysis (Neuman, 2014). Therefore, the purpose of methodology is to carry out the study in a reliable and valid way. The methods section outlines the steps that will be taken to investigate a research problem and the justification for the use of particular procedures or techniques used to locate, pick, process, and analyse data relevant to understanding the problem. This information enables the reader to critically assess the overall validity and reliability of a study. The present chapter provides a comprehensive idea regarding the methodology employed by the researcher.

Every research study revolves around its methodology since the effectiveness of any research project significantly depends on the choice of methodology. The researcher's entire framework is provided by methodology. The several sub sections falling under this chapter are:

- Variables
- Objectives
- Hypotheses
- Research method
- Tools used for collecting data

- Data collection procedure
- Statistical techniques used for data analysis

Variables of the Study

Variables selected for the study are

Attitude

Opportunities

Challenges

Continuous professional development

Primary school teachers of Kerala

Classificatory Variables

- 1) District
- 2) Section in school
- 3) Type of management
- 4) Locale
- 5) Gender
- 6) Age
- 7) Years of service
- 8) Educational qualification

Objectives of the Study

The investigator fixed the following objectives for the present study

Main Objective

To study and explore the attitude, opportunities and challenges of Continuous Professional Development among primary school teachers of Kerala

Specific objectives

1. To find out the level of attitude towards Continuous Professional Development among primary school teachers of Kerala.
2. To find out the level of opportunities for Continuous Professional Development among primary school teachers of Kerala.
3. To find out whether there exists any significant relation between the attitude towards Continuous Professional Development and the opportunities for Continuous Professional Development among primary school teachers of Kerala.
4. To find out whether there exists any significant difference in attitude towards Continuous Professional Development among primary school teachers for relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.
5. To find out whether there exists any significant difference in the opportunities for Continuous Professional Development for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and academic qualification.
6. To go in-depth to understand continuous professional development experiences of primary school teachers of Kerala.
7. To identify and explore the challenges experienced during the implementation of continuous professional development programmes among primary school teachers of Kerala.
8. To suggest strategies on the basis of research experience to overcome the challenges of Continuous Professional Development implementation among primary school teachers of Kerala.

Hypotheses

1. There exists a significant relation between the attitude towards Continuous Professional Development and the opportunities for Continuous Professional Development among primary school teachers of Kerala.
2. There exists a significant difference in attitude towards Continuous Professional Development among primary school teachers for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.
3. There exists a significant difference in the opportunities for Continuous Professional Development for the relevant subsamples based on the district, section in the school, type of management, locale, gender, age, years of experience and educational qualification.

Design of the study

The study used a mixed-method design. A mixed method design uses a plan of enquiry that involves data collection both quantitative and qualitative at the same time or one after another to have a better understanding of the research problem (Creswell, 2003). Mixed methods allowed qualitative findings to explain quantitative results, increasing the study's validity and dependability. As a result, the potential limitation of one method is outweighed by the strength of the other method. This study adopted Explanatory Sequential Mixed Methods Design (Ivankova, 2002). The method is called 'explanatory' as the quantitative data results are explained with the qualitative data and sequential as one phase follows the other (Creswell, 2009).

The use of a mixed-method design in this study has several advantages. Firstly, it allowed for a more comprehensive exploration of the research problem by collecting and analyzing both quantitative and qualitative data. Quantitative data provides numerical information that can be analyzed statistically, while qualitative data provides in-depth insights into individuals' experiences and perceptions. Moreover, by using mixed methods, the study was able to increase the validity and

dependability of its findings. By allowing qualitative data to explain the quantitative results, the study was able to gain a better understanding of the complexity of the research problem, and to provide a more nuanced interpretation of the findings. This approach also enabled the researchers to address potential limitations of one method by balancing it with the strengths of the other method.

The study employed Pragmatic research paradigm. The pragmatic research paradigm is a philosophical approach to research that places a greater emphasis on the consequences of research and the research questions themselves, rather than on the methods used. This approach is often associated with mixed-methods or multiple methods, where researchers may use a variety of data collection and analysis techniques to answer research questions (Cresswell & Plano clark, 2011)

The study carried out in two phases. The quantitative data collection stage using survey instrument preceded the qualitative data collection phase which utilised Focused Group Discussions and in-depth semi-structured interviews

Phase One – Quantitative Tool Construction and Survey

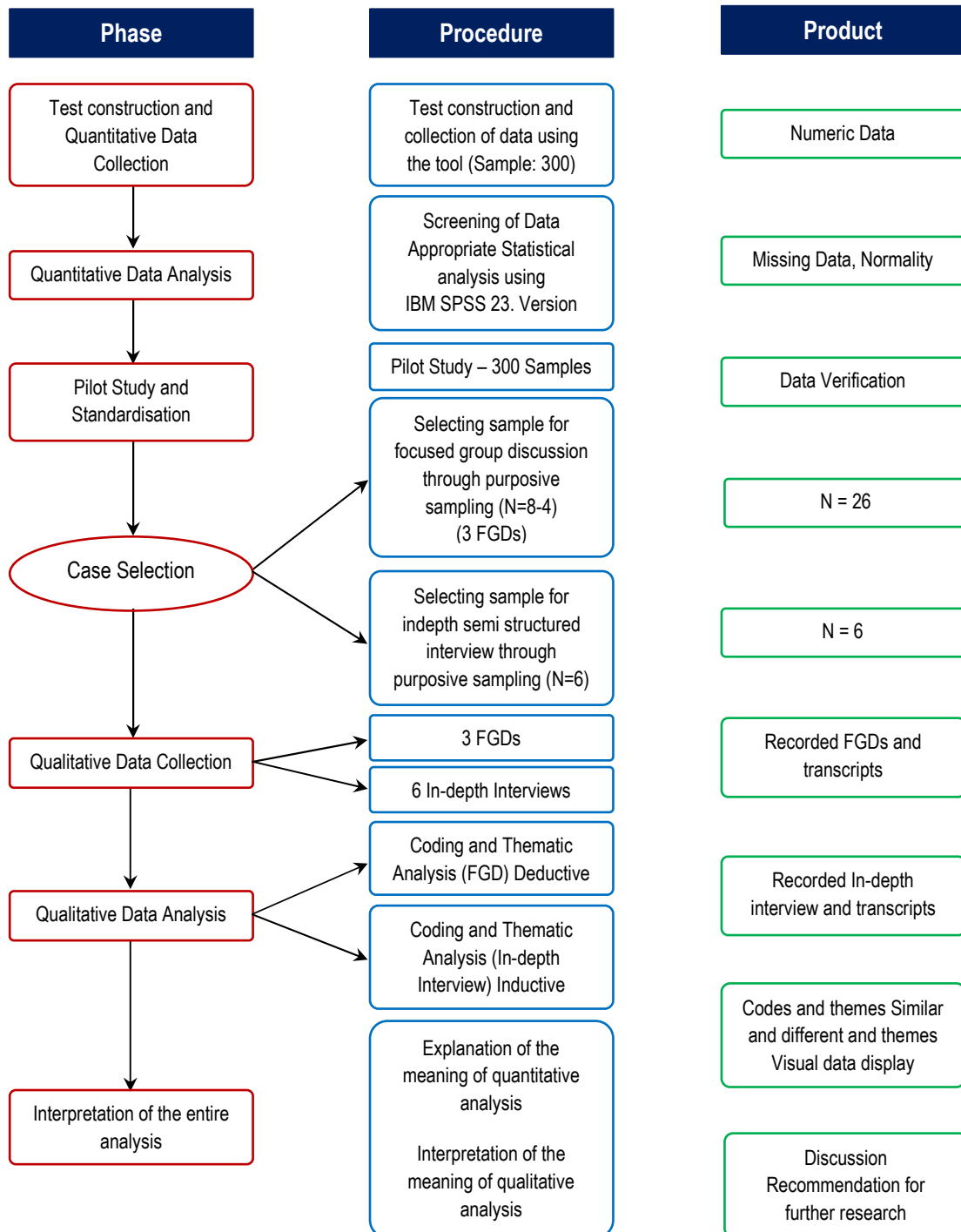
During the first phase the researcher conducted a survey among 600 primary school teachers from the six districts of Kerala, i.e., Wayanad, Malappuram, Palakkad, Thrissur, Idukki and Kollam. The researcher ensured due representation of different regions in the state by including one north district (Wayanad), one south district (Kollam) and 3 central districts (Malappuram, Palakkad and Thrissur), and one south eastern district (Idukki). Among these, two are hilly regions (Wayanad and Idukki), one coastal area (Thrissur), the most populated (Malappuram) and the biggest one (Palakkad). The data was gathered in order to analyse the attitude towards continuous professional development among lower primary and upper primary teachers in the public schools of Kerala along with the opportunities provided to them. It was intended to get a comprehensive data regarding the professional development opportunities they receive as well as their self initiatives to make use of available opportunities. The dimension adopted in the scale was the professional development programmes and activities which are individually focused, school/institutional focused and state/ national focused.

Phase two – Qualitative Focused Group Discussion and In-depth Interview

In the qualitative phase the researcher conducted Focused Group Discussion among three groups. A semi-structured questionnaire was prepared and employed during discussion. The participants were primary teachers. In the qualitative phase the researcher conducted an in-depth interview as well. Through this qualitative research method the investigator assumed to explore in depth the respondent's point of view, experiences, feelings, and perspectives. Here, the participants were six educational officers representing various educational agencies that coordinate and implement continuous professional development programmes for primary teachers. A semi-structured interview schedule was prepared and employed for the interview. The use of multiple qualitative methods and the inclusion of different stakeholders can provide a rich and nuanced understanding of the complex issues surrounding CPD for primary teachers.

Figure 6

Diagrammatic Representation of the Design



Sample for the Study

In the quantitative phase, the sample selected was 600 primary teachers from government and aided schools. The teachers included both male and female from rural and urban schools. During the qualitative phase 26 primary teachers were selected for focused group discussions and six educational officers representing various educational agencies that coordinate and implement continuous professional development programmes for primary teachers were selected for in-depth interview.

Sampling technique in phase one

The stratified random sampling technique was used to select the primary school teachers. Due representation was given to section (lower primary and upper primary), type of management (government and aided), locale (rural and urban) and gender (male and female) while considering the sample. Teachers teaching different subjects in both lower primary and upper primary classes were included in the study, while teachers who were specialised in languages, art, work, and physical education, as well as head teachers, were excluded.

The survey was conducted in six districts and the final break-up of sample is given in Table 6.

Table 6

Final break-up of sample

Sl. No	District	Number	Section (LP/UP)	Type of School (Govt/Aided)	Locality (Urban / Rural)	Gender (Female /Male)
1	Wayanad	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26
2	Malappuram	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26
3	Palakkad	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26

Sl. No	District	Number	Section (LP/UP)	Type of School (Govt/Aided)	Locality (Urban / Rural)	Gender (Female /Male)
4	Thrissur	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26
5	Idukki	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26
6	Kollam	100	LP-50	Govt-50	Rural-80	Female-74
			UP-50	Aided-50	Urban-20	Male-26

Data Collection Procedure

The researcher ensured prior permission from the teachers concerned. Before administering the tool sufficient instruction was given which helped teachers fill the tool effectively. Fixed time was provided to complete the tool and the researcher herself collected the filled response sheets. The data was consolidated and tabulated for further analysis. These measures suggest that the researcher took steps to ensure the ethical and effective administration of the tool and the subsequent collection of data.

Tools and Techniques used for Data Collection

1. Continuous Professional Development Assessment Scale (Rachana and Meera, 2020)
2. Schedule for Focused Group Discussion to assess the attitude, opportunities and challenges of Continuous Professional Development Programmes (Rachana and Meera, 2021)
3. Semi-structured Interview schedule (Rachana and Meera, 2022)

Continuous Professional Development Assessment Scale (Rachana and Meera, 2020)

Continuous Professional Development Assessment Scale is developed by the investigator with the help of the supervising teacher. It is intended to assess the

attitude of primary teachers towards continuous professional development and the various opportunities they receive as part of CPD. For designing the tool, the investigator followed the steps such as:

- Planning the scale
- Construction of the scale
- Scoring
- Trying out
- Item analysis
- Establishing reliability and validity

Planning of the scale

In this stage the investigator carried out a detailed review of studies related to continuous professional development programmes and activities. The investigator conducted a comprehensive review of relevant studies and literature on the topic to gain a better understanding of the existing research and practices in the field. In addition, the investigator also sought the guidance and expertise of professionals and experts in the field of professional development for teachers, including faculty members from universities, research officers from State Council of Educational Research and Training (SCERT), faculty members from District Institutes of Education and Training (DIETs), programme officers from Samagra Shiksha Kerala (SSK), programme coordinators from State Institute of Educational Management and Training (SIEMAT), and coordinators from Kerala Infrastructure and Technology for Education (KITE). The aim of this stage was to gather relevant and up-to-date information that could inform the development of the Continuous Professional Development Assessment Scale for primary school teachers. This helped to ensure that the assessment scale was based on the latest research and prevailing practices.

Construction of the scale

Along with different relevant studies, the investigator had made use of the ideas put forwarded by General Teaching Council (GTC) for preparing the scale.

England's General Teaching Council (GTC) published Teacher Professional Learning Framework (TPLF) in March 2003 (Earley & Bubb, 2007). According to it teachers must have access to structured time to engage in sustained reflection and structured learning. They must be provided with learning opportunities from everyday practice such as planning and assessing for learning. They must be given adequate space to build their capacity to recognise their own and other people's learning and development requirements and to create individualised learning plans. The teachers need to get slot for school based learning and course participation which is recognized for accreditation. Along with this there should be scope for self evaluation, observation and peer review skills. Moreover they must get opportunity to plan their long term career aspirations. The TPLF provided a useful framework for organizing the different aspects of professional development that could be assessed through the scale. By using this framework, the investigator ensured that the Continuous Professional Development Assessment Scale was comprehensive and covered different areas of professional development

GTC argues that teachers need CPD opportunities based on three priority areas

- a) Individually focused – Here, the activities should be centred on the requirements of the individual teachers and identified as complementing their professional goals. Individually focused CPD activities can take various forms, such as participating in courses or workshops that address specific areas of interest or professional development needs. This could include courses on new teaching techniques or technologies, leadership development programs, or specialist subject training. Another way to provide individually focused CPD is through mentorship programs, where more experienced teachers can guide and support newer colleagues in developing their skills and expertise. Peer learning and sharing of best practices with colleagues can also be an effective way of enhancing professional development, as teachers can learn from each other's experiences and successes. Finally, going on exchange trips can also be an effective way of providing individually focused

CPD. This could involve visiting other schools or institutions to learn about different teaching approaches, cultures, and practices. Such experiences can broaden teachers' perspectives and help them develop new insights and ideas for their own teaching practices.

- b) School focused – The demands of the school where the teacher is currently employed are the main focus here. The school growth plan would be used to determine the requirements for continual professional development opportunities. By aligning CPD opportunities with the school growth plan, teachers can receive targeted professional development that meets the specific needs of their school. This can help to ensure that CPD activities are relevant and meaningful, as well as contributing to broader school improvement efforts.
- c) National / Local authority focused – These CPD activities would meet the national and local initiatives. National and local authorities may have specific priorities and initiatives aimed at improving educational outcomes or addressing specific issues in education. CPD activities aligned with these initiatives can help teachers to keep up-to-date with the latest research and best practices in education, as well as support the implementation of these initiatives in their own practice.

By carefully examining various internet sources, newspaper articles, casual interactions with the teacher community, and her own professional experience as a teacher and teacher educator, the investigator was able to identify the various sub dimensions that fell under the three main dimensions proposed by GTC, England (2003).

Individually focused –attending a formal course, undertaking action research, planning for classroom practices, innovative pedagogic practices, attending conferences, seminars and workshops and presentation and publication of research papers are a few examples.

School focused – professional development activities initiated and supported by school is immense. It included the discussions in school resource groups (SRGs), peer observation, constructive feedback from head teachers, exploring the possibilities of team teaching, slots in academic masterplans etc.

National/Local focused- the state or nation provides many opportunities for teacher professional development such as cluster meetings, in-service trainings, subject specific intensive programmes, MOOC courses etc.

The scale consists of two parts – Part A and Part B. Part A covers the statements related to the different CPD opportunities provided by central and state departments, other agencies, schools etc. Part B includes statements to assess the attitude of teachers towards the different opportunities they receive. It mainly included items related to the self-initiated professional development activities. It helps to gather information on the willingness and motivation of teachers to engage in CPD and their perceptions of the usefulness and effectiveness of different CPD opportunities.

Each item is provided with a choice of response in the Part A and Part B. In part A, for each item five responses were given such as Always, Often, Sometimes, Rarely, Not at all etc. In part B also five responses were given such as, Strongly agree, Agree, No Opinion, Disagree, and Strongly disagree. 29 positive statements and 10 negative statements were included Part A and 32 positive statements and 10 negative statements were included in Part B.

Example for positive statement in Part A

My school provides whole hearted support for my professional development.

- a) Always
- b) Often
- c) Sometimes
- d) Rarely
- e) Never

Example for negative statement in Part A

The academic plan of the school does not incorporate any provisions for the professional development of teachers.

- a) Always
- b) Often
- c) Sometimes
- d) Rarely
- e) Never

Example for positive statement in Part B

Taking an active role in teacher community has helped me grow professionally.

- a) Strongly agree
- b) Agree
- c) No Opinion
- d) Disagree
- e) Strongly disagree

Example for negative statement in Part B

I believe that writing a reflection note after each class is not necessary.

- a) Strongly agree
- b) Agree
- c) No Opinion
- d) Disagree
- e) Strongly disagree

Table 7

The number of items that come under different dimensions (Part A)

Dimension	No.of items
Individually focused	10
School focused	8
State/ National focused	21

Table 8*The number of items that come under different dimensions (Part B)*

Dimension	No. of items
Individually focused	31
School focused	7
State/ National focused	4

Rationale for selection of strata

The following strata were considered in the sampling.

District

In order to investigate whether district-level factors influence teachers' participation in professional development programs, the investigator selected six districts in Kerala: Wayanad, Malappuram, Palakkad, Thrissur, Idukki, and Kollam. These districts were chosen to represent a diverse range of geographic, demographic, and socio-economic factors that could impact the provision and accessibility of professional development opportunities for teachers.

Section

In order to know if the sections among primary teachers such as lower primary and upper primary has any influence on their participation in continuous professional development programmes, the researcher decided to include these two strata in the sampling. The researcher decided to include both lower primary and upper primary teachers in the sampling in order to investigate whether there was any difference in their participation in continuous professional development programmes.

Type of management

Since there are two types of management among public schools in Kerala, the investigator selected government and aided school teachers. This created a need

for studying whether there exist any significant difference due to management of the institution.

Locale

Since there are two major strata of institutions based on locality i.e., urban and rural, the investigator selected locale as strata in order to find out whether there exists any locale wise difference in participating continuous professional development programmes

Gender

The investigator decided to include gender as strata in the sampling. Including gender as a stratum in the sampling allows the investigator to examine whether there is a significant difference in the participation of continuous professional development programmes between male and female teachers. This can help identify any potential gender biases or barriers that may be affecting access to professional development opportunities and inform strategies to address these issues.

Pilot Study

The tool was administered on a representative sample of 300 teachers by giving due representation to district, section, type of management, locale and gender. The pilot study was conducted to analyse each item statistically in order to select the significant ones to be included in the final tool.

Scoring

The Continuous Professional Development Assessment Scale was a '5' point scale. In part A, for each item five responses were given such as Always, Often, Sometimes, Rarely, Not at all etc. In part B also five responses were given such as, strongly agree, agree, no opinion, disagree, strongly disagree. For positive statements the scoring pattern was 5, 4, 3, 2, 1 and for negative statements the scoring pattern was 1, 2, 3, 4, 5 for Part A and Part B.

Item Analysis

The item analysis of Continuous Professional Development Assessment Scale is done according to the procedure suggested by Likert (1932). The data was collected from 600 samples and were scored and arranged in ascending order of scores from low to high. Then two subgroups namely the lower group consisting of approximately 27 percent of the total group who got lowest scores and the upper group consisting of an equal number who got highest scores were selected separately. The response of each item in the lower group and upper group were subjected to item analysis. The 't' value of each item was then calculated separately using the following formula

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sum (X_H - \bar{X}_H)^2 + \sum (X_L - \bar{X}_L)^2}{n(n-1)}}$$

Where,

XH =Mean score on a given item for high group

XL = Mean score on a given item for low group

H =Standard deviation of scores of the given item of high group

L= Standard deviation of scores of the given item of low group

NH= Number of individuals in high group

NL=Number of individuals in low group

Selection of Items: The 't' value of 81 items in the Continuous Professional Development Status Assessment Scale were calculated and items with 't' value 2.58 and above were selected for the final scale. The details of item analysis and the 't' values computed for each item of the Continuous Professional Development Assessment Scale are given in the table 9.

Table 9

*Item Analysis of the Continuous Professional Development Status Assessment Scale
(Part A)*

Item No	Positive/ Negative	t-value	Accepted / Rejected
1	Positive	3.839	Accepted
2	Positive	3.964	Accepted
3	Positive	1.581	Rejected
4	Positive	4.808	Accepted
5	Positive	3.072	Accepted
6	Negative	1.039	Rejected
7	Negative	3.974	Accepted
8	Negative	.887	Rejected
9	Positive	4.266	Accepted
10	Positive	3.839	Accepted
11	Positive	1.912	Rejected
12	Negative	1.382	Rejected
13	Negative	.118	Rejected
14	Positive	2.445	Rejected
15	Positive	1.896	Rejected
16	Negative	2.612	Accepted
17	Negative	3.607	Accepted
18	Positive	3.927	Accepted
19	Positive	3.683	Accepted
20	Positive	3.272	Accepted
21	Positive	3.156	Accepted
22	Negative	1.195	Rejected
23	Positive	2.004	Rejected
24	Positive	1.598	Rejected
25	Positive	2.116	Rejected
26	Positive	4.898	Accepted
27	Positive	4.193	Accepted

Item No	Positive/ Negative	t-value	Accepted / Rejected
28	Negative	4.101	Accepted
29	Positive	2.945	Accepted
30	Negative	6.211	Accepted
31	Positive	5.949	Accepted
32	Positive	4.220	Accepted
33	Positive	3.606	Accepted
34	Positive	3.851	Accepted
35	Positive	2.837	Accepted
36	Positive	2.613	Accepted
37	Positive	2.075	Rejected
38	Positive	2.667	Accepted
39	Positive	5.442	Accepted

Table 10

Item Analysis of the Continuous Professional Development Status Assessment Scale (Part B)

Item No	Positive / Negative	t-value	Accepted / Rejected
1	Positive	4.527	Accepted
2	Negative	1.388	Rejected
3	Negative	2.135	Rejected
4	Positive	1.789	Rejected
5	Positive	2.367	Rejected
6	Positive	2.954	Accepted
7	Positive	3.526	Accepted
8	Negative	.661	Rejected
9	Positive	2.379	Rejected
10	Positive	4.264	Accepted
11	Positive	6.379	Accepted
12	Positive	2.244	Rejected
13	Negative	3.523	Accepted
14	Positive	3.585	Accepted

Item No	Positive / Negative	t-value	Accepted / Rejected
15	Positive	3.644	Accepted
16	Negative	2.777	Accepted
17	Positive	4.837	Accepted
18	Positive	4.978	Accepted
19	Positive	3.599	Accepted
20	Positive	3.763	Accepted
21	Positive	2.934	Accepted
22	Positive	3.844	Accepted
23	Positive	3.144	Accepted
24	Positive	4.380	Accepted
25	Positive	1.715	Rejected
26	Negative	4.220	Accepted
27	Positive	3.092	Accepted
28	Positive	3.749	Accepted
29	Positive	3.077	Accepted
30	Negative	1.838	Rejected
31	Positive	3.379	Accepted
32	Positive	3.849	Accepted
33	Positive	4.716	Accepted
34	Positive	4.425	Accepted
35	Positive	4.154	Accepted
36	Negative	2.780	Accepted
37	Positive	3.212	Accepted
38	Negative	2.047	Rejected
39	Positive	.265	Rejected
40	Positive	3.398	Accepted
41	Positive	3.270	Accepted
42	Positive	3.502	Accepted

The total number of items selected for the final scale is 66 (Part A-26 items and Part B-31items)

Estimation of Validity and Reliability

Validity

Content validity refers to the degree to which an assessment instrument is relevant to, and representative of, the targeted construct it is designed to measure. Content validation, which plays a primary role in the development of any new instrument, provides evidence about the validity of an instrument by assessing the degree to which the instrument measures the targeted construct (Rusticus, 2014). The content validity was established by reviewing literature and ensuring the appropriateness of content. Content validity of the scale was ensured by subjecting the items of the scale for experts' evaluation. The panel contains five experts from the field of educational and social science research. According to the suggestions from the experts the items were reviewed and refined properly.

Construct validity is the extent to which the measurements used, often questionnaires, actually test the hypothesis or theory they are measuring. Construct validity should demonstrate that scores on a particular test do predict the theoretical trait it says it does (Salkind, 2010). The construct validity of the tool was established by giving due weightage to the major dimensions of continuous professional development.

A tool is having face validity if it is measuring what the author had in mind. The researcher claimed that the scale possessed face validity since all the items were constructed in the least ambiguous way by purposefully avoiding unfamiliar terms.

Reliability

Reliability of the Continuous Professional Development Assessment Scale was established through test-retest method. The scale was re-administered after an interval of two month on a representative sample of 100 teachers. The reliability coefficient was computed by correlating the scores obtained in the first assessment and that of the re-test scores. The formula used for computing the correlation coefficient (r) is given below.

$$r = \frac{N \sum XY - (\sum X \sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

r = Coefficient of correlation

X, Y = Variables to be compared

N = Size of sample

Cronbach's alpha was 0.86 which shows that the Continuous Professional Development Assessment Scale is a highly reliable tool for assessing the status of professional development programmes among primary school teachers.

The English and Malayalam versions of the Continuous Professional Development Status Assessment Scale (draft and the final) are given in the Appendices B, C, D and E

Statistical Technique used for the Study

In the present study statistical technique used for the study were Preliminary analysis, Correlation, Test of significance of difference between means (Independent Sample t-test and One way-ANOVA). Statistical Package for Social Sciences (IBM SPSS Version 20.0) was used for data analysis.

The data were analyzed to find mean, median and mode, and standard deviation, skewness and kurtosis.

Test of significance of difference between means (t-test). In the present study, the test of significance of difference between means of independent samples was used to find out if there exists any significant difference in the attitude towards CPD and opportunities for CPD of total sample. The formula used to calculate critical ratio is given below.

$$t = \frac{M_1 - M_2}{\frac{SD_1^2}{N_1} + \frac{SD_2^2}{N_2}}$$

Where,

t = critical ratio

M1 and M2 = Means of the groups

SD1 and SD2 = Standard Deviations of the groups

N1 and N2 = Number of observations in the groups

The differences in mean scores are significant depending upon the critical ratio (CR). If the CR obtained is ≥ 2.58 , it is considered as significant at .01 level. If the CR obtained is ≥ 1.96 , it is considered as significant at .05 level.

Correlation- Pearson's Product Moment Coefficient of Correlation was used to find out the degree of relationship between variables.

ANOVA - One way-ANOVA is used for three or more groups of data, to gain information about the relationship between the variables.

Focused Group Discussion (FGD)

The investigator wanted to get a comprehensive picture regarding the attitude of primary teachers towards continuous professional development and the opportunities they receive for their professional development. In order to improve and strengthen the survey based quantitative data, the investigator conducted focused group discussions. Focus groups are especially useful as a complement to other methods of data collection for providing in-depth information in a relatively short period of time. It is to be noted that FGD is a method of gathering qualitative data about a certain subject or issue that uses informal small-group discussions, and it is quite efficient for gathering qualitative data (Patton, 2002; Wilkinson, 2011). Cailluad and Flick (2017) have rightly observed "when used in a triangulation context, focus group, can thus, help the researcher to access a deeper understanding

of the phenomenon by furnishing result on social interactions and on the way they participate in meaning construction” (p. 3). Focus groups are a ‘carefully planned series of discussions, designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment’ (Krueger, 2014 p. 5). There was a gap of six months between the administration of the Continuous Professional Development Assessment Scale and focus group discussions, which permitted the time to statistically analyse the data. The study used a homogenous focus group, which provided members with a safe space. The venues were accessible and convenient for the participants.

The rooms were spacious with enough ventilation. The seats were arranged in the semi-circular so that it allowed everyone to see, to listen to and to interact with one another. Refreshment was arranged as well. The researcher took care to create a comfortable and conducive environment for the focus group discussions. The accessible and convenient venues with spacious rooms and good ventilation, as well as the arrangement of seats in a semi-circular pattern to encourage interaction, are all positive factors that could help ensure the success of the discussions. Providing refreshments could also help to make participants feel more comfortable and engaged.

Three focus group discussions were held, with each group consisting of 8-10 participants. Some of the participants had already responded to the Professional Development Assessment Scale. Before commencing the focus group discussions, the investigator made a self-introduction and explained briefly her role in this process. The investigator had already prepared a semi-structured schedule and employed in the focus group discussion. Each focus group discussion lasted around sixty to ninety minutes. After obtaining the consent by telephone from the participants, the investigator decided on the date and place of the discussion at their convenience. The venues were offices of Samagra Siksha Kerala at Wayanad and Thrissur and GLPS Nurani in Palakkad district.

Table 11*Details of Focus Group Discussions*

Date of FGD conducted	No. of participants	Venue
30-12-2021	10	BRC Bathery, Wayanad
15-2-2022	8	GLPS Nurani, Palakkad
19-2-2022	8	BRC Chavakkad, Thrissur

Table 12*Demographic details of the participants in FGD 1*

Sl No	Participant Name	Gender	Age	Qualification	Designation
1	P1	Female	31	BA, B.Ed	UPST
2	P2	Female	34	TTC	LPST
3	P3	Male	48	TTC, B.Ed	LPST
4	P4	Female	28	TTC, B.Sc	UPST
5	P5	Male	51	TTC	UPST
6	P6	Male	41	TTC, BA	LPST
7	P7	Male	26	BSc, B.Ed	UPST
8	P8	Female	24	B.Sc, TTC	UPST
9	P9	Female	36	MA, TTC	LPST
10	P10	Male	34	TTC, BA	LPST

Table 13*Demographic details of the participants in FGD 2*

Sl No	Participant Name	Gender	Age	Qualification	Designation
1	P1	Female	33	TTC, BA	LPST
2	P2	Male	35	TTC	LPST
3	P3	Female	42	TTC, B.Ed	LPST
4	P4	Female	28	TTC, B.Sc	UPST
5	P5	Male	51	TTC	UPST
6	P6	Female	28	TTC, B.Com	LPST
7	P7	Male	27	BSc, B.Ed	UPST
8	P8	Male	41	TTC, BA	LPST

Table 14*Demographic details of the participants in FGD 3*

Sl No	Participant Name	Gender	Age	Qualification	Designation
1	P1	Male	28	MSc, B.Ed	UPST
2	P2	Male	41	TTC, BA	LPST
3	P3	Female	42	TTC, B.Ed	LPST
4	P4	Female	28	TTC, B.Sc	UPST
5	P5	Male	51	TTC	UPST
6	P6	Female	28	TTC, B.Com	LPST
7	P7	Male	38	B.Ed, TTC	UPST
8	P8	Female	32	MA, TTC	LPST

The role of moderator in the focused group discussions is critical. With a set of previously prepared open-ended questions the moderator facilitated the interaction within the focus group. During the focus group discussions, the investigator asked open-ended questions related to the teachers' attitudes, experiences, and challenges related to continuous professional development. The questions were designed to elicit detailed responses and encourage participants to share their thoughts and opinions. The investigator also used probes and follow-up questions to clarify and deepen the participants' responses. The questions included in the schedule belong to the three major dimensions such as the continuous professional development opportunities at the national/state focused, school focused and individually focused as well as the attitude and perception of the participants. Some items from the FGD schedule is given below:

1. How much support does your school offer to promote your professional development?
2. How will you reflect your own performance after each class?

Most of the participants were carefully selected from the first phase and it was very crucial to make it a representative sample. Therefore the demographic details were considered.

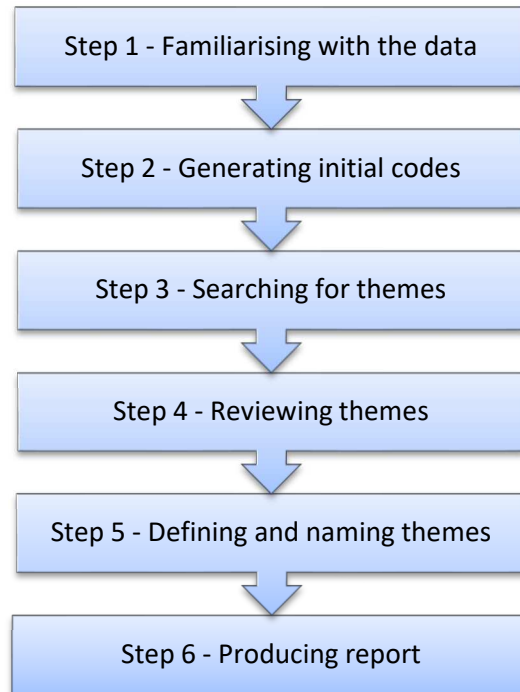
The moderator carefully considered the opening comments, the order of the questions, the physical environment, and other materials effectively to make the focus group discussion successful. The moderator tried to keep listening skills and for the entire debate to be productive and successful there must be warmth, a sense of humour, and flexibility. The level of moderator's participation or involvement varied at different stages of focus groups. It can be extreme low, low, high, extreme high depending on the intensity of discussion. The investigator ensured the confidentiality of the discussions in the focus group. The discussions were digitally recorded with the participants' consent. In addition, depending on the observation, handwritten notes were prepared to sketch the nonverbal communication and emotions of the participants. Each focus group session was photographed with their consent. Participants were asked at the end of each discussion whether there was anything further that should be included. The investigator could deeply delve into the themes and tales articulated by members which were not so explicit in the data collected through the survey in the first phase of the investigation.

Analysis Procedure

Thematic analysis was used to analyse and interpret the qualitative data for this study. The data were transcribed and analysed based on the thematic analysis procedure recommended by Braun and Clarke (2006). Thematic analysis is a critical method for conveying the research participants' experiences, meanings, and realities (Braun & Clarke, 2006). The study used deductive (top-down) thematic analysis (Boyatzis, 1998).

Figure 7

The Process of Thematic Analysis



The data were transcribed, and the texts were read numerous times to ensure a thorough understanding of the participants' experiences (Braun & Clarke, 2006; Creswell, 2012) and initial codes were noted. Transcription was a time-consuming process as it required around four hours transcribing one hour of recorded interview data (Braun & Clarke, 2006; Creswell, 2012). Because the discussions were undertaken in Malayalam, the data was transcribed in Malayalam before being translated into English for analysis. The investigator performed theme analysis by hand, and each data set received equal attention during the coding procedure (Braun & Clarke, 2006).

Table 15*Major Themes and their sub-themes derived from FGD*

Major Themes	Sub Themes
Support	i. Home ii. Head of institution iii. Colleagues
Self-initiatives	i. Collaboration ii. Reading and researching iii. Mentoring and coaching iv. Reflective journal and portfolio v. Material development and Innovation vi. Additional academic qualification vii. Online/blended learning
Opportunity	i. Need ii. Planning iii. Praxis iv. Choice
Quality	i. Resource persons ii. Convergence iii. Monitoring iv. Mode of conducting v. Content vi. Infrastructure vii. Follow-up
Barriers	i. Personal ii. School iii. Gender

Semi-structured Interview

In-depth interviews are powerful qualitative data gathering approach that can be utilised for a number of reasons such as needs assessment, programmes refining, problem identification, and strategic planning. In-depth interviews are best suited for occasions in which you want to ask open-ended questions that generate a wealth of

information from a small number of individuals (Guion, et al., 2001). To understand the challenges faced by the department of education in implementing the professional development programmes among the teachers, it was pertinent to get the responses from the officers in the field of education and training. As it was a face-to-face interview, the investigator could very well recognize the hurdles and challenges faced by the educational officers while planning, coordinating and implementing professional development programmes. Thus in-depth interview was conducted to correctly capture the facts in words. The interviews were conducted to uncover the in-depth details about the experiences and perceptions of the participants. Interviews allowed the investigator to gain a more nuanced understanding of the issues being studied. By allowing the participants to express their views and experiences in their own words, the investigator could gain insights that might not be apparent from other sources of data. In this way, in-depth interview provided a more complete and accurate picture of the challenges faced by department in implementing professional development programmes among teachers.

Participants

The investigator used purposeful sampling for in-depth interview. This means that the researcher chooses participants because they can intentionally contribute to studying the research's main phenomenon and research problem (Creswell & Poth, 2016). The investigator interviewed 6 officers, a representative sample from the department of public education. The participants were research officer in SCERT, state and district programme coordinators in SSK, Principal from DIET, Chief Planning Officer in the General Education Department, District programme co-ordinator in KITE etc. The researcher wanted to get a vivid image of the diverse professional development initiatives organized by the various governing agencies, as well as the hurdles they encounter.

Table 16*Demographic details of the participants in semi-structured interview*

Sl No	Participant Name	Qualification	Designation
1	P1	M.Sc, M.Ed	Chief Planning Officer, General Education Department
2	P2	MA, M Ed, Ph.D	Research Officer (SCERT)
3	P3	M.Sc, M Ed, Ph.D	Principal (DIET)
4	P4	M.A, M.Phil, M.Ed	District Programme Coordinator (SSK)
5	P5	M.Sc, B.Ed	District Coordinator (KITE)
6	P6	M.A, M.Phil, Ph.D	Block Programme Coordinator (SSK)

Data Collection Procedure

The researcher developed a semi-structured interview schedule after reviewing relevant literature. The items were prepared to get a clear understanding about the type of the programmes conducted; the target group; the selection of resource persons, development of module; financial assistance; monitoring; evaluation; success stories; challenges etc. Some of the items in the schedule are given below:

1. What are the challenges that you come across while monitoring the teacher empowerment programmes?
2. Kindly share some of your suggestions to enhance the present teacher professional development programmes.

Prior permission was ensured for the interviews. Adequate in-depth data with minute details about the issues and challenges in planning, implementing and

evaluating the existing programmes for the professional development of teachers were collected. The data was transcribed properly.

Data analysis

The transcribed data was analysed using thematic analysis. Data analysis, according to Thorne (2000), is the most difficult stage in qualitative research. Braun and Clarke (2006) claimed that theme analysis should be a fundamental technique for qualitative research since it imparts fundamental abilities for carrying out a wide range of other qualitative research methods. Theme analysis is a good tool for exploring multiple study participants' viewpoints, revealing similarities and differences, and providing unexpected insights (Braun and Clarke, 2006 & King 2004). The researcher attempted thematic analysis following the steps put forwarded by Braun and Clarke (2006). It included the steps such as familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing report. The researcher used inductive thematic analysis where line-by-line analysis is done by researcher, who then develops codes depending on the data's contents. Instead of relying on already established themes that the researcher has sought for, the data is analysed based on what it actually presents (Braun and Clarke, 2006).

The data was transcribed, and the texts were reviewed several times to ensure a complete comprehension of the participants' experiences, and preliminary codes were recorded. As mentioned earlier the transcription was quite a time-consuming procedure. Some interview data needed to be transcribed in Malayalam before being translated into English for analysis because three interviews were conducted in Malayalam.

Table 17*Major Themes and their sub-themes derived from semi-structured interview*

Major Themes	Sub themes
Perspectives about CPD	<ul style="list-style-type: none"> i. Conflict within ii. Conflict between
Content and Strategy	<ul style="list-style-type: none"> i. Content ii. Cascade iii. Lack of continuity iv. Blended v. Residential
Selection	<ul style="list-style-type: none"> i. Participants ii. Resource Persons
Module	<ul style="list-style-type: none"> i. Approach ii. Process iii. Participants iv. Quality
Participation	<ul style="list-style-type: none"> i. Attitude ii. Time schedule and access iii. Workload iv. Support from heads v. Gender
Facilities	<ul style="list-style-type: none"> i. Funding ii. Venue
Administration	<ul style="list-style-type: none"> i. Policy ii. Lack of flexibility in regulations iii. Performance appraisal iv. Convergence
Effectiveness	<ul style="list-style-type: none"> i. Monitoring ii. Feedback iii. Follow-up iv. Trainer skill

Data Validation

The schedule for Focused Group Discussion was prepared after reviewing relevant literature. The draft schedule was sent for expert validation. Experts from the field of educational research had reviewed the tool and made recommendations. As per the feedback the schedule was refined and implemented. The expert validation could ensure the face validity and content validity.

During the preparation and implementation of the FGD schedule the researcher made use of bracketing, as her personal experience as a teacher and trainer should not impact her conclusions. Gearing (2004) explained bracketing as “a scientific process in which researcher suspends or holds in abeyance his/her presuppositions, biases, assumptions, theories or previous experiences to see and describe the phenomenon” (p 1430). Bracketing helped the researcher to reach deeper level of reflections during the Focused Group Discussions. Bracketing proved to be helpful for the researcher to remain impartial and unbiased while interpreting the responses of the participants.

To strengthen the trustworthiness of the researcher’s findings the researcher used Member checking. Member checking is basically what the term implies – an opportunity for members (participants) to check (approve) particular aspects of the interpretation of the data they provided (Doyle, 2007). It was done by sharing a brief summary of the conclusions of the researcher with the participants in the Focused Group Discussions. After the discussions the interview transcripts were shared with a few participants and ensured that the responses were accurately documented. By sharing the researcher's interpretations of the data with the participants and asking for their feedback, member checking provided an opportunity to validate the accuracy and authenticity of the data collected. It also helped to ensure that the findings were representative of the participants' perspectives and experiences.

The schedule for in-depth interview was also prepared after reviewing related literature. This helped the researcher to prepare relevant questions. The drafted schedule was treated for expert analysis and based on the positive feedback from experts regarding the nature of items included, the schedule was considered as a valid one. Thus the face validity and content validity of the interview schedule was established. By reviewing relevant literature and seeking expert analysis, the researcher was able to create a schedule that effectively captured the necessary information. Additionally, by establishing face validity and content validity, the researcher ensured that the interview questions were appropriate and relevant to the research question. This approach increased the credibility and trustworthiness of the research findings.

The researcher also used bracketing to avoid personal bias while preparing questions. During the actual interview also the bracketing was used as the researcher wanted to avoid the impact of her personal experiences as a teacher and trainer on the entire process of the interview. By suspending or holding in abeyance one's presuppositions, biases, assumptions, theories or previous experiences, the researcher could focus on describing the phenomenon as it appears to the participants. This ensured that the data collected and the conclusions drawn from it are trustworthy and reliable.

Member checking was used after the interviews. The researcher contacted the participants and shared the interview transcripts with them. This potentially helped the researcher to enhance accuracy by deleting the misrepresentation of the participants' experiences and helped for the validation by the participants themselves. Member checking provided an opportunity for participants to review and confirm the accuracy of the data collected from them. This helped to enhance the credibility and trustworthiness of the research findings as it ensures that the interpretations made by the researcher align with the perspectives and experiences of the participants. Furthermore, member checking could also uncover any

misunderstandings or errors in the data that could be clarified or corrected, leading to a more accurate representation of the participants' views.

The supervisor thoroughly examined the obtained data to avoid fabrication, falsification, and discrepancies in data, ensuring the research integrity.

Chapter IV

ANALYSIS AND INTERPRETATION

The chapter covers a detailed analysis and interpretation of the quantitative and qualitative data collected for the study. The quantitative data analysis covers the analysis of data collected through survey. The qualitative data analysis includes the analysis of data collected through Focused Group Discussions and in-depth interviews. Basic descriptive statistics correlation and analysis of variance were done to analyse the data. Hypotheses were formulated and tested with appropriate statistical techniques.

The details of analysis done are provided under the following headings:

- Preliminary analysis
- Correlation
- T-test
- One way ANOVA

The details of analysis are as follows:

Descriptive and Percentage Analysis

Table 18

Statistical Constants for the Distribution of Scores of Opportunities for CPD in the Total Sample and Subsamples based on Districts, Section, Type of School, Locale, Gender, Age, Experience and Qualification of Primary School Teachers of Kerala.

Sample	N	Mean	Median	Mode	SD	Skewness	Kurtosis
Total Sample	600	88.21	89.00	89	12.118	-0.124	-0.404
Wayanad	100	86.79	88.50	97	12.455	-0.087	-0.437
Malappuram	100	88.65	90.00	87	12.278	-0.355	-0.136
Palakkad	100	85.15	85.00	89	11.598	0.134	-0.356
Thrissur	100	90.05	90.00	102	12.083	-0.183	-0.348
Idukki	100	88.44	90.50	92	12.368	-0.368	-0.479
Kollam	100	90.19	91.00	77	11.403	0.210	-0.446

Sample		N	Mean	Median	Mode	SD	Skewness	Kurtosis
Section	LP	300	88.23	89.00	90	12.036	-0.102	-0.388
	UP	300	88.19	89.00	89	12.220	-0.146	-0.407
Type of School	Govt.	240	88.25	90.00	91	12.638	-0.224	-0.518
	Aided	360	88.18	89.00	89	11.777	-0.043	-0.311
Locale	Rural	480	88.10	89.00	89	12.529	-0.106	-0.443
	Urban	120	88.67	89.50	87	10.348	-0.185	-0.497
Gender	Female	440	88.08	89.00	89	12.131	-0.096	-0.362
	Male	160	88.56	89.50	87	12.115	-0.205	-0.485
Age	Below 30	37	88.2	91	92.0	11.9	-0.7684	0.4669
	30 – 40	205	88.2	89	90.0	12.8	-0.1256	-0.4771
	Above 40	358	88.2	89.0	89.0	11.8	-0.0611	-0.4294
Experience	Below 5yrs	155	88.4	90	92.0	12.9	-0.10272	-0.4337
	5 – 10 yrs	73	87.2	87	83.0	11.7	0.00363	-0.2441
	10 -15 yrs	139	89.5	90	95.0	11.6	-0.24628	-0.4003
	Above 15 yrs	233	87.6	89	89.0	12.0	-0.11425	-0.3852
	TTC/DEI.Ed	309	88.7	89	89.0	11.86	-0.1591	-0.3949
Qualification	Graduation	77	87.7	90	91.0	12.56	-0.0707	-0.2907
	Post-graduation	60	89.2	90.5	71.0	12.66	-0.2704	-0.8068
	BE.d/ME.d	140	87.0	88.0	90.0	12.28	-0.0330	-0.1644
	Diploma/Certificate	14	88.9	87.5	80.0	12.14	0.1528	-0.4003

Table 18 reveals the mean, median, mode and standard deviation of the variable of the opportunities for CPD for total sample and sub samples based on district, section, type of school, locale, gender, age, experience, and qualification of primary teachers. The obtained mean, median, mode and standard deviation for total sample are 88.21, 89.00, 89 and 12.118 respectively.

The value of skewness ($sk = -0.124$) and kurtosis ($k = -0.404$) for total sample show that opportunities for CPD is negatively skewed and platykurtic. Therefore it is evident that the obtained data of opportunities for CPD for the total sample and sub samples approaches to normality.

Differences in district-level infrastructure, resources, and policies may affect the availability and accessibility of CPD opportunities. Some districts might have a higher focus on professional development and allocate more resources to support teacher growth, leading to higher scores in those districts. Likewise Government and aided schools may have different funding and administrative structures, which can impact the provision of CPD opportunities. Government schools, being directly managed by the government, may have standardized programs or initiatives in place, while aided schools may rely on different sources for CPD support, potentially leading to variations in scores. Rural and urban areas often have different levels of resources, including access to training programs and workshops. Urban areas may have more educational institutions, research centers, and professional networks, providing greater exposure and access to CPD opportunities compared to rural areas. Gender biases or variations in societal expectations might influence the participation and availability of CPD opportunities for male and female teachers. Cultural factors or personal choices could impact the engagement of teachers in professional development activities, leading to slight differences in scores. Differences in qualifications and experience levels can influence the availability of CPD opportunities. Teachers with higher qualifications or extensive experience may have access to more specialized training or advanced programs, potentially contributing to higher scores.

Table 19

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Total Sample

Sample	Mean	SD	Levels	N	%
Total	88.21	12.12	High	113	18.83
			Average	379	63.17
			Low	108	18.00
			Total	600	100

From table 19, it is obvious the majority of primary teachers in the total sample (63.17%) receive an average level of opportunities for CPD, while only 18.83% receive high level of opportunities and 18% do receive low level of opportunities.

Figure 8

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Total Sample

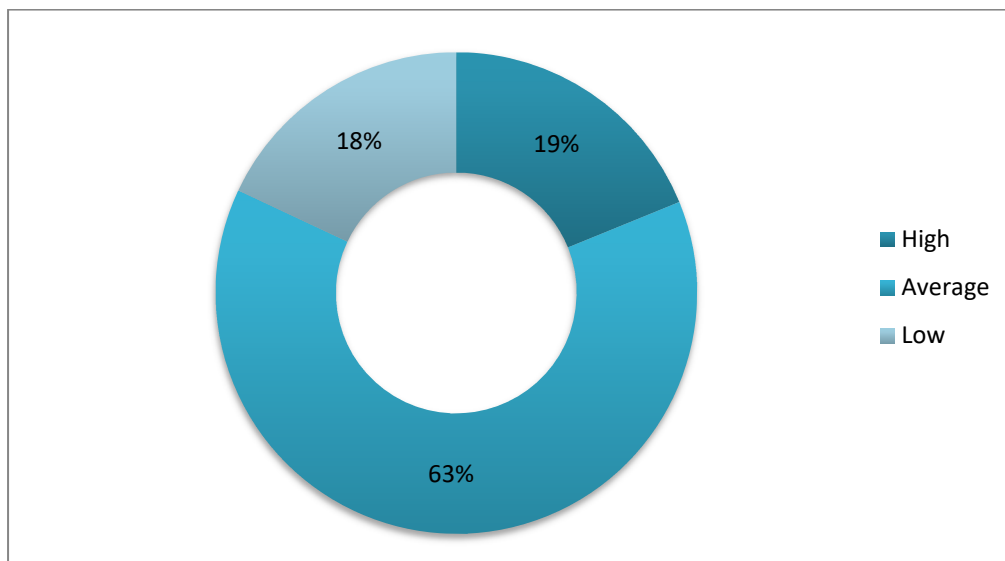


Table 20

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the District wise Sample

Category	Districts											
	Wayanad		Malappuram		Palakkad		Thrissur		Idukki		Kollam	
	(M=86.79 S.D=12.46)		(M=88.65 S.D=12.28)		(M=85.15 S.D=11.60)		(M=90.05 S.D=12.08)		(M=88.44 S.D=12.37)		(M=90.19 S.D=11.40)	
	N	%	N	%	N	%	N	%	N	%	N	%
High	16	16	14	14	20	20	22	22	16	16	14	14
Average	66	66	69	69	60	60	60	60	64	64	67	67
Low	18	18	17	17	20	20	18	18	20	20	19	19
Total	100	100	100	100	100	100	100	100	100	100	100	100

M = Mean; S.D = Standard Deviation

Table 20 indicates that a significant number of primary teachers in Wayanad (66%), Malappuram (69%), Palakkad (60%), Thrissur (60%), Idukki (64%), and Kollam (67%) are provided with average opportunities for CPD. However, Kollam district shows a significant difference in scores between the high (14%) and low (19%) categories, while Palakkad district has an equal score for both high and low categories (20%). In comparison, Thrissur district has the highest level of opportunity for CPD programmes (22%) when compared to other districts.

District-level administrators and education authorities may prioritize CPD differently, resulting in varying levels of investment and attention given to professional development programs. This can influence the distribution of CPD opportunities across districts.

Table 21

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Section wise Sample

Category	Sections			
	Lower Primary (M=88.23; S.D=12.04)		Upper Primary (M=88.19; S.D=12.22)	
	N	%	N	%
High	59	19.67	54	18.00
Average	188	62.67	191	63.67
Low	53	17.67	55	18.33
Total	300	100	300	100

According to Table 21, the percentage of teachers obtaining an average level of Opportunities for CPD is 62.67% for lower primary and 63.67% for upper primary sub samples. The percentage of teachers with a high level of opportunity is low, with 19.67% in lower primary and 18% in upper primary. Meanwhile, 17.67% of lower primary teachers and 18.33% of upper primary teachers experience low level opportunities. The result shows that there is not much difference in the level of opportunities for CPD between lower primary and upper primary teachers, as both have similar percentages for average, high, and low levels of opportunities.

Table 22

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample based on Type of School

Category	School Type			
	Government (M=88.25; S.D=12.64)		Aided (M=88.18; S.D=11.78)	
	N	%	N	%
High	40	16.67	64	17.78
Average	152	63.33	236	65.56
Low	48	20.00	60	16.67
Total	240	100	360	100

Table 22 illustrates that majority of teachers in government schools (63.33%) and aided institutions (65.56%) are receiving an average level of opportunities for CPD. A smaller percentage of teachers in both types of schools are receiving a high level of opportunities (16.67% and 17.78% for government and aided schools respectively), while the remaining teachers receive a low level of opportunities (20% for government schools and 16.67% for aided schools). This suggests that there is not much disparity in the opportunities for CPD between teachers working in government and aided schools, as both groups have a similar distribution of opportunity levels.

Table 23

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample based on Locale

Category	Locale			
	Rural (M=87.94; S.D=12.49)		Urban (M=88.61; S.D=11.56)	
	N	%	N	%
High	67	18.82	46	18.85
Average	225	63.20	152	62.30
Low	64	17.98	46	18.85
Total	356	100	244	100

Table 23 reveals that 63.20% teachers working in institutions of rural area gets an average level of opportunity, while it is 62.30% for teachers in urban area. Only 18.85% teachers in rural and urban area receive high level of opportunities. The percentage of teachers having low level of opportunities in the category of rural and urban areas constitute 17.98% and 18.85% respectively.

This indicates that there is room for improvement in terms of providing more extensive and specialized CPD programs to teachers in both locales. The result also highlights the need to address the factors contributing to the limited availability of CPD opportunities for these teachers.

Table 24

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample based on Gender

Category	Gender			
	Female (M=88.08; S.D=12.13)		Male (M=88.56; S.D=12.11)	
	N	%	N	%
High	80	18.18	28	17.50
Average	278	63.18	106	66.25
Low	82	18.64	26	16.25
Total	440	100	160	100

Table 24 vividly shows the data and results for the CPD opportunities for the subsample based on gender. It is clear that the percentage of teachers getting average level of opportunity is 63.18% and 66.25% for female and male categories. The percentage of teachers who are provided with high level of opportunity is meagre constituting to 18.18% for females and 17.50% for males respectively. Besides, 18.64% females and 16.25% males do get a low level of opportunity. This suggests that there is a slight difference in CPD opportunities between male and female teachers, with male teachers having slightly more opportunities.

Table 25

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample based on Age

Category	Age					
	Below 30 yrs (M=88.16; S.D=11.89)		30-40 yrs (M=88.24; S.D=12.77)		Above 40 yrs (M=88.20; S.D=11.79)	
	N	%	N	%	N	%
High	6	16.22	34	16.59	65	18.16
Average	25	67.57	134	65.37	231	64.53
Low	6	16.22	37	18.05	62	17.32
Total	37	100	205	100	358	100

Table 25 reveals the results of level of primary school teachers' opportunities for CPD for the subsample based on age. It is evident that the obtained percentage of teachers getting average Opportunities for CPD programme is 67.57 for teachers below 30 years; 65.37 for teachers whose age fall between 30-40 years and 64.53 for teachers above 40 years. Only 16.22% of teachers below 30 years do get a high opportunity whereas it is 16.59% for teachers under the age group 30-40 years and 18.16% for teachers above 40 years. Among the teachers under 30 years 16.62% receives low opportunity. At the same time the obtained percentage is 18.05 for the teachers between 30-40 years and 17.32 for teachers above 40 years old.

Table 26

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample Based on Experience

Category	Experience							
	Below 5 yrs (M=88.44; S.D=12.93)		5-10 yrs (M=87.19; S.D=11.72)		10-15yrs (M=89.47; S.D=11.59)		Above 15 yrs (M=87.63; S.D=12.00)	
	N	%	N	%	N	%	N	%
High	24	15.48	12	16.44	23	16.55	41	17.60
Average	101	65.16	48	65.75	92	66.19	148	63.52
Low	30	19.35	13	17.81	24	17.27	44	18.88
Total	155	100	73	100	139	100	233	100

The data and result of level of primary school teachers opportunities for CPD based on the sub sample of experience is given in table 26. Teachers who belong to the category of below 5 years' experience obtained 15.48% with respect to the high opportunities for CPD is concerned, whereas the obtained value for teachers having an experience between 5-10 is 16.44%, teachers with an experience between 10-15 years gained 16.44% and teachers having an experience above 15 years got 17.60%. From the table it is also vivid that most of the teachers in all the categories receive only average opportunity for CPD programmes. Moreover, the obtained percentage for low opportunities for CPD is 19.35%, 17.81%, 17.27% and 18.88% for teachers having an experience below 5 years, 5-10years, 10-15 years and above 15 years respectively.

Table 27

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Subsample based on Educational Qualifications

Category	Educational Qualifications									
	TTC (M=88.65; S.D=11.86)		Graduation (M=87.66 S.D=12.56)		Post Graduation (M=89.22 S.D=12.66)		B.Ed./M.Ed. (M=87.04 S.D=12.28)		Diploma (Certified) (M=88.66 S.D=12.14)	
	N	%	N	%	N	%	N	%	N	%
High	50	16.18	12	15.58	11	18.33	25	17.86	2	14.29
Average	201	65.05	50	64.94	36	60.00	93	66.43	10	71.43
Low	58	18.77	15	19.48	13	21.67	22	15.71	2	14.29
Total	309	100	77	100	60	100	140	100	14	100

Table 27 reveals that the obtained value for high Opportunities for primary teachers who possess only TTC qualification is 16.18%. At the same time the high Opportunities for teachers having graduation is 15.88% and that of teachers having post-graduation is 18.33%. 17.86% teachers with qualification of B.Ed / M.Ed receive high opportunities for CPD programmes and the obtained percentage for teachers with additional diploma or degree is 14.29%.

Table 28

Statistical Constants for the Distribution of Scores of Attitude towards CPD in the Total Sample and subsamples based on Districts, Section, Type of School, Locale, Gender, Age, Experience and Qualification of Primary School Teachers of Kerala.

Sample	N	Mean	Median	Mode	SD	Skewness	Kurtosis	
Total Sample	600	127.65	126.00	122	10.845	0.290	0.000	
Districts	Wayanad	100	126.32	125.00	125	11.094	0.580	0.724
	Malappuram	100	129.66	127.00	123	11.675	0.320	-0.784
	Palakkad	100	124.83	124.00	122	11.119	0.074	0.698
	Thrissur	100	128.43	127.00	125	9.616	0.334	0.188
	Idukki	100	126.79	124.00	120	10.110	0.564	-0.133
	Kollam	100	129.86	128.50	122	10.662	0.006	-0.427
Section	LP	300	128.11	125.00	125	11.058	0.368	-0.231
	UP	300	127.19	126.00	122	10.625	0.194	0.243
Type of School	Govt.	240	128.22	126.00	119	11.318	0.290	-0.218
	Aided	360	127.27	125.00	122	10.516	0.275	0.170
Locale	Rural	480	127.75	126.00	122	11.059	0.264	-0.093
	Urban	120	127.24	125.00	123	9.976	0.408	0.515
Gender	Female	440	127.66	125.0	125	10.885	0.339	-0.131
	Male	160	127.63	126.0	123	10.767	-0.019	0.419
Age	Below 30	37	129.3	127	118.0	11.7	0.1233	-0.7246
	30 – 40	205	129.4	128	119.0	11.1	0.0667	0.3031
	Above 40	358	126.5	125.0	122.0	10.5	0.4326	0.0539
Experience	Below 5yrs	155	129.9	128	123.0	10.6	0.21169	-0.3611
	5 – 10 yrs	73	127.5	125	119.0	10.9	0.47563	-0.0926
	10 -15 yrs	139	127.2	125	122.0	10.7	0.18762	0.6428
	Above 15 yrs	233	126.5	125	125.0	10.9	0.38202	0.0384
	TTC/DEI.Ed	309	127.2	125	125.0	11.04	0.4785	-0.0515
Qualification	Graduation	77	127.9	127	122.0	10.70	0.2028	-0.2373
	Post-graduation	60	130.7	129.0	125.0	10.83	0.3490	-0.8791
	BE.d/ME.d	140	127.6	126.0	122.0	10.54	-0.1509	0.6521
	Diploma/Certificate	14	122.3	123.0	122.0	7.98	-0.9242	2.9017

Table 28 reveals the the mean, median, mode and standard deviation of the variable of the Attitude for CPD for total sample and sub samples based on district, section, type of school, locale, gender, age, experience and qualification of primary teachers. The obtained mean, median, mode and standard deviation for total sample is 127.65, 126.00, 122 and 10.845 respectively.

The value of skewness ($sk= 0.290$) and kurtosis ($k= 0.000$) for total sample show that opportunities for CPD is positively skewed and platykutic. Therefore it is evident that the obtained data of opportunities for CPD for the total sample and sub samples approaches to normality.

Attitudes towards CPD may vary based on individual motivations and beliefs about professional development. Teachers' previous experiences with CPD, including the quality and effectiveness of past opportunities, can shape their attitudes. The presence of a supportive school environment, including leadership that encourages and values CPD, access to resources, and collaboration among teachers, can contribute to more positive attitudes towards CPD.

Table 29

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Total Sample

Sample	Mean	SD	Levels	N	%
Total	127.65	10.84	High	112	18.67
			Average	399	66.50
			Low	89	14.83
			Total	600	100

Table 29 indicates the result of level of primary teachers' attitude towards CPD programmes for the total sample. 18.67% have high attitude while 14.83% have low attitude. It is also clear that most of the teachers have an average attitude with an obtained value of 66.50%. The data in Table 29 suggests that the majority of primary school teachers have an average attitude towards CPD programmes, with 66.50% falling into this category. A relatively small percentage of teachers, 18.67%, have a high attitude towards CPD, indicating that they are motivated and

enthusiastic about participating in such programmes. On the other hand, 14.83% of teachers have a low attitude towards CPD, suggesting that they may be less interested or resistant to participating in such programmes. Overall, the results suggest that while majority of teachers show positive attitude towards CPD, there may be some challenges in engaging those with more negative attitude.

Table 9

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Total Sample

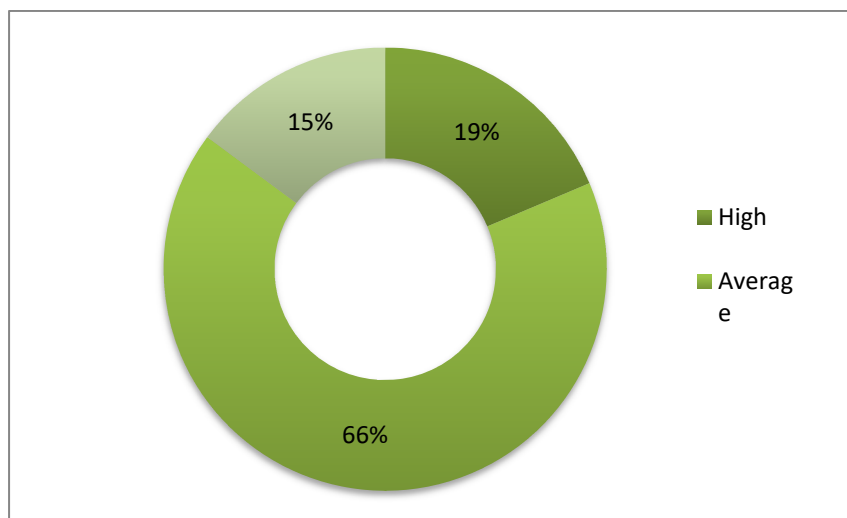


Table 30

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the District wise Sample

Category	Districts											
	Wayanad (M=126.32 S.D=11.09)		Malappuram (M=129.66 S.D=11.68)		Palakkad (M=124.83 S.D=11.12)		Thrissur (M=128.43 S.D=9.62)		Idukki (M=126.79 S.D=10.11)		Kollam (M=129.86 S.D=10.66)	
	N	%	N	%	N	%	N	%	N	%	N	%
High	18	18	23	23	16	16	13	13	18	18	19	19
Average	72	72	62	62	71	71	70	70	66	66	67	67
Low	10	10	15	15	13	13	17	17	16	16	14	14
Total	100	100	100	100	100	100	100	100	100	100	100	100

M = Mean; S.D = Standard Deviation

Table 30 reveals the attitude of primary teachers towards CPD for the district wise sample. It is evident that in all the districts except Thrissur the obtained percentage for high attitude is greater than the value obtained for low attitude. The percentage of teachers with high attitude is greater than the percentage of teachers with low attitude in all the districts except Thrissur.

Collaboration and networking opportunities among teachers and schools within a district can positively impact attitudes towards CPD. Districts that foster collaboration, promote sharing of best practices, and provide platforms for teachers to connect and learn from each other might have a higher percentage of teachers with positive attitudes.

Table 31

Data and Results of Level of Primary School Teachers' Opportunities for CPD for the Section wise Sample

Category	Sections			
	Lower Primary (M=128.11; S.D=11.06)		Upper Primary (M=127.19; S.D=10.63)	
	N	%	N	%
High	56	18.67	52	17.33
Average	204	68.00	199	66.33
Low	40	13.33	49	16.33
Total	300	100	300	100

Table 31 reveals that 68.00% lower primary teachers and 66.33% upper primary teachers have only average levels of Attitude towards CPD programmes. Only 18.67% of lower primary teachers and 17.33% of upper primary teachers possess a high level of Attitude. At the same time it is also obvious that teachers who possess low level of Attitude constitute to 13.33% for lower primary and 16.33% for upper primary teachers respectively.

Table 32

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Type of School

Category	School Type			
	Government (M=128.22; S.D=11.32)		Aided (M=127.27; S.D=10.52)	
	N	%	N	%
High	42	17.50	63	17.50
Average	166	69.17	240	66.67
Low	32	13.33	57	15.83
Total	240	100	360	100

The table indicates the primary teachers' attitude towards CPD for the subsample based on the type of the school. 69.17% teachers working in government institutions possess an average level of Attitude, while it is 66.67% for teachers working in aided schools. 17.50% Teachers of government and aided schools possess high level of Attitude towards CPD programmes when 13.33% of government teachers and 15.83% of aided teachers show a low Attitude as per the table.

Table 33

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Locale

Category	Locale			
	Rural (M=127.94; S.D=11.09)		Urban (M=127.22; S.D=10.49)	
	N	%	N	%
High	65	18.26	43	17.62
Average	232	65.17	171	70.08
Low	59	16.57	30	12.30
Total	356	100	244	100

Table 33 presents the level of primary teachers' attitude towards CPD in the subsample based on locale. The average level of attitude towards CPD possessed by of teachers working in schools located in rural and urban area is 65.17% and 70.08% respectively. Only 18.26% teachers in rural area and 17.62% teachers in urban area possess high level of Attitude. It is also shown that 16.57% teachers of rural area and 12.30% teachers of urban area possess low level of Attitude towards CPD.

Table 34

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Gender

Category	Gender			
	Female (M=127.66; S.D=10.88)		Male (M=127.63; S.D=10.77)	
	N	%	N	%
High	75	17.05	31	19.38
Average	299	67.95	106	66.25
Low	66	15.00	23	14.38
Total	440	100	160	100

The table shows the level of primary teachers' attitude towards CPD for the subsample based on gender. From Table 34, it is evident that 67.95% of females and 66.25% of males have average level of Attitude. 17.05% of females and 19.38% of males possess high level of attitude while 15.00% of females and 14.38 of males possess low level of Attitude.

Table 35

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Age

Category	Age					
	Below 30 yrs (M=129.32; S.D=11.69)		30-40 yrs (M=129.43; S.D=11.10)		Above 40 yrs (M=126.46; S.D=10.47)	
	N	%	N	%	N	%
High	8	21.62	40	19.51	66	18.44
Average	22	59.46	143	69.76	239	66.76
Low	7	18.92	22	10.73	53	14.80
Total	37	100	205	100	358	100

Table 35 reveals that the level of attitude is average for 59.46% of teachers below 30 years, 69.76% for teachers who fall under 30-40 years category and 66.76% for teachers above 40 years. Only 21.62%, 19.51% and 18.44% teachers show a high attitude in categories such as below 30 years, between 30-40 years and above 40 years respectively. 18.92% teachers of below 30 years age group has low attitude whereas it is 10.73% and 14.80 for teachers belong to 30-40 years and above 40 years category.

Table 36

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Experience

Category	Experience							
	Below 5 yrs (M=129.88; S.D=10.56)		5-10 yrs (M=127.52; S.D=10.88)		10-15yrs (M=127.16; S.D=10.75)		Above 15 yrs (M=126.50; S.D=10.93)	
	N	%	N	%	N	%	N	%
High	33	21.29	14	19.18	20	14.39	47	20.17
Average	100	64.52	50	68.49	102	73.38	148	63.52
Low	22	14.19	9	12.33	17	12.23	38	16.31
Total	155	100	73	100	139	100	233	100

Table 36 indicates the level of primary teachers' attitude towards CPD in the subsample based experience. 64.52% under below 5 years category and 68.49% under 5-10 years category have only an average attitude towards CPD. The obtained percentage for teachers within 10-15 years and above 15 years is 73.38% and 63.52% respectively. Furthermore, 21.29% of teachers below 5 years' experience have high attitude whereas it is 19.18%, 14.39% and 20.17% for teachers in 5-10 years, 10-15 years and above 15 years respectively. For teachers whose experience below 5 years show a low attitude, and it is 12.23% for teachers having an experience of 5-10 years and 10-15 years. 16.31% of teachers having more than 15 years of experience show a low attitude.

Table 37

Data and Results of Level of Primary School Teachers' Attitude towards CPD for the Subsample based on Educational Qualifications

Category	Educational Qualifications									
	TTC (M=127.05; S.D=11.04)		Graduation (M=127.92 S.D=10.70)		Post Graduation(M=130.67 S.D=10.83)		B.Ed./M.Ed. (M=127.63 S.D=10.54)		Diploma (Certified) (M=122.29 S.D=7.98)	
	N	%	N	%	N	%	N	%	N	%
High	57	18.45	12	15.58	14	23.33	26	18.57	1	7.14
Average	213	68.93	54	70.13	35	58.33	91	65.00	11	78.57
Low	39	12.62	11	14.29	11	18.33	23	16.43	2	14.29
Total	309	100	77	100	60	100	140	100	14	100

Based on a subsample of educational qualifications, the table 37 shows primary teachers' attitudes towards CPD programmes. An average attitude toward CPD is held by 68.93% of teachers with only TTC qualifications and 70.13% of teachers with a bachelor's degree. It is 58.33% for teachers with a post-graduate educational qualification, 65.00% for teachers with a B.Ed./M. Ed, and 78.57% for teachers with an additional diploma or certificate. 18.45% of teachers with TTC qualifications have a positive attitude, but the percentages found for teachers with graduation, post-graduate, B.Ed / MEd, and diploma or certificate are 15.58%,

23.33%, 18.57%, and 7.14%, respectively. 12.62% of teachers with TTC qualifications and 14.29% of teachers with graduation have low attitude towards CPD programmes, and 18.33%, 16.43%, and 14.29% of teachers with post-graduate, B.Ed/ M.Ed., and diploma or certificate, respectively, have low attitude towards CPD programmes.

Correlation

Correlation explains the relationship that exists between two variables. It is used to express the extent to which two variables are correlated either positively or negatively (Hauke & Kossowski, 2011). The investigator used Pearson's Product Moment Correlation to know how strongly the variables are connected. The correlation coefficient, r , is a summary measure that describes the statistical relationship between two variables. The correlation coefficient is scaled to be between -1 and +1 at all instances. When r is near to zero, there is little relationship between the variables, and the farther r is from zero, in either a positive or negative direction, the larger the relationship between the two variables.

Table 38

Relationship between Opportunities for CPD and Attitude towards CPD among Primary School Teachers

Variables	(1)	(2)
Opportunities for CPD (1)	-	-
Attitude towards CPD (2)	.455**	-

** $p < 0.01$

Pearson's Product Moment Correlation test was performed to find out the relationship between Opportunities for CPD and Attitude towards CPD among primary school teachers. The result shows that there exists a moderate significant positive correlation between Opportunities for CPD and Attitude towards CPD among primary school teachers. ($r = 0.455$, $p < 0.01$). The correlation coefficient of 0.455 indicates a moderate positive correlation between Opportunities for CPD and Attitude towards CPD among primary school teachers. The p -value less than 0.01

indicates that this correlation is statistically significant, meaning that it is unlikely to have occurred by chance. This result suggests that as the Opportunities for CPD increase, the Attitude towards CPD also tends to increase, and vice versa. Therefore, it is important to provide adequate Opportunities for CPD to teachers, which may lead to a positive attitude towards CPD and professional development. The result makes it clear that CPD chances will favourably impact teachers, and there is a possibility of a good attitude toward CPD. Similarly if the teachers have a positive attitude towards Continuous Professional Development they can find out more CPD opportunities.

Opportunities for CPD play a crucial role in supporting teachers' professional growth and development. When teachers are exposed to relevant and meaningful CPD opportunities, they enhance their knowledge, skills, and pedagogical practices. This growth leads to a more positive attitude towards CPD. Providing Opportunities for CPD demonstrates a commitment to recognizing and valuing the professional growth and expertise of teachers. When teachers feel supported and invested in, it enhances their motivation and enthusiasm for continuous learning, resulting in a positive attitude towards CPD. In conclusion, the significant positive correlation between Opportunities for CPD and Attitude towards CPD emphasizes the importance of providing ample opportunities for primary school teachers to develop their profession. By investing in CPD opportunities, education authorities can foster a positive attitude towards CPD, leading to improved professional growth and enhanced teaching practices among teachers.

Comparison of Mean Scores

t-test

The test of significance of difference between mean scores was done out so as to examine whether there exists any significant differences in the mean scores of variables and for the sub samples based on section, type of school, locale and gender.

The t value which is the critical ratio was determined. The significance of results was evaluated by considering the critical ratios. The critical ratio 1.96 and above was considered to be significant at .05 level and the critical ratio of 2.58 and above was considered to be significant at .01 level. The details of mean difference analysis are presented in the following section. The results of mean difference analysis of predictors and criterion based on subsamples are presented in tables under the heads – section difference, management difference, locale difference and gender difference. This was done to present the results in a condensed format.

Table 39

Data and Results of Test of Significance of Difference between the Mean Scores of Opportunities for CPD among Lower and Upper Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Section	Lower Primary	300	88.23	12.036	.044	.965
	Upper Primary	300	88.19	12.220		

Table 39 shows the test result of independent sample t-test between the mean scores of opportunities for CPD among lower and upper primary school teachers of Kerala. The mean and standard deviation of lower primary and upper primary are 88.23, 12.036; 88.19, 12.220 respectively. And the t-value is 0.044 which is not significant. It suggests that there is no significant difference between lower and upper primary teachers in terms of opportunities for Continuous Professional Development.

Therefore, based on these results, we can conclude that there is no substantial evidence to support the presence of a significant difference in the opportunities for CPD between lower and upper primary school teachers in Kerala. This implies that both groups have similar levels of access to CPD opportunities, indicating a relatively equitable distribution of professional development resources among these two categories of teachers.

Table 40

Data and Results of Test of Significance of Difference between the Mean Scores of Opportunities for CPD among Government and Aided Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Type of School	Government	240	88.25	12.638	.070	.944
	Aided	360	88.18	11.777		

The test result of an independent sample t-test between the mean scores of opportunities for CPD among government and aided primary school teachers is shown in Table 40. The mean and standard deviation of government and aided are 88.25, 12.638; 88.18, 11.777 respectively. And the t-value is 0.070 which is not significant. It shows that there is no significant difference between government and aided primary school teachers in terms of opportunities for Continuous Professional Development.

The department ensures equitable provision of professional development opportunities to both government and aided schools, prioritizing the goal of providing quality education to students in public schools. Apart from this, teachers from government and aided schools might engage in collaboration and networking opportunities, allowing them to share knowledge and experiences related to CPD. Such interactions can bridge any potential disparities and ensure that teachers from both types of schools have similar opportunities for professional growth.

Table 41

Data and Results of Test of Significance of Difference between the Mean Scores of Opportunities for CPD among Rural and Urban Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Locale	Rural	480	88.10	12.529	.460	.646
	Urban	120	88.67	10.348		

The test result of an independent sample t-test between the mean scores of opportunities for CPD among primary teachers of rural and urban schools is displayed in Table 41. The mean and standard deviation of rural and urban are 88.10, 12.529; 88.67, 10.348 respectively. And the t-value is 0.460 which is not significant. It points out that there is no significant difference between rural and urban primary school teachers in terms of opportunities for Continuous Professional Development.

Table 42

Data and Results of Test of Significance of Difference between the Mean Scores of Opportunities for CPD among Male and Female Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Gender	Male	440	88.08	12.131	.427	.669
	Female	160	88.56	12.115		

Table 42 presents the test result of an independent sample t-test between the mean scores of opportunities for CPD among male and female primary teachers. The mean and standard deviation of male and female are 88.08, 12.131; 88.56, 12.115 respectively. And the t-value is 0.427 which is not significant. It highlights that there is no significant difference between male and female school teachers in terms of opportunities for Continuous Professional Development.

If schools and educational institutions prioritize ensuring equal access to professional development resources for all teachers, irrespective of gender, it will lead to comparable mean scores and a lack of significant difference. Policies and initiatives implemented at the national, regional, or school level focus on promoting gender equality specifically in relation to CPD opportunities.

Table 43

Data and Results of Test of Significance of Difference between the Mean Scores of Attitude towards CPD among Lower and Upper Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Section	Lower Primary	300	128.11	11.058	1.035	.301
	Upper Primary	300	127.19	10.625		

Table 43 indicates the test result of independent sample t-test between the mean scores of attitude towards CPD among lower and upper primary school teachers of Kerala. The mean and standard deviation of lower primary and upper primary is 128.11, 11.058; 127.19, 10.625 respectively. And the t-value is 1.035 which is not significant. It discloses that there is no significant difference between lower and upper primary teachers in terms of attitude towards Continuous Professional Development.

Lower and upper primary teachers may share similar professional goals and aspirations. If both groups have a collective vision for continuous improvement and are committed to their professional growth, it will contribute to similar attitudes towards CPD. Moreover, lower and upper primary school teachers often work within similar teaching contexts, focusing on foundational education and student development. This shared context results in similar perspectives and attitudes towards the importance of CPD in enhancing their teaching practices.

Table 44

Data and Results of Test of Significance of Difference between the Mean Scores of Attitude towards CPD among Government and Aided Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Type of School	Government	240	128.22	11.318	1.048	.295
	Aided	360	127.27	10.516		

Table 44 shows the test result of independent sample t-test between the mean scores of attitude towards CPD among government and aided primary school teachers of Kerala. The mean and standard deviation of government and aided are 128.22, 11.318; 127.27 and 10.516 respectively. And the t-value is 1.048 which is not significant. It indicates that there is no significant difference between government and aided primary teachers in terms of attitude towards Continuous Professional Development.

The lack of significant difference in attitudes towards Continuous Professional Development (CPD) between government and aided primary school teachers may be attributed to several factors. Firstly, both types of schools may cultivate a similar professional environment that values the importance of CPD and continuous learning for teachers. This shared emphasis on professional development contributes to a convergence in attitudes towards CPD. Additionally, government and aided schools may provide comparable CPD opportunities, offering similar resources, training programmes, and support to facilitate teachers' professional growth. Consequently, teachers from both types of schools exhibit similar levels of motivation and engagement in pursuing CPD opportunities.

Table 45

Data and Results of Test of Significance of Difference between the Mean Scores of Attitude towards CPD among Rural and Urban Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Locale	Rural	480	127.75	11.059	.459	.646
	Urban	120	127.24	9.976		

Table 45 designates the test result of independent sample t-test between the mean scores of attitude towards CPD among primary teachers of rural and urban schools in Kerala. The mean score of rural and urban is 127.75 and 127.24 and that of standard deviation are 11.059 and 9.976. The obtained t-value is 0.459 which is not significant. It suggests that there is no significant difference between primary

teachers of rural and urban schools with regard to the attitude towards Continuous Professional Development.

This suggests that rural and urban primary school teachers in Kerala hold similar attitudes towards CPD, despite their differing geographical contexts. The findings imply that both groups of teachers recognize and value the importance of continuous professional development in their teaching practice. It is worth noting that the lack of significant difference in attitudes towards CPD could be influenced by various factors, such as similar training opportunities, shared pedagogical beliefs, or comparable access to resources.

Table 46

Data and Results of Test of Significance of Difference between the Mean Scores of Attitude towards CPD among Male and Female Primary School Teachers

	Sample	N	Mean	Standard Deviation	t value	p-value
Gender	Male	440	127.66	10.885	.032	.975
	Female	160	127.63	10.767		

Table 46 designates the test result of independent sample t-test between the mean scores of attitude towards CPD among male and female primary teachers of Kerala. The mean score of male and female teachers are 127.66 and 127.63 and that of standard deviation is 10.885 and 10.767. The obtained t-value is 0.032 which is not significant. It reveals that there is no significant difference between male and female primary teachers with regard to the attitude towards Continuous Professional Development.

Both genders may recognize the ever-changing educational landscape and the need to stay updated with new methodologies, technologies, and pedagogical approaches. They understand that CPD enables them to adapt to the evolving needs of students and provide quality education.

ANOVA

A One-way ANOVA is used to determine whether there exists or doesn't exist a statistical difference between the means of three or more independent groups.

Table 47

Summary of Mean and Standard Deviation of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their District

District	N	Mean	SD
Wayanad	100	86.79	12.45
Malappuram	100	88.65	12.28
Palakkad	100	85.15	11.60
Thrissur	100	90.05	12.08
Idukki	100	88.44	12.37
Kollam	100	90.19	11.40

Table 48

Results of the Summary of ANOVA of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their District

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between group	1893.248	5	378.650	2.613*	.024
Within group	86070.87	594	145.00		
Total	87964.118	599			

*p<0.05

Table 48 shows that the obtained value for the sum of squares and mean square between groups is 1893.248 and that of within group is 1893.248. Likewise the mean square value for between group and within group is also same (378.650). The degrees of freedom for between group and within group is 5. The F value is 2.613 and the value obtained for significance is 0.024 which is significant at 0.05

level. From the table it is evident that there exists a statistically significant difference in opportunities for CPD among teachers of various districts of Kerala.

Table 49

Data Showing Multiple Comparison of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their District

Groups for Comparison		Mean Difference (I-J)	Std. Error	t-value	Level of Significance
Wayanad	Malappuram	1.86	1.99	0.934	NS
Wayanad	Palakkad	1.64	2.02	0.812	NS
Wayanad	Thrissur	3.26	1.98	1.647	NS
Wayanad	Idukki	1.65	2.00	0.826	NS
Wayanad	Kollam	3.40	1.96	1.735	NS
Malappuram	Palakkad	3.50	2.02	1.731	NS
Malappuram	Thrissur	1.40	1.97	0.710	NS
Malappuram	Idukki	0.21	1.99	0.107	NS
Malappuram	Kollam	1.54	1.96	0.787	NS
Palakkad	Thrissur	4.90	1.98	2.472	0.05
Palakkad	Idukki	3.29	2.00	1.646	NS
Palakkad	Kollam	5.04	1.96	2.577	0.05
Thrissur	Idukki	1.61	1.97	0.817	NS
Thrissur	Kollam	0.86	1.95	0.441	NS
Idukki	Kollam	0.75	1.98	0.379	NS

Table 49 shows the results of the multiple comparison test of opportunities for CPD among primary school teachers for the total sample with respect to their district. The mean difference and standard error values are provided for each comparison, along with the t-value and level of significance. The results show that there are significant mean differences in attitude towards CPD between Palakkad and Thrissur (t-value = 2.47, $p < 0.05$) and between Palakkad and Kollam (t-value = 2.58, $p < 0.05$). This suggests that primary school teachers in these districts have significantly different opportunities for CPD.

On the other hand, there are no significant mean differences in opportunities for CPD between Wayanad and Malappuram, Wayanad and Palakkad, Wayanad and Thrissur, Wayanad and Idukki, Wayanad and Kollam, Malappuram and Palakkad, Malappuram and Thrissur, Malappuram and Idukki, Malappuram and Kollam, Palakkad and Idukki, Thrissur and Idukki, Thrissur and Kollam and Idukki and Kollam. The t-values for these comparisons are not significant, and therefore, the level of significance is reported as NS (not significant). Overall, the results suggest that there are some significant differences in opportunities for CPD among primary school teachers across different districts, but there are also some districts where the opportunities are similar.

However, regardless of the presence or absence of significant differences, the overall findings highlight the importance of targeted interventions and support to ensure equitable access to CPD opportunities for all primary school teachers. This may involve addressing resource disparities, providing additional funding for underserved districts and implementing inclusive policies that promotes professional growth and development for teachers in all districts. Such interventions can help bridge the gap between districts with significant differences in CPD opportunities and those with similar opportunities, ultimately enhancing the overall quality of education by supporting teachers' continuous professional development.

Table 50

Summary of Mean and Standard Deviation of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their District

District	N	Mean	SD
Wayanad	100	126.32	11.09
Malappuram	100	129.66	11.68
Palakkad	100	124.83	11.12
Thrissur	100	128.43	9.62
Idukki	100	126.79	10.11
Kollam	100	129.86	10.66

Table 51

Results of the Summary of ANOVA of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their District

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between group	1999.348	5	399.870	3.470**	.004
Within group	68445.450	594	115.228		
Total	70444.798	599			

**p<0.01

Table 51 shows that the sum of squares and mean square for between group is 1999.348 and 399.870 and that of within group is 68445.450 and 115.228 respectively. There is a statistically significant difference between the six groups $F(5, 594) = 3.470, p < 0.01$. Post hoc analysis revealed that teachers from Kollam district (M=129.86, SD=10.66) has higher attitude towards continuous professional development than Wayanad (M= 126.32, SD =11.09), Malappuran (M =129.66, SD = 11.68), Palakkad (M =124.83, SD = 11.12), Thrissur (M =128.43, SD = 9.62) and Idukki (M =126.79, SD =10.11)

Table 52

Data Showing Multiple Comparison of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their District

Groups for Comparison		Mean Difference (I-J)	Std. Error	t-value	Level of Significance
Wayanad	Malappuram	3.340	1.518	2.20	0.05
Wayanad	Palakkad	1.490	1.518	0.98	NS
Wayanad	Thrissur	2.110	1.518	1.39	NS
Wayanad	Idukki	.470	1.518	0.31	NS
Wayanad	Kollam	3.540	1.518	2.33	0.05
Malappuram	Palakkad	4.830	1.518	3.18	0.01
Palakkad	Thrissur	3.600	1.518	2.37	0.05
Thrissur	Malappuram	1.230	1.518	0.81	NS

Groups for Comparison		Mean Difference (I-J)	Std. Error	t-value	Level of Significance
Thrissur	Idukki	1.640	1.518	1.08	NS
Thrissur	Kollam	1.430	1.518	0.94	NS
Idukki	Malappuram	2.870	1.518	1.89	NS
Idukki	Palakkad	1.960	1.518	1.29	NS
Kollam	Malappuram	.200	1.518	0.13	NS
Kollam	Palakkad	5.030	1.518	3.31	0.01
Kollam	Idukki	3.070	1.518	2.02	0.05

Table 52 shows the results of the multiple comparison test of attitude towards CPD among primary school teachers for the total sample with respect to their district. The mean difference and standard error values are provided for each comparison, along with the t-value and level of significance. The results show that there are significant mean differences in attitude towards CPD between Wayanad and Malappuram (t-value = 2.20, $p < 0.05$) and between Wayanad and Kollam (t-value = 2.33, $p < 0.05$). This suggests that primary school teachers in these districts have significantly different attitudes towards CPD. There are also significant mean differences in attitude towards CPD between Malappuram and Palakkad (t-value = 3.18, $p < 0.01$), Palakkad and Thrissur (t-value = 2.37, $p < 0.05$), and Kollam and Palakkad (t-value = 3.31, $p < 0.01$). These results indicate that there are significant differences in attitude towards CPD between these districts as well.

On the other hand, there are no significant mean differences in attitude towards CPD between Wayanad and Palakkad, Wayanad and Thrissur, Wayanad and Idukki, Malappuram and Thrissur, Thrissur and Idukki, Thrissur and Kollam, Idukki and Malappuram, Idukki and Palakkad, and Kollam and Idukki. The t-values for these comparisons are not significant, and therefore, the level of significance is reported as NS (not significant). Overall, the results suggest that there are some significant differences in attitude towards CPD among primary school teachers across different districts, but there are also some districts where the attitudes are similar.

Table 53

Summary of Mean and Standard Deviation of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Age

Age	N	Mean	SD
Below 30 yrs	37	88.16	11.89
30-40 yrs	205	88.24	12.76
Above 40 yrs	358	88.20	11.79

Table 54

Results of the Summary of ANOVA of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Age

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	.367	2	.184	.001	.999
Within Groups	87963.751	597	147.343		
Total	87964.118	599			

Table 54 shows that the sum of squares and mean square for between group is 0.367 and 0.184 and that of within group is 87963.751 and 147.343 respectively. There does not exist statistically significant difference between the three groups $F(2, 597) = 0.001$

Table 55

Summary of Mean and Standard Deviation of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Age

Age	N	Mean	SD
Below 30 yrs	37	129.32	11.68
30-40 yrs	205	129.43	11.09
Above 40 yrs	358	126.46	10.47

Table 56

Results of the Summary of ANOVA of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Age

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	1263.681	2	631.840	5.452**	.005
Within Groups	69181.117	597	115.881		
Total	70444.798	599			

**p<0.01

Table 56 shows that the sum of squares and mean square for between group is 1263.681 and 631.840 and that of within group is 69181.117 and 115.881 respectively. There is a statistically significant difference between the three groups $F(2, 597) = 5.452, p < 0.01$. Post hoc analysis revealed that teachers between the age of 30-40 years ($M = 129.43, SD = 11.09$) have higher attitude towards continuous professional development than teachers below the age of 30 years ($M = 129.32, SD = 11.68$) and above 40 years ($M = 126.46, SD = 10.47$).

Table 57

Data Showing Multiple Comparison of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Age

Groups for Comparison		Mean Difference (I-J)	Std. Error	t-value	Sig.
Below 30 yrs	40-30 yrs	-.105	1.923	0.054	.999
Below 30 yrs	Above 40 yrs	2.869	1.859	1.543	.305
40-30 yrs	Above 40 yrs	2.974*	.943	3.153	.007

Table 57 presents the results of the multiple comparison test of attitude towards CPD among primary school teachers based on their age. The mean differences, standard error, t-values, and levels of significance are reported for each comparison group. The results show that there is no significant difference in attitude towards CPD between teachers below 30 years old and those aged 30-40 years

(mean difference = -0.105 , t -value = 0.054 , $p > 0.05$). Similarly, there is no significant difference in attitude towards CPD between teachers below 30 years old and those above 40 years old (mean difference = 2.869 , t -value = 1.543 , $p > 0.05$). However, there is a significant difference in attitude towards CPD between teachers aged 30-40 years and those above 40 years old (mean difference = 2.974 , t -value = 3.153 , $p < 0.01$). This indicates that primary school teachers above 40 years old have a more positive attitude towards CPD compared to those aged 30-40 years.

The results suggest that age plays a significant role in shaping the attitudes towards CPD among primary school teachers. Specifically, teachers above 40 years old demonstrate a more positive attitude towards CPD compared to those aged 30-40 years. It is important to note that other factors, such as experience, career stage, and professional development opportunities, may also influence the observed differences in attitude towards CPD among different age groups of teachers. Teachers above 40 years old may have progressed further in their careers, reaching a stage where they prioritize continuous learning and development. They may have realized the importance of staying updated with the latest research, pedagogical approaches, and technology advancements to enhance their teaching effectiveness. This recognition of the ongoing need for professional growth may contribute to their positive attitude towards CPD.

Table 58

Summary of Mean and Standard Deviation of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Experience

Experience	N	Mean	SD
Below 5 yrs	155	88.44	12.926
5-10 yrs	73	87.19	11.724
10-15 yrs	139	89.47	11.589
Above 15 yrs	233	87.63	12.002

Table 59

Results of the Summary of ANOVA of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Experience

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	381.774	3	127.258	.866	.458
Within Groups	87582.345	596	146.950		
Total	87964.118	599			

Table 59 shows that the sum of squares and mean square for between group 381.774 and 127.258 and that of within group is 87582.345 and 146.950 respectively. There does not exist statistically significant difference between the four groups $F(3, 596) = 0.866$

Table 60

Summary of Mean and Standard Deviation of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Experience

Experience	N	Mean	SD
Below 5 yrs	155	129.88	10.56
5-10 yrs	73	127.52	10.88
10-15 yrs	139	127.16	10.75
Above 15 yrs	233	126.50	10.93

Table 61

Results of the Summary of ANOVA of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Experience

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	1113.141	3	371.047	3.190*	.023
Within Groups	69331.657	596	116.328		
Total	70444.798	599			

* $p < 0.05$

Table 61 shows that the sum of squares and mean square for between group is 1113.141 and 371.047 and that of within group is 69331.657 and 116.328 respectively. There is a statistically significant difference between the four groups $F(3, 596) = 3.190, p < 0.01$. Post hoc analysis revealed that teachers having the experience between 10-15 years ($M = 89.47, SD = 11.589$) have higher attitude towards continuous professional development than teachers below 5 years of experience ($M = 88.44, SD = 12.926$), between 5-10 years of experience ($M = 87.19, SD = 11.724$) and teachers with experience of above 15 years ($M = 87.63, SD = 12.002$)

Table 62

Data Showing Multiple Comparison of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Experience

Groups for Comparison		Mean Difference	Std. Error	t-value	Sig.
Below 5 yrs	5-10 yrs	2.357	1.531	1.54	.500
Below 5 yrs	10-15 yrs	2.719	1.260	2.16	.200
Below 5 yrs	Above 15 yrs	3.380*	1.118	3.02	.028
5-10 yrs	10-15 yrs	.362	1.559	0.23	.997
5-10 yrs	Above 15 yrs	1.023	1.447	0.71	.919
10-15 yrs	Above 15 yrs	.660	1.156	0.57	.955

Table 62 shows the results of multiple comparisons of attitude towards CPD among primary school teachers with respect to their experience. The table displays the mean difference, standard error, t-value, and level of significance for each comparison between different groups of experience. The results show that there is a significant difference in attitude towards CPD between primary school teachers with below 5 years of experience and those with above 15 years of experience (mean difference = 3.380, t-value = 3.02, $p < 0.05$). There is no significant difference in attitude towards CPD between primary school teachers with below 5 years of experience and those with 5-10 years of experience, or between those with 5-10 years of experience and those with above 15 years of experience. Additionally, there is no significant difference in attitude towards CPD between primary school teachers

with below 5 years of experience and those with 10-15 years of experience, or between those with 10-15 years of experience and those with above 15 years of experience.

These findings suggest that as teachers gain more experience in their profession, their attitudes towards CPD tend to become more positive. This may be due to the accumulation of knowledge and skills over time, as well as a greater appreciation for the value and impact of continuous professional development. However, it is important to consider that other factors, such as individual motivation, support from colleagues and school leadership, and access to quality CPD opportunities, may also influence the observed differences in attitude towards CPD among teachers with varying years of experience.

Table 63

Summary of Mean and Standard Deviation of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Educational Qualifications

Educational Qualifications	N	Mean	SD
TTC	309	88.65	11.859
Graduation	77	87.66	12.558
Post Graduation	60	89.22	12.656
B.Ed./M.Ed.	140	87.04	12.279
Rec. Diploma/Certificate Course	14	88.86	12.139

Table 64

Results of the Summary of ANOVA of Opportunities for CPD among Primary School Teachers for the Total Sample with Respect to their Educational Qualifications

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	341.309	4	85.327	.579	.678
Within Groups	87622.809	595	147.265		
Total	87964.118	599			

Table 64 shows that the sum of squares and mean square for between group 341.309 and 85.327 and that of within group is 87622.809 and 147.265 respectively. There does not exist statistically significant difference between the five groups $F(4, 595) = 0.579$

Table 65

Summary of Mean and Standard Deviation of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Educational Qualifications

Educational Qualifications	N	Mean	SD
TTC	309	127.25	11.041
Graduation	77	127.92	10.699
Post Graduation	60	130.67	10.831
B.Ed./M.Ed.	140	127.63	10.541
Rec. Diploma/Certificate Course	14	122.29	7.985

Table 66

Results of the Summary of ANOVA of Attitude towards CPD among Primary School Teachers for the Total Sample with Respect to their Educational Qualifications

Source of variation	Sum of squares	df	Mean Square	F value	Significance
Between Groups	1005.082	4	251.271	2.153	.073
Within Groups	69439.716	595	116.705		
Total	70444.798	599			

Table 66 shows that the sum of squares and mean square for between group 1005.082 and 251.271 and that of within group is 69439.716 and 116.705 respectively. There does not exist statistically significant difference between the five groups $F(4, 595) = 0.073$.

Discussion

The result throws light to the need of providing more opportunities to the primary school teachers in Palakkad district and Wayanad district. It also emphasizes the necessity of changing the attitude of primary school teachers in Wayanad and Palakkad district and engages them more in professional development activities. The result indicates that teachers in Kollam district have more opportunity as well as attitude than teachers from other districts. The result suggests that there is a need to provide more professional development opportunities for primary teachers in Palakkad and Wayanad districts. Additionally, it suggests that the attitude of primary teachers in these districts needs to be changed to encourage them to participate more in professional development activities. It also implies that teachers in Kollam district have more opportunities and a better attitude towards professional development than teachers in other districts. This may suggest that Kollam district has more resources or support available for professional development activities, or that the teachers in Kollam district are more receptive to engaging in professional development opportunities. The reasons why teachers in some districts have a higher attitude towards and more opportunities for professional development are likely to be complex and multifaceted, and could be influenced by a range of factors at the individual, organizational, and systemic levels (Nawab & Bissaker, 2021).

The analysis suggests that the lower primary teachers receive more opportunities to enrich themselves professionally and they show more attitude than that of upper primary teachers. There could be several reasons why lower primary teachers may have more opportunities for professional development and a more positive attitude towards it. Lower primary teachers are expected to teach all the subjects, which means they are responsible for a wider range of subject areas than upper primary teachers who typically specialize in specific subjects. This exposure to a wide range of subjects and teaching responsibilities could be a reason why lower primary teachers are more likely to participate in teacher empowerment programmes that cover both general topics and subject-specific content.

More than female teachers, male teachers receive more opportunity to develop professionally. At the same time while considering the attitude both groups have the same attitude towards professional development programmes. The reasons for this difference in opportunities for professional development between male and female teachers may vary depending on the context. In some cases, it may be due to biases or stereotypes that associate certain subjects or roles with gender (Al Shabibi & Silvennoinen, 2018). It is important to note that regardless of gender, all teachers should have equal opportunities for professional development in order to improve their teaching skills and provide the best education possible to their students. The fact that male and female teachers have the same attitude towards professional development suggests that both groups are equally interested and motivated in improving their skills and knowledge (Osakwe, 2014) and therefore should have equal access to opportunities for professional development.

The study highlights the need to provide more and better professional development opportunities for teachers of all age groups, and to address systemic barriers that limit access to these opportunities. By doing so, teachers can improve their skills and knowledge, which will ultimately benefit their students and improve the quality of education.

The correlation analysis unveils that when teachers have more opportunities for CPD, it can lead to a more positive attitude towards CPD, which in turn can increase their motivation to participate in further CPD opportunities. On the other hand, when teachers have a positive attitude towards CPD, they are more likely to seek out and take advantage of available opportunities for CPD. This cycle of positive reinforcement can lead to continuous growth and development of the teachers, which can ultimately lead to improved teaching and learning outcomes in the classroom (Avalos, 2011; Hadar & Brody, 2010; Irgatoglu, 2021). Providing adequate opportunities for CPD and promoting a positive attitude towards it among teachers can lead to a cycle of positive reinforcement that ultimately benefits both teachers and students. By continuously growing and developing professionally, teachers can enhance their teaching practices, which in turn can improve learning

outcomes in the classroom. Therefore, creating a positive environment for CPD opportunities and fostering a positive attitude towards CPD is crucial for the continuous growth and development of teachers and for improving the quality of education.

The One way ANOVA provides information on the opportunities for CPD among teachers from various districts of Kerala. Based on the statistical analysis, it is clear that there is a significant difference in opportunities for CPD among teachers from different districts. This difference in opportunities could be due to a number of factors such as the availability of resources, support from school management, and government initiatives to promote CPD. It is important to note that this difference in opportunities for CPD can have a significant impact on the professional growth and development of teachers. Teachers who have more opportunities for CPD are likely to be more motivated to engage in professional development activities, which in turn can enhance their teaching practices and benefit their students. Therefore, it is crucial to ensure that all teachers, regardless of their district, have equal opportunities for CPD. This can be achieved through government initiatives to promote CPD, providing adequate resources and support for CPD, and encouraging a positive attitude towards CPD among teachers and school management. By doing so, teachers can continue to grow and develop professionally, which will ultimately benefit their students and contribute to the overall improvement of education in Kerala.

The results also suggest that there are some significant differences in attitude towards CPD among primary school teachers across different districts. This means that primary school teachers in some districts may have a more positive attitude towards CPD than those in other districts. These differences in attitude may be influenced by various factors such as the availability of CPD opportunities, the support provided by the school administration, and the overall culture and environment in the district. However, it is also important to note that there are some districts where the attitudes towards CPD are similar. This could be due to factors such as similar levels of support for CPD opportunities or a shared culture of valuing

professional development among teachers in those districts. It is important to further investigate the reasons for similarities and differences in attitudes towards CPD among primary school teachers across different districts, as this can help inform strategies for promoting and supporting CPD initiatives in each district.

The ANOVA results indicate that the differences in opportunities for CPD among primary school teachers based on their age are not statistically significant. This means that age does not play a significant role in determining the opportunities for CPD among primary school teachers. It is true that the department does not make any discrimination among the younger or older teachers in providing different opportunities. At the same time the result suggests that there is a significant difference in attitude towards CPD among primary school teachers based on their age. The findings are in accordance with the results of many studies conducted before (Badri, et al., 2016; Hürsen, 2012).

The ANOVA results indicate that there is no statistically significant difference in opportunities for CPD among primary school teachers based on their years of experience. This means that the number of years of teaching experience does not play a significant role in determining the opportunities for CPD among primary school teachers. This analysis suggests that the department provides equal opportunities for CPD to all primary school teachers regardless of their years of experience. The result also indicates that there is a significant difference in the attitude towards CPD among primary school teachers based on their experience in their profession. Several studies conducted have attested the findings that the years of experience in the service affects the teachers' attitude and motivation to take part in professional development initiatives (Ifanti & Fotopoulou, 2011).

The result discloses that there is no statistically significant difference in opportunities as well as in attitude for CPD among primary school teachers based on their educational qualifications. This means that the level of education does not play a significant role in determining the attitude towards CPD and opportunities for CPD among primary school teachers even though several studies concluded that demonstrates that academic qualifications affected the teachers' views on the value

of the CPD (Lessing & De Witt, 2007; Tanang & Abu, B., 2014). This analysis suggests that the department provides equal opportunities for CPD to all primary school teachers regardless of their level of education.

Analysis of Focused Group Discussions

The researcher has conducted three Focused Group Discussions and the analysis and further discussion are described here under the different themes and sub-themes.

Table 67

Major Themes and their sub-themes with excerpts from FGD

Major Themes	Sub Themes	Excerpts
Support	i. Home	<i>Well, you've to work on holidays too!</i>
	ii. Head of institution	<i>I must convince my HM that I am not going to a personal affair.</i>
	iii. Colleagues	<i>I feel better stay back at school and do the work allotted to me</i>
Self-initiatives	i. Collaboration	<i>I felt a kind of commitment and confidence when I work together</i>
	ii. Reading and researching	<i>We recognize the necessity for reading but I can do that only when I'm a little bit relieved from busy school schedule</i>
	iii. Mentoring and coaching	<i>If I had someone experienced to support, advice and guide, my induction period would have become successful.</i>
	iv. Reflective journal and portfolio	<i>Now I'm able to prepare worksheets for my own learners.</i>
	v. Material development and Innovation	<i>I'm short of time.</i>
	vi. Additional academic qualification	<i>It's never simple to change a routine, and nothing is ever right the first time. It is destined to fail from the start if there is no support</i>
	vii. Online/blended learning	<i>You know, it is truly painful that nobody cares what we are</i>

Major Themes	Sub Themes	Excerpts
Opportunity	i. Need	<p><i>If our preferences had been adequately elicited, we could have avoided repeated sessions or similar programmes.</i></p> <p><i>It is pathetic that we were never invited during planning stage.</i></p> <p><i>We prefer professional development that incorporates hands-on practices applicable to our classroom.</i></p> <p><i>If we had choice to decide upon, we would be happy and motivated</i></p>
	ii. Planning	
	iii. Praxis	
	iv. Choice	
Quality	i. Resource persons	<i>RPs merely present their perspectives.</i>
	ii. Convergence	<i>Why are the same teachers being called by multiple agencies at the same time?</i>
	iii. Monitoring	<i>We would just go, sit, listen and come back. We never felt that we had a role to play.</i>
	iv. Mode of conducting	<i>Most of the programmes are old wines in new bottles</i>
	v. Content	<i>Workshops over the summer are quite hectic. It's like being trapped and burnt inside a crowded classroom with only one or two fans.</i>
	vi. Infrastructure	<i>Since there is no follow-up, we never feel that it's something to be executed in the classroom.</i>
	vii. Follow-up	
Barriers	i. Personal	<p><i>They make us feel worse, more stressed, and exhausted, which prompts our performance to collapse.</i></p> <p><i>Teachers who work hard are overburdened rather than appreciated.</i></p> <p><i>It's just because I'm a woman that I have to skip numerous professional development activities.</i></p>
	ii. School	
	iii. Gender	

Support

It is imperative that teachers must be adequately supported to excel in their profession. Support from family, heads of school and colleagues play a vital role in this context. Teachers in Asian and Southern European nations, often considered to be family oriented (Bataineh, 2009; Moreno & Marklose, 2013), frequently seek emotional and practical assistance from their families (Bataineh, 2009; Otero López et al., 2010). Traditionally Kerala has been considered as having a family oriented culture. Additionally, the attitude of school administrators, colleagues, and parents of students has a significant impact on how successfully teachers develop professionally. Support from home, school and colleagues are discussed herewith.

Home

The majority of participants expressed the opinion that it makes their families very unhappy when teachers participate in professional development events over the holidays. They recommended scheduling such programmes on weekdays. Therefore, even if the teachers were self motivated and eager to participate in programmes over the holidays, their thoughts would be preoccupied with their family and they would not be able to fully engage in the activities or sessions. Some respondents claimed that their families didn't explicitly protest since they were used to their hectic schedule. One participant said

“Personally, I don't prefer going to the department's programmes on holidays. I would like to spend my time engaging in several professional development events at the same time. I used to make my time to read books or journals and I'm an active member of several reader and writer groups”.

Only one person mentioned how supportive her family was. Her family understood that her actual identity was that of a teacher, therefore she should act accordingly. Everyone in the family shared household chores, which enabled her to participate in activities that would benefit her professionally. It is important to

balance the needs of teachers for ongoing professional development with their personal commitments and responsibilities.

Head of institution

The majority of participants stated that their head teachers wouldn't entertain them participating in professional development events on working days since they would negatively affect the pupils and colleagues. The absence of the teacher will cause problems, especially in lower elementary schools where only one teacher engages the entire class from morning to evening. Some participants complained that their HMs considered the programmes as a way to escape from school and that the teachers were just invited due to some other considerations. Even if they would agree, they would do it half-heartedly.

“I must convince my HM that I am not going to a personal affair!”

“Even democratic and loving HMs will become autocratic under such circumstances”.

“The HM discourages us. He will criticize and ridicule me.”

Another issue shared by the participants is that parents lament that the teacher is missing on working days.

“It is not their concern whether the teacher is on leave due to personal reasons or the teacher is attending some official programmes. If the teacher's physical presence is not there in the classroom, they will complain at the HMs or higher officials. They simply ask us ‘If students have too many "absences," they risk having an "Unsatisfactory" on their progress reports, but what happens if teachers skip too many classes?’ “So feel better stay back at school and do the work allotted to us.”

“We are not urged to attend PD by our HMs. They frequently remark that there is no one to engage our classes when they refuse to send us for programmes. Even if we go to professional development, my

HM never asks us about our learning or what we require to practice. I had gone to the 30 days Regional Institute of English (RIE) course last year. Nobody queried whether or not I gained anything from the course. Teachers should be asked by the heads both before and after the training to determine what they required and how the training improved their practices.”

Colleagues

Majority of the participants agreed that their colleagues were not very supportive as far as professional development programmes were concerned. It might be because they were overburdened by the physical absence of teacher from the school. Moreover they did not properly recognize the need of being updated and the necessity of teachers to learn and integrate innovative ideas. These teachers were regularly reminded of their commitment towards children and they felt ashamed of attending courses or playing the role of resource persons. Their activities were frequently labeled as outside their responsibilities as teacher. A few participants told that their colleagues were usually very positive but a long absence from school would never be tolerated.

Discussion

The analysis of the participants’ reaction is in accordance with the studies conducted. School heads, as administrators of the schools where teachers work, play a crucial role in motivating teachers to learn, develop, and enhance their profession actively and autonomously. As a result, leaders must be involved in creating development opportunities that meet the needs of teachers, students, the school, and the community (Somantri& Iskandar, 2021). The entire society must acknowledge that the teachers’ roles are not confined to the four walls of schools.

These issues underscore the need for effective communication between head teachers and teachers regarding the importance of ongoing professional development, as well as the potential benefits that it can bring to students and the school as a whole. Postholm (2011) found in her study the importance of colleagues

and stated, “A continuous development of practice appears to rely on a common vision or objective among teachers and school leaders” (p. 567). Clear guidelines and policies regarding teacher attendance at professional development events could also be established to help alleviate concerns about teacher absences. Furthermore, it is important for head teachers to recognize and acknowledge the value of professional development for teachers and to encourage their participation in a supportive manner. This can help to foster a culture of continuous learning and growth within the school community. School administrators should provide a conducive environment for teachers to participate in blended CPD activities, offering them adequate choices based on their individual requirements (NCERT, 2022). Teachers are required to seek assistance from their organisations and colleagues, as well as identify areas for development in order to improve their profession (Texas Education Agency, 1997).

The analysis clearly discloses that teachers struggle to balance their commitments at home and at work as concluded by previous studies (Cinamon & Rich, 2005). Neither weekdays, nor holidays are appropriate for them to do something to excel their profession. It is evident from the analysis that teachers face challenges in finding a suitable time to participate in professional development programmes due to their competing commitments at home and work. Weekdays are not feasible as they may affect the learning of students and colleagues, while holidays may cause stress and conflict with family commitments. This highlights the need for flexible and personalized professional development programmes that consider the unique needs and schedules of teachers.

Self – initiatives

As part of their self-initiatives for CPD, teachers themselves act as the developers and creators of their professional learning opportunities and activities. The significance and necessity of informal and self-initiated learning have recently been acknowledged. Self-directed professional development is defined as a process in which a learner takes principal responsibility for planning, implementing, and assessing the learning process, while an education agent or resource frequently plays

a supportive role (Guskey, 2000). According to Bailey et al. (1998), professional development must be ongoing, sustained, and self-directed in order to be effective. This emphasises the significance of continuous and self-directed professional development. The focused group discussions throw light to the fact that the teachers' self initiative CPD is realized through collaboration among teachers, reading and doing action research, mentoring and coaching, writing reflective journal and preparing one's own professional portfolio, academic material development and testing innovative strategies in teaching-learning process and enriching one's own academic and professional qualifications through different courses.

Collaboration

Participants expressed their wish to have professional development that involves collaboration with other teachers and the building of a learning community. Teachers value the opportunity to collaborate with other teachers and benefit from their experiences. Teachers can learn from others in a number of ways. The participants opined that it is good to observe a colleague's class because peer observation enables individuals to reflect on their own teaching abilities, strategies, and preconceptions by observing alternative styles of teaching. Even though they acknowledge that peer observation do contribute a lot for reflective teaching, most of them shared that they were not comfortable by the presence of another teacher during teaching sessions.

“I'm sure it's an interesting idea. Personally, I dislike having another teacher sit in my class and observe. It is I like I'm being judged.”

According to them the purpose for observing another teacher's classroom activities may potentially evoke appraisal of the teacher observed. Using observation to evaluate teaching can have undesirable consequences. Besides they also feel that colleagues are a bit reluctant to give true feedback in order to avoid offence, hostility and resistance. Alternately, the observer could feel inclined to just offer favorable remarks, in which case the entire process devolves into a meaningless exchange of compliments. All participants agreed that peer observation is an effective professional development tool. If managed properly, it may be a useful exercise for

the teachers and the observers. It has the capacity to foster teamwork, strengthen observational and reflective abilities, and consequently, increase teaching abilities.

Apart from peer observation, collaborating with teachers in other schools and the development of Professional Learning Community (PLC) have become very relevant. Most of the participants shared that they were the members of many academic groups sharing similar interests.

“Collaboration allows us to grow as professionals and to provide better support to our students. We often collaborate in teams or groups, either within our own school or with teachers from other schools.”

The outbreak of the pandemic and the subsequent online interaction, in fact made these groups more active. They could conduct classes both online and offline related to their subjects; arrange field trips; organize expert interaction; developing study materials for online classes etc.

“Having the chance to observe an experienced teacher demonstrate how they teach the poem incredibly helpful...”

“I was involved in some study material development collaboratively with teachers in other districts and it was novel experience for me. I felt a kind of commitment and confidence when I work together”.

The perceptions about collaborative activities and the extent to which they employ these activities are looked at. Nearly all teachers consider collaborative activities crucial, including exchanging experiences and issues with colleagues, seeking their professional guidance, and working together to develop new materials, techniques, and tasks. They don't, however, utilize those activities in the very same degree that they value. While teachers recognize the importance of collaborative activities they have been not actually engaged in these activities to. In other words, they may not be fully utilizing the collaborative opportunities available to them.

Reading and researching

When asked what they want their students to be or what they want them to receive out of their education, teachers frequently say that they want them to be lifelong learners. Needless to say that it is a great aim, but there is a critical issue that has to be asked: How many teachers or educational leaders genuinely read professionally on their own initiative? Many participants felt that the reading habits of teachers have a direct impact on student learning and performance. Some of them are voracious readers of professional literature in their native language, while others rely on internet materials. These educators, too, have demonstrated a real interest in their professional growth, particularly self-initiated activities.

“I examine expert books, blogs, and web articles to discover fresh tactics to put to use in my class. We recognize the necessity for reading but I can do that only when I’m a little bit relieved from busy school schedule”

Many participants stated that they did not read regularly owing to time constraints, implying that they could not accommodate reading into their already busy schedule.

“I’m short of time. A change from what I do all day is necessary. Sometimes I don’t even have time to organize my lessons, even less go through a book on how to become a better teacher.”

“I wish I had more time to read. I think there are a lot of books and articles out there that could help me to become a better teacher, but I just don’t have the time. There are so many demands on my time, between planning lessons, grading papers, and attending meetings, that I barely have time to breathe”.

A few teachers acknowledged that they would be more interested to read professional literature in a reading community because an active and fruitful discussion follows after reading.

The participants were also encouraged to discuss on action research, being a self-initiated activity to improve the teaching. Since action research is a teacher-initiated classroom inquiry, all participants agreed that it is an excellent method for professional growth. This indicates that the teacher is prepared and driven to look for opportunities to improve his or her comprehension of classroom instruction, reflect on, and implement change in his or her methods. However, they admitted that they could not effectively use because they have not been adequately trained to do this. Undertaking such research initiatives need stronger assistance from colleagues and the senior authorities are least interested in listening to the findings. Therefore, the teachers' self-directed efforts are put on hold as a result of the lack of support from the authorities. In a nutshell, it can be seen that teachers appear to give little attention to research.

All teachers reported that action research is rarely used in their profession. Trying out innovative ideas in practice, reflective teaching, improving one's own practices are all professional developmental engagements that rely on research and practice. Action research, which is also a reflective activity, doesn't get much attention from the teachers even though the majority of participants believe these activities are vital for their growth. In contrast to the other half of the teachers, who do not think it is very essential for their growth; half of the teachers feel this practice to be necessary. Obviously, the majority of educators seldom or never used action research. Occasionally, a small percentage of teachers sometimes started an investigation in the class.

Mentoring and coaching

Even though formal mentoring has not been included in the system, there are teachers who benefit from being a mentor or mentees in a school. Two novice teachers in the group shared that mentoring from some experienced hands gives mentees the chance to experiment with new concepts, techniques, and ideas as well as reflect on their existing pedagogy. Well experienced participants also shared their mentoring experience. For them it was beneficial as they were given the opportunity to expand their knowledge, experience, and abilities in mentoring and coaching, as

well as to improve their feedback skills, methodologies, and communication techniques and methods. However, it should also be mentioned that the system does not initiate anything for mentoring programmes even if it is proved globally that mentoring has an indispensable role during the induction period of a novice teacher.

“If I had someone experienced to support, advice and guide, my induction period would have become successful”.

Another participant said:

“We didn’t have a formal mentor, but some of our senior teachers really provided good support. They were with us whenever we needed.”

Reflective journal and portfolio

Writing a reflective journal is a typical reflection technique used in a teaching process for the teacher to reflect on his or her teaching. It has a significant influence on the teacher’s professional growth. When asked if they kept reflective journals, majority of the participants admitted that they did not.

“I often do these in my mind rather than really writing anything down, which may be useful for evaluation in the future”.

Although every teacher has kept a reflective diary during their pre-service education, majority of them do not continue the practice in their later years. Two participants in all of the three sessions mentioned that they had been maintaining a reflective journal, which had proven to be quite beneficial in reflecting on their own practices. They said that they, too, felt resistance and reluctance to write a diary on a regular basis at first, but once they started; the diaries themselves mirrored their journey as teachers. Just as these two teachers feel that in a way that is distinct from any other type of teaching and learning research, diaries promote reflection or introspection (Hubbs and Brand, 2005).

The participants had not heard of the term professional development portfolio, despite the fact that many of them, particularly those working in lower

primary classes, had excellent student portfolios. However, the concept caught their curiosity, and they stated that some of their acquaintances had been keeping records of the training sessions they had attended and the innovations they had implemented.

“The concept sparked my interest and I wanted to learn more, but I didn't have a clear and exact idea of how to do so.”

Material development and Innovation

When asked about their engagement in material development, majority of the participants replied that they had never been involved prior to the COVID-19 pandemic. They were required to create digital learning materials for the online classes including worksheets, audio and video animations, digital quizzes, and more using a variety of software applications. Because of their impending need, they had studied everything rapidly. These materials became very beneficial even after the schools reopened and many teachers extended their ability and involvement in such material development after the pandemic. Such materials other than text books, according to the participants could instill interest among the learners and they had become more active. Some of the responses are as follow:

“I couldn't believe myself that I'm good at doing all these things”

“Now I'm able to prepare worksheets for my own learners”

“.....it actually instilled confidence to prepare something for our learners. Every student is unique. We have to address their needs individually”.

“One textbook may not always be helpful. As a result, we currently rely on such materials”.

This instilled a positive attitude towards teachers and they started up taking more challenges. At the same time, many teachers were still unwilling to participate in such an activity. Some of them were ready to utilize materials provided by others but had never participated in material development yet. Some teachers do have negative mindset and rely only on the student textbook.

Majority of the participants shared that testing innovation in teaching is of greatest importance. At the same time they complained that they did not get any institutional support for the same. This discouraged them.

A participant who has a good history of professional innovation shared his concern:

“.....Make sure there is adequate follow-up, support, and resources available to fully commit and overcome any challenges that may occur when thinking about integrating new ideas in your classroom. It's never simple to change a routine, and nothing is ever right the first time. It is destined to fail from the start if there is no support”.

At the same time it must be mentioned that if educators feel free to try out novel ideas or techniques in the classroom, they will be less reliant on the organisation they work for if they take the initiative and take action for their own growth. Hence, their professional development efforts will be more significant.

Additional academic qualification

Most of the participants had cleared additional courses, such as a degree, diploma, or certificate. They have been doing this for two reasons: to seek a promotion or to gain greater recognition and exposure. According to them completing a bachelor's degree is a significant achievement for many teachers and is unquestionably a start in the right path as we strive for higher professional achievements. While a bachelor's degree is an impressive accomplishment, it is frequently insufficient to have an impact in students' lives. Reaching a true sense of success may need an advanced education degree, which is designed particularly to provide teachers with professional expertise.

Some participants opined that even if they do more courses and all, only a few is considered for promotion. Attaining M.Phil or Ph.D degree is not properly recognized by the department. Furthermore, they do not get any monetary benefit. They said, they needed more paid leave for doing additional academic courses.

“No one from the department, not even our HMs do not care what achievement we have made. For them, taking leave for attending classes or writing examinations will never be entertained. We neither get any financial, administrative support nor any recognition. You know, it is truly painful that nobody cares what we are!”

One participant expressed his distress in the following words

“Nobody is around to question teachers whether they participate in professional development or not, or whether they enhance their methods. When someone participates in PD programmes, they are not appreciated. A teacher's job is unaffected by participating in professional development programmes or improving methods.”

Online/blended learning

Self-Initiated Professional Development has attracted a lot of attention from professionals as a result of the COVID-19 outbreak, which has afflicted people all over the world. This was evident when teachers were abruptly forced to begin active learning, which was mostly conducted online to replace face-to-face learning. Immediate measures were taken by the growth of online professional development methods like Google Meet, Zoom, podcasts, social media, and webinars. to make sure that learning is not affected

“I believe that learning something new is beneficial to my mental health and well-being. I believe I am developing both personally and professionally. Residing in a small village is no longer a barrier to lifelong learning thanks to the internet. There are no barriers for online classes and webinars, and I can study alongside like-minded folks. Making connections with teachers from various countries is exciting and motivating”.

Discussion

The findings reinforce the notion that the greatest place to begin for professional development is with the teachers themselves, because professional development cannot be relevant and successful unless the teachers are committed to growing professionally. The discussion discloses that many teachers often resist participating in observation of a colleague's class or similar events since observation is attached to assessment. At the same time many teachers enjoyed working together with other teachers especially in some other schools. Strong collegial connections among teachers contribute to the development of a learning community and, as a result, successful PD, which teachers are more inclined to take part in (Smith, 2015). This is based on the notion that every school has competent and experienced teachers who have a great deal of knowledge and experience. Teachers may interact, reflect, and learn from one another by sharing their expertise. They may also attend more traditional 'courses' on occasion, but under a collaborative approach, any learning obtained would be added to a pool of useful information to be shared (Duncombe & Armour, 2004). According to Ferrier-Kerr et al. (2009), this is due to the fact that the major goal of professional development programmes is changing from "teaching" to "learning."

The comments made by the participants indicate that teachers did not spend a considerable amount of time reading professionally during school and instead found time to read when they were not constrained by school-based duties. The comments on action research attributed to a few reasons. It is likely that educators don't know enough or anything about action research and how it should be done. In addition, they will not have the motivation, time, or resources at their disposal to undertake research in their classrooms.

The results on reading for professional development supports the efforts of Carroll and Simmons (2009), who explored the relevance of teachers' professional reading habits and concluded that they show a true enthusiasm for their profession. The results show that, over half of the participants, have difficulties in understanding the recent literature on their subject matter. Nearly one third of teachers see reaching

literature in the area as a very significant/important limitation, while others see it as not relevant at all or of little relevance. The apparent absence of direct relevance for classrooms practice and a lack of time are stated as reasons for not engaging in reading scholarly literature. This finding is in accordance with the studies conducted by Burgess et al. (2011) and Carrol & Simmons (2009). Some studies conducted illustrate the same point. Additional supports may encourage teachers to read; reading groups or learning communities that concentrate on researching a specific topic of interest for the teachers in a particular school provide collegial support and shared meaning-making (Darling-Hammond & Richardson, 2009).

Perspectives of teachers on mentoring are in accordance with the practices worldwide. To encourage the professional growth of new teachers, mentoring is a necessary tool in Finnish schools. The teachers desired that mentoring become a permanent practice since they believed it to be so crucial throughout the induction phase (Jokinen & Välijärvi, 2017). The very idea of keeping a portfolio for teachers made the participants excited. According to an Australian study, using a portfolio encourages learners' and teachers' participation in the teaching and learning process. Additionally, it was shown that using a portfolio reduces the importance placed on the end result or product. It supports both the process and the product, but the process is given more prominence (Brady, 2002). The discussion attests the findings of some previous studies conducted in the area of material development. The use of materials increases students' interest in their classes, their level of activity and exercise, their achievement, their opportunity to cooperate and think critically, and their ability to solve problems and express themselves creatively (Koparan, 2015).

The feedback from the participants highlights the need for the institutional support for teachers to test and implement innovative teaching methods in their classrooms. Without such support, teachers may feel discouraged and less motivated to try new approaches to teaching. By providing teachers with the necessary resources, training, and support, institutions can encourage and empower teachers to experiment with new teaching methods and improve their instructional practices.

Results and the analysis indicated that experienced teachers participated in different form of self-initiated learning activities: information exchange, experimentation, and pursuing higher studies. Participation in these activities was determined by the availability of resources, family support, and the support from their schools. With the exception of some differences between novice and experienced teachers regarding the observation of classroom events by heads and administrators, following research literature in their own field, and peer observation, the majority of them nearly all agreed on the importance of these activities. Participants agreed to the fact that they need more recognition for their self-driven professional development initiatives. This is well attested by many studies conducted. Teachers should be recognized and rewarded depending on their competence. These incentives and rewards might take the shape of increment enhancements and consideration for promotion. Furthermore, high-performing teachers may be recognised by awarding titles, certificates, and perhaps comments of appreciation (Nawab, 2020). Teachers will be more motivated to participate in PD if it is made mandatory for them and there are chances for rewards, career progression, growth, and accomplishment (McMillan, et al., 2016).

These findings indicate that teachers recognise the value of professional development. They have a positive attitude towards the important aspects underlying the concept, like the importance of teacher motivation and willingness, self-initiation, collaboration, reflection, and assessment, as well as staying current with new ideas and developments in the area. According to Mora et al. (2016), teachers are required to participate in their own professional development by devising strategies that reflect their preferences, beliefs, and perceived needs. Teachers are more likely to be committed to these professional development areas and activities and improvements are more likely to be profound and long-lasting if professional development is driven by their own needs and interests (Kohonen, 2002).

Majority of the self-directed activities occur outside of institutions, and the teachers themselves must engage in them. With a few exceptions, the majority of participants are unaware that self-initiated activities can be a component of

professional growth. They believe that only certain external agencies or systems can offer prospects for professional advancement. Self-directed development and teachers taking charge of their own advancement do not imply that teachers must develop alone. Therefore, it is a fine decision to seek collaboration from colleagues to strengthen their capacity building. In other words, teachers should take the initiative to collaborate with colleagues on their professional development. They can acquire an inside outlook on other teachers' experiences and enhance their knowledge by reflecting on their own teaching in this manner.

When compared to face-to-face formats, online professional development programmes for academic teaching had similar beneficial impacts on teachers' understanding of course material, pedagogical attitudes, and teaching techniques (Russell et.al, 2009). Perry, Findon and Cordingley (2021) have analysed many studies related to online professional development programmes and concluded the following points. They suggested that according to recent research, teachers should be actively involved in professional development activities that are sustained over time and linked to what they are teaching in the classroom (Belland et al., 2015; Boyle et al., 2004; Dede et al., 2016; Garet et al., 2001; Jao & McDougall, 2015).

Adding online components to face-to-face-only models can help PD experiences last over time by allowing for more scheduling and programming flexibility (Belland et al., 2015; O'Dwyer et al., 2007; Owen et al., 2008). According to Dede et al. (2008), asynchronous interactions boost the contributions of teachers who typically remain mute in face-to-face settings. According to the NCERT Guidelines for 50 hours CPD (2022) teachers will have the chance to take part in well-organized online, open, and remote learning sessions. The cafeteria approach will be used in this mode, where teachers can choose the module that best suits their needs for professional development. This hybrid approach to CPD will provide the chance to influence teachers' attitudes and inspire them to fulfil their required 50 hours of CPD each year.

The significance of partaking in voluntary, individual, and self-development activities that are undertaken in collaboration are noteworthy. The degree to which

self-development is valued, realized and the hindrance to progress is discussed via this discussion. Decision-makers may thus find this information insightful and use it to help them re-evaluate development opportunities, and understand the necessity of teacher development, and ways to improve the situation. They also work together with their peers to exchange online learning materials. It is critical for teachers to stay motivated by actively participating in metacognitive skills for monitoring, assessing, and reflecting on their work. They can choose their own professional development process. Aside from that, they must learn new skills in order to stay competitive keeping up with the rapidly changing developments and global crisis. As a result, this is the ideal time for teachers to transform their teaching paradigm to make professional learning more relevant and effective. Due to shortcomings in the conventional professional development paradigm including treating teachers like passive learners, providing little continuing support, and using a one-size-fits-all structure have been changing. The necessity of teachers being lifelong learners has been demonstrated at this period, since they must be self-motivated and consciously choose to participate in deliberate learning, upskilling, and retraining for their personal and professional growth (Rahman, et al., 2020).

Opportunities

Teachers' motivation to participate in professional learning is a key factor in determining the success of CPD programmes. At the same time, it is critical to examine the options offered by the system for elementary teachers to enrich their career. It has been observed that there are multiple opportunities. However, some factors such as the ability to express their needs, involvement in planning their own professional development activities, the ability to implement what they have learned in PD sessions, the option to select the programme based on their convenience, and the availability of online/blended programmes are essential.

Need

Many participants expressed that they were not able to express their true needs during the CPD programmes. They felt that most of the programmes followed a top-down approach, and the teachers had very little chance to express what they

truly needed. The programmes are often designed based on assumptions about the needs of the teachers rather than being informed by actual teacher needs. As a result, the programmes may not always be relevant or useful to the teachers, leading to low motivation to participate and implement the learnings in their classrooms. At the same time some participants said that a few programmes by DIET and SSK were conducted after assessing their needs using a google form.

“If our needs had been adequately elicited, we could have avoided repeated sessions or similar programmes. Persons sitting at the top are designing something and no one is truly thinking exactly if it is required in the field. Occasionally we are asked to attend something and the coordinators are least concerned if it is actually required then. I feel they wanted to settle the files after showing the expenditure and for namesake some programmes are implemented.”

“I honestly feel that we cannot talk about the effectiveness of professional development activities unless they are designed around the needs of teachers and practicing for long.”

“I regret that I was unable to engage in any useful professional development activities since they were both irrelevant to my own requirements and were arranged for such a short period of time.”

Planning

Teachers expressed a desire for a voice in the sorts of professional development that were made available to them and said they liked the chance to create their own model of development. In order to better understand what kinds of learning would satisfy their perceived requirements, teachers expressed a wish to be included in the planning of professional development sessions and to be consulted before sessions were scheduled. This would allow them to share their thoughts and ideas about what they need, what has worked for them in the past, and what they hope to gain from the sessions.

“I wish I could have more chances to be involved in the process of planning of professional development programmes. Because I feel it will stimulate me more than anything else in professional development initiatives.”

“A few of us are invited for module preparation, training etc. It is pathetic that we were never invited during planning stage. People at the top of the system do plan something and implementing”.

Praxis

Another feature that the teachers appreciated about professional development sessions was the ability to immediately integrate strategies or activities into their classroom instruction. The participants are particularly interested in the quick implementation of strategies they have received during professional development sessions. They felt that sessions that allowed them to apply what they learned in a practical manner in their classrooms were more effective and beneficial to their professional growth.

"I really appreciate the sessions that give us the chance to apply what we've learned in a practical manner in our classrooms.”

According to them very often the sessions lack chances for immediate classroom application and this creates frustration.

“Even if things don't go perfectly at first, seeing the ideas in action with our own learners in our own classrooms is empowering. We prefer professional development that incorporates hands-on practices applicable to our classroom.”

Choice

The element of choice within the framework of the PD was mentioned as another required quality of professional development sessions. According to Jones et al. (2018), choice served as a stronger incentive. Teachers expressed that they would engage in professional development programmes more successfully if they

could choose the time, duration, venue, learning content, level of involvement to the training, and persons with whom they would collaborate.

“I am staying in a remote area and frequently the programmes are in townships. It takes a long time to travel for attending such programmes. If I had choice to participate sessions according to my interest, I would attend them without hesitation”

“Everyone is provided with the same content. My need will be different from that of my colleagues. Most of the sessions are like one-size fits all. If we had choice to decide upon, we would be happy and motivated”

“I want to learn about new techniques in the teaching of math but the professional development is focused on language teaching which is not relevant to me.”

“I would like to attend professional development related to classroom management as I find it challenging to manage my students but the sessions are mostly focused on subject content.”

These verbatim by teachers highlight the importance of personalized professional development opportunities. Teachers have different needs and challenges in their classrooms, and a one-size-fits-all approach may not be effective in meeting their needs. Providing teachers with a choice to decide upon their professional development sessions based on their specific needs and interests can be a motivating factor for them to participate actively and implement what they have learned in their classrooms.

Discussion

The results highlight the importance of addressing the contradictions and bridging the gap between the requirements of teachers and the objectives of the providers. The conclusions derived by Adams (2014) in his study are in accordance with the findings. Teachers were required to participate in district-mandated PD

because of the school's poor performance rating. Teachers complained in private interviews acknowledged a discrepancy between their PD experiences and what they thought PD ought to be like (Adams, 2014). Teachers and PD providers had conflicting perspectives and that the latter were unable to provide teachers with practical ideas for how to apply the ideas they had introduced to the confines of their daily classroom activities. This suggests the studies conducted worldwide. Thirty teachers from two low performing Midwest primary schools reported feeling upset by the professional development sessions they had received (Kragler et al., 2008), and one of the reasons for that unhappiness was the absence of immediately executed, practical strategies. "If it's something that you can use in your class right now, tomorrow, or the following day, or whatever, it's relevant".

Teachers and administrators expressed a lack of interest in PD in studies conducted by Kimbrel (2018) and Shurtleff (2019), and teachers reported that they actually participated in formal professional development sessions only when they were able to provide their own ideas and expertise. Many participants expressed that they required more accountability in the formal professional development programmes. They wished to have the opportunity to give feedback to decision-makers about the type of the PD they attended. In a research including 395 math teachers from 50 different primary schools in California, Rutherford et al. (2017) extended previous findings. They found that teachers' favourable views toward professional development had a direct impact on teacher self-efficacy, which in turn had a beneficial influence on student outcomes.

As felt by most of the participants, the programmes have been conceived and implemented by a group who are not in touch with the 'field reality'. This top-down approach is criticised for the potential of becoming increasingly conceptual and isolated from classroom practice, which might hinder professional growth and, in many instances, leave teachers ineffective (Timperley, 2011).

Quality

The academic community has started to study professional development programmes in an effort to determine how beneficial this approach may be, in light

of the potential significance of professional development in enhancing teacher knowledge and student results. At the same time, it is also important to analyse the quality of professional development initiatives from the stakeholders' point of view. From the different discussions conducted it was assumed that participants are more concerned about the selection and performance of the resource persons, the simultaneous conduction of different programmes, monitoring and feedback, the mode of conduction, the content of PD sessions, the provision for follow-up and the infrastructure facilities.

Resource persons (RP)

Many participants are dissatisfied with RP performance. Good teachers are not always effective trainers. Many people lack training skills. They must have enough training before being selected as RPs for various programmes. According to the participants, some resource persons are not enough resourceful, since they conduct sessions without adequate preparation. This is undeniably reflected in the programme.

“They don't demonstrate how to accomplish it. They simply exhibit the powerpoint. "Oh, you could use it like this." OK. That's all. Now we're ready for the next one.”

“I just wanted to say that I believe it's odd that we're discouraged from using the lecture technique in the classroom and have always pushed on keeping the class participatory, but then every training we go to is not interactive and RPs merely present their perspectives.”

“They will consolidate everything from their own point of view”

“As I observe the low-quality trainers in the given professional development activities, I am losing interest in participating in any more professional development activities for the next year.”

“In-service training often involves resource persons trying to teach topics that they do not really understand. They are unaware of their

purpose and what they are supposed to be conveying. It is impossible to conclude about the selection process used to choose some resource persons for trainings. They must possess greater levels of competency. This skill level must be taken into account while selecting them. If so, I believe the in-service trainings become smarter.”

This insight certainly brings to light a concern that needs to be addressed. If they are to deliver their pupils high-quality learning, teachers expect the same to get it themselves. If the RPs leading the training sessions are not adequately prepared, it can undermine the effectiveness of the programme and lead to teacher disengagement. Therefore, it is essential to ensure that the RPs are equipped with the necessary training and support to effectively deliver professional development sessions.

Convergence

Participants complained that the department implement many professional development sessions simultaneously. Many agencies, including SCERT, SSK, DIETs, KITE, etc., run programmes simultaneously but not in harmony with one another. They felt overwhelmed with several programmes that did not complement one another and that they received no follow-up or feedback regarding the implementation of any of the programmes. They were therefore against the idea of modifying their teaching techniques.

“We will be called upon by DIET to participate in or conduct the sessions. KITE or SSK would call us the next day. All of these programmes are frequently scheduled on weekdays. How will we deal with this? Why are the same teachers being called by multiple agencies at the same time? Furthermore, if many programmes run concurrently by various agencies, who will be available at the school to engage the children? Parents will protest, and HMs are in trouble.”

Monitoring

About 90% of the participants believed that the programmes are not properly monitored by the educational officers. With regard to the attendance and punctuality, only a few officers are paying much attention.

“Some coordinators called at the centre and spent the whole day with us. On such occasions we feel it nice enough to stay back and attend the sessions actively. Some officers have actively participated in sessions with us. It gave us some extra vigor when they do so. There melts the gap between practicing teachers and officers and we feel comfortable to interact with them and express our feedback openly”

Majority of the participants consider that monitoring by their HMs and other educational officers play an essential role in their performance. At the same time they didn't feel comfortable if these officials monitor them in a judgmental way. Some participants shared that observation of the class by heads or administrators is not favoured always. This resistance may be due to the possibility that administrative observations are judgmental and compulsory. Teachers may perceive the approach as a threat and be hesitant or resistant to allow inspectors to assess their activities.

Mode of conducting

Most of the participants were reported to be satisfied on an average level. They were happy that the training sessions had been evolved into a workshop model. In the previous years, the participants had very little role where as the entire sessions were RP oriented.

“We would just go, sit, listen and come back. We never felt that we had a role to play. Like all other participants, I merely sit and listen to trainers when I take part in professional development programmes. To be very honest, these ineffective professional development exercises are really dull, and I do not learn from them. It seems like a waste of time to me.”

Majority of the participants shared their concern that they didn't feel novelty in programmes both in terms of content and transaction.

“Most of the programmes are old wines in new bottles”.

Anyhow the participants said that nowadays the content and strategies are being changed especially the programmes conducted by DIETs and SSK. Three participants who had been in the leading roles of RPs for the past 15-20 years said, that a few years ago the modules were not self-explanatory and the RPs struggled hard to transact the content. They had to devise new strategies and sometimes it wouldn't work as planned. Anyhow, at present the modules had been prepared after considering the demands of the field and the new strategies are being experimented.

Most of the participants shared the need for residential workshops. Residential programmes allow the participants to engage more on their works.

“Being away from home and from one's usual place of work reduces many of life's concerns. As a result, we will be completely immersed in the training experience. We need to just concentrate on participating without having to worry about travelling, cooking, or doing other everyday duties”.

The sessions, according to the participants should be engaging and interactive.

“Often, we've one sided instruction. We need activity oriented meaningful sessions. Sit-and-gets are poor methods of educating teachers and students. We like to be actively engaged by answering questions, debating topics, doing some physical activities, singing a poem, solving a puzzle, narrating a story, trying out an experiment or having some simple interaction with others.”

Furthermore, the participants shared that they needed more technology embedded sessions. Whatever content is getting transacted, if it is done incorporating technology, they feel novelty and readiness.

"In the recent session we attended, several Google apps were used, and it was pretty interesting. It adds creativity to the sessions and provides information for us as well. I find all of the classes to be smart, and I'm aware that several teachers have already started using them. So to speak, we are kind at the bottom curve. But we're making some progress."

Content

The participants shared dissatisfaction in terms of the content being transacted.

"Teacher empowerment programmes fall short of being detailed enough. In my opinion, the content is insufficient. The topics covered in in-service training, in my opinion, are superficial. Sessions address theoretical topics that are not at all applicable. Even if it is learnt, it is forgotten since it is not useful. Additionally, the same concepts are presented frequently."

"Most of the workshops are dealing with general topics. We need more subject-based sessions. As primary teachers we are expected to teach many subjects. And majority of us are not confident enough to deal with them. So definitely we need more subject specific sessions."

"I am graduate in English. Apart from English, I'm teaching Mathematics also. I always feel that I should get more trainings and workshops in topics related to Mathematics to meet my minimum classroom requirements."

Infrastructure

Participants unanimously agreed that the good refreshment facilities at the venue will certainly affect the program's success.

“If lunch is offered, we will be more relaxed and will turn up on time.”

They also stated that proper seating arrangements and fan availability are critical factors that have a positive impact on the program's effectiveness.

“The programmes will frequently be conducted in school classes. The seats and desks, which are specifically designed for primary students, are not always suitable for adult teachers. Some of the teachers in our group are older and experience health issues when they have to sit in one place for a long time in these types of settings.”

“We required portable chairs and furnishings for activities. But in most of the places such facilities won't be available. Workshops over the summer are quite hectic. It's like being trapped and burnt inside a crowded classroom with only one or two fans.”

“We got only rare chance to attend programmes that are conducted in such a professional manner. Quite often, it is we participants would reach there, make seating arrangements, arrange facilities for refreshment and toilet etc. We don't complain because we're used to be doing so.”

“It was hot, there were a lot of people there, and we were all tired from sitting for so long.”

Follow-up

Participants want professional support that lasted longer than just the day of the PD sessions. Some professional development initiatives were genuinely inspiring and effective. Teachers also claimed that having someone available to help in their implementation efforts in the classroom would have been beneficial. Additionally, some workshops included too much information and the participants became confused. They also anticipated expert assistance in this situation.

“I've attended numerous PDs where experts instruct you in a specific technique. But there is no follow-up—or, since there is no follow-up, we never feel that it's something to be executed in the classroom”

Some participants shared their experience like:

“We work hard to put the workshop ideas into practice since we know they will visit us. As no one has visited us in our classrooms before, it's beneficial that they come so that we may seek them for assistance when we get into challenges while practicing the new skills from the sessions.”

Discussion

From the analysis, it is revealed that teachers need more subject-specific sessions. It is reported that PD is more successful when it includes subject-specific training (Blank & Alas, 2009). This is sometimes contrasted with PD that consists solely of training in generic pedagogical techniques unrelated to the material that they would be used to deliver. Indeed, these two are usually considered to be complementary, and PD is therefore most successful when both subject specific sessions and general pedagogical approaches are provided together (Sims & Fletcher-Wood, 2018).

Even if teachers do not completely agree with the practice of rigorous monitoring of their practices, several studies highlighted the need of monitoring to ensure quality. If teachers' practices are regularly reviewed and monitored with the intention of bringing about modifications, they are more likely to seek out and take advantage of any learning opportunity. As a result, improved teaching methods and student achievement are achievable in an environment of strict monitoring and responsibility (Reeves, 2005). While discussing the quality of resource persons, some of the teachers had positive remarks about the trainers, describing them as competent and effective. However, others expressed negative opinions, citing the trainers' inadequate and poor-quality sessions.

Numerous studies conducted worldwide have highlighted the importance of follow-up in teacher professional development programmes. This need for follow-up is evident in the discussions held within focus groups. The findings of the study conducted by Goderya-Shaikh (2010) suggested that one of the mitigating factors which affect the successful professional development programmes is the lack of follow-up programmes. If there is no follow-up for teacher professional development, the effectiveness of the training may be limited. Teachers may not have the opportunity to practice the skills they learned or receive feedback on their implementation. This could lead to a lack of confidence in applying new strategies in the classroom, and ultimately result in little or no change in teaching practices or student learning outcomes. In addition, without follow-up, teachers may not feel valued or supported, and may be less likely to engage in future professional development opportunities.

Another important factor while discussing the quality of the teacher empowerment programmes organized by the department is the negative perceptions of the environment in which the programme was conducted. In one of the studies conducted by Ayvaz-Tuncel and Çobanoğlu (2018), they assessed the suitability of the training center, its physical and social amenities, the number of participants, and the weather. This emphasised the need of carefully reviewing the training environment in addition to a number of other elements.

The analysis highlights the importance of maintaining the quality in professional development programmes. The findings are in congruence with many studies conducted. According to Ayvaz-Tuncel and Çobanoğlu (2018), when planning the teaching and learning process, the principles of andragogy should be taken into consideration, and activities that involve active participation should be designed. Effective goal achievement also depends on the quality of the trainers, the environment's characteristics, and the length of the training.

Barriers

Teachers in unstable and stressful situations confront significant obstacles in receiving high-quality professional development. Even though the previous themes

have well discussed the barriers and constraints on the path of meaningful professional development for primary teachers, there are some other factors to be discussed. The personal reasons, some difficulties at school and the gender disparity were all pointed out by participants. These may cause for some teachers to resist or reject any attempts to enhance professionalism. They are briefly described here.

Personal

Some of participants underline that they are unable to participate in professional development activities due to family and health issues. According to several participants, family issues cause problems at work, as they do in any field.

“They make us feel worse, more stressed, and exhausted, which prompts our performance to collapse. As a result, we struggle to focus on our tasks.”

School

The majority of participating teachers believe that the performance appraisal for teachers is inadequate and unsatisfactory, because teachers who work hard or work less get the same salary. As a result, some are unwilling to work hard since there is no reward for effort. The following are some participants' perspectives on this issue:

“Teachers who excel in their profession are given additional responsibilities by their administrators or others. Teachers who work hard are punished rather than appreciated.”

Teachers also complain that they have to do many file works in addition to their daily academic schedule. They have to maintain a lot of files related to noon-meals, scholarships and other clerical works. It becomes worse in lower primary section where the head teacher has to take the charge of one class as well.

“Teaching already requires a lot of work. Along with daily preparation, class time, and evaluation, we are also required to complete a significant number of documents. In schools, there is no

clerical staff. We are required to complete several more tasks in addition to teaching. Then how do we get time to enrich our profession?

Gender

In the whole teaching population, there are more female teachers. Therefore, discussing their involvement in teacher professional development programmes is crucial. Many people still believe that the situation is same, even though times have changed significantly and female teachers currently hold many important positions.

“We have other duties at home that need a lot of attention and time. In our culture, women are expected to do everything at home, even if they have other commitments outside the household. We have challenges in attending different professional development programmes though we are willing to do and motivated.”

“You are aware that, particularly for us, thinking beyond the box requires more effort. Even if we would like to go to other places to attend conferences, our domestic duties—caring for our children, elderly parents, cooking, and cleaning—force us to stay home. and people will point the finger at us, saying that we are negligent about family matters!”

“My usual schoolwork is unaffected by my gender. But if I want to do anything like travel for a long time or remain away from home, I have to answer a lot of questions. I'm certain it's because I'm a woman. Male teachers in our group are more free than we are. They will go and do anything they want. It's just because I'm a woman that I have to skip numerous professional development activities.”

Discussion

Conflicts with work schedule, without incentives and conflicts with family commitments were the most often reported impediments to participation in

professional development by teachers. The majority of teachers regard excessive workload as a more serious impediment to their professional growth. Workload and rigid working hours as a detriment to teachers' professional development efforts may raise the issue of communication and teamwork. Among all the things that prevent primary teachers from evolving and improving are the lack of self-motivation lack of institutional support for professional growth, according to most teachers. Obviously, the most critical factors appear to be excessive workload, a lack of self-motivation and institutional support for professional development. The OECD is doing research on teacher professional development with larger samples. As a result, the findings of the study are expected to be more generalizable. According to OECD studies in 2009 and 2014 (Kemp & Productions, 2009) the most significant barriers are time (conflict with work schedule), a lack of incentives for participation, and other barriers such as a lack of relevant opportunities, a lack of employer support, conflicts with family responsibilities, and a lack of prerequisites. These findings are congruent with those of recent study.

It is important to acknowledge that personal and family issues can have a significant impact on a teacher's ability to participate in professional development activities. Schools and educational institutions should consider offering flexible schedules and accommodations to support teachers who are facing such challenges. This could include offering online or remote learning options, providing resources for childcare or eldercare, or adjusting workloads and expectations to better fit the individual's circumstances. By recognizing and addressing the personal barriers to professional development, teachers are more likely to feel supported and engaged in their ongoing learning and growth.

According to the study's findings (Eroglu & Donmus Kaya, 2021) teachers' professional development impediments included insufficient in-service training, challenges with school functioning, individual problems, and other issues. Participants also emphasised professional development barriers such as negative attitudes toward in-service training courses, inconvenient course time, monotony of course content, ineffectiveness of course trainers, out-of-content knowledge,

dissatisfying performance appraisal, heavy workload, financial problems, and a lack of professional development opportunities.

If teachers feel that their efforts are not recognized or rewarded, they may feel demotivated and less likely to put in additional effort to improve their teaching skills. Therefore, it is important for educational authorities to provide an effective performance appraisal system that acknowledges and rewards teachers' efforts towards continuous professional development. This can be done by linking professional development opportunities to career advancement and salary increments, as well as providing incentives such as recognition and awards for outstanding performance. By doing so, teachers will be more motivated to participate in professional development activities and improve their teaching skills.

The discussion also revealed that many teachers lack the awareness about professional development opportunities available and accessible to them. Massive open online courses (MOOCs), e-content, webinars, podcasts, blogs, and educational websites are now available. Teachers can participate in these events without missing time from their institutions, and they are available to support their professional development. They can easily fit these activities into their normal workday. If they are used appropriately, they could be useful. Lack of understanding of them and, more crucially, ignorance of how they work are also significant factors. Teachers should put up some effort to research new activities and possibilities on the internet, and the institute leadership can also obtain this information for their personnel (Sahu, 2016)

Participants expressed their gratitude for the discussion regarding their thoughts on professional development. When the researcher stated that she planned to look at teachers' perspectives on professional development in three of those sessions, the group passionately cheered. This shows that teachers appreciated the opportunity to share their thoughts while they were not used to doing so previously. This suggests that there may have been limited opportunities in the past for these teachers to voice their thoughts and ideas about professional development. The

responses of participants indicated a number of variables that impacted their participation in professional development activities.

Analysis of In-depth Interview with Educational Officers

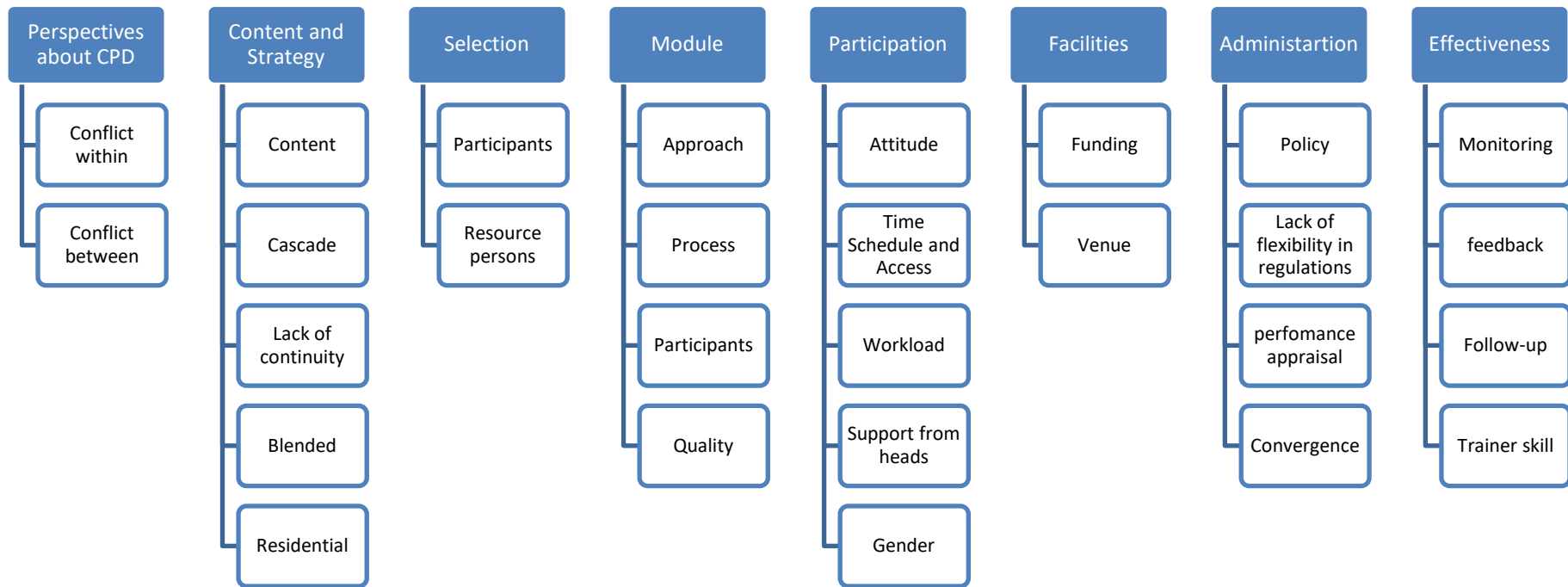
In-depth interview was conducted with educational officers regarding the continuous professional development programmes among primary teachers. Six officers representing different educational agencies were interviewed. It included state-level, district level and block level officers. Even though CPD stands for both self-initiated activities and system providing official programmes, majority of the officers are more concerned with the teacher empowerment programmes delivered by their concerned agencies. Thus the discussion, in fact, unveiled more facts about formal professional development programmes and opportunities. So the analysis suggests that during the in-depth interview with educational officers, the focus was on formal professional development programmes and opportunities delivered by various educational agencies. While CPD can include both self-initiated activities and official programs, the officers seemed to be more concerned with the latter. As a result, the discussion provided more insights into the formal professional development programmes available to teachers.

The officers' focus on formal programmes may be due to the fact that these programmes are usually well-structured, with defined objectives and outcomes, and are more likely to be recognized by the education system. In contrast, self-initiated activities may not always have clear objectives, outcomes or structure, and may not be officially recognized by the education system. Additionally, formal programmes may offer teachers access to resources, such as subject experts, instructional materials, and funding, which may not be available for self-initiated activities.

The themes and sub-themes were generated after the researcher started transcribing and coding the interview data. This allowed for a more flexible and open-ended approach to analysis, and can help to uncover new insights and perspectives.

Figure 10

Themes and Sub-themes generated after in-depth interview with educational officers



Perspectives about CPD

Though teachers are at the centre of their CPD, their perceptions provide only an incomplete picture that must be reinforced by other stakeholders' perspectives on teachers' CPD (Padwad & Dixit, 2013). Examining the perspectives of officers regarding the CPD is crucial for gaining a better understanding of the department, addressing concerns, enhancing trust, and informing policy decisions. By better understanding the needs and experiences of both teachers and educational officers, we can create more effective CPD programmes that support the growth and development of educators.

Officers from various agencies have differing perspectives regarding teacher professional development. According to the chief planning officer, it is the system's obligation to provide adequate opportunities for teacher development. He seldom accepts that teachers must be accountable for their own growth. The officer acknowledges that most teachers lack the intrinsic motivation to participate in the department's professional development programmes and do not place much importance on them. This viewpoint is shared by the KITE coordinator as well. According to her, professional development is predominantly formal training programmes conducted by the education department. Teacher's self initiated professional development activities have not prioritized by these officers. DIET principal and BPC have of the opinion that it would be unfair on the part of teachers who wait for some outside agency to provide them with professional development opportunities. BPC remarked,

“Teachers now assume that the authority will standardise practices and direct teachers.”

District Programme Coordinator in SSK have also shared such a perspective

“Professional development is now more better understood to include more than merely enrolling in courses offered by outside organisations; it also refers to improving one's knowledge and abilities, which is best accomplished within educational institutions.”

Principal of DIET made a comprehensive statement,

"Everyday should be seen as a learning experience. I realise that reflecting after every class might get boring for teachers, but even if you don't write anything down, if you reflect on the lesson and make a mental record not to repeat an error, I believe it is still professional growth. Reading something up, trying out a new approach, watching at a colleague, discussing with a colleague about their experience about a colleague's experience or about a colleague's style of delivering a certain lesson or colleague's plan - all of this is continuous growth in many different ways."

Discussion

It is evident from the analysis that there is a conflict in perspective about CPD among the officers. Some officers conceived it as predominantly provided by the education department whereas some other officers affirm that professional development is self-initiated than system providing. Meanwhile, there also exists incongruence between what teachers perceive and what officers perceive about CPD. This emphasise the relevance of a shared understanding about Continuous professional development. Having a shared understanding of the purpose, goals, and benefits of CPD is crucial for its success. Clear communication and collaboration between all stakeholders, including teachers, administrators, and policy makers, can help to ensure that the needs of teachers are met and that resources are used effectively. When everyone is on the same page, it can also help to build trust and cooperation, which can ultimately lead to a better quality of education for all learners. The findings emphasizes the conclusions of Hanley et al. (2008) who emphasise developing a shared vision of the program's aims and outcomes; being flexible in implementing the program's phases and specifics; negotiating common understanding with participants; and assuring productive teamwork in planning and execution. In any effective development process, the demands of responding to all of these elements should not be overlooked.

Content and Strategy

There appears to be widespread agreement in teacher professional development research that a number of theoretical assumptions underpin effective professional development programmes (Osborne et al., 2019). The content and strategy selected for delivering the programme are critical for the success of a professional development programme. Educational officers had shared the ideas related to selection of content and strategies while designing professional development programmes.

Content

Fixing the content for teacher CPD involves ensuring that it aligns with the needs of the teacher and the school's goals. This includes providing content that is current, evidence-based, and contextualized to the teacher's subject area and level of experience. Planning officer had rightly commented that both general themes and subject related sessions had been included in the programmes.

“It depends upon the objectives and target groups. Topics related to students’ mental health, communication, learning enhancement programmes, technology assisted teaching, equity and inclusion etc had been included.”

Research officer opined that SCERT also focus on both general topics and subject related topics in teacher empowerment programmes. Sessions to enhance pedagogic content knowledge had been included in many sessions. Even in general sessions, the subject related activities and applications are discussed.

DPC has commented

“It is true that SSK has been conducting a variety of programmes that cover a wide range of topics. We have been providing professional development opportunities for teachers on various subjects, such as language teaching, mathematics teaching, and science teaching. We also organize programmes on classroom management, assessment,

and technology integration. Overall, we have been successful in providing a diverse set of professional development opportunities to cater to the needs of teachers.”

Cascade

It is worth noting that the majority of teacher empowerment programmes have been implemented in a cascade model. According to officers, this is the appropriate model as the system has to address a large number of teacher community. The Cascade model of professional training is a top-down approach to learning where information is passed from "expert" instructors, such as Primary Trainers (PTs), to Secondary Trainers (STs), or multipliers, at various levels (Abeysena et al., 2016). The cascade approach is frequently employed because it is a cost-efficient technique to quickly reach a large number of instructors with standardised CPD.

DPC has commented

“New policies are quickly and effectively cascaded to every teacher”

It does have certain drawbacks, though, with the danger of quality dilution ranking as one of the most serious.

Coordinator in KITE pointed out a different aspect.

“As we engage with teachers, the cascade technique does not always offer us powerful knocks. State experts design the module and transact with the district groups. We transact it with the next level trainers. However, the challenge lies in effectively communicating the ideas to teachers who work directly with students on a daily basis.”

The resources needed for an efficient cascade programme implementation, such as trained facilitators and materials, may not be easily available. Another concern is sustainability. Over time, there may be challenges in sustaining the level

of training and support required for effective implementation. Principal from DIET made the following observation.

“We have a lot of great teachers here. However, we do not have enough effective trainers and resource personnel. In addition, the available trainers are not trained to adapt to a field that is always evolving. The system should be responsible for TOT (training of trainers), in my opinion.”

DPC of SSK also shared the drawback of cascade model.

“Cascade programmes frequently specialize on certain topics, such a specific subject or instructional strategies, which may not be sufficient to meet the broader needs of teachers.”

Research officer cited two successful programmes conducted by SCERT in which state-level resource persons directly engaged with participants. One programmes was an induction training for newly appointed teachers, and the other was related to curriculum revision. Feedback from the field showed that these programmes were more successful than those conducted using a cascade model.

Strategies of different teacher empowerment programmes were also discussed. The programmes had been conducted in the form of workshops and the sessions were participant-oriented. Research officer in SCERT said,

“In every programmes we try to make it interactive and participatory. Experiences tell us that such sessions are warmly received. We always ensure that our participants are actively engaged.”

Lack of continuity

To be productive, professional development should be a continuous process that supports the overall improvement of education (Bredeson, 2002). Isolated inputs that do not build on one another are worthless to those attending the programmes (Lessing & De Witt, 2007). CPD is sometimes misunderstood as in-service training

(INSET) programmes, which are typically one-off, isolated, short-term, and occasional training activities (Bolitho & Padwad, 2015).

The authorities acknowledge that the state's professional development programmes are not continuous in nature. Majority of the programmes are created and implemented to meet immediate demands from the field. These programmes have one or two major goals that may or may not be in line with the overall professional development sector. As a result, the programmes are frequently separated and independent, with little link to one another. According to the chief planning officer, the programmes for each year are planned in advance, and a detailed proposal will be presented. The department made certain that representatives from numerous agencies as well as practicing teachers were included in this process. As a consequence, the stakeholders' needs are appropriately met. However, the quality of coherence in many programmes is lacking. The CPO said,

“We have to address multiple needs simultaneously. So we would prioritise and address the immediate concerns. Such programmes are better received by the teachers. So we make a detailed plan for this and implement. It is true that some of them have nothing to do with the earlier interventions.”

Research officer in SCERT shared his concern.

“Well... we feel the need of making it a part of continuous process. However, multiple programmes and the demands from different parts make us think of planning and implementing programmes shortly.”

He recommended that the monthly cluster meetings must be brought back. While vacation training can provide valuable learning opportunities, it may not be enough to sustain long-term growth and development. In previous years such cluster meetings proved to be very helpful to create a dynamic and vibrant teacher community which encouraged collaboration. Monthly cluster meetings can provide a forum for teachers to collaborate, share best practices, and receive ongoing support from their peers and colleagues. These meetings can help to create a sense of

community among teachers, which can be particularly important in rural or remote areas where teachers may feel isolated.

Unfortunately, fragmented trainings do not provide teachers with the opportunity to experiment and develop on what they have learned over time. Teachers may attempt to adopt new tactics in their classrooms; however, without follow-up of professional development sessions, mentoring, or collaborative discussions with other educators, they will not receive the feedback required to meaningfully enhance their performance. Teachers can make gradual, long-term improvements to their instruction when professional development is continuous.

Additionally, continuous professional development allows the education system to provide teachers with more comprehensive professional development opportunities. While one-off workshops may provide a brief introduction to new ideas and skills, continuous professional development can help teachers build upon what they have learned in previous sessions to gain a deeper understanding of their enhanced abilities.

Blended

Blended teacher CPD has become more important than ever after the COVID-19 pandemic because it provides the flexibility, access, collaboration, cost-effectiveness, and customization that are needed to support teachers in adapting to new educational practices and technologies. The perspectives of administrators regarding blended professional development training for teachers are important to consider as they can influence programmes planning and implementation, resource allocation, teacher participation, and outcome assessment. Research officer commented,

“Nowadays we use the blended strategy in programmes. It proved to be effective as teachers receive enthusiastically. Blended learning strategies have become increasingly popular in teacher professional development programs, and for good reason.”

Officer in KITE, commented,

“One of the key benefits of blended learning is that it enables teachers to engage with new learning materials and technologies in a way that is interactive and engaging. By providing a mix of online and in-person learning experiences, teachers are able to participate in collaborative activities, take part in discussions with peers, and receive feedback on their progress from experts in the field. This can be a highly effective way of building new skills and knowledge, as it provides opportunities for teachers to apply what they have learned in real-world scenarios and receive support and guidance as they do so.”

Overall, the enthusiastic responses of officers to blended learning suggests that it is an effective approach to professional development that is well-suited to the needs of modern educators.

Residential

Majority of the professional development programmes are conducted as non-residential. The programmes are non-residential due to the practical considerations of accessibility, cost, flexibility, and customization. However, all the officers shared the view that residential programmes are more effective. Chief Planning Officer stated,

“The government prefers residential teacher empowerment programmes because it can help foster a culture of professional development by providing a space for teachers to focus on their own learning and growth. And there are plans to conduct programmes as residential. We hopefully believe that it will happen shortly.”

Research officer observed,

“I have observed that teachers who attend residential programmes are more engaged and motivated to apply what they have learned in their classrooms.”

District Programme Coordinator shared that conducting residential teacher professional development programmes can present a number of logistical and practical difficulties.

“Residential programmes require a lot of resources, including accommodations, food, transportation, and so on. It can be difficult to provide all of these in a cost-effective way.”

“In some remote areas, it may be difficult to find suitable accommodations and facilities for a residential programme.”

Discussion

To ensure effective teacher CPD, it is crucial to determine the content that is appropriate, valuable, and beneficial for the professional development of the teacher. This content should align with the objectives and priorities of the school or department. Providing current and evidence-based content that is tailored to the teacher's subject area and level of experience can enhance their effectiveness in the classroom and improve student outcomes. Research studies have consistently shown that the relevance of the content in teacher professional development programmes is a critical factor in determining their effectiveness (Adu & Okeke, 2014; Malm, 2009). Additionally, contextualizing the content within the broader school or district goals can help to ensure that the teacher's learning is aligned with the needs of the institution.

The analysis emphasizes the need of revisiting the cascade model of teacher training programmes in the state. The observations of the officers attest the findings of research in this area. The cascade model has been criticized by many, especially the cascading process, which is often centred on knowledge rather than values (Solomon & Tresman, 1999).

One shot trainings in teacher CPD, the widely practicing programme in the state can be problematic as they may not provide enough time or support for teachers to fully engage with and apply what they have learned. These types of trainings typically involve a single, stand-alone workshop or session, which may be

delivered without considering the specific needs and goals of the school or individual teacher. This can result in a lack of continuity and follow-up, and a limited opportunity for ongoing reflection and collaboration. The findings are in accordance with the research conducted by Joyce & Showers (2002) and Garet, et al. (2001). At the same time some other studies disclose that one-shot workshops can be effective if they are aligned with the needs of the teacher and the students (Wei et al., 2009).

Effective professional development allows teachers enough time to study, practice, apply, and reflect on new ideas that will help them make improvements in their practice. As a result, rather than brief, one-time seminars, good PD efforts generally involve teachers in learning throughout weeks, months, or even academic years (Darling-Hammond et al., 2017). A brief, one-time seminar may provide teachers with new knowledge or skills, but it is unlikely to result in significant changes in classroom practice. Teachers need time to process and apply what they have learned, experiment with new strategies, and reflect on their successes and challenges. This process takes time and requires ongoing support and feedback.

Over the past several years, there has been a significant increase in research focused on the effectiveness of blended learning as an approach to teacher professional development. Many of these studies have found that blended learning can be highly effective in supporting the ongoing growth and development of teachers, and in improving learning outcomes for students (Shand & Farrelly, 2018; Sinclair & Owston, 2006). The findings of these studies intensify conclusions of the analysis done.

Selection

It is acknowledged that effective professional development programmes should not be one size fits all type. The effectiveness of a PD programme may be determined by numerous aspects, including the program's relevance to the participants, the quality of the programme content, and the experience and expertise of the resource persons who run the programme. So the selection of participants and the selection of the resource persons for leading the sessions are critical. As a result,

it is imperative to carefully choose the right participants and resource persons to ensure that the programme fits the requirements of the participants and that the curriculum is delivered successfully.

Participants

Most of the officials agreed that there should be some criteria for selecting the participants according to their needs and demands. But they admit that it is not always possible because of some valid reasons. The Planning officer made it clear,

“Many teachers consider making criteria as something blessing in disguise. In fact, they don’t like to attend anything which disturbs their daily routine. They make it as an excuse to escape from the programme. Additionally, it is not always feasible.”

Research officer in SCERT shared the following,

“Nowadays we consider certain criteria like experience in years, teachers taking particular subjects etc. we can’t make it the other way by meeting the individual needs of the teachers.”

When selecting participants for a professional development programme, it is important to consider the specific needs and goals of the programme. It is important to consider the participants’ current skills, abilities, and areas in need of improvement. It is also important to consider the participants’ career goals, job roles, and interests. By considering these factors, the organizer of the programme can ensure that the programme is according to the needs of the participants and will be of most benefit. Additionally, it is important to consider the diversity of the participants. A diverse selection of participants will ensure that different perspectives are represented and that the programme can take into account the different needs and experiences of each participant.

District Programme Coordinator opined that participant selection is a decentralized process.

“We have no direct involvement in the selection of participants for programme conducted statewide. And it is impossible. So we ask the block programme co-ordinates to select the participants”

Block programme coordinator made it clear that frequently they entrust the heads of schools for selecting the participants

“We ask the heads of institutions to send the most needy teachers for the programme. But very often, you know, they send the same teachers who participate in all the programmes.”

While it is common for heads of schools to be involved in the selection process of participants for professional development programs, it is important to ensure that the selection process is effective and not biased towards sending the same teachers for all the programmes.

Principal of DIET shared a similar issue

“We either ask directly to the HMs to send the appropriate teachers or ask the BRCs to suggest the names of teachers. Later on, we find that we have the same participants for all programmes! Thus many teachers do not get any exposure and they do not come out of the confines of their classroom”.

It is important to ensure that teacher professional development programmes are designed and implemented in a way that is equitable, inclusive, and focused on meeting the needs of all teachers, not just a select few.

Resource Persons

Selection of resource persons for leading the sessions is one of the critical factors. The efficiency of resource persons for teacher professional development programmes will depend on a variety of factors, such as their experience,

qualifications, expertise, and the quality of their presentation. Resource persons should have the necessary subject knowledge and teaching experience to effectively communicate the intended message to the target audience. They must also possess strong communication and interpersonal skills, as well as the ability to interact with teachers of different levels, backgrounds, and cultures. Furthermore, they should be able to design and deliver engaging and interactive sessions that are tailored to the needs of the teachers. Finally, resource persons should have the capacity to evaluate and assess the impact of their sessions on the teachers' professional development.

Officers have admitted that very often the resource persons are not selected according to their quality. Some other reasons like the coordinator's personal interest, availability of RPs, etc may be some other reasons. Still another issue pointed out by coordinators is about the willingness of these resource persons. They are not able to keep a balance between the schedule at school and the schedule of the teacher empowerment programmes.

DIET principal said,

“Hope you know well that we prefer good trainers to better teachers. Because we acknowledge well, the difference between a teacher and trainer. But unfortunately we do not have a lot of such efficient resource persons.”

BPC remarked,

“The effectiveness of any programmes depends largely on the expertise of the individuals leading the sessions. Therefore, we rely on the same teachers, in addition to the trainers at our BRC. However, this can be inconvenient for these teachers' schools as their prolonged absence can create issues for school heads, colleagues, students, and parents. As a result, we sometimes have to rely on less skilled resource persons. Availability matters!”

RO from SCERT is of the opinion that if we create a state or district pool of resource persons for teacher empowerment programme the problems can be solved

to a great extent. CPO shared the plan of the department to create such a pool of resource persons entitled SMART (State Mission for Active Resourceful Teachers). programme. These teachers will be provided continuous support in different areas and keep them a s permanent resource team to aid implementing the department's flagship programmes. This pool of resource persons will get much exposure which creates insight into the latest trends and best practices in teacher training, helping to ensure that the training is up to date and relevant.

Discussion

Several studies suggest that the selection of participants and resource persons is crucial for the effectiveness of PD programmes. Participants should be selected based on their motivation and ability to engage in the program, while resource persons should be knowledgeable, experienced, and able to adapt to the needs of the participants. The participants should be motivated and willing to engage in the program, which means that they should be interested in the topics being covered and committed to learning and applying new knowledge and skills. It is also important to consider the ability of the participants to engage in the program, including their current level of knowledge and skill, as well as their availability and other commitments. Kennedy (2014) in her study underlines the necessity of selecting the right individuals for PD. According to the author, PD programmes should be structured to fulfill the requirements of the participants, and participants should be chosen based on their willingness and capacity to participate in the programme. Korthagen (2010) highlighted the importance of selecting resource persons who are knowledgeable and experienced in the subject area being taught. They should have the ability to adapt to the needs of the participants and tailor the programmes to meet their individual needs. Additionally, they should be skilled in facilitating learning and be able to create an engaging and supportive learning environment.

Modules

Developing a comprehensive module that effectively addresses the needs of teachers and promotes their professional development can be a challenging task. This is because a good module should be designed to meet the specific needs of

teachers, while also being based on sound pedagogical principles and drawing on current research and best practices in the field of education. There should be an understanding of specific elements of how to process the content, as well as techniques of supporting teachers' implementation and filling the gap between theoretical concepts and operationalized characteristics in professional development programmes (Korsager, et al., 2022).

Approach

Every officer agreed that modules for teacher empowerment programme followed a top-down approach. Thus a module prepared at the top level shall not undergo changes during transaction at different stages. The officers who work at the field level demand for a change in this top-down approach and shift to the bottom-up approach in module development.

BPC observed,

“Both the content and strategies must be suggested from the bottom level. Though we ensure the representation of one or two practicing teachers in module development, we cannot always address field level participants. So, what I feel is that, modules must be evolved from bottom to top. Then only our interventions and innovations will be accepted. Then only teachers will feel that they too have a voice”.

Process

Modules for teacher empowerment programmes are developed from the state based on some theoretical framework. The objectives are fixed and method is chosen appropriately. Research officer from SCERT confirmed that SCERT scheduled many workshops for preparing module for a single programme including visioning workshop, workshops for module preparation, editing and refining. Only after such a tiresome process that the department conduct programmes. This helped to ensure quality in training modules.

Programmes initiated by DIETs also go through such a process for module development, ascertained by principal from DIET. At the same time he shared that, time would be a big constraint to do such a task. However this helped them to prepare full proof modules. Officers from SSK and KITE also shared that module preparation by all these agencies have gone through such a procedure. This makes their modules innovative and unique.

Participants

It is worthy to mention that during the module preparation, the participation of practicing teachers is utilized along with other experts in the field. So the needs and aspirations of the stakeholders can clearly be addressed

DPC said,

“A collective effort of practicing teachers and other experts in the field have helped to develop better modules. We always recognize the role of teachers in such endeavours because mostly they are the main stakeholders of our programmes”

Officers from other agencies also shared the same opinion.

DIET principal remarked,

“It is equally beneficial to the teachers and other experts because the participating teachers get an opportunity to share their viewpoint without hesitation and the experts get vivid idea about what the teachers actually need in the field.”

He continued,

"Selecting the smartest teachers, bringing in the experts, having the state and district officers sit down with them, working together—that is the core of group work. There is no pressure involved here, and typically they are quite pleased of their results and of their task,"

Research officer commented,

“Recently we have conducted induction training for newly appointed teachers. It was subject specific. What we have done is that in every subject module preparation we bought a newly appointed teacher and ensured their involvement in the module development. As a result, the other participants could well sensitise the needs and aspirations of novice teachers and could well address challenges. I’m sure that this strategy was really helpful for the success of the six day residential induction training programme. We have teachers who have contributed sincerely and passionately to the effort.”

Another challenge pointed by many officers is regarding the availability of personnel for module preparation. As academic coordinators they come across a lot of difficulty in arranging experts suitable for each module preparation workshops. Practicing teachers would not be willing to stay away from their schools for a long and experts also may not be available in all the multiple workshops conducted as part of one module preparation.

DIET principal observed,

“When the same resource persons will not be available in consecutive workshops, we have to depend on new persons. So the objectives and work done so far may not be able to communicate effectively. They will come up with their own ideas which may often be contradictory with what we have assumed earlier. The result is that we cannot get a comprehensive module at the end. The link will be lost.”

Quality

Content and quality of the module were yet another concern shared by the officers. The department always insists to form a module framework and later it will be developed into a full fledged module. It should be self explanatory including vivid suggestions related to the method, techniques and materials to be used. Thus any trainer can transact the module effectively at the field level. But this depend

upon the quality of persons participated in the module preparation workshops and the effort taken to edit the prepared module. An incomplete module will destroy the objectives of the programme.

Planning officer opined,

“Overall, self-explanatory modules are an important component of a cascade model of teacher empowerment, as they allow for the knowledge and skills gained by teachers to be transferred and sustained over time.”

Principal from DIET pointed out,

“In a cascade model of teacher empowerment, self-explanatory modules play a critical role in ensuring that the knowledge and skills gained by teachers are transferred to other teachers in a systematic and sustainable way. Self-explanatory modules allow teachers who have undergone training to become trainers themselves, leading to a multiplier effect and maximizing the reach of the programme.”

Discussion

The module development using a top-down approach, which is the most popular, has some limitations (Okoth, 2016). The content, goals, and objectives of the module are set by these experts and are then disseminated to teachers for implementation. This approach is characterized by a centralized decision-making process and a hierarchical structure. At the same time it has some advantages too. A top-down approach can ensure consistency and quality in the content and objectives of the module and can be efficient in terms of time and resources. However, it may not be responsive to the needs and concerns of the teachers who will be implementing the module and may not adequately address their specific professional development needs.

Conducting workshops for module development provides an opportunity for teachers to collaborate and share their expertise with each other. This can lead to the

development of more comprehensive and effective modules that incorporate a range of perspectives and experiences. Conducting multiple workshops for module development allows for an iterative refinement process, where the module is reviewed, evaluated, and revised over time based on feedback from the participants.

The analysis highlights that the officers come across a lot of difficulties in arranging experts or resource persons for preparing module for teacher professional development programmes. Fullan and Hargreaves (2012) conducted a research that stressed the significance of "deep learning" in professional development, which entails engaging teachers in prolonged, collaborative, and reflective learning activities. According to the research, high-quality modules should be designed to foster deep learning, allow opportunity for teachers to share their experiences and learn from one another, and be connected with the school or state's aims and values.

Participation

Participation is a key determinant of the success of teacher professional development programs, as it fosters active engagement, increased motivation, improved knowledge and skills, increased confidence, collaboration and networking, relevance, and sustainability. The attitude of participants, the convenience of the time schedule, access to the program, support from the heads of institutions, and even factors such as gender can all play a significant role in determining participation and, ultimately, the success of a teacher professional development programme.

Attitude

In any profession, attitude influences performance and the extent to which goals are realised (Ball and Lampert, 1999). When participants have a positive attitude towards CPD, they are more likely to be motivated to engage in the programmes and learn from it. They may be more open to new ideas and willing to try out new approaches in their work. Additionally, participants with a positive attitude towards CPD may be more likely to view the programmes as a valuable opportunity to enhance their professional development, which can increase their

motivation to engage in the programmes and apply the knowledge and skills they have learned.

The in-depth interview reveals that teachers were offered opportunities to develop in such circumstances, but they were hesitant to take use of them. Teachers who had been in the profession for a prolonged period were the typically reluctant, rather than new teachers. The BPC had this to say regarding this challenge.

“I believe there is reluctance on the part of teachers to participate in such programmes; I would say this constitutes the problem, it could be the 'I don't care' attitude by teachers who have been teaching for too many years; they kinda believe they know everything, so regardless of how much we try to inspire and motivate them, they don't see the necessity.”

He added,

“When I was a teacher in the school, a colleague once remarked that enhancing one's academic performance at school is pointless since it does not contribute to promotion.”

The idea of tying professional development to promotion was not exclusive to this teacher and it could be a sign that some instructors have a profound lack of appreciation for the need of professional development.

“However, I believe that change is something that not everybody is comfortable with. I suppose, as they say, 'change sucks.'”

It was interesting to note that some teachers were satisfied with their existing practices. They feel confident in their current teaching practices and believe that they do not need any further development or improvement.

BPC stated,

“New theories and practices are developed to meet changing national and international requirements, but some teachers are not bothered

about them. They believe that because they already possess the necessary knowledge and skills, they do not require any further development. Teachers will not be engaged in PD unless their mindset is transformed”.

Principal of DIET remarked his experience with some senior teachers during training programmes. They feel that they sufficient and there is no need of any further improvement. They were telling to the junior teachers that they have been teaching for more than 20 years. They already have the knowledge and skills they require.

“Now, we're worn out. Now it's your turn. We're only here for a short trip.”

Time schedule and access

Schedule issues can be a major barrier for teachers who are looking to participate in professional development. DIET principal commented

“With limited planning time, teachers may struggle to find the time to attend conferences, complete online courses, or meet with other teachers for collaborative learning. Additionally, if professional development courses are offered outside normal school hours, teachers may be unable to attend due to family commitments or other work. Schools may need to find creative solutions to these schedule issues, such as offering more flexible scheduling options or providing extra time for teachers to complete professional development activities.”

DPC observed,

“As busy people with often disorganised schedules, teachers, need administrative help. Options include scheduling time for frequent teacher-led gatherings, providing opportunity for teachers to watch one another's classrooms (either in person or on video), and making

sure that teachers have the means to readily exchange materials and connect with one another.”

According to the RO, many professional development opportunities are located far away or require a significant time commitment, making it difficult for teachers to attend.

Workload

KITE coordinator said that workload can be a barrier for teacher professional development, as teachers may not have the time or resources to invest in furthering their professional growth. This could be due to a heavy teaching load, extracurricular activities, administrative duties, or other commitments. Professional development opportunities can also require additional time and resources that a teacher may not have. Additionally, if a teacher’s professional development requires them to be away from their school or classroom that can add to their workload.

Officers have acknowledged that workload issues for teachers can act as a significant barrier for their participation in professional development. The heavy demands on teachers' time and energy can make it difficult for them to devote sufficient attention to their own professional growth.

Support from Heads

Education officers agreed that heads of school play a key role in teacher professional development. The most common method at school is SRG (School resource group) meetings where the stress is on academic matters. Principal of DIET is of the opinion that some head teachers do not have an idea about how to conduct SRG meetings. In many schools there are no regular meetings and very often academic matters are not discussed properly.

BPC reported that it was difficult to get teachers to engage in programmes since most HMs were not very supportive. Even if the teachers were willing to go, the heads of the institutions preferred not to send their teachers happily. According to the trainers, the heads of institutions must recognise that professional

development for teachers is vital, and that it will benefit the entire system and all the stakeholders.

Head teachers can provide the necessary leadership and direction to ensure that teachers have access to the right resources and opportunities to learn and grow. They can also create a culture of collaboration and open communication that encourages teachers to share their experiences and learn from each other. Head teachers can also ensure that teachers are given the support they need to succeed, such as access to professional development opportunities, mentoring and coaching, and access to the latest educational technology. They can also foster a culture of innovation and experimentation, encouraging teachers to try new approaches to teaching and learning. Finally, head teachers should be proactive in addressing any issues or challenges that teachers may face, such as bullying or a lack of resources.

Gender

Gender stereotypes can lead to expectations that women will take on more of the workload related to childcare, housework, and other domestic responsibilities, which can limit their time available for professional development. These barriers are surprisingly similar in various regions (Yousaf & Schmiede, 2017). All officers remarked that the department makes no discrimination between male and female teachers in providing professional development opportunities. At the same time they agreed that it is not easy to ensure the participation of female teachers in professional development activities. According to them female teachers are better at self-initiated activities such as pursuing higher qualification, updating teaching manuals and reflection notes, attending seminars, reading professional literature, undertaking action research etc. They have also proved to be good at material development for learning.

DIET principal shared,

“Female teachers are more proactive in terms of engaging with parents and other educators. They may also take online courses, participate in webinars, or attend professional development events

provided by their school district or state education department. In all the workshops we conduct they participate well.”

KITE coordinator commented,

“Our programmes are ICT based and majority of the participants are male teachers. Female teachers may be reluctant towards technology-based professional development programmes due to a variety of reasons. It could be that they may not be comfortable using technology, may lack the necessary skills and knowledge to effectively use the technology, or may even lack the confidence to do so. They may also feel intimidated by the idea of using technology in a professional setting, or may have difficulty keeping up with the pace of technological change.”

Research officer said that there are many female teachers who proved to be efficient at leading sessions in workshops. But they may not be available quite often due to family constraints. They said that if the programme is near to their schools or home, they could join. But it is not always possible.

Chief Planning Officer commented,

“It is not accurate to generalize that all female teachers are reluctant to be resource persons in teacher trainings. There can be a variety of reasons why a teacher, male or female, may not choose to participate as a resource person in teacher training events. Some common reasons may include a lack of confidence in public speaking, a busy schedule, prior commitments, or a lack of interest in the topic. It is also possible that some female teachers may face additional barriers such as gender bias, discrimination, or a lack of support from their colleagues or institutions.”

Discussion

Research studies (Guskey, 2002; Xu, 2016) have shown that teachers' attitude towards professional development programmes can have a significant impact on their effectiveness. There could be a variety of reasons why teachers may have negative attitudes toward professional development programs, including lack of relevance, resistance to change etc. It is important for programmes designers and administrators to take these factors into account and to work to design programmes that are relevant and engaging. Studies suggest that scheduling conflicts can be a major barrier to teacher participation in professional development. To address this barrier, it may be important to provide flexible scheduling options, such as asynchronous online courses or scheduling professional development during school breaks. Providing substitute teachers or other forms of support may also be necessary to allow teachers to participate in professional development without disrupting their teaching responsibilities (Fang, et al., 2021).

The workload of teachers can be an important factor that determines their participation in professional development programmes outside the school. Teachers often have a heavy workload, with many demands on their time, including lesson planning, grading, and other administrative tasks. This can make it difficult for them to find time to participate in professional development programmes outside of regular school hours. Sellen (2016) in her study found that workload was a major barrier to participation, particularly for teachers who had heavy teaching loads or who had administrative responsibilities. The analysis draws a conclusion that is supported by multiple studies, which highlights the critical importance of institutional leaders in promoting teacher professional development and fostering a culture of ongoing learning within schools. When leaders prioritize and actively support teacher professional development, it can lead to improved teacher effectiveness and student learning outcome. Bredeson (2000) underlines that principals who provided instructional leadership and supported teacher professional development had a positive impact on teacher self-efficacy and motivation.

The gender difference in participating professional development activities had described in various studies (Busygina, et al., 2019; Goastellec & Pekari, 2013). It is important to address these gender disparities in professional development to ensure that all teachers, regardless of gender, have equal opportunities for professional growth and development. It is critical to acknowledge and address these barriers, so that all teachers, regardless of gender, have equal opportunities to participate in professional development and growth opportunities. This can be achieved by creating supportive environments and providing training and resources for teachers to develop their skills and confidence as trainers.

It is important for programmes organizers to take these factors into consideration when designing and implementing professional development programmes for teachers. By creating an environment that is supportive and inclusive, and by offering programmes that are accessible, relevant, and engaging, organizers can help ensure that teachers are motivated and empowered to participate and continue developing their skills and knowledge. According to a research by Borman and Dowling in 2008, male teachers were more likely than female teachers to take part in professional development courses, particularly those with a focus on technology and math and science teaching. Datnow and Castellano (2000) discovered that female teachers faced higher impediments in participation in professional development programmes than male teachers. Female teachers highlighted family obligations, a lack of time, and a lack of administrative support for professional development as barriers for professional development.

Facilities

Facilities can have a significant impact on the success of teacher empowerment programmes. For example, having appropriate venues for workshops, training sessions, and conferences can create a conducive learning environment that promotes active participation and engagement among the teachers. Additionally, having access to necessary resources such as books, teaching materials, and technology can support the implementation of new teaching practices in the classroom. Adequate transportation and accommodation facilities can also enable

teachers to attend professional development programs, especially those held in remote areas. Overall, facilities are an important factor to consider when planning and implementing teacher empowerment programmes. By providing comfortable, accessible, and well-equipped training environments, programmes organizers can create an environment that is supportive and conducive to learning, helping teachers to develop the skills and knowledge they need to improve their teaching practices and student outcomes. Organizing adequate facilities for teacher empowerment programmes can be challenging for several reasons.

Funding

The provision of fund is crucial for the effectiveness of teacher empowerment initiatives, as it enables the delivery of high quality training, facilitates the growth of teachers' professional skills, and guarantees the continuity of programmes for an extended period. Without sufficient funding, programmes organizers will struggle to provide the resources necessary for delivering effective programs, and the impact of their programmes will be limited. The officers admitted that the department allocated a handsome fund for teacher empowerment programmes. Any new project is implemented after teachers are equipped for the same. Anyhow there are some issues related to the financial break-up of teacher enrichment programme.

Principal shared his worry

“Detailed intimation related to fund allocation will be done after August, and we have to spend everything before closing the financial year. It is truly challenging to effectively manage the budget and ensure that resources are utilized effectively.”

BPC is of the opinion that the SSK programmes are planned in advance at the state level and the fund will be allotted. He raised another pertinent concern that they could not arrange lunch for participants at the venue because of some technical reasons. At the same time he acknowledged that if lunch is arranged, the participants

will be more relaxed and can turn at the venue early. He is concerned that not providing lunch could negatively impact participant attendance and engagement.

The officers feel that the higher officials shall revisit the funding and revise the same for the best learning experience for the participants. According to them, it is important to recognize that different programmes have different needs and requirements, and that proper provision should be made to meet these needs. This can help to ensure that the programmes are implemented effectively and that they deliver the best possible outcomes. Adequate funding can support the development and implementation of comprehensive and sustained professional development programmes that can have a positive impact on teacher practices and student learning outcomes.

Venue

Arranging a suitable venue for teacher enrichment programmes can be challenging, especially if there are specific requirements or constraints that need to be considered.

The chief planning officer commented,

“We try to arrange the best possible venue within the financial constraints for conducting state-level workshops”

Principal of DIET shared,

“In some cases, it may be necessary to compromise on certain aspects of the venue in order to stay within budget. For example, the venue may not have all of the desired amenities or be located in the ideal location. Additionally most of our programmes – trainings or material preparation workshops are conducted in a decentralized manner in order to ensure the maximum teacher participation. In such cases, arranging the venue becomes challenging for my faculty members.”

Officers from SSK like DPC and BPC are not much worried about the venue arrangement as they already have facilities at block levels. At the same time they

also feel that traditional venues must be transformed for the effectiveness of the programme. It is important to recognize the need for change and to be open to exploring new and innovative solutions for delivering teacher enrichment programmes.

“Traditional venues may have served their purpose in the past, but it's important to continuously evaluate and improve upon them to ensure that they are meeting the needs of the participants and delivering the best possible outcomes.”

Discussion

Transforming traditional venues can involve making changes to the physical space, such as reconfiguring the layout or incorporating new technology, or it can involve taking a more holistic approach and considering how the venue can better support the goals of the programme. By exploring new and innovative solutions, the organization can stay ahead of the curve and ensure that its teacher enrichment programmes are effective, efficient, and meet the needs of all stakeholders. This can help to ensure that the programmes are successful and that the participants are receiving the best possible learning experience. It is important for the organization to take a collaborative approach when transforming traditional venues, working closely with stakeholders such as the participants, the coordinators, and other departments within the organization to ensure that the changes being made are well-aligned with the needs and goals of the programme.

Administration

Administrative factors can have a decisive role in teacher professional development programmes. These factors can include issues related to policy matters, bureaucratic procedures, lack of clear communication and coordination, and limited resources for planning and implementation etc.

Policy

The need for policy refinement in teacher empowerment programmes arises due to a number of factors, including changes in the educational landscape, advancements in technology, and evolving best practices in the field. Regular policy refinement can help to ensure that the programmes remains relevant, effective, and responsive to the needs of its stakeholders. A well-designed CPD policy can help to create a culture of ongoing learning and development, and it can support teachers in their professional growth and improvement. By clearly outlining the expectations and requirements for participation, the policy can ensure that the CPD programmes is effective and that it is delivering the best possible experiences for teachers and students.

There is a growing consensus among researchers that a policy framework is necessary for the effective implementation of teacher professional development programmes. All officers have admitted the need of having a comprehensive policy for teacher professional development. According to them the policy should clearly state the purpose of the CPD program, including its goals and objectives, and how it supports the overall mission of the department. The policy must address the professional learning requirements of the target group, that is to outline the expectations for teachers to engage in ongoing professional learning, such as a minimum number of hours per year, or a requirement to attend specific training events or workshops.

Some officers were of the opinion that approved learning activities should be entertained. The policy should specify what types of activities are approved for CPD, such as in-person workshops, online courses, or self-directed learning. The policy can provide a framework for assessing and evaluating the progress, including how participation in CPD activities will be recorded and tracked, and how teacher performance will be evaluated in relation to their CPD activities. Another important aspect is that the policy needs to include the outline of the support and resources available to teachers for their CPD, such as access to training materials, funding for training events, and mentorship or coaching programmes.

Lack of flexibility in regulations

Excessive regulations and lack of flexibility make it difficult to accomplish the objectives of many programmes. In the context of teacher professional development programs, the administrative or regulatory hurdles that make it difficult to implement effective and efficient programmes.

The officers made it clear that the programme coordinators come across a lot of challenges as every programme is financially audited. It is a good practice that financial auditing helps to create transparency and ensure that there is no corruption. At the same time these officers have to spend their creative time for the file settlement rather than academic involvement.

“It is very unfortunate that our academic contributions are less and the entire focus is to be on official matters. That has become a common issue that when officers are bogged down by administrative tasks such as file settlement, it can take away from their creative time and limit their ability to engage in academic activities.”

Performance Appraisal

Performance appraisal is a method used to evaluate the performance of teachers. The goal of performance appraisal is to offer teachers with feedback on their strengths and weaknesses, as well as to identify areas where they may need to improve or get additional support. This data may then be utilised to strengthen teachers' professional development, as well as to assist schools and department in meeting their goals and objectives. The officers felt that the system does not ensure performance appraisal of teachers because of numerous reasons. The interview points out reasons related to lack of resources (if resources are limited, it may be difficult to allocate sufficient time and resources for performance appraisal); Inadequate training (teachers, administrators, and evaluators may not have received adequate training in the use of performance appraisal tools and methods, making it difficult to implement a system that is accurate, reliable, and valid); resistance to

change (some teachers, administrators, or stakeholders may be resistant to the idea of performance appraisal, and may not see the benefits of the process) etc.

Principal of DIET shared his concern

“Teachers have the mindset that if they are the most senior, no one can block their promotion. It is necessary by regulation that teachers who develop themselves and their pedagogical skills get promoted.”

Research officer shared that SCERT always tried to acknowledge the best practices and efforts of teacher community.

“SCERT provides financial and academic support to individual teachers to take up or continue their research in school innovations. We also plan to select the best academic initiatives and provide scholarship. Besides, we have plan to organize school Educational Congress, a platform for school and college teachers and research scholars to present research papers. The congress also features invited talks by eminent academicians who will provide valuable insights into the latest developments and innovations in education.”

Acknowledging teacher performance is important because it can improve teacher motivation, job satisfaction, and retention. Teachers who feel appreciated and valued are more likely to be motivated and engaged in their work, which can lead to improved student outcomes.

Convergence issues

Convergence issues in the education sector can create challenges in coordinating and aligning efforts towards teacher professional development. Difficulties in bringing together different stakeholders, systems, and processes to support teacher professional development are to be addressed. All officers mentioned that the lack of convergence creates a lot of issues.

Principal of DIET commented,

“We come across difficulties in arranging resource persons and venue. Very often the same teachers play the role of resource persons in multiple programmes, that too happening simultaneously”.

When the same teachers are expected to play the role of resource persons in multiple programmes at the same time, it can lead to several difficulties, including, overburdening of teachers. It indicates that when teachers are asked to participate in multiple programmes at the same time, it can be overwhelming and reduce the quality of their contributions. When teachers are already busy with their regular teaching duties and are also expected to participate in multiple professional development programs, they may face time constraints, making it difficult for them to fully engage in the programmes.

Programme officer in SSK stated that during previous years the convergence meeting at district level was regular and more effective. The district officers representing different agencies used to sit together and plan one month programme. A tentative programme calendar would be prepared and give to other educational officers. So that all the officials would get an idea about the various programmes.

Due to the lack of convergence at the state level, different agencies undertake multiple programmes with similar objectives and for the same target groups. According to the research officer in SCERT, this results in duplication of effort, confusion among participants, and inefficient use of resources. Additionally, it can also lead to a fragmented approach to teacher professional development, making it difficult to track progress and assess the impact of programmes. A coordinated, convergent approach is essential for ensuring that teacher professional development programmes are effective and efficient.

Discussion

A well-designed CPD policy can help to create a culture of ongoing learning and development, and it can support teachers in their professional growth and improvement. By clearly outlining the expectations and requirements for

participation, the policy can help to ensure that the CPD programmes is effective and that it is delivering the best possible outcomes for teachers and students. The significance for policies that provide precise guidance on the conception, execution, and evaluation of professional development programmes has been underlined by a number of studies. According to report by Desimone et al. (2002), for instance, policies are necessary to provide professional development activities consistency and orientation. This study highlighted the significance of policy frameworks for professional development.

Red tape in the context of teacher professional development programmes can create a number of barriers to effective and efficient implementation, including excessive reporting requirements, rigid approval processes, funding constraints, inadequate support, and lack of flexibility. These bureaucratic hurdles can make it difficult for teachers to access professional development opportunities, and can also limit the impact of these programmes on teacher learning and growth. In order to reduce red tape and promote effective teacher professional development, it is important to streamline administrative processes, increase funding, provide adequate support and resources, and offer flexible programmes that can be tailored to meet the needs of individual teachers.

That is a common concern expressed by many professionals in various fields. When the focus shifts towards administrative tasks, it can limit the time and energy available for creative and academic pursuits, leading to a lack of professional growth and development. This can also impact the overall effectiveness and impact of programmes and initiatives. It is important for organizations to find a balance between administrative duties and opportunities for professional growth, in order to foster a supportive and productive work environment for their employees. This can involve streamlining administrative processes, providing additional support and resources, and allocating adequate funding for professional development activities.

In addition, a study by Nawab and Sharar (2022) found that lack of coordination between different administrative departments and levels of government

can lead to confusion and inconsistency in teacher professional development programs, which can ultimately decrease their effectiveness.

Lack of performance appraisal leads to lack of accountability. Without a system for evaluating teachers, it can be difficult to hold them accountable for their performance and to ensure that they are meeting the standards and expectations set for their role. Inadequate recognition of good performance in the due course prove that , it will be more difficult to identify and reward teachers who are performing well and making significant contributions to the school or educational organization. Teachers' commitment to improvement is recognized through performance-based incentives (Fullan 2007). It is disheartening for teachers who are dedicated to improving their practices when the system lacks acknowledgment and reward methods. Teachers are hesitant to participate in PD activities when a high-performing teacher and his low-performing counterpart are treated equally (Nawab & Bissaker, 2021). Teachers may be less motivated if they are not given recognition for their good work, or if they are not given opportunities to improve and grow in their role. Addressing these issues will require a concerted effort from all stakeholders, including administrators, teachers, evaluators, and policymakers. By working together, it may be possible to overcome these challenges and ensure that the system is effectively evaluating teacher performance and supporting professional growth and development. Several studies focus on the effectiveness of using performance appraisal to motivate and support teachers to engage in self-initiated professional development activities, and the impact of such activities on teacher learning and development (Kagama & Irungu, 2018 ; Khatete, 2020).

Effectiveness

If a professional development programmes is not effective, then it may not result in any meaningful changes in teacher practice or student outcomes, and may ultimately be a waste of time and resources. Effective professional development programmes can lead to improved teacher confidence, satisfaction, and motivation, as well as increased student engagement, achievement, and overall success. It is true that effectiveness of a professional enrichment programme depends on many factors.

Analysis of the interview points out some relevant reasons related to monitoring, feedback, follow-up and the skill of trainers.

Monitoring

Monitoring teacher professional development is mandatory to ensure quality education. At the same time it is also important to know the nature of monitoring prevailing and challenges and prospects in this field.

For DIET principal it is possible that some teachers may prefer onsite support instead of monitoring. Onsite support allows teachers to receive hands-on guidance from an expert, which can be more beneficial than monitoring which seems to be a little bit offensive. With onsite support, teachers have the opportunity to ask questions and receive immediate feedback, which can help them improve their teaching skills and techniques.

He adds,

“In the monthly convergence meetings of educational officers, it is decided that every officer should visit schools and provide academic support to teachers twice a week. But in reality it does not happen due to the workload and time constraints. The same reason is told by heads of institutions like HMs and principals during their conferences.”

The lack of continuous monitoring of formal professional development workshops can be a significant challenge. Without ongoing monitoring, it can be difficult to determine the impact of the workshops on the participants and the extent to which the knowledge and skills acquired in the workshop are being applied in the classroom. DPC shared the following experience,

“We could just pay some visits at the beginning or in-between the sessions. We would interact with participants and get their feedback. But we can't stay with them during the entire sessions, eventhough we acknowledge that it is inevitable.”

According to BPC, there should be monitoring team for different programmes and the team members should internalize the objectives of the programme, the module etc. Then only they can give creative academic support. Otherwise, it would be nonsensical and a form of ridicule.

Technology shall be effectively used for monitoring teacher professional development, according to KITE coordinator.

“We conduct programmes after teachers registering in our training management system, and it proved to be effective for ensuring attendance”.

According to DPC, reporting and documentation involves documenting the program, including its activities, outcomes, and feedback from participants. This information can be used for reporting purposes and to support future planning and decision making.

Feedback

It is critical to give feedback after monitoring the teacher professional development activities. The qualitative feedback given individually and in group, have major impact on the efficacy of the programme. Feedback can help assess the effectiveness of the professional development programmes and determine whether it has had a positive impact on teachers' practices. This information can be used to improve future professional development initiatives. DIET principal said,

“We convene SRG meeting after class observations during monitoring at school. Spend time to discuss what we have observed and what do we expect. We extend assistance to improve the classroom practices. Remember, teachers shall not feel that they are being judged.”

The significance of feedback is evident in the case of teacher professional development. When officers criticize them, many teachers become reactive, especially if the criticism is based on rumors or a chance visit to the teacher's

classroom. However, administrators must devise efficient ways to provide feedback to teachers if they are to foster a good learning environment and guarantee that everyone is upholding professional standards.

“When teachers are aware of the criteria used to evaluate them, they are less likely to respond, ‘I didn't realise I was meant to do it in the first place’, to feedback”.

Research officer opined that SCERT did not have a structured monitoring at the field and the council depends on DIET for the same. However, every officers tried to collect feedback of the programme during and after the programme. This summative and formative feedback provides insight for the refinement of the programme.

Giving feedback to teacher performance is important for improving instructional practices, supporting teacher growth, enhancing student learning, promoting accountability, and building trust between teachers and education leaders.

Follow-up

Effective follow-up after a professional development programmes can support teachers in their growth and development, leading to improved student learning outcomes and greater success for all involved. But officers stated that very often effective follow up wouldn't happen.

The planning officer stated,

“With many competing demands, it can be difficult for administrators to prioritize follow-up activities. Other tasks and responsibilities may take precedence, leading to a lack of focus on follow-up efforts.”

Research officer shared,

“Overall, critical stakeholders opined that professional development programmes frequently have little impact on practice because they

lack focus, intensity, consistency, and follow-up. In other words, the teacher training, we offer doesn't result in better teachers.”

BPC said,

“Effective follow-up requires clear and open communication between administrators, teachers, and other stakeholders. If communication is poor or non-existent, it will be difficult to coordinate and carry out follow-up activities.”

Overall, follow-up activities are crucial to ensure that teacher training programmes have a lasting impact on teacher practice and student learning. By providing ongoing support and accountability, follow-up activities can help to ensure that the training is effective and leads to improved outcomes in the classroom.

Trainer skill

The ability of the trainer is a significant component that can influence the efficacy of teacher professional development programmes. Skilled trainers with subject matter expertise, understanding of successful teaching tactics, and the ability to engage and encourage adult learners are more likely to provide teachers with a positive and productive learning experience.

KITE coordinator, DPC and BPC stated that they already have trainers in their offices, who were once practicing teachers. These in-house trainers are completely engaged in training programmes.

“But their number is not sufficient to impart sessions to a large number of teachers. So we depend on practicing teachers.”

Regardless of whether trainers are in-house or external, it is important that they possess the necessary subject matter expertise and pedagogical skills to deliver engaging and effective training.

Discussion

The effectiveness of a professional development programmes depends on several factors, including monitoring, feedback, follow-up, and the skills of the trainers. Studies have shown that teacher professional development programmes that include ongoing monitoring and feedback, along with follow-up support, are more likely to result in sustained changes in teacher practice and improved student learning outcomes. In addition, the skills and expertise of the trainers play a crucial role in the success of the program, as they need to be able to effectively communicate the content and provide guidance and support to the teachers throughout the process. This research investigates how teachers and administrators from a rural district in South Africa utilised WhatsApp as virtual communities of practice to help in monitoring and support after a professional development programme (Moodley, 2019).

Several studies have emphasized the relevance of monitoring and feedback during and after professional enrichment programmes. A program's effectiveness depends not just on participants' attendance but also on the monitoring and assistance they receive after Teacher Professional Development (TPD) (Niess, 2011). According to a study (Bernadine, 2019), educators may be encouraged to engage in CPD programmes and professional development can become a reality with the proper monitoring and support. Evaluation not only demonstrates that some beneficial outcomes have emerged from professional development initiatives, but it also focuses on current and future programmes to guarantee that sustainable progress is made. It is critical to remember that good assessment and monitoring are essential components of achievement of desired plan (Asghar & Ahmad, 2014). A study by Garet et al. (2001) found that teacher professional development programmes that were designed and delivered by skilled trainers were more likely to result in changes in teacher knowledge and practice.

Consolidated Discussion of Phase I and Phase II

The entire analysis throws light to some significant aspects of CPD among teachers. Teachers show high attitude during survey analysis which was not evident

in focused group discussions. It is not uncommon for teachers to exhibit different attitudes in quantitative surveys and in focused group discussions (DiLoreto & Gaines, 2016). In quantitative surveys, teachers may feel pressure to provide socially desirable responses or to avoid expressing negative attitudes for fear of being perceived as unprofessional or uncooperative. In a focused group discussion, however, teachers may feel more comfortable expressing their true opinions and experiences. In quantitative surveys, teachers may respond to questions based on their perception of what is expected or appropriate rather than their true beliefs or experiences. In a focused group discussion, teachers have the opportunity to discuss and explore their attitudes in more depth, which may lead to more nuanced and honest responses.

The study discloses that teachers' involvement in self-initiated professional development activities is comparatively less. Several reasons contributed to the lack of self-initiated professional development among teachers as per the analysis. It includes the lack of motivation, lack of awareness about opportunities, time constraints and lack of support. It is also influenced by factors related to the quality of formal professional development activities and the lack of monitoring, follow-up and feedback. The findings are in accordance with the previous studies in the field of self-initiated professional development (Rahman, et al., 2020).

This finding suggests that the officers are more interested in providing formal professional development opportunities to teachers rather than encouraging teachers to take ownership of their own professional development through self-initiated activities. This may be because the officers have more control over formal programmes and can ensure that they align with the agency's goals and objectives.

When teachers point out the external reasons as barriers for their professional empowerment, the officials highlighted reasons related to teachers' lack of motivation and negative attitude. The discrepancy between teachers' perceptions of external barriers and officials' perceptions of internal barriers highlights a significant disconnect in communication and understanding between teachers and officials. Such discrepancies have been noted in previous studies as well (Nawab, 2020). This

disconnect can hinder progress towards improving professional development opportunities for teachers. When teachers point out external reasons as barriers for their professional empowerment, officials should take those concerns seriously and work to address them. Officials must recognize that external factors can indeed impact teachers' ability to engage in professional development activities and seek solutions to alleviate those barriers. On the other hand, when officials highlight reasons related to teachers' lack of motivation and negative attitude, they may be overlooking other underlying factors that contribute to the perceived lack of motivation, such as burnout or inadequate support. Officials should take a more comprehensive approach to identify and address the underlying causes of teachers' lack of motivation. To bridge the gap between teachers and officials, there must be effective communication and collaboration (Bantwini & Diko, 2011) that involves active listening and mutual understanding. Officials must be willing to listen to teachers' concerns and work with them to find solutions that are practical and effective. This collaborative approach can help to build trust between teachers and officials and create a culture of shared responsibility for professional development and growth (Tschannen-Moran, 2001).

Clear communication and collaboration between all stakeholders are essential for ensuring that the needs of teachers are met and that resources are used effectively. Effective communication and collaboration will ensure that all stakeholders are working towards the same goals and objectives, and that everyone's perspectives and ideas are taken into consideration. Moreover, effective communication and collaboration can also lead to better decision-making and policy development. When stakeholders have the opportunity to share their perspectives and ideas, it can help to identify potential challenges and opportunities, and develop solutions that work for everyone. Building trust and cooperation among stakeholders is also critical. When teachers, administrators, and policy makers trust and respect each other, they are more likely to work collaboratively and share their expertise and knowledge. This ultimately lead to a better quality of education for all learners.

The analysis points out the necessity of conducting need analysis of teachers. Professional needs analysis is an important process for identifying the learning needs and priorities of teachers and other education professionals. It involves gathering information on the skills, knowledge, and competencies that teachers require to effectively perform their roles, as well as the gaps that exist in their current knowledge and practice.

By encouraging teachers to reflect on their own learning needs and priorities, and providing them with opportunities to engage in continuous professional development, professional need analysis will foster a culture of lifelong learning and professional growth. By identifying the areas where teachers need the most support and guidance, professional needs analysis can help to ensure that resources are targeted to the areas where they will have the greatest impact, avoiding wasted resources and maximizing the effectiveness of professional development programmes (Zein, 2017).

Addressing the individual needs of teachers while planning professional development activities is important to ensure that the activities are relevant and meaningful, this in turn can increase their motivation and engagement in the activities. The analysis reminds of some strategies for addressing every teacher. Conducting needs assessments to identify the specific needs and interests of individual teachers proved to be useful in planning professional development activities. This can be done through surveys, interviews, or other forms of data collection.

Providing teachers with a range of professional development activities to choose from, such as workshops, webinars, online courses, or mentoring, allow them to select activities that align with their individual needs and interests. Such choices will make them effective practitioners (Scott, 2002). Additionally, offering flexibility in the timing and location of the activities accommodates the individual schedules and preferences of teachers. Professional development activities should be suitable to the different levels of experience of teachers.

Providing opportunities for teachers to reflect on their professional development experiences and receive feedback ensure that the activities are meeting their individual needs. This can be done through regular check-ins with mentors or peers, or through formal evaluations. Providing personalized support to individual teachers will help to address their specific needs and challenges. This can be done through individual coaching or mentoring, or through the provision of additional resources or training.

By addressing the individual needs of teachers in professional development activities, schools and administrators will be able to create a more personalized and effective approach to professional development, which increases the engagement and motivation of teachers and ultimately improve student learning outcomes. The provision of conditions for learning which offered the time and support for personalized professional development was considered more desirable than traditional in-service models (Taylor et al., 2011).

Individualized professional development plans are critical for ensuring that teachers have access to the specific training and support they need to improve their practice and achieve their professional goals. IPDP (Individual Professional Development Plan) assists teachers in developing a personalised professional development plan that guides professional development and helps them follow this same plan to accomplish their objectives (Özer et al., 2020). They provide a more personalized approach to professional development, help to build teacher motivation and engagement, promote a culture of continuous learning and improvement, and ensure that resources are used effectively and efficiently.

It is noteworthy that the study emphasizes the need of perceiving professional development as a continuous and multifaceted process that extends beyond INSET (In-service education and training). While INSET can be an effective way to provide training and development opportunities to teachers, it is important to recognize that it is just one part of a larger, ongoing process of professional development. Professional development should be viewed as a continuous process of learning and development that extends throughout a teacher's career. This can

include a wide range of activities and approaches, such as attending conferences and workshops, participating in online courses, engaging in self-directed learning, collaborating with other teachers, and seeking out mentorship and coaching. By viewing professional development as a continuous and multifaceted process, teachers are encouraged to take ownership of their own learning and development, and to seek out opportunities that align with their interests, goals, and needs.

There are several aspects to consider when organising or facilitating teacher-led professional development. The interaction with teachers indicates the need of adopting a bottom-up approach to professional development which will be highly effective in engaging participants and ensuring that the professional development is relevant to their needs. When participants are involved in the planning and design process, they are more likely to take ownership of their learning and be motivated to participate actively in the development (Macias, 2017).

The analysis implies that there is a need to reconsider the cascade model and explore alternative approaches that may be more effective in addressing the professional development needs of teachers. Recent research has highlighted some limitations and drawbacks of cascade model, which suggests that alternative approaches may be more effective in addressing the professional development needs of teachers. One of the main criticisms of the cascade model is that it often fails to result in sustained changes in teaching practice. This is because the training is often delivered in a one-off session or series of sessions, and there is little follow-up or ongoing support provided to help teachers apply what they have learned in the classroom. As a result, many teachers may revert back to their old habits once the initial excitement of the training wears off. The implementation of a cascade model of curriculum change often results in a substantial reduction of its impact by the time it reaches the classroom teacher, who plays a crucial role in the success of the change (Hayes, 2000). Another challenge which is clear from the discussion is associated with the characteristics of the second level trainers, the way the training materials are utilized by them and support required from the primary trainers (Ngeze et al., 2018). The quality of training delivered by the second level trainers may vary,

and that they may not always have the necessary skills and support to deliver the training effectively. This can result in inconsistencies in the training delivered to different groups of teachers, which may limit the impact of the training

Adopting alternative methods of professional development, such as coaching or collaborative inquiry, may rely less on the individual skills and motivation of teachers as they prioritize continual collaboration, support, and reflection. Such approaches involve more participatory and collaborative strategies that engage teachers in the development and planning of training programs, as well as provide continuous support and follow-up to ensure effective implementation of the training in the classroom (Lovett & Gilmore, 2003).

Interestingly, the analysis leads to the realization that teachers and officials do value the impact of collaborative professional development. Collaborative CPD is highly effective for several reasons. Many studies have concluded the relevance of collaboration for teacher enrichment (Forte & Flores, 2014; Kennedy, 2011). It promotes a culture of continuous improvement, where teachers feel comfortable sharing their knowledge and skills with each other. It can be more cost-effective than traditional CPD, as it involves teachers sharing resources and expertise. Finally, it is more engaging and relevant to teachers' needs, as they are directly involved in the planning and delivery of the training.

Encouraging collaborative CPD and Professional Learning Communities (PLC) have several benefits for teachers. Collaborative CPD involves teachers working together to improve their skills and knowledge in a particular area, while PLC involves teachers coming together on a regular basis to share their experiences and best practices (Caena, 2011). Collaborative CPD and PLC lead to improve teacher motivation and job satisfaction. When teachers feel that they are part of a supportive community that values their professional growth, they are more likely to feel engaged and motivated in their work. One benefit of collaborative CPD and PLC is that it provides teachers with opportunities to learn from each other. Teachers can share their experiences, successes, and challenges, and learn from each

other's strategies and approaches. This helps to build a culture of continuous learning and improvement within the school community (Webb et al., 2009).

However, it is important to note that collaborative CPD requires a high degree of trust and respect among teachers, as well as a commitment to ongoing collaboration. Therefore, schools and educational institutions need to create a supportive environment that values collaboration and provides teachers with the time and resources necessary to engage in collaborative CPD activities (Yuan & Zhang, 2016).

Both teachers and officials agree that the lack of performance appraisal is a significant factor that hinders teachers' participation in self-initiated and formal professional development activities. Teachers argue that without clear performance standards or feedback on their performance, they may not know where to focus their efforts to improve, leading to a lack of motivation to engage in professional development activities.

Officials stress the need for teacher performance appraisal because it is an essential process that helps to assess and evaluate teachers' work performance against specific criteria or standards. Many reports have attested the relevance of performance review and appraisal (Elliott, 2015; OECD, 2009). Performance appraisal data can be used to identify teachers' professional development needs, allocate resources, and design effective professional development programmes that align with teachers' specific needs and goals.

The state needs to prioritize the implementation of effective teacher performance appraisal systems. The appraisal system should be designed to provide feedback to both teachers and officials, outlining areas of strength and areas for improvement. Moreover, the performance appraisal system should be linked to the professional development programmes to ensure that the professional development opportunities are aligned with the identified needs of the teachers. It is important to recognize that professional development is not a one-size-fits-all approach, and it is critical to identify the specific needs and goals of each teacher to design effective professional development programmes. Additionally, the state should create a

culture of continuous learning, where professional development is viewed as an ongoing process. Teachers should be encouraged to take ownership of their professional development and set their own goals, with the support of the school or district.

The analysis reveals that the lack of convergence among different agencies can lead to clashes and repeated programs, which will be frustrating for teachers and may also waste resources. It is also evident from previous studies conducted in the field (Lobman & Ryan, 2008). When agencies plan their programmes without coordinating with each other, they may inadvertently schedule programmes on the same dates or times, making it difficult for teachers to attend both programmes. This will result in missed opportunities for professional growth and may lead to repeated programs, which can be inefficient and costly.

The agencies may have different goals and approaches to professional development, which can sometimes lead to overlapping programmes or conflicting schedules, making it difficult for teachers to participate in multiple programmes. Furthermore, when programmes are not well coordinated, there may be duplication of content, resulting in a waste of time and resources. For example, if two agencies plan programmes on the same topic, teachers may have to choose between attending one programmes and missing out on the other, or attending both programmes and hearing the same content twice.

To address this issue, agencies can collaborate and coordinate their efforts to ensure that professional development programmes are well-aligned and avoid clashes in scheduling. Collaboration will take different forms such as joint planning, sharing resources, and joint funding of programmes. Joint planning involves agencies working together to develop a comprehensive professional development plan that meets the needs of teachers and avoids overlaps in scheduling. This shall be achieved through regular meetings or workshops where representatives from different agencies can discuss their plans and identify areas of collaboration.

The analysis emphasizes that the lack of trainer skill affects the teachers' attitude towards formal training programmes. Teachers need trainers who have the

knowledge and skills to provide high-quality professional development opportunities that are relevant to their needs and that can help them improve their teaching practices. Trainers with the required knowledge and skills can provide pertinent and interesting training experiences that are suited to the particular requirements of teachers. Such training leads teachers to improve their skills and competencies, boost their confidence, and foster a positive attitude towards continuing professional development.

Trainers who lack the necessary skills and expertise, on the other hand, will produce a negative impression of training programmes, resulting in low participation rates and minimal improvements in teaching practices. To address this factor, it is important to ensure that trainers have the necessary skills and expertise to provide high-quality professional development opportunities. This may involve investing in trainer training programs, providing ongoing support and feedback to trainers, and ensuring that trainers are selected based on their experience and expertise in the relevant areas. Additionally, it is important to gather feedback from teachers on the quality of the training and to continually assess and improve the effectiveness of the training programmes.

Addressing the issue of teachers' long absence from school for attending professional development sessions is crucial for ensuring minimal disruption to the regular teaching and learning process. Teachers' prolonged absence lead to a backlog of teaching work and create additional pressure on teachers when they return, leading to burnout and decreased motivation. It is vivid from various studies (Herrmann, & Rockoff, 2012; Miller et al., 2008). One way to address this issue is to schedule professional development sessions during school breaks or outside regular school hours. Schools consider using technology to deliver professional development sessions remotely, which can help minimize the need for teachers to be away from school for extended periods.

Integrating professional development sessions into the regular school schedule will help schools to address the issue of teachers' extended absence from school. This approach ensures that teachers receive professional development

opportunities while minimizing disruptions to classroom instruction and student learning.

Online professional development utilizing information technologies and involving teachers in virtual learning communities is gaining in popularity (Dede, 2006). However, it is important to note that online CPD should not replace traditional face-to-face training entirely. Personal interaction with trainers and colleagues is important for building relationships, creating a sense of community, and providing opportunities for hands-on practice and feedback. Therefore, a balanced approach to CPD that combines face-to-face and online learning opportunities can provide teachers with the best of both worlds, ensuring that they have access to a variety of professional development opportunities that meet their individual needs and preferences.

Blended form of CPD for teachers is proved to be an effective way to address many challenges (Belland et al., 2015). Blended CPD combines traditional face-to-face training with online learning opportunities, offering a more flexible and personalized approach to teacher development. Blended CPD can take many forms, such as online modules, virtual conferences, and webinars, which can be completed at a time and place that is convenient for teachers. This will be particularly beneficial for teachers who have busy schedules or who may not have access to face-to-face training opportunities. In addition, blended CPD provides teachers with opportunities for collaborative learning and peer-to-peer support. Online discussion forums, social media groups, and virtual learning communities can connect teachers with colleagues from around the world, facilitating the sharing of ideas and best practices.

Relieving teachers of administrative and clerical duties, will be beneficial in allowing them to focus more on professional development activities, which can ultimately lead to improved teaching and learning outcomes (Taharim, et al., 2017). Here are some reasons why this will be effective: Administrative and clerical duties are time-consuming and take away from the time that teachers could be spending on professional development activities. By reducing these tasks, teachers will have

more time to focus on improving their teaching practices and developing new skills. By providing teachers with opportunities for professional development and relieving them of administrative and clerical duties, schools can help to improve teacher retention rates. Teachers are more likely to stay at schools where they feel supported and valued, and where they have opportunities for professional growth.

While it may not be possible to completely eliminate administrative and clerical duties for teachers, finding ways to reduce these tasks and provide more time and resources for professional development are beneficial for both teachers and students.

Lack of immediate application of what teachers learned in professional development sessions is cited as a common problem that can reduce the effectiveness of professional development programmes. To address this issue, professional development programmes should incorporate opportunities for teachers to practice what they have learned in real-world settings. This includes classroom observations, coaching and mentoring, and opportunities for teachers to work collaboratively with their peers. By providing teachers with opportunities to apply what they have learned immediately, they gain confidence in their new skills and strategies, and see the direct impact of their professional development on their teaching practices. According to Saunders (2014), professional development is not just what happens in workshops or on courses; it also refers to what happens when teachers experiment with new methods and procedures in the classroom. As they implement new procedures and practises, teachers are compelled to negotiate a number of different issues.

The lack of time was found to be a major barrier that affects teachers' participation in PD programmes. A number of studies have emphasised time as one of the most important factors influencing teacher participation in PD activities (Collinson & Fedoruk 2001; Kedzior & Fifield, 2004). Teachers' busy schedules and heavy workloads make it challenging for them to find time for professional development activities. Teachers are responsible for planning and delivering lessons, grading assignments, communicating with parents, attending meetings, and fulfilling administrative duties. All these responsibilities will take up a significant portion of

their time, leaving little room for additional activities like professional development. International research on continuing professional development consistently emphasizes the importance of providing teachers with adequate time to implement new practices and bring about change at both the individual and school levels. It is crucial for policy-makers to take into account the amount of time needed for teachers to integrate new knowledge and practices into their existing workload. A lack of time may be due to an overloaded curriculum, which can result in teachers being less receptive and enthusiastic about change. To ensure effective CPD, it is necessary to prioritize the allocation of sufficient time for teachers to participate in professional learning activities such as workshops, seminars, and collaborative learning communities.

Teachers often have to balance their professional responsibilities with personal obligations, such as caring for their families and pursuing personal interests. This makes it challenging for them to find time for professional development programmes, which are often offered outside of regular school hours. Furthermore, the scheduling of professional development programmes can also be a barrier. Professional development programmes may be scheduled during times when teachers have other obligations or when they are already experiencing high levels of stress or workload. This makes it difficult for teachers to commit to attending professional development programmes and to fully engage in the learning experience.

Additionally, time constraints also limit the effectiveness of PD programmes as teachers may not have enough time to implement new strategies and techniques in their classrooms. This will lead to a lack of sustained improvement in teaching practices.

The result suggests that officials working at the district education department are aware of system-related issues that can affect teachers' engagement in professional development programmes. However, these officials are not the ones who make policies; they simply implement them. This implies that the policies are formulated at a higher level and may not always take into account the ground realities and challenges faced by teachers and district education officials in

implementing them. As a result, the policies may not always be effective in promoting teachers' professional development.

A structured Continuing Professional Development policy is highly relevant for ensuring that teachers have access to high-quality professional learning opportunities that are aligned with their needs, interests, and career goals. A structured CPD policy typically includes a set of guidelines and procedures for planning, delivering, and evaluating professional development activities. This includes identifying priority areas for teacher professional development, setting goals and objectives for each professional development activity, determining the most appropriate delivery methods and formats, and evaluating the effectiveness of each activity. By having a structured CPD policy in place, schools and the officials can ensure that teachers have access to professional development activities that are aligned with their needs and goals, and that are delivered in a way that is most effective for their learning styles and preferences. A well defined CPD policy, obviously demands a well structured CPD framework which includes need assessment, goal setting, delivery methods, assessment strategies etc (Prince & Barrett, 2014).

The continuing argument about the quality of teachers and their professional development remains a popular and pertinent subject for discourse among academics, policymakers, and all other stakeholders in Kerala, and it offers ample opportunity for future study. As a result, educational policies in Kerala should focus on significant variables identified in this research to encourage teachers to participate in professional development activities.

Chapter V

**SUMMARY OF FINDINGS, CONCLUSION
AND SUGGESTIONS**

- ❖ *Summary of the Findings*
- ❖ *Conclusion*
- ❖ *Limitations of the Study*
- ❖ *Suggestions for Further Research*

This chapter discusses a summary of findings, conclusions, limitations of the study and potential for further research.

Summary of the Findings

- There is a relation between attitude towards CPD and opportunities of CPD. The attitude of an individual towards CPD can affect their willingness and motivation to engage in professional development opportunities, and the availability of opportunities for CPD can influence their attitude towards it.
- There exists no significant difference in attitude towards CPD among primary school teachers for the relevant subsamples based on the, section, type of management, locale, gender and educational qualification.
- There exists significant difference in attitude towards CPD and opportunities for CPD among primary school teachers for the subsample based on district.
- There exists no significant difference in the opportunities for CPD for the relevant subsamples based on the district, section, type of management, locale and gender, age, experience and educational qualification.
- There exists significant difference in attitude towards CPD among primary school teachers for the subsample based on age and experience.
- The study found that teachers' involvement in self-initiated professional development activities is relatively low. This is due to several factors, including lack of motivation, lack of awareness about opportunities, time constraints, and lack of support. Additionally, the quality of formal professional development activities, as well as the lack of monitoring,

follow-up, and feedback, also contributes to the lack of self-initiated professional development among teachers. It is also found that low motivation and lack of awareness about opportunities affect self-initiated CPD.

- The findings suggest that the officers are more interested in providing formal professional development opportunities to teachers rather than encouraging teachers to take ownership of their own professional development through self-initiated activities.
- There is a mismatch between what educational administrators and stakeholders believe about the importance of formal learning opportunities for teachers and the effort they put into creating effective learning environments for teachers. While there is a general understanding that teachers need to be equipped with the necessary knowledge and skills to create effective learning environments for their students, the same level of attention and resources are not often devoted to creating optimal learning environments for the teachers themselves.
- When teachers identify external factors as barriers to their professional development, officials tend to attribute the barriers to the teachers' lack of motivation and negative attitude. This difference between the teachers' perception of external barriers and the officials' perception of internal barriers emphasizes a significant gap in communication and understanding between teachers and officials.
- The analysis emphasizes the importance of conducting professional need analysis for teachers. This involves encouraging teachers to reflect on their learning needs and priorities and providing them with opportunities for ongoing professional development. The purpose of a professional need analysis is to promote a culture of lifelong learning and professional growth among teachers.

- The relevance of a bottom-up approach to professional development is disclosed by the study to increase participant engagement and relevance to their needs. The analysis suggests that the cascade model of training should be reconsidered and alternative approaches should be explored for their effectiveness.
- The findings of the study suggest that both teachers and officials value the impact of collaborative professional development. However, the study also identified challenges in sustaining this collaboration due to insufficient opportunities provided by officials and teachers not always practicing what they value. In other words, officials may struggle to consistently provide collaboration opportunities due to resource constraints or other barriers, and teachers may not always effectively utilize collaborative opportunities due to various factors such as time constraints or lack of guidance.
- Teachers and officials concur that the absence of performance evaluation impedes teachers from engaging in both self-initiated and formal professional development. Educators hold the belief that in the absence of constructive feedback on their performance or established benchmarks to meet, they find themselves adrift without a clear sense of direction regarding areas for improvement. This, in turn, leads to a marked decrease in their motivation to engage in professional development activities. Conversely, authorities place a strong emphasis on the vital role of teacher performance appraisal as a rigorous process for evaluating and scrutinizing educators' work performance against well-defined criteria or standards. To sum up, while both educators and officials agree on the critical importance of performance evaluation in stimulating teachers' engagement in professional development and enhancing their overall performance, they hold differing viewpoints regarding the precise role of performance appraisal in achieving these goals.
- The findings indicate that when different agencies have divergent approaches and goals towards professional development, it can result in clashes and

duplication of programmes, which will be frustrating for teachers and a waste of resources. The lack of coordination among agencies sometimes lead to overlapping programmes or conflicting schedules, making it challenging for teachers to participate in multiple programmes. Additionally, if programmes are not well-coordinated, they may cover the same content, leading to a waste of time and resources. In essence, when different agencies responsible for professional development do not have aligned approaches, it will lead to conflicts, inefficiencies, and negative impacts on teachers' professional growth.

- The findings reveal that the lack of trainer skill has an impact on the teachers' attitude towards formal training programmes. When trainers lack the necessary skills to design and deliver effective training programmes, teachers may become disengaged and disinterested in the training. Poorly designed or delivered training programmes are frustrating for teachers, leading to a negative attitude towards professional development. Therefore, the quality of the trainers can significantly influence the attitude of teachers towards formal training programmes.
- It is found that one of the common problems that can reduce the effectiveness of professional development programmes is the lack of immediate application of what teachers have learned during the sessions. When teachers are not given opportunities to apply what they have learned, they may forget the information or lose interest in the programme, leading to a lack of motivation to implement the new strategies or skills in their classrooms. This highlights the importance of ensuring that professional development programmes provide opportunities for teachers to apply their new learning in their classroom context, so they will see the immediate impact and relevance of the training.
- The fragmented picture of CPD with several mismatches between the objectives and practices is identified as a challenge that needs to be addressed in the context of professional development for teachers. The

different professional development opportunities may not be part of a comprehensive plan and may not be well-integrated with each other. It is found that there are discrepancies between the intended objectives of the professional development and the actual practices that are implemented. This will lead to a lack of consistency and effectiveness in the professional development opportunities provided to teachers.

- The absence of teacher involvement in the planning and scheduling of professional development programmes is a significant challenge for ensuring the effectiveness and impact of these programmes. If teachers are not involved in the planning and scheduling of professional development programs, there is a risk that the programmes do not meet their needs or be well-aligned with their goals. Without the input of teachers, it is challenging to ensure that the programmes are relevant, effective, and accessible. Moreover, if teachers are not involved in the planning and scheduling there is a possibility that they will not be able to participate in the programmes due to scheduling conflicts or other barriers. This could result in lower levels of engagement and participation.
- Conflict in scheduling, heavy workload, access issues, lack of relevance in content, lack of innovation in strategies, absence of strict monitoring etc were found to be major challenges in participation of professional development opportunities.
- Conflict in scheduling makes it difficult for teachers to attend professional development sessions, especially if they have other work or personal and professional commitments that take precedence.
- Heavy workload is found to be a common challenge that many teachers face when it comes to participating in professional development activities. Teachers often have a long list of responsibilities that they need to fulfill during the school day, including lesson planning, grading, classroom management, and meeting with students and parents. Professional

development opportunities often require additional time outside of the regular school day, which can further strain teachers' already limited free time.

- Access to professional development opportunities is also a significant challenge for many teachers, particularly those who are located in remote or underserved areas, or who lack the necessary resources to participate in such activities. Teachers who are located in remote or rural areas may face challenges in accessing professional development opportunities due to geographical barriers or limited transportation options. Additionally, teachers who lack access to high-speed internet or other technology may not be able to participate in online professional development activities, which further limits their opportunities for growth and development.
- Lack of relevance in content and lack of innovation in strategies are significant barriers in participation, as teachers may not see the value in participating in activities that are not directly relevant to their needs or that do not provide them with new and innovative ideas or approaches.
- The issue of teachers' long absence from school for attending professional development is one of the challenges for schools and students. When teachers are absent for professional development sessions, it can disrupt the regular teaching and learning process and potentially impact student learning outcomes. It may also result in additional work for other teachers who have to cover the absent teacher's classes.
- The lack of time is a major challenge that affects teachers' participation in professional development programmes due to the demanding nature of their work. Teachers have many responsibilities, including lesson planning, teaching, grading, parent-teacher meetings, and various administrative tasks that can take up a significant amount of their time. As a result, finding additional time to participate in professional development is challenging for many teachers. Attending a programme requires time away from the

classroom, which can create a backlog of work that needs to be addressed when they return. This backlog of work creates additional stress and time pressure for teachers, making it challenging to find the time needed to participate in a programme. Furthermore, some teachers may have additional commitments outside of school, such as family responsibilities, which further limit their availability to participate in PD programmes. When teachers are under pressure to complete their regular duties while attending a PD program, they may not be able to fully engage with the programmes or implement the knowledge and skills gained from the programmes effectively. Moreover, if teachers feel overwhelmed by their workload, they will not be motivated to participate in professional development programmes or may not see the value of investing their time and effort into professional development.

- Teachers often have to balance their professional responsibilities with personal obligations, such as caring for their families and pursuing personal interests, which will make it challenging for them to find time for professional development programmes. Overall, the combination of heavy workloads and personal obligations proved to be challenging for teachers to find time for PD programs, which are essential for their professional development.
- The lack of monitoring is found to be a significant challenge because without it, it is difficult to determine whether the workshop achieved its goals and objectives, and whether the participants have acquired the knowledge and skills that were intended. In addition, without monitoring, it is challenging to assess the extent to which the participants are implementing the new knowledge and skills in their teaching practices.
- Officers are not always able to monitor teacher professional development programmes due to various reasons such as limited resources, competing priorities etc. Monitoring programmes requires a significant amount of time and resources, including personnel and technology, which may not always be

available. Officers have other responsibilities that require their attention, such as managing the school or district, attending administrative tasks, or supporting students and teachers in other areas. Furthermore, monitoring professional development programmes can be challenging if the programmes are held off-site or if the participants are spread out over a wide geographical area. It may be difficult for officers to visit each site or location to monitor the programs, and alternative methods of monitoring, such as virtual monitoring, may not always be feasible or effective.

- Giving feedback to teacher performance is essential for improving instructional practices, supporting teacher growth, enhancing student learning, promoting accountability, and building trust between teachers and educational leaders. Feedback can provide teachers with valuable information about their instructional practices, help them identify areas of strength and areas for improvement, and guide their ongoing professional development. But officers face many challenges to provide effective feedback to formal teacher professional development programmes.
- Officers encounter difficulties in providing effective follow-up after a professional development program, despite the importance of doing so for supporting teachers' growth and development. These challenges may arise due to factors such as limited time and resources, a lack of communication between officers and teachers, and competing priorities. Without adequate follow-up, teachers may not fully integrate new learning into their practice, which can limit the potential impact of the professional development on student learning outcomes.
- Excessive regulations and a lack of flexibility create challenges that make it difficult to achieve the objectives of many programmes. In the case of teacher professional development programs, administrative or regulatory hurdles can hinder the implementation of effective and efficient programmes. These hurdles include strict guidelines for programmes design and implementation, limited funding and resources, inflexible scheduling, and

bureaucratic procedures that delay or impede programme's implementation. Additionally, the focus on compliance with regulations shifts the focus away from the actual learning and development of teachers, which limit the impact of the programmes on improving teaching and learning outcomes.

- Providing appropriate facilities is a crucial factor in ensuring the success of teacher empowerment programmes. Teachers need a conducive learning environment that is free from distractions and equipped with the necessary resources to fully engage in the activities. Comfortable seating, adequate lighting, and appropriate technology are some examples of facilities that help create a positive learning environment for teachers. Additionally, providing refreshments and breaks also contribute to creating a supportive and engaging atmosphere for learning. Organizing adequate facilities for teacher empowerment programmes can be challenging for several reasons related to funding, policy, excessive regulations, lack of personnel etc.
- Female teachers often face more challenges while attending professional development (PD) programmes compared to their male counterparts. This is due to various factors, including societal expectations, family responsibilities, etc.

Conclusion

The findings of the study are in accordance with previous research in the field of continuous professional development for teachers, which has consistently shown that teachers who have a positive attitude towards CPD and are aware of available opportunities are more likely to engage in CPD activities regularly. Successful implementation of CPD programmes for teachers requires addressing various challenges and providing support to ensure that teachers have the necessary resources and time to participate and practice new strategies in their classrooms. This support can come from educational officers, school leaders, and the teachers themselves.

A collaborative effort between educational officers, school leaders, and teachers is essential for the successful implementation of CPD programmes. This includes providing ongoing support, feedback, and opportunities for reflection and sharing of best practices. Additionally, it is crucial to address the barriers that prevent teachers from participating in CPD programs, such as time constraints, lack of resources, and competing demands of their time.

Educational officers and school leaders can create a supportive environment that promotes continuous learning and growth by providing necessary resources, such as time, funding, and professional development opportunities, and by establishing clear policies and guidelines for CPD. Teachers can also take an active role in their own professional development by seeking out opportunities, reflecting on their practice, and sharing their knowledge and expertise with others in their school community. Together, a collaborative approach will help to build a culture of ongoing learning and growth that benefits both individual teachers and the overall quality of education.

Limitations of the Study

When considering the results of the current research, a number of limitations should be taken into account, including

- The researcher conducted this study only in six district of the state. Failure to study the entire state reduces the generalizability of the findings.
- The researcher conducted this study with only primary school teachers. As such, the factors that affect primary school teachers' participation in professional development activities might differ from those that affect secondary school teachers' participation in CPD. Hence, the results of this study are limited to the attitude and opportunities of primary school teachers as well as the challenges in their professional development journey.

Suggestions for Further Research

- The study may be conducted in secondary, higher secondary or higher education level.
- Teacher CPD package may be developed incorporating all the characteristics of effective CPD.
- Studies can be conducted in specific subject related groups to assess their perceived needs and interest.
- Studies related to collaborative CPD can be conducted.
- The study can be conducted among teacher educators.
- A study related to technology integrated CPD can be conducted.
- A study can be conducted related to the role of school leadership in promoting CPD among primary school teachers.
- A study related to the need for policy changes to enhance the quality and availability of CPD programmes for primary school teachers in Kerala can be undertaken.
- Can undertake an investigation on the impact of CPD programmes on different subject areas and its implications for improving teaching and learning in primary schools.
- Can conduct comparative studies across different regions and countries to assess the similarities and differences in CPD practices and their effectiveness.
- A study can be undertaken to assess the role of teacher networks and peer support in promoting CPD among primary school teachers.

Chapter VI

RECOMMENDATIONS

❖ *Educational Implications*

The study's overall findings confirmed that there is a pressing need to discuss the current state of Continuing Professional Development (CPD) among primary school teachers in Kerala, India. Both the quantitative and qualitative phases of the study revealed significant aspects that must be considered, such as teachers' attitudes towards CPD, their experiences with professional development, available self-initiated and system-provided opportunities, and the challenges faced by educational officers in implementing CPD programmes. The study's results have practical implications at the individual, school, and state levels. This chapter focused on the study's recommendations concerning its educational implications.

Educational Implications

The following recommendations have been made for the teachers, schools, administrators, and policy makers in the light of the study's findings:

Recommendation for Teachers

- An individualized CPD plan for teachers can be a valuable tool for supporting professional development. Such a plan outlines the teacher's goals for professional development, the steps they will take to achieve those goals, and the resources and support they will need to succeed. By creating an individualized plan, teachers can take ownership of their professional development and work towards achieving their specific goals in a way that is tailored to their unique needs and interests.

An effective individualized CPD plan might include Clearly defined goals, many opportunities, access to resources and support, regular check-ins and reflection etc. Teachers should identify specific areas of growth they

want to work on and outline measurable goals that they can track progress towards. The plan should include a mix of learning opportunities, such as workshops, courses, conferences, and mentorship, that align with the teacher's goals and preferred learning style. Teachers should be provided with the necessary resources and support, such as access to learning materials, mentorship, or coaching, to help them achieve their goals. Regular check-ins with a mentor or supervisor can help teachers stay on track and adjust their plan as needed. Reflection activities can also help teachers to evaluate their progress and identify areas for improvement. Overall, an individualized CPD plan can help teachers to take ownership of their professional growth and development and can provide a roadmap for achieving their goals. By providing the necessary resources and support, schools and the state can help to ensure that teachers have the tools they need to succeed.

- Creating an e-portfolio for teacher CPD is to be considered. Creating an e-portfolio for teacher CPD involves providing teachers with a digital platform to document their learning and growth over time. This platform includes various features such as online learning modules, self-assessment tools, and reflective journals. Teachers can document their learning and growth over time, reflect on their practice, and set goals for future development. It can also serve as a valuable tool for sharing their expertise with others, building their professional network, and showcasing their accomplishments.
- Teachers should be able to reflect on their teaching practice and identify areas for improvement or exploration. Set specific, measurable, achievable, relevant, and time-bound (SMART) goals that align with their professional aspirations.
- Teachers should actively seek out professional development opportunities such as workshops, seminars, webinars, conferences, and online courses to stay updated on current research, best practices, and innovative approaches in their field.

- Engaging in reflective practice, teachers should regularly reflect on their teaching experiences, strategies, and outcomes, considering the impact of their instructional decisions and making necessary adjustments. Keeping a reflective journal allows them to document their thoughts and insights.
- To enhance their teaching practice, teachers should collaborate with peers in collaborative learning communities, such as professional learning communities (PLCs), where they can share ideas, discuss challenges, and engage in projects, lesson co-planning, and peer feedback.
- To enhance instructional delivery, student engagement, and assessment practices, it is important for teachers to stay updated on relevant technological advancements in education. They should explore digital tools, online resources, and educational apps that can augment their teaching methods and support student learning.
- Teachers can drive improvement in their classrooms by undertaking action research projects to explore specific teaching and learning challenges. Through data collection, analysis, experimentation with new strategies, and reflection on outcomes, they can gather valuable insights to inform their instructional decisions.
- Teachers should build professional networks by connecting with other educators through professional associations, social media platforms, and online forums. By actively participating in discussions, sharing resources, and engaging in collaborative projects, they can expand their professional network and gain diverse perspectives.
- Teachers should actively seek feedback from colleagues, administrators, and students, inviting observations and constructive criticism to gain valuable insights into their teaching practice and identify areas for improvement.
- Teachers should regularly assess student learning and reflect on the impact of their instructional strategies by using both formative and summative

assessments. This enables them to monitor progress, identify areas for improvement, and make necessary adjustments to their teaching approaches.

Recommendation for Policy Makers and Administrators

- Professional development activities must be planned to develop a positive attitude towards CPD among primary teachers. This can include providing opportunities for reflection, sharing best practices, and creating a supportive environment for learning and growth. By addressing any negative attitudes towards CPD and highlighting the benefits of continuous learning, teachers may be more motivated to engage in professional development activities and apply new strategies in their classrooms.
- It is important for teachers to be informed about the various CPD opportunities available to them and the potential benefits of participating in them. This can help to increase their motivation and willingness to engage in professional development activities. Providing clear and timely communication about CPD opportunities and their relevance can also help teachers make informed decisions about which activities to pursue and how they can contribute to their professional growth.
- Considering teacher CPD as part of school accreditation and performance appraisal can help increase accountability and encourage teachers to engage in professional development activities. By including CPD as a component of school accreditation and teacher performance appraisal, there is an increased emphasis on the importance of continuous learning and growth for teachers. This encourages schools to provide more opportunities for CPD and ensure that teachers are supported in their professional development efforts.
- Rather than brief, one-time workshops, good CPD efforts generally involve teachers in learning throughout weeks, months, or even academic years. Longer-term professional development efforts are more effective than brief, one-time workshops. Teachers need time and support to fully integrate new knowledge and skills into their teaching practice, and this can only be

achieved through ongoing and sustained professional development efforts. Good CPD programmes involve teachers in learning over a longer period of time, allowing them to build on their existing knowledge and skills, reflect on their practice, and collaborate with colleagues.

- Conducting an effective need analysis before starting a formal professional development programme is important because it helps to ensure that the programmes meet the specific needs and goals of the teachers and the school. A need analysis can identify areas where teachers require support and where they may benefit from additional training and development opportunities. It can also help to identify any existing strengths and weaknesses in the teaching staff, as well as any gaps in knowledge or skills.

Before conducting the need analysis, it is important to identify the purpose and goals of the programme. This will help in determining what type of need analysis is required and what data needs to be collected. Data can be collected through a variety of methods, such as surveys, interviews, focus groups, and observation. Once the data has been collected, it should be analyzed to identify the areas where teachers need professional development. Once the areas where teachers need professional development have been identified, they should be prioritized based on their importance and impact on student learning. Based on the need analysis, a plan should be developed for the professional development programme. This plan should include specific objectives, strategies for achieving these objectives, and a timeline for implementation. The plan should also include a plan for evaluating the effectiveness of the professional development programme.

- Encouraging teacher Professional Learning Communities (PLCs) is a great way to foster collaborative CPD. PLCs provide teachers with opportunities to collaborate, share knowledge and experiences, and engage in reflective practice. Educational officers play a crucial role in encouraging and supporting teacher PLCs. They can facilitate the formation of PLCs by identifying common needs and interests among teachers and bringing them

together to collaborate and learn from one another. They can also provide resources and support for PLCs, such as meeting space, funding for professional development activities, and access to relevant research and literature.

- Integrating professional development programmes with the regular work schedule of teachers is an effective way to increase convenience and participation. Teachers are often busy and have limited time and energy to devote to professional development outside of their regular work schedule. By incorporating professional development activities into their regular workday, teachers are more likely to participate and apply new learning in their practice immediately. This approach also enhances praxis, as teachers have the opportunity to apply new knowledge and skills in real-time, receive feedback and support from colleagues, and reflect on their practice. Creation of PRG (Permanent Resource Group) including practicing teachers, retired hands, national and international experts can solve the issues related to resource persons.
- To overcome the limitations of 'Cascade model' of CPD, the 'Transformative model' can be implemented. The transformative model of CPD involves combining various processes and conditions from different CPD models to address the limitations of the cascading model. This model emphasizes a more collaborative and teacher-centered approach, where teachers are empowered to take ownership of their professional development and engage in ongoing reflective practice. It involves a range of activities, including collaborative planning and reflection, peer observation and feedback, action research, and ongoing support and coaching. By combining these different elements, the transformative model aims to create a more comprehensive and sustainable approach to CPD that leads to real changes in teaching practice.
- Collaborating with colleges and universities is a valuable way to provide school teachers with access to high-quality professional development

opportunities. These institutions have expertise in specific subject areas or educational practices, and can offer courses, workshops, and other learning experiences according to the needs of teachers. Furthermore, partnerships with colleges and universities will lead to research collaborations, where teachers and researchers work together to develop and implement evidence-based practices.

- Regular feedback from stakeholders is critical for the success of CPD programmes for educators. By collecting feedback and incorporating it into CPD programs, educators are more likely to be engaged in the learning process, leading to improved outcomes for educators and their students.
- Creating a supportive culture that values professional development can motivates teachers to participate in CPD programmes. This can be achieved by providing mentorship and coaching, peer support, and recognition of the achievements of participating teachers. Peer support and mentorship, in particular, provide opportunities for teachers to collaborate, share knowledge and skills, and learn from each other's experiences, which can be a powerful motivator for professional development. Additionally, recognition of achievements help to reinforce the importance of CPD and encourage teachers to continue to seek out opportunities for growth and development.
- Providing flexible scheduling options is an important factor in making professional development accessible to all teachers, regardless of their other commitments. Many teachers may have family or personal obligations that make it difficult to attend traditional in-person training sessions, so providing alternative options such as after-school sessions or online training will ensure that everyone has the opportunity to participate in professional development activities. Additionally, offering flexible scheduling will reduce teacher stress and workload, as they can choose the time and place that works best for them.

- Offering incentives such as pay increases, recognition, or additional professional development opportunities for teachers who participate in CPD programmes motivates teachers to engage more with such initiatives. These incentives demonstrate the value that the school or system places on professional development, and show teachers that their efforts are appreciated and recognized.
- Technology make CPD programmes more accessible and engaging. Online courses, webinars, and interactive modules are more convenient for teachers to access, and make it easier for administrators to track teacher progress and evaluate the effectiveness of the programme.
- Having a well-defined CPD policy in the state is essential to ensure that educators have access to the latest research and best practices in education, align with state education goals, and provide a framework for evaluating the effectiveness of professional development programmes. Such a policy outlines the goals and objectives of professional development, the types of programmes that are available, the criteria for selecting and evaluating professional development opportunities, and the roles and responsibilities of educators, administrators, and other stakeholders. A good CPD policy should also ensure that professional development opportunities are equitable and accessible to all educators, regardless of their location, experience level, or subject area expertise. It should also provide clear guidelines for how professional development must be integrated into the overall teaching and learning process, and how it should be evaluated to ensure that it is meeting the needs of educators and students. Moreover, the policy is to be regularly reviewed and updated based on feedback from educators, administrators, and other stakeholders to ensure that it remains relevant and effective.
- To address the incongruence in the perception of CPD, it is important to promote communication, collaboration, and shared goals among stakeholders. This can be achieved by promoting communication, collaboration, and shared goals among all involved parties, including

administrators, teachers, parents, and students. Regular meetings between administrators and teachers will ensure that everyone is on the same page regarding the goals and objectives of the CPD programme. Additionally, involving parents and students in the process may create a sense of shared responsibility for the success of the programmes and ensure that it is aligned with the needs of all stakeholders.

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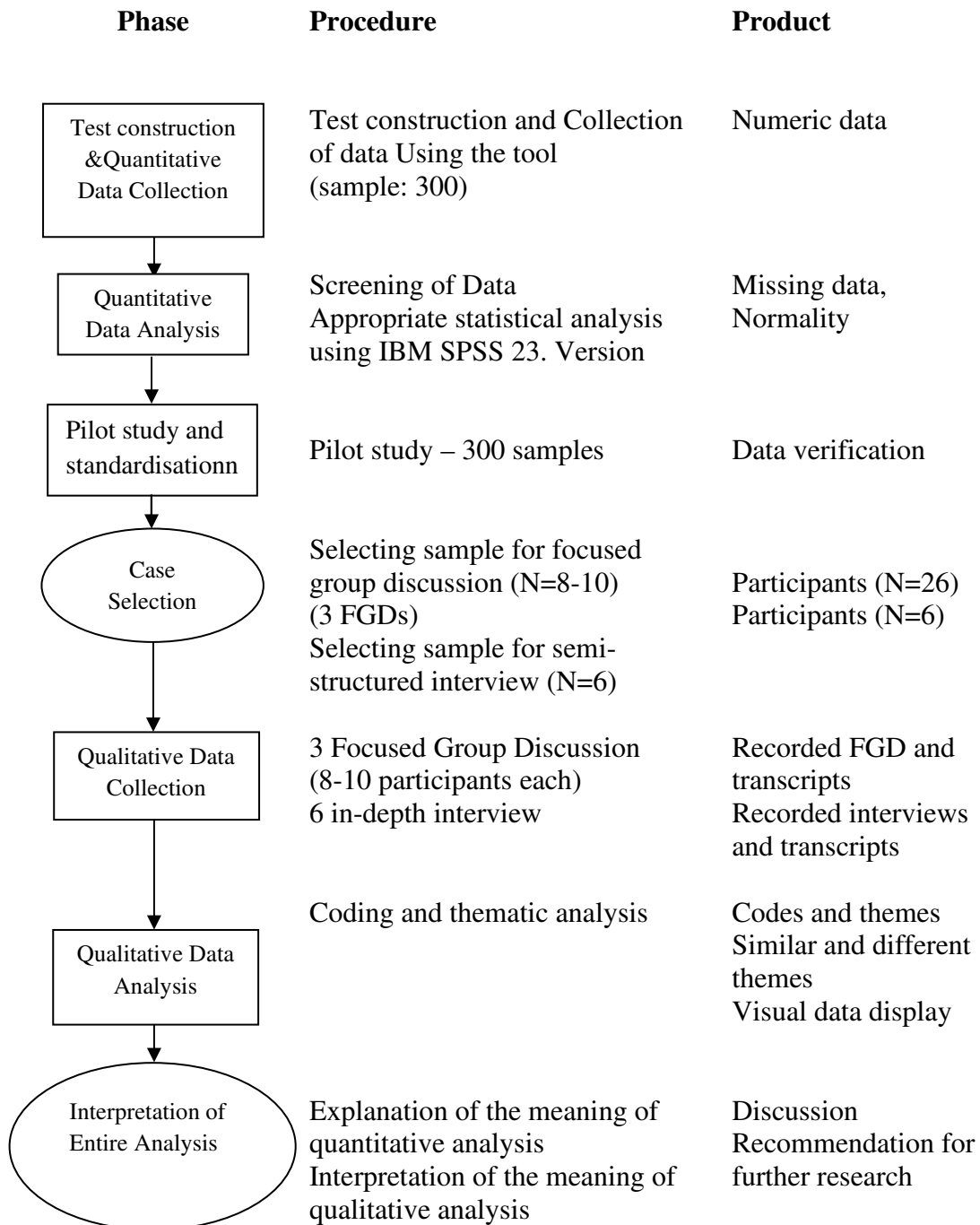
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APPENDICES

APPENDIX A

Visual Model for Explanatory Sequential Mixed Methods Design (Ivankova, 2002)



APPENDIX B
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
CONTINUOUS PROFESSIONAL DEVELOPMENT
ASSESSMENT SCALE
MALAYALAM VERSION (Draft)

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof. (Dr.) K.P MEERA
Professor
Department of Education

പ്രിയപ്പെട്ട അധ്യാപകരെ,

താഴെ തന്നിരിക്കുന്ന പ്രസ്താവനകൾ നിങ്ങളുടെ Continuous Professional Development (CPD) മായി ബന്ധപ്പെട്ടവയാണ്. ഇതിൽ രണ്ട് ഭാഗങ്ങളുണ്ട്. PART A പ്രൊഫഷണൽ വളർച്ചക്ക് നിങ്ങൾക്ക് ലഭ്യമായിട്ടുള്ള അവസരങ്ങളെ സംബന്ധിച്ചുള്ളതാണ്. PART B, CPD യോടുള്ള നിങ്ങളുടെ മനോഭാവം അളക്കുന്നതിനാണ്.

നിർദ്ദേശങ്ങൾ

1. ഇതിലെ പ്രസ്താവനകൾ ശ്രദ്ധാപൂർവ്വം വായിച്ച് നിങ്ങളുടെ അഭിപ്രായങ്ങൾ ഓരോന്നിനും നേരെയുള്ള കോളത്തിൽ (√) ചിഹ്നം ഉപയോഗിച്ച് രേഖപ്പെടുത്തണം .
2. PART A യിൽ ഉൾപ്പെടുത്തിയിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നേരെ 'എല്ലായ്പ്പോഴും', 'മിക്കപ്പോഴും', 'വല്ലപ്പോഴും', 'അപൂർവ്വമായി', 'ഒരിക്കലുമില്ല' എന്നിങ്ങനെ 5 വീതം പ്രതികരണങ്ങളാണ് നൽകിയിട്ടുള്ളത് .
3. PART B യിൽ ഉൾപ്പെടുത്തിയിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നേരെ 'ശക്തമായി യോജിക്കുന്നു', 'യോജിക്കുന്നു', 'അഭിപ്രായമില്ല', 'വിയോജിക്കുന്നു', 'ശക്തമായി വിയോജിക്കുന്നു' എന്നിങ്ങനെ 5 വീതം പ്രതികരണങ്ങളാണ് നൽകിയിട്ടുള്ളത്
4. ഒരു പ്രസ്താവനക്ക് നേരെ ഒന്നിലധികം പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തരുത് .
5. നിങ്ങൾ ഇവിടെ തരുന്ന പ്രതികരണങ്ങൾ ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രമേ ഉപയോഗിക്കുകയുള്ളൂ.

അധ്യാപകന്റെ/അധ്യാപികയുടെ പേര് :
സ്കൂളിന്റെ പേര് :
ഗവ:/ എയ്ഡഡ് :
സ്ത്രീ/പുരുഷൻ /മറ്റുള്ളവർ :
ഉപജില്ല :
ജില്ല :

വയസ്സ്

- 30 ൽ താഴെ
- 30 -40
- 40 നു മുകളിൽ

സേവന കാലയളവ്

- ❖ 5 വർഷത്തിൽ താഴെ
- ❖ 5 -10 വർഷം
- ❖ 10 -15 വർഷം
- ❖ 15 -20 വർഷം
- ❖ 20 വർഷത്തിന് മുകളിൽ

പ്രതിവർഷം പങ്കെടുക്കുന്ന അധ്യാപക പരിശീലന പരിപാടികളുടെ എണ്ണം

പ്രതിവർഷം പങ്കെടുക്കുന്ന വിഷയാധിഷ്ഠിത പരിശീലനങ്ങളുടെ എണ്ണം

വിദ്യാഭ്യാസ യോഗ്യത

- TTC
- ബിരുദം
- ബിരുദാനന്തര ബിരുദം
- B Ed/ M Ed/ NET/M Phil/ PhD.
- അംഗീകൃത ഡിപ്ലോമ, സർട്ടിഫിക്കറ്റ് കോഴ്സുകൾ

വിദ്യാലയം നിൽക്കുന്ന പ്രദേശം

- ❖ മുൻസിപ്പാലിറ്റി കോർപ്പറേഷൻ /
- ❖ ഗ്രാമപഞ്ചായത്ത്

ജോലി ചെയ്യുന്ന വിഭാഗം- LP /UP -

പഠിപ്പിക്കുന്ന വിഷയം -

PART A

Sl.No.	പ്രസ്താവന	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
1	സഹപ്രവർത്തകരുടെ ക്ലാസുകൾ കാണാനും വിലയിരുത്താനും കഴിയാറുണ്ട്.					
2	പ്രധാനാധ്യാപിക എന്റെ ക്ലാസുകൾ കൃത്യമായി വിലയിരുത്തി അഭിപ്രായം പങ്കുവെക്കാറുണ്ട്.					
3	ക്ലാസുകൾ മെച്ചപ്പെടുത്തുന്നതിന് സഹപ്രവർത്തകരുടെ നിർദ്ദേശങ്ങൾ എന്നെ സഹായിക്കാറുണ്ട്.					
4	ന്യതന പ്രവർത്തനങ്ങൾ നടക്കുന്ന വിദ്യാലയങ്ങൾ സന്ദർശിക്കാൻ അവസരം ലഭിക്കാറുണ്ട്.					
5	Professional Development നുള്ള എല്ലാ പിന്തുണയും എനിക്ക് വിദ്യാലയത്തിൽ നിന്ന് ലഭിക്കാറുണ്ട്.					
6	അടിസ്ഥാന യോഗ്യതക്ക് ഉപരിയായുള്ള അധിക വിദ്യാഭ്യാസ യോഗ്യതകൾ നേടുമ്പോൾ സവിശേഷമായ അംഗീകാരം വിദ്യാലയത്തിൽ നിന്ന് ലഭിക്കാറില്ല					
7	സ്കൂളിൽ തയ്യാറാക്കിയ അക്കാദമിക് മാസ്റ്റർ പ്ലാനിൽ അധ്യാപകരുടെ പ്രൊഫഷണൽ വളർച്ചക്ക് ആവശ്യമായ പദ്ധതികൾ ഉൾപ്പെടുത്തിയിട്ടില്ല.					
8	Regional Institute of English, CCRT തുടങ്ങിയ സ്ഥാപനങ്ങൾ നടത്തുന്ന പരിശീലന പരിപാടികളിൽ പങ്കെടുക്കാൻ അവസരം ലഭിക്കാറില്ല					
9	ഭിന്ന നിലവാരത്തിലുള്ള കുട്ടികളുമായി ഇടപെടുന്നതിന് സഹായകരമായ പരിശീലന പരിപാടികൾ സമയാ സമയങ്ങളിൽ ലഭിക്കാറുണ്ട്.					
10	വിദ്യാഭ്യാസ ഓഫീസർമാരുടെ ഫലപ്രദമായ അക്കാദമിക് മോണിറ്ററിങ് നടക്കാറുണ്ട്.					
11	BRC തലത്തിലുള്ള പരിശീലന പരിപാടികളിൽ റിസോഴ്സ് പേഴ്സൺ ആയി പ്രവർത്തിക്കാൻ ഉള്ള അവസരങ്ങൾ ലഭിക്കാറുണ്ട്.					
12	അധ്യാപക പരിശീലന പരിപാടികളിൽ RP മാരുടെ കാര്യക്ഷമതയില്ലായ്മ അനുഭവപ്പെട്ടിട്ടുണ്ട്.					
13	പാഠപുസ്തക രചനാ ശില്പശാലകൾ, ചോദ്യപേപ്പർ നിർമ്മാണശില്പശാലകൾ എന്നിവയിൽ പങ്കെടുക്കാൻ അവസരം ലഭിച്ചിട്ടില്ല					

Sl.No.	പ്രസ്താവന	എല്ലാപ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
14	SCERT, SIEMAT, SIET തുടങ്ങിയ സംസ്ഥാന തലത്തിലുള്ള സ്ഥാപനങ്ങളുമായി ബന്ധപ്പെട്ട പ്രവർത്തിക്കാൻ എനിക്ക് കഴിഞ്ഞിട്ടുണ്ട്.					
15	ജില്ലാ വിദ്യാഭ്യാസ പരിശീലന ഇൻസ്റ്റിറ്റ്യൂട്ട് (ഡയറ്റ്) ന്റെ ആഭിമുഖ്യത്തിൽ നടത്തുന്ന പരിശീലന പരിപാടികളിൽ പങ്കെടുത്തിട്ടുണ്ട്					
16	വിദ്യാഭ്യാസ വകുപ്പും മറ്റ് ഏജൻസികളും നടപ്പിലാക്കുന്ന മിക്ക പദ്ധതികളുടെയും കൃത്യമായ മോണിറ്ററിങ്ങും തുടർ പ്രവർത്തനങ്ങളും കാര്യക്ഷമമായി നടക്കാറില്ല					
17	പരിശീലന പരിപാടികളിലെ ഹാജർ പലപ്പോഴും അധികൃതർ കാര്യമായി എടുക്കാറില്ല .					
18	വ്യക്തിത്വ വികസനം, ജീവിത നൈപുണി തുടങ്ങിയ വിഷയങ്ങളെ അധികരിച്ച് വിദ്യാഭ്യാസ വകുപ്പ് സംഘടിപ്പിച്ച ക്ലാസ്സുകളിൽ പങ്കെടുക്കാൻ അവസരം ലഭിച്ചിട്ടുണ്ട്					
19	അവധിക്കാല അധ്യാപക പരിശീലനങ്ങൾ ഫലപ്രദമായി അനുഭവപ്പെട്ടിട്ടുണ്ട്.					
20	ഉപജില്ലാ ജില്ലാ സംസ്ഥാന തലങ്ങളിൽ നടക്കുന്ന വായന സാമഗ്രികളുടെ നിർമ്മാണ ശില്പശാലകളിൽ പങ്കെടുക്കാൻ എനിക്ക് അവസരം ലഭിച്ചിട്ടുണ്ട്.					
21	സമഗ്ര ശിക്ഷ കേരള(SSK) യുടെ ആഭിമുഖ്യത്തിൽ നടത്തുന്ന പഠന പോഷണ പരിപാടികൾ (ഹലോ ഇംഗ്ലീഷ് , ഉല്ലാസ ഗണിതം, മലയാളത്തിളക്കം etc.) അധ്യാപന നൈപുണി വളർത്തുന്നതിന് ഏറെ സഹായിച്ചിട്ടുണ്ട്.					
22	ബോധന ശാസ്ത്രത്തിലെ നൂതന ആശയങ്ങൾ (Modern trends in pedagogy) പരിചയപ്പെടാനോ പ്രാക്ടീസ് ചെയ്യാനോ അവസരം ലഭിക്കാറില്ല.					
23	SCERT നടത്തുന്ന അധ്യാപക പരിവർത്തന പരിപാടി എന്ന സർട്ടിഫിക്കറ്റ് കോഴ്സിൽ സജീവമായി പങ്കെടുക്കാൻ കഴിയുന്നുണ്ട്.					

Appendices

Sl.No.	പ്രസ്താവന	എല്ലാപ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
24	പൊതു വിദ്യാഭ്യാസ സംരക്ഷണ യജ്ഞത്തിന്റെ ഭാഗമായി നടത്തിയ അധ്യാപക ശാക്തീകരണ പരിപാടിയിൽ പങ്കെടുക്കാൻ കഴിഞ്ഞിട്ടുണ്ട്.					
25	NCERT, NUEPA തുടങ്ങിയ സ്ഥാപനങ്ങൾ നടത്തുന്ന പരിപാടിയിൽ പങ്കെടുക്കാൻ അവസരം ലഭിച്ചിട്ടുണ്ട്.					
26	അധ്യാപകർക്ക് സ്വയം പഠനത്തിനും അക്കാദമിക വളർച്ചക്കുമായി വിപുലമായ പദ്ധതികൾ വിദ്യാഭ്യാസ വകുപ്പ് ഒരുക്കുന്നുണ്ട്.					
27	കോവിഡ് കാലഘട്ടത്തിൽ ജില്ലാ / സംസ്ഥാന / ദേശീയതല വിദ്യാഭ്യാസ വെബിനാറുകളിൽ പങ്കെടുക്കാൻ കഴിഞ്ഞിട്ടുണ്ട്					
28	ക്ലാസ്സും പ്രവർത്തനങ്ങൾക്ക് സഹായകരമായ വിഭവങ്ങൾ സമഗ്രയിൽ നിന്ന് കണ്ടെത്താൻ കഴിഞ്ഞിട്ടില്ല.					
29	ദേശീയ വിദ്യാഭ്യാസ നയം 2020 നെക്കുറിച്ചുള്ള ചർച്ചകളിൽ പങ്കെടുക്കാനും അഭിപ്രായം അതതു വേദികളിൽ അറിയിക്കാനും കഴിഞ്ഞിട്ടുണ്ട്					
30	ഫസ്റ്റ് ബെൽ ക്ലാസ്സുകളുടെ തുടർച്ച ഉറപ്പു വരുത്തുവാൻ എന്റെ ക്ലാസ്സിലെ കുട്ടികളുമായി ഓൺലൈനിലൂടെയുള്ള ഇടപെടൽ ഫലപ്രദമായി അനുഭവപ്പെട്ടിട്ടില്ല.					
31	വിദ്യാഭ്യാസ സെമിനാറുകളിലെ പങ്കാളിത്തം ഞാൻ ഉറപ്പാക്കാറുണ്ട്.					
32	ചരിത്ര സ്മാരകങ്ങൾ, കോട്ടകൾ തുടങ്ങിയവ സന്ദർശിക്കാനും വസ്തുതകൾ മനസ്സിലാക്കാനും കഴിയാറുണ്ട്.					
33	ISRO, പ്ലാനറ്റോറിയം, വാനനിരീക്ഷണ കേന്ദ്രം തുടങ്ങിയ സ്ഥാപനങ്ങൾ സന്ദർശിക്കാനുള്ള അവസരങ്ങൾ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ട് .					
34	പാഠ്യപദ്ധതി വിനിമയത്തിനാവശ്യമായ E- വിഭവങ്ങൾ തയ്യാറാക്കുന്നതിന് ആവശ്യമായ ധാരണയുണ്ട്.					

Sl.No.	പ്രസ്താവന	എല്ലാസ്റ്റേപ്പും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
35	വിദ്യാഭ്യാസ സെമിനാറുകളിൽ പ്രബന്ധങ്ങൾ അവതരിപ്പിക്കാൻ കഴിഞ്ഞിട്ടുണ്ട്					
36	ഫസ്റ്റ്ബെൽക്ലാസ്സുകളുടെ തുടർപ്രവർത്തനങ്ങൾക്ക് ആവശ്യമായ വർക്ഷീറ്റ് നിർമ്മാണത്തിൽ പങ്കെടുത്തിട്ടുണ്ട്.					
37	കാർഷിക സർവ്വകലാശാലകൾ, മണ്ണ് ഗവേഷണ കേന്ദ്രം തുടങ്ങിയ സ്ഥാപനങ്ങൾ സന്ദർശിക്കാനും അവിടത്തെ വിദഗ്ധരുമായി സംവദിക്കാനും കഴിഞ്ഞിട്ടുണ്ട്					
38	അധ്യാപക കൂട്ടായ്മകളുടെ ആഭിമുഖ്യത്തിൽ നടക്കുന്ന പരിശീലനങ്ങളിൽ ഞാൻ നേതൃത്വം നൽകാറുണ്ട്.					
39	ടെലിവിഷനിലൂടെ സംപ്രേഷണം ചെയ്യപ്പെടുന്ന പരിപാടികൾ എന്നിലുള്ള അധ്യാപകനെ ശക്തിപ്പെടുത്തിയിട്ടുണ്ട്.					

PART B

Sl.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
1	കുട്ടികളുടെ പഠന പുരോഗതി സമയാസമയങ്ങളിൽ വിലയിരുത്താനും രക്ഷിതാക്കളുമായി പങ്കുവെക്കാനും എനിക്ക് കഴിയാറുണ്ട് .					
2	ടീച്ചിങ് മാന്വൽ തയ്യാറാകാതെ തന്നെ നല്ല രീതിയിൽ ക്ലാസ്സെടുക്കാൻ കഴിയുമെന്ന് എന്റെ അനുഭവത്തിന്റെ വെളിച്ചത്തിൽ എനിക്ക് പറയാൻ കഴിയും					
3	ഭിന്നശേഷിക്കാരായ കുട്ടികളെ പഠന പ്രവർത്തനത്തിന് സഹായിക്കാൻ ഞാൻ പ്രാപ്തയല്ല					

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Sl.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
4	പരിശീലനങ്ങളിൽ പങ്കെടുക്കുമ്പോൾ ഞാൻ അവധി ദിവസങ്ങളെക്കുറിച്ച് വേവലാതിപ്പെടാറില്ല					
5	എന്റെ ക്ലാസ്സിൽ പഠിക്കുന്ന ഓരോ കുട്ടിയേയും വ്യക്തിപരമായി അറിയാനും അവന്റെ കുടുംബ പശ്ചാത്തലം മനസ്സിലാക്കാനും ഗൃഹ സന്ദർശനം അനിവാര്യമാണെന്ന് ഞാൻ തിരിച്ചറിഞ്ഞിട്ടുണ്ട്.					
6	അധ്യാപക കൂട്ടായ്മകളിലെ സജീവ പങ്കാളിത്തം പ്രൊഫഷണൽ വികസനത്തിന് എന്നെ സഹായിച്ചിട്ടുണ്ട്.					
7	ക്ലാസ് മുറിയിൽ അനുഭവപ്പെടുന്ന പ്രശ്നങ്ങളെ ഗവേഷണാത്മകമായി സമീപിക്കാനും അവക്ക് പരിഹാരം കാണാനും എനിക്ക് കഴിഞ്ഞിട്ടുണ്ട്					
8	കുട്ടികളുടെ മോശമായ സാമൂഹ്യ സാമ്പത്തിക ചുറ്റുപാടുകളും പഠനത്തോടുമുള്ള താല്പര്യക്കുറവും മാണ് സ്കൂളിന്റെ പിന്നാക്കാവസ്ഥക്ക് പ്രധാന കാരണമെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
9	ടീച്ചിങ് മാന്വൽ കൃത്യമായി എഴുതാതെ ക്ലാസ്സെടുക്കുന്നത് എനിക്ക് സംതൃപ്തി നൽകാറില്ല					
10	പഠിപ്പിക്കുന്ന പാഠത്തെക്കുറിച്ചുള്ള സമഗ്രമായ ധാരണ ലഭിക്കുന്നതിന് പാഠാനുരൂപം (unit plan) അനിവാര്യമാണെന്ന് ഞാൻ കരുതുന്നു.					
11	ഫലപ്രദമായ പഠന ബോധന പ്രവർത്തനങ്ങൾക്ക് (teaching learning activities) അനുയോജ്യമായ പഠന സാമഗ്രികൾ കണ്ടെത്താനും ഉപയോഗിക്കാനും ഞാൻ ശ്രമിക്കാറുണ്ട്.					
12	പാട്ടു പാടാൻ കഴിവുള്ള സഹപ്രവർത്തകയുടെ സേവനം എന്റെ ഭാഷ ക്ലാസ്സിൽ ഉപയോഗപ്പെടുത്താൻ ഞാൻ മടി കാണിക്കാറില്ല					
13	കോവിഡ് കാലഘട്ടത്തിൽ രക്ഷിതാക്കൾക്ക് വേണ്ടി നടത്തുന്ന ഓൺലൈൻ മീറ്റിംഗുകൾക്കു വേണ്ടത്ര പ്രസക്തിയില്ല എന്ന് ഞാൻ കരുതുന്നു .					
14	വിദ്യാഭ്യാസ ജേർണലുകൾ വായിക്കാനും അവയിലെ നൂതനാശയങ്ങൾ ക്ലാസ്റൂമുകളിൽ പ്രയോഗിക്കാനും ഞാൻ ശ്രമിക്കാറുണ്ട് .					

Sl.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
15	വിവര വിനിമയ സാങ്കേതിക വിദ്യ ഉപയോഗിച്ചുള്ള അധ്യാപനം ആശയങ്ങൾ വ്യക്തമായി കുട്ടികളിലേക്കെത്തിക്കാൻ എന്നെ സഹായിക്കാറുണ്ട്.					
16	ക്ലാസ്സ്മുറികളിൽ സഹ പഠനത്തിനും സഹവർത്തിത പഠനത്തിനും അവസരമൊരുക്കുന്നത് ഫലപ്രദമാണെന്ന് എനിക്ക് അനുഭവപ്പെട്ടിട്ടില്ല.					
17	സ്കൂളിലെ വിവിധ ആവശ്യങ്ങൾക്കനുസരിച്ച് ഗുറിൾ മീറ്റ് ഫലപ്രദമായി സംഘടിപ്പിക്കുവാൻ എനിക്ക് ആത്മവിശ്വാസമുണ്ട്					
18	അധ്യാപനത്തെ സഹായിക്കുന്ന വിഡിയോകൾ ഞാൻ കൗതുകത്തോടെ വീക്ഷിക്കാറുണ്ട് .					
19	രക്ഷിതാക്കളെ വിശ്വാസത്തിലെടുക്കാനും അവരുടെ പരിപൂർണ്ണ സഹകരണം ഉറപ്പുവരുത്താനും എനിക്ക് കഴിഞ്ഞിട്ടുണ്ട്					
20	അപ്രതീക്ഷിതമായി വിദ്യാലയത്തിലുണ്ടാകുന്ന സംഭവങ്ങളെ വിശകലനം ചെയ്യാനും സമചിത്തതയോടെ പെരുമാറാനും എനിക്ക് കഴിയാറുണ്ട്.					
21	എന്റെ ക്ലാസ്സിലെ വ്യത്യസ്ത സ്വഭാവക്കാരായ ചില വിദ്യാർത്ഥികളെ അറിയാനും അവരുടെ പ്രശ്നങ്ങളിൽ ഇടപെടാനും ഞാൻ ശ്രദ്ധിക്കാറുണ്ട്.					
22	അധ്യാപന രംഗത്തുള്ള പുരോഗമനപരമായ മാറ്റങ്ങളെ ഞാൻ തുറന്ന മനസ്സോടെ സമീപിക്കാറുണ്ട്.					
23	വിഷയാടിസ്ഥാനത്തിലുള്ള WhatsApp ഗ്രൂപ്പുകളിലൂടെയുള്ള ചർച്ച പ്രസ്തുത വിഷയത്തിലുള്ള എന്റെ ധാരണകളെ മെച്ചപ്പെടുത്തിയിട്ടുണ്ടെന്നു ഞാൻ വിശ്വസിക്കുന്നു.					
24	കമ്പ്യൂട്ടറിനെക്കുറിച്ചുള്ള അടിസ്ഥാന ധാരണകൾ അറിഞ്ഞിരിക്കേണ്ടത് അനിവാര്യമായതിനാൽ ഞാൻ അക്കാര്യങ്ങൾ സ്വായത്തമാക്കിയിട്ടുണ്ട്.					
25	പഠന യാത്രകൾ വിജയകരമായി സംഘടിപ്പിക്കാനുള്ള ആത്മ വിശ്വാസം എനിക്കുണ്ട്.					

Appendices

Sl.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
26	ഓരോ ദിവസത്തെ ക്ലാസിനു ശേഷവും പ്രതിഫലനാത്മകക്കുറിപ്പ് (reflection note (എഴുതുന്നത് ആവശ്യമാണെന്ന് ഞാൻ കരുതുന്നില്ല.					
27	കലാ സാഹിത്യ സാംസ്കാരിക മണ്ഡലങ്ങളിൽ പ്രവർത്തിക്കുന്ന പ്രതിഭകളുമായി സംവദിക്കാനും അതിലൂടെ ലഭിക്കുന്ന ആശയങ്ങൾ എന്റെ ക്ലാസ്സും പ്രവർത്തനങ്ങളിൽ ഉൾച്ചേർക്കാനും കഴിഞ്ഞിട്ടുണ്ട് .					
28	അടിസ്ഥാനയോഗ്യതക്കുറവായുള്ള കോഴ്സുകൾ ചെയ്യാൻ ഞാൻ സദാ സന്നദ്ധയാണ് .					
29	അധ്യാപിക എന്ന നിലയിലുള്ള എന്റെ പ്രകടനത്തെ ആത്മ പരിശോധനക്ക് വിധേയമാക്കാറുണ്ട്.					
30	T.T.C./D.El.Ed./B.Ed.പഠന കാലത്തു തന്നെ ആവശ്യമായ പരിശീലനം ലഭിച്ചത് കൊണ്ട് തുടർ പരിശീലനങ്ങൾ അനിവാര്യമാണെന്ന് ഞാൻ കരുതുന്നില്ല.					
31	പ്രതിഭാധനരായ കുട്ടികളുടെ കഴിവുകൾക്കനുസൃതമായി വെല്ലുവിളികൾ നിറഞ്ഞ പഠന പ്രവർത്തനങ്ങൾ കൊടുക്കാൻ കഴിയാറുണ്ട്.					
32	School Resource Group എന്നിലുള്ള അധ്യാപകനെ ശക്തിപ്പെടുത്താറുണ്ട്					
33	പഠന പ്രവർത്തനങ്ങൾക്ക് അനുയോജ്യമായ രീതിയിൽ ക്ലാസ് മുറി ഒരുക്കുന്നതിന് ഞാൻ ശ്രദ്ധിക്കാറുണ്ട്.					
34	ദിനാചരണങ്ങളെ (day celebrations) പഠന പ്രവർത്തനവുമായി ബന്ധപ്പെടുത്തുന്നതു ഫലപ്രദമാണെന്ന് ഞാൻ തിരിച്ചറിഞ്ഞിട്ടുണ്ട്.					
35	സ്കൂളുകളിലെ വിവിധ ക്ലബ്ബുകളുടെ നേതൃസ്ഥാനം ഏറ്റെടുക്കാൻ ഞാൻ ഒരിക്കലും മടികാണിക്കാറില്ല					
36	വിഷയ സംബന്ധമായ പ്രശ്നങ്ങൾ ചർച്ച ചെയ്യാനും പരിഹാരം കാണാനും School Resource Group സഹായകരമല്ല					

Sl.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
37	Building as a Learning Aid എന്ന ആശയത്തെ സാക്ഷ്യംകരിക്കാൻ എന്റെ വിദ്യാലയ പരിസരത്തെ ഞാൻ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ട്.					
38	സ്കൂളിലെ ജൈവ വൈവിധ്യ പാർക്കിനെ ക്ലാസ്സും പഠനവുമായി ബന്ധപ്പെടുത്താൻ എനിക്ക് കഴിഞ്ഞിട്ടില്ല					
39	ക്ലസ്റ്റർ പരിശീലനം സമയബന്ധിതമായി നടത്താൻ കഴിയാത്തത് അധ്യാപകരുടെ കൂടിച്ചേരലിനുള്ള അവസരം നിഷേധിച്ചിട്ടുണ്ട്.					
40	ഉപജില്ലാ/ ജില്ലാതല അധ്യാപക ശാക്തീകരണ പരിപാടികളിൽ റിസോഴ്സ് പേഴ്സൺ ആയി പ്രവർത്തിക്കാൻ അവസരം ലഭിച്ചാൽ ഞാൻ സന്തോഷത്തോടെ ഏറ്റെടുക്കാൻ തയ്യാറാണ്.					
41	ചോദ്യപേപ്പർ നിർമ്മാണ ശില്പ ശാലകളിൽ പങ്കെടുക്കാൻ എനിക്ക് താല്പര്യമുണ്ട്.					
42	SCERT നടത്തുന്ന അധ്യാപക പരിവർത്തന പരിപാടി എന്ന സർട്ടിഫിക്കറ്റ് കോഴ്സ് എന്റെ അധ്യാപക മികവിനെ സഹായിക്കുമെന്ന് ഞാൻ കരുതുന്നില്ല .					

APPENDIX C
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
CONTINUOUS PROFESSIONAL DEVELOPMENT ASSESSMENT SCALE
ENGLISH VERSION (Draft)

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof (Dr.) K.P MEERA
Professor
Department of Education

Dear teacher,

The following statements are related to your Continuous Professional Development (CPD) which has got two parts. While Part A is related to statements which assess the different CPD opportunities available to you; Part B assesses your attitude towards CPD.

Instructions

1. Read the statements carefully and put a tick mark (√) against your response.
2. In part A, for each item five responses were given such as Always, Often, Sometimes, Rarely and Not at all.
3. In part B also five responses were given such as, Strongly Agree, Agree, No opinion, Disagree and Strongly disagree.
4. Please select only one response per statement.
5. It is assured that the responses will be kept confidential and used only for research purposes.

PART A

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
1	We are given chances to watch and evaluate the classes of our peers.					
2	The head teacher regularly assesses my classes and communicates her perspective effectively.					
3	The input and recommendations provided by my colleagues are beneficial in improving the quality of my classes.					

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
4	There are opportunities to visit schools that are implementing innovative practices.					
5	My school provides me with consistent support for my professional development.					
6	The department does not provide any specific acknowledgement or recognition for obtaining additional academic or professional credentials.					
7	The academic plan of the school does not incorporate any provisions for the professional development of teachers.					
8	I have not received chances to participate in the training programmes conducted by Regional Institute of English and CCRT.					
9	Training programmes are available from time to time to engage children with special needs.					
10	Academic monitoring by educational officers takes place in an effective manner.					
11	There are opportunities to play the role of resource person in BRC level programmes.					
12	In my experience, the Resource Persons (RPs) who facilitated the training programmes were not as efficient or effective as I had expected.					
13	Didn't get opportunity to participate in textbook writing workshops or question paper preparation workshops.					
14	I've had the opportunity to collaborate with state-level institutions such as SCERT, SIET, and SIEMAT.					
15	Participated in professional enrichment programmes conducted under the auspices of DIET (District Institute of Education and Training).					
16	Many programmes implemented by the Department of Education and other agencies do not have adequate monitoring and follow-up.					

Appendices

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
17	Attendance at training programmes is frequently not monitored by authorities.					
18	I have been given the chance to participate in professional development programmes focused on areas such as personality development and life skills education.					
19	Teacher training programmes conducted during vacation periods have been proven to be effective.					
20	I have had the opportunity to participate in workshops related to reading material preparation held at sub district, district and state levels.					
21	The initiatives organized under SSK's auspices (<i>Hello English, Malayalathilakkam, Ullasaganitham</i> etc.) have been instrumental in my growth and development as an educator.					
22	There is no opportunity to experience or practice modern trends in pedagogy.					
23	I could take part in Teacher Transformation Programme, a certificate course conducted by SCERT.					
24	I have been able to participate in the teacher empowerment programmes conducted as part of public education rejuvenation mission.					
25	I have been given the provision to participate in programmes conducted by NCERT, NEUPA etc.					
26	The Department of Education arranges various programmes and events to help teachers enhance their academic skills and engage in self-study.					
27	Amidst the COVID-19 pandemic breakdown, I had the opportunity to attend webinars at the district, state, and national levels.					
28	It was not possible to locate useful materials for classroom activities in 'Samagra'.					

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
29	I have actively taken part in forums related to NEP 2020 and shared my views during discussions.					
30	Online interaction with students in my class has not been found to be effective in supporting the First Bell classes.					
31	I am committed to ensuring participation in educational seminars.					
32	I have got the opportunity to explore and visit historical monuments and forts.					
33	I have utilized the opportunity to visit places such as ISRO, planetarium, and observatory.					
34	I have adequate knowledge for preparing e-materials for curriculum transaction					
35	I could present academic papers in educational seminars.					
36	Participated in the preparation of worksheets required for supporting First Bell classes.					
37	I had the opportunity to visit agricultural universities and soil research centers and engage in discussions with experts in the field.					
38	I have organised and facilitated training sessions on behalf of teachers' groups.					
39	The educational programmes telecasted on television channels have empowered me as a teacher.					

PART B

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
1	I can promptly evaluate the children's learning progress and effectively convey it to their parents.					
2	Based on my experience, I can say that preparing a teaching manual is not essential for conducting a good class.					
3	Providing support to children with disabilities in my classroom is not something I am capable of doing.					
4	I am not concerned about missing holidays when I attend teacher trainings					
5	I have realized that house visits are essential to get to know each child in my class personally and understand their family background.					
6	Taking an active role in teacher communities has helped me grow professionally.					
7	By taking a research-based approach to deal with challenges that arise in my classroom, I have been able to find out solutions.					
8	I believe that the main reason for the backwardness of the school is the poor socio economic background of the children and their lack of interest in learning.					
9	Teaching a class without a well-written teaching manual does not bring me a sense of satisfaction.					
10	To gain a comprehensive understanding of the subject being taught, I believe it is essential to have a well-designed unit plan that encompasses all the necessary elements.					
11	I make an effort to locate and utilize suitable teaching and learning resources to ensure effective learning activities in the classroom.					

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
12	I am fully willing to ask for help from colleagues who have musical talents to support my language classes.					
13	In my opinion, virtual meetings with parents are inadequate during the Covid-19 pandemic.					
14	I try to read educational journals and put into practice innovative ideas in classroom.					
15	The use of ICT (Information and Communications Technology) in teaching enables me to effectively communicate ideas to children in a clear manner.					
16	From my personal experience, I do not believe that offering chances for peer learning and collaborative learning in the classroom has been effective.					
17	I feel confident in my ability to effectively organize Google Meet sessions to meet the various needs of the school.					
18	I am interested in watching videos that aid me in my teaching.					
19	I have been able to take the parents into confidence and ensure their full cooperation.					
20	I am capable of analyzing unforeseen situations that occur at school and maintaining composure in my actions.					
21	I try to get to know some of the different students in my class and deal with their problems.					
22	I am receptive to progressive changes in teaching.					
23	I believe that the discussion through WhatsApp groups has improved my understanding of the subjects I teach.					
24	Since I believe that having a basic understanding of computers is essential, I have mastered the fundamental concepts of computers.					

Appendices

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
25	I have the confidence to organize study tours successfully.					
26	I believe that writing a reflection note after each day's class is not necessary.					
27	I have been able to interact with talented people in the fields of art, literature, and incorporate the ideas I gained from them into my classroom activities.					
28	I am enthusiastic about pursuing additional courses that go beyond the basic qualifications needed for my present teaching post.					
29	My own teaching performance is regularly subjected to introspection.					
30	In my view, additional training sessions are not needed since I received the necessary training during my TTC/D.Ed/B.Ed program					
31	Challenging learning activities are provided according to the abilities of gifted children					
32	The School Resource Group (SRG) strengthens my skills as a teacher.					
33	It is important for me to prepare the classroom ambience to align with the learning activities.					
34	Relating day celebrations with day-to-day classroom activities has proven to be effective in my teaching experience.					
35	I am always willing to take on leadership roles in different school clubs.					
36	The School Resource Group is not helpful in addressing and finding solutions to difficulties related to specific subjects.					
37	I have utilized my school surroundings to implement the concept of Building as a Learning Aid (BALA)					

Appendices

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
38	I have not been able to relate the school biodiversity park to classroom learning.					
39	The lack regular cluster training has denied the opportunity for teachers to meet.					
40	I would be delighted to take on the role of a resource person in sub-district or district-level teacher empowerment programs, if given the opportunity.					
41	I am interested in participating question paper preparation workshops.					
42	I think that the certificate course entitled Teacher Transformation Programme conducted by SCERT will not help my teaching.					

APPENDIX D
 DEPARTMENT OF EDUCATION
 UNIVERSITY OF CALICUT
CONTINUOUS PROFESSIONAL DEVELOPMENT
ASSESSMENT SCALE
 MALAYALAM VERSION (Final)

RACHANA M.V
 Part-Time Research Scholar
 Department of Education

Prof. (Dr.) K.P MEERA
 Professor
 Department of Education

പ്രിയപ്പെട്ട അധ്യാപകരെ,

താഴെ തന്നിരിക്കുന്ന പ്രസ്താവനകൾ നിങ്ങളുടെ Continuous Professional Development (CPD) മായി ബന്ധപ്പെട്ടവയാണ്. ഇതിൽ രണ്ട് ഭാഗങ്ങളുണ്ട്. PART A പ്രൊഫഷണൽ വളർച്ചക്ക് നിങ്ങൾക്ക് ലഭ്യമായിട്ടുള്ള അവസരങ്ങളെ സംബന്ധിച്ചുള്ളതാണ്. PART B, CPD യോടുള്ള നിങ്ങളുടെ മനോഭാവം അളക്കുന്നതിനാണ്.

നിർദ്ദേശങ്ങൾ

6. ഇതിലെ പ്രസ്താവനകൾ ശ്രദ്ധാപൂർവ്വം വായിച്ച് നിങ്ങളുടെ അഭിപ്രായങ്ങൾ ഓരോന്നിനും നേരെയുള്ള കോളത്തിൽ (√) ചിഹ്നം ഉപയോഗിച്ച് രേഖപ്പെടുത്തണം .
7. PART A യിൽ ഉൾപ്പെടുത്തിയിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നേരെ ‘എല്ലായ്പ്പോഴും’, ‘മിക്കപ്പോഴും’, ‘വല്ലപ്പോഴും’, ‘അപൂർവ്വമായി’, ‘ഒരിക്കലുമില്ല’ എന്നിങ്ങനെ 5 വീതം പ്രതികരണങ്ങളാണ് നൽകിയിട്ടുള്ളത് .
8. PART B യിൽ ഉൾപ്പെടുത്തിയിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നേരെ ‘ശക്തമായി യോജിക്കുന്നു’, ‘യോജിക്കുന്നു’, ‘അഭിപ്രായമില്ല’, ‘വിയോജിക്കുന്നു’, ‘ശക്തമായി വിയോജിക്കുന്നു’ എന്നിങ്ങനെ 5 വീതം പ്രതികരണങ്ങളാണ് നൽകിയിട്ടുള്ളത്
9. ഒരു പ്രസ്താവനക്ക് നേരെ ഒന്നിലധികം പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തരുത് .
10. നിങ്ങൾ ഇവിടെ തരുന്ന പ്രതികരണങ്ങൾ ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രമേ ഉപയോഗിക്കുകയുള്ളൂ.

അധ്യാപകന്റെ/അധ്യാപികയുടെ പേര് :
 സ്കൂളിന്റെ പേര് :
 ഗവ:/ എയ്ഡഡ് :
 സ്ത്രീ/പുരുഷൻ /മറ്റുള്ളവർ :
 ഉപജില്ല :
 ജില്ല :

വയസ്സ്

- 30 ൽ താഴെ
- 30 -40
- 40 നു മുകളിൽ

സേവന കാലയളവ്

- ❖ 5 വർഷത്തിൽ താഴെ
- ❖ 5 -10 വർഷം
- ❖ 10 -15 വർഷം
- ❖ 15 -20 വർഷം
- ❖ 20 വർഷത്തിന് മുകളിൽ

പ്രതിവർഷം പങ്കെടുക്കുന്ന അധ്യാപക പരിശീലന പരിപാടികളുടെ എണ്ണം

പ്രതിവർഷം പങ്കെടുക്കുന്ന വിഷയാധിഷ്ഠിത പരിശീലനങ്ങളുടെ എണ്ണം

വിദ്യാഭ്യാസ യോഗ്യത

- TTC
- ബിരുദം
- ബിരുദാനന്തര ബിരുദം
- B Ed/ M Ed/ NET/M Phil/ PhD.
- അംഗീകൃത ഡിപ്ലോമ, സർട്ടിഫിക്കറ്റ് കോഴ്സുകൾ

വിദ്യാലയം നിൽക്കുന്ന പ്രദേശം

- ❖ മുൻസിപ്പാലിറ്റി കോർപ്പറേഷൻ /
- ❖ ഗ്രാമപഞ്ചായത്ത്

ജോലി ചെയ്യുന്ന വിഭാഗം- LP /UP -

പഠിപ്പിക്കുന്ന വിഷയം -

PART A

Sl.No.	പ്രസ്താവന	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
1	സഹപ്രവർത്തകരുടെ ക്ലാസുകൾ കാണാനും വിലയിരുത്താനും കഴിയാറുണ്ട്.					
2	പ്രധാനാധ്യാപിക എന്റെ ക്ലാസുകൾ കൃത്യമായി വിലയിരുത്തി അഭിപ്രായം പങ്കുവെക്കാറുണ്ട്.					
3	ന്യൂന പ്രവർത്തനങ്ങൾ നടക്കുന്ന വിദ്യാലയങ്ങൾ സന്ദർശിക്കാൻ അവസരം ലഭിക്കാറുണ്ട്.					
4	Professional Developmentനുള്ള എല്ലാ പിന്തുണയും എനിക്ക് വിദ്യാലയത്തിൽ നിന്ന് ലഭിക്കാറുണ്ട്.					
5	സ്കൂളിൽ തയ്യാറാക്കിയ അക്കാദമിക് മാസ്റ്റർ പ്ലാനിൽ അധ്യാപകരുടെ പ്രൊഫഷണൽ വളർച്ചക്ക് ആവശ്യമായ പദ്ധതികൾ ഉൾപ്പെടുത്തിയിട്ടില്ല.					
6	ഭിന്ന നിലവാരത്തിലുള്ള കുട്ടികളുമായി ഇടപെടുന്നതിന് സഹായകരമായ പരിശീലന പരിപാടികൾ സമയാ സമയങ്ങളിൽ ലഭിക്കാറുണ്ട്.					
7	വിദ്യാഭ്യാസ ഓഫീസർമാരുടെ ഫലപ്രദമായ അക്കാദമിക് മോണിറ്ററിങ് നടക്കാറുണ്ട്.					
8	വിദ്യാഭ്യാസ വകുപ്പും മറ്റ് ഏജൻസികളും നടപ്പിലാക്കുന്ന മിക്ക പദ്ധതികളുടെയും കൃത്യമായ മോണിറ്ററിങ്ങും തുടർ പ്രവർത്തനങ്ങളും കാര്യക്ഷമമായി നടക്കാറില്ല					
9	പരിശീലന പരിപാടികളിലെ ഹാജർ പലപ്പോഴും അധികൃതർ കാര്യമായി എടുക്കാറില്ല .					
10	വ്യക്തിത്വ വികസനം, ജീവിത നൈപുണി തുടങ്ങിയ വിഷയങ്ങളെ അധികരിച്ച് വിദ്യാഭ്യാസ വകുപ്പ് സംഘടിപ്പിച്ച ക്ലാസ്സുകളിൽ പങ്കെടുക്കാൻ അവസരം ലഭിച്ചിട്ടുണ്ട്					
11	അവധിക്കാല അധ്യാപക പരിശീലനങ്ങൾ ഫലപ്രദമായി അനുഭവപ്പെട്ടിട്ടുണ്ട്.					
12	ഉപജില്ലാ ജില്ലാ സംസ്ഥാന തലങ്ങളിൽ നടക്കുന്ന വായന സാമഗ്രികളുടെ നിർമ്മാണ ശില്പശാലകളിൽ പങ്കെടുക്കാൻ എനിക്ക് അവസരം ലഭിച്ചിട്ടുണ്ട്.					

Sl.No.	പ്രസ്താവന	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
13	സമഗ്ര ശിക്ഷ കേരള(SSK) യുടെ ആഭിമുഖ്യത്തിൽ നടത്തുന്ന പഠന പോഷണ പരിപാടികൾ (ഹലോ ഇംഗ്ലീഷ് , ഉല്ലാസ ഗണിതം, മലയാളത്തിളക്കം etc.) അധ്യാപന നൈപുണി വളർത്തുന്നതിന് ഏറെ സഹായിച്ചിട്ടുണ്ട്.					
14	അധ്യാപകർക്ക് സ്വയം പഠനത്തിനും അക്കാദമിക വളർച്ചക്കുമായിവിപുലമായ പദ്ധതികൾ വിദ്യാഭ്യാസ വകുപ്പ് ഒരുക്കുന്നുണ്ട്.					
15	കോവിഡ് കാലഘട്ടത്തിൽ ജില്ലാ /സംസ്ഥാന / ദേശീയതല വിദ്യാഭ്യാസ വെബിനാറുകളിൽ പങ്കെടുക്കാൻ കഴിഞ്ഞിട്ടുണ്ട്					
16	ക്ലാസ്സും പ്രവർത്തനങ്ങൾക്ക് സഹായകരമായ വിഭവങ്ങൾ സമഗ്രയിൽ നിന്ന് കണ്ടെത്താൻ കഴിഞ്ഞിട്ടില്ല.					
17	ദേശീയ വിദ്യാഭ്യാസ നയം 2020 നെക്കുറിച്ചുള്ള ചർച്ചകളിൽ പങ്കെടുക്കാനും അഭിപ്രായം അതതു വേദികളിൽ അറിയിക്കാനും കഴിഞ്ഞിട്ടുണ്ട്					
18	ഫസ്റ്റ് ബെൽ ക്ലാസ്സുകളുടെ തുടർച്ച ഉറപ്പു വരുത്തുവാൻ എന്റെ ക്ലാസ്സിലെ കുട്ടികളുമായി ഓൺലൈനിലൂടെയുള്ള ഇടപെടൽ ഫലപ്രദമായി അനുഭവപ്പെട്ടിട്ടില്ല.					
19	വിദ്യാഭ്യാസ സെമിനാറുകളിലെ പങ്കാളിത്തം ഞാൻ ഉറപ്പാക്കാറുണ്ട്.					
20	ചരിത്ര സ്മാരകങ്ങൾ , കോട്ടകൾ തുടങ്ങിയവ സന്ദർശിക്കാനും വസ്തുതകൾ മനസ്സിലാക്കാനുംകഴിയാറുണ്ട്.					
21	ISRO, പ്ലാനറ്റോറിയം, വാനനിരീക്ഷണ കേന്ദ്രം തുടങ്ങിയസ്ഥാപനങ്ങൾ സന്ദർശിക്കാനുള്ള അവസരങ്ങൾ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ട് .					
22	പാഠ്യപദ്ധതി വിനിമയത്തിനാവശ്യമായ E- വിഭവങ്ങൾ തയ്യാറാക്കുന്നതിന് ആവശ്യമായ ധാരണയുണ്ട്.					
23	വിദ്യാഭ്യാസ സെമിനാറുകളിൽ പ്രബന്ധങ്ങൾ അവതരിപ്പിക്കാൻ കഴിഞ്ഞിട്ടുണ്ട്					

Appendices

SI.No.	പ്രസ്താവന	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	വല്ലപ്പോഴും	അപൂർവമായി	ഒരിക്കലുമില്ല
24	ഫസ്റ്റ്ബെൽക്ലാസ്സുകളുടെ തുടർപ്രവർത്തനങ്ങൾക്ക് ആവശ്യമായ വർക്ക്ഷീറ്റ് നിർമ്മാണത്തിൽ പങ്കെടുത്തിട്ടുണ്ട്.					
25	അധ്യാപക കൂട്ടായ്മകളുടെ ആഭിമുഖ്യത്തിൽ നടക്കുന്ന പരിശീലനങ്ങളിൽ ഞാൻ നേതൃത്വം നൽകാറുണ്ട്.					
26	ടെലിവിഷനിലൂടെ സംപ്രേഷണം ചെയ്യപ്പെടുന്ന പരിപാടികൾ എന്നിലുള്ള അധ്യാപകനെ ശക്തിപ്പെടുത്തിയിട്ടുണ്ട്.					

PART B

SI.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
1	കുട്ടികളുടെ പഠന പുരോഗതി സമയാസമയങ്ങളിൽ വിലയിരുത്താനും രക്ഷിതാക്കളുമായി പങ്കുവെക്കാനും എനിക്ക് കഴിയാറുണ്ട് .					
2	അധ്യാപക കൂട്ടായ്മകളിലെ സജീവ പങ്കാളിത്തം പ്രോഫഷണൽ വികസനത്തിന് എന്ന സഹായിച്ചിട്ടുണ്ട്.					
3	ക്ലാസ് മുറിയിൽ അനുഭവപ്പെടുന്ന പ്രശ്നങ്ങളെ ഗവേഷണാത്മകമായി സമീപിക്കാനും അവക്ക് പരിഹാരം കാണാനും എനിക്ക് കഴിഞ്ഞിട്ടുണ്ട്					
4	പഠിപ്പിക്കുന്ന പാഠത്തെക്കുറിച്ചുള്ള സമഗ്രമായ ധാരണ ലഭിക്കുന്നതിന് പാഠാനുക്രമം (unit plan) അനിവാര്യമാണെന്ന് ഞാൻ കരുതുന്നു.					
5	ഫലപ്രദമായ പഠന ബോധന പ്രവർത്തനങ്ങൾക്ക് (teaching learning activities) അനുയോജ്യമായ പഠന സാമഗ്രികൾ കണ്ടെത്താനും ഉപയോഗിക്കാനും ഞാൻ ശ്രമിക്കാറുണ്ട്.					

SI.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അടിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
6	കോവിഡ് കാലഘട്ടത്തിൽ രക്ഷിതാക്കൾക്ക് വേണ്ടി നടത്തുന്ന ഓൺലൈൻ മീറ്റിംഗുകൾക്കു വേണ്ടത്ര പ്രസക്തിയില്ല എന്ന് ഞാൻ കരുതുന്നു .					
7	വിദ്യാഭ്യാസ ജേർണലുകൾ വായിക്കാനും അവയിലെ നൂതനാശയങ്ങൾ ക്ലാസ്റൂമുകളിൽ പ്രയോഗിക്കാനും ഞാൻ ശ്രമിക്കാറുണ്ട് .					
8	വിവര വിനിമയ സാങ്കേതിക വിദ്യ ഉപയോഗിച്ചുള്ള അധ്യാപനം ആശയങ്ങൾ വ്യക്തമായി കുട്ടികളിലേക്കെത്തിക്കാൻ എന്നെ സഹായിക്കാറുണ്ട്.					
9	ക്ലാസ്റൂമുകളിൽ സഹ പഠനത്തിനും സഹവർത്തിത പഠനത്തിനും അവസരമൊരുക്കുന്നത് ഫലപ്രദമാണെന്ന് എനിക്ക് അനുഭവപ്പെട്ടിട്ടില്ല.					
10	സ്കൂളിലെ വിവിധ ആവശ്യങ്ങൾക്കനുസരിച്ച് ഗൂഗിൾ മീറ്റ് ഫലപ്രദമായി സംഘടിപ്പിക്കുവാൻ എനിക്ക് ആത്മവിശ്വാസമുണ്ട്					
11	അധ്യാപനത്തെ സഹായിക്കുന്ന വിഡിയോകൾ ഞാൻ കൗതുകത്തോടെ വീക്ഷിക്കാറുണ്ട് .					
12	രക്ഷിതാക്കളെ വിശ്വാസത്തിലെടുക്കാനും അവരുടെ പരിപൂർണ്ണ സഹകരണം ഉറപ്പുവരുത്താനും എനിക്ക് കഴിഞ്ഞിട്ടുണ്ട്					
13	അപ്രതീക്ഷിതമായി വിദ്യാലയത്തിലുണ്ടാകുന്ന സംഭവങ്ങളെ വിശകലനം ചെയ്യാനും സമചിത്തതയോടെ പെരുമാറാനും എനിക്ക് കഴിയാറുണ്ട്.					
14	എന്റെ ക്ലാസ്സിലെ വ്യത്യസ്ത സ്വഭാവക്കാരായ ചില വിദ്യാർത്ഥികളെ അറിയാനും അവരുടെ പ്രശ്നങ്ങളിൽ ഇടപെടാനും ഞാൻ ശ്രമിക്കാറുണ്ട്.					
15	അധ്യാപന രംഗത്തുള്ള പുരോഗമനപരമായ മാറ്റങ്ങളെ ഞാൻ തുറന്ന മനസ്സോടെ സമീപിക്കാറുണ്ട്.					

Appendices

SI.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അടിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
16	വിഷയാടിസ്ഥാനത്തിലുള്ള WhatsApp ഗ്രൂപ്പുകളിലൂടെയുള്ള ചർച്ച പ്രസ്തുത വിഷയത്തിലുള്ള എന്റെ ധാരണകളെ മെച്ചപ്പെടുത്തിയിട്ടുണ്ടെന്നു ഞാൻ വിശ്വസിക്കുന്നു.					
17	കമ്പ്യൂട്ടറിനെക്കുറിച്ചുള്ള അടിസ്ഥാന ധാരണകൾ അറിഞ്ഞിരിക്കേണ്ടത് അനിവാര്യമായതിനാൽ ഞാൻ അക്കാര്യങ്ങൾ സ്വായത്തമാക്കിയിട്ടുണ്ട്.					
18	ഓരോ ദിവസത്തെ ക്ലാസിനു ശേഷവും പ്രതിഫലനാത്മകക്കുറിപ്പ് (reflection note (എഴുതുന്നത് ആവശ്യമാണെന്ന് ഞാൻ കരുതുന്നില്ല					
19	കലാ സാഹിത്യ സാംസ്കാരിക മണ്ഡലങ്ങളിൽ പ്രവർത്തിക്കുന്ന പ്രതിഭകളുമായി സംവദിക്കാനും അതിലൂടെ ലഭിക്കുന്ന ആശയങ്ങൾ എന്റെ ക്ലാസ്സും പ്രവർത്തനങ്ങളിൽ ഉൾച്ചേർക്കാനും കഴിഞ്ഞിട്ടുണ്ട് .					
20	അടിസ്ഥാനയോഗ്യതക്കുപരിയായുള്ള കോഴ്സുകൾ ചെയ്യാൻ ഞാൻ സദാ സന്നദ്ധനാണ് .					
21	അധ്യാപിക എന്ന നിലയിലുള്ള എന്റെ പ്രകടനത്തെ ആത്മ പരിശോധനക്ക് വിധേയമാക്കാറുണ്ട്.					
22	പ്രതിഭാധനരായ കുട്ടികളുടെ കഴിവുകൾക്കനുസൃതമായി വെല്ലുവിളികൾ നിറഞ്ഞ പഠന പ്രവർത്തനങ്ങൾ കൊടുക്കാൻ കഴിയാറുണ്ട്.					
23	School Resource Group എന്നിലുള്ള അധ്യാപകനെ ശക്തിപ്പെടുത്താറുണ്ട്					
24	പഠന പ്രവർത്തനങ്ങൾക്ക് അനുയോജ്യമായ രീതിയിൽ ക്ലാസ് മുറി ഒരുക്കുന്നതിന് ഞാൻ ശ്രദ്ധിക്കാറുണ്ട്.					
25	ദിനാചരണങ്ങളെ (day celebrations) പഠന പ്രവർത്തനവുമായി ബന്ധപ്പെടുത്തുന്നതു ഫലപ്രദമാണെന്ന് ഞാൻ തിരിച്ചറിഞ്ഞിട്ടുണ്ട്.					

SI.No.	പ്രസ്താവന	ശക്തമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അടിപ്രായമില്ല	വിയോജിക്കുന്നു.	ശക്തമായി വിയോജിക്കുന്നു
26	സ്കൂളുകളിലെ വിവിധ ക്ലബ്ബുകളുടെ നേതൃസ്ഥാനം ഏറ്റെടുക്കാൻ ഞാൻ ഒരിക്കലും മടികാണിക്കാറില്ല					
27	വിഷയ സംബന്ധമായ പ്രശ്നങ്ങൾ ചർച്ച ചെയ്യാനും പരിഹാരം കാണാനും School Resource Group സഹായകരമല്ല					
28	Building as a Learning Aid എന്ന ആശയത്തെ സാക്ഷ്യംകരിക്കാൻ എന്റെ വിദ്യാലയ പരിസരത്തെ ഞാൻ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ട്.					
29	ഉപജില്ലാ/ ജില്ലാതല അധ്യാപക ശാക്തീകരണ പരിപാടികളിൽ റിസോഴ്സ് പേഴ്സൺ ആയി പ്രവർത്തിക്കാൻ അവസരം ലഭിച്ചാൽ ഞാൻ സന്തോഷത്തോടെ ഏറ്റെടുക്കാൻ തയ്യാറാണ്.					
30	ചോദ്യപേപ്പർ നിർമ്മാണ ശില്പ ശാലകളിൽ പങ്കെടുക്കാൻ എനിക്ക് താല്പര്യമുണ്ട്.					
31	SCERT നടത്തുന്ന അധ്യാപക പരിവർത്തന പരിപാടി എന്ന സർട്ടിഫിക്കറ്റ് കോഴ്സ് എന്റെ അധ്യാപക മികവിനെ സഹായിക്കുമെന്ന് ഞാൻ കരുതുന്നില്ല .					

APPENDIX E
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
CONTINUOUS PROFESSIONAL DEVELOPMENT ASSESSMENT SCALE
ENGLISH VERSION (Final)

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof. (Dr.) K.P MEERA
Professor
Department of Education

Dear teacher,

The following statements are related to your Continuous Professional Development (CPD) which has got two parts. While Part A is related to statements which assess the different CPD opportunities available to you; Part B assesses your attitude towards CPD.

Instructions

1. Read the statements carefully and put a tick mark (√) against your response.
2. In part A, for each item five responses were given such as Always, Often, Sometimes, Rarely and Not at all.
3. In part B also five responses were given such as, Strongly Agree, Agree, No opinion, Disagree and Strongly disagree.
4. Please select only one response per statement.
5. It is assured that the responses will be kept confidential and used only for research purposes.

PART A

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
1	We are given chances to watch and evaluate the classes of our peers.					
2	The head teacher regularly assesses my classes with precision and communicates her perspective effectively.					
3	There are opportunities to visit schools that are implementing innovative practices.					

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
4	My school provides me with consistent support for my professional development.					
5	The academic plan of the school does not incorporate any provisions for the professional development of teachers.					
6	Training programmes are available from time to time to engage children with special needs.					
7	Academic monitoring by educational officers takes place in an effective manner.					
8	Many programmes implemented by the Department of Education and other agencies do not have adequate monitoring and follow-up.					
9	Attendance at training programmes is frequently not monitored by authorities.					
10	I have been given the chance to participate in professional development programmes focused on areas such as personality development and life skills education.					
11	Teacher training programmes conducted during vacation periods have been proven to be effective.					
12	I have had the opportunity to participate in workshops related to reading material preparation held at sub district, district and state levels.					
13	The initiatives organized under SSK's auspices (<i>Hello English, Malayalathilakkam, Ullasaganitham</i> etc.) have been instrumental in my growth and development as an educator.					
14	The Department of Education arranges various programmes and events to help teachers enhance their academic skills and engage in self-study					
15	Amidst the COVID-19 pandemic breakdown, I had the opportunity to attend webinars at the district, state, and national levels					
16	It was not possible to locate useful materials for classroom activities in 'Samagra'.					

Appendices

	STATEMENT	Always	Often	Sometimes	Rarely	Not at all
17	I have actively taken part in forums related to NEP 2020 and shared my views during discussions.					
18	Online interaction with students in my class has not been found to be effective in supporting the First Bell classes					
19	I am committed to ensuring participation in educational seminars.					
20	I have got the opportunity to explore and visit historical monuments and forts.					
21	I have utilized the opportunity to visit places such as ISRO, planetarium, and observatory.					
22	I have adequate knowledge for preparing e-materials for curriculum transaction					
23	I could present academic papers in educational seminars.					
24	Participated in the preparation of worksheets required for supporting First Bell classes.					
25	I have organised and facilitated training sessions on behalf of teachers' groups.					
26	The educational programmes telecasted on television channels have empowered me as a teacher.					

PART B

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
1	I can promptly evaluate the children's learning progress and effectively convey it to their parents.					
2	Taking an active role in teacher communities has helped me grow professionally.					

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
3	By taking a research-based approach to deal with challenges that arise in my classroom, I have been able to find out solutions.					
4	To gain a comprehensive understanding of the subject being taught, I believe it is essential to have a well-designed unit plan that encompasses all the necessary elements.					
5	I make an effort to locate and utilize suitable teaching and learning resources to ensure effective learning activities in the classroom.					
6	In my opinion, virtual meetings with parents are inadequate during the Covid-19 pandemic.					
7	I try to read educational journals and put into practice innovative ideas in classroom.					
8	The use of ICT (Information and Communications Technology) in teaching enables me to effectively communicate ideas to children in a clear manner.					
9	From my personal experience, I do not believe that offering chances for peer learning and collaborative learning in the classroom has been effective.					
10	I feel confident in my ability to effectively organize Google Meet sessions to meet the various needs of the school.					
11	I am interested in watching videos that aid me in my teaching.					
12	I have been able to take the parents into confidence and ensure their full cooperation.					
13	I am capable of analyzing unforeseen situations that occur at school and maintaining composure in my actions.					
14	I try to get to know some of the different students in my class and deal with their problems.					
15	I am receptive to progressive changes in teaching.					

Appendices

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
16	I believe that the discussion through WhatsApp groups has improved my understanding of the subjects I teach.					
17	Since I believe that having a basic understanding of computers is essential, I have mastered the fundamental concepts of computers.					
18	I believe that writing a reflection note after each day's class is not necessary.					
19	I have been able to interact with talented people in the fields of art, literature, and incorporate the ideas I gained from them into my classroom activities.					
20	I am enthusiastic about pursuing additional courses that go beyond the basic qualifications needed for my present teaching post.					
21	My own teaching performance is regularly subjected to introspection.					
22	Challenging learning activities are provided according to the abilities of gifted children					
23	The School Resource Group (SRG) strengthens my skills as a teacher.					
24	It is important for me to prepare the classroom ambience to align with the learning activities.					
25	Relating day celebrations with day-to-day classroom activities has proven to be effective in my teaching experience.					
26	I am always willing to take on leadership roles in different school clubs.					
27	The School Resource Group is not helpful in addressing and finding solutions to difficulties related to specific subjects.					
28	I have utilized my school surroundings to implement the concept of Building as a Learning Aid (BALA)					

SL NO	STATEMENT	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
29	I would be delighted to take on the role of a resource person in sub-district or district-level teacher empowerment programs, if given the opportunity.					
30	I am interested in participating question paper preparation workshops.					
31	I think that the certificate course entitled Teacher Transformation Programme conducted by SCERT will not help my teaching.					

APPENDIX F

DEPARTMENT OF EDUCATION

UNIVERSITY OF CALICUT

SCHEDULE FOR FOCUSED GROUP DISCUSSION TO ASSESS THE ATTITUDE, OPPORTUNITIES AND CHALLENGES OF CONTINUOUS PROFESSIONAL DEVELOPMENT PROGRAMMES

MALAYALAM VERSION

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof (Dr.) K.P MEERA
Professor
Department of Education

ചോദ്യങ്ങൾ

1. ഇങ്ങനെ ഒരു ഒഴിവു ദിവസം ഇതുപോലെ ഒരു പരിപാടി ഉണ്ടെന്നു പറഞ്ഞു വീട്ടിൽ നിന്ന് പോരുമ്പോൾ കുടുംബാംഗങ്ങളിൽ നിന്ന് ഉണ്ടായ പ്രതികരണം ഏതു തരത്തിലുള്ളതായിരുന്നു?
 - ഇത്തരത്തിലുള്ള ചോദ്യങ്ങൾ മുൻപ് എപ്പോഴൊക്കെ നേരിട്ടിട്ടുണ്ട്?
 - നിങ്ങളുടെ പ്രൊഫഷണൽ വികാസത്തിന് ആവശ്യമായ പിന്തുണ എത്രമാത്രം കുടുംബത്തിൽ നിന്ന് ലഭ്യമായിട്ടുണ്ട്?
 - ഇതിൽ സ്ത്രീ-പുരുഷ വ്യത്യാസം എത്രത്തോളം അനുഭവപ്പെട്ടിട്ടുണ്ട്?
 - അനുകൂലമല്ലാത്ത പ്രതികരണങ്ങൾ നിങ്ങളെ പുറകോട്ടു വലിക്കാറുണ്ടോ?
2. ഒരു അധ്യാപകൻ/ അദ്ധ്യാപിക എന്ന നിലയിൽ നിങ്ങളുടെ വിദ്യാലയം നൽകുന്ന പിന്തുണ എത്തരത്തിലുള്ളതാണ്?
 - പ്രധാനാധ്യാപകരുടെ പങ്ക്?
 - സഹപ്രവർത്തകരുടെ സഹകരണം ?
3. നിങ്ങളുടെ പ്രൊഫഷണൽ വികാസനം നിങ്ങളുടെ സ്വന്തം ഉത്തരവാദിത്തം ആണെന്ന് നിങ്ങൾ കരുതുന്നുണ്ടോ? അതോ ഡിപാർട്‌മെന്റ് ആണോ നിങ്ങൾക്കുള്ള അവസരങ്ങൾ സൃഷ്ടിക്കേണ്ടത്?
 - അധ്യാപക കൂട്ടായ്മകളിൽ നിങ്ങളുടെ സാന്നിധ്യം എത്രമാത്രം ഉണ്ട്?
 - അധ്യാപനത്തെ സഹായിക്കുന്ന തരത്തിൽ ഉള്ള പുസ്തകങ്ങൾ നിങ്ങൾ വായിക്കാറുണ്ടോ?

- ക്ലാസ്റ്റർമിത നേരിടുന്ന പ്രശ്നങ്ങളെ ഗവേഷണാത്മകമായി സമീപിക്കാൻ നിങ്ങൾക്ക് കഴിയാറുണ്ടോ?
 - സർവീസിൽ പ്രവേശിച്ച കാലത്ത് സീനിയർ അധ്യാപകർ എത്രമാത്രം നിങ്ങളെ സഹായിച്ചിട്ടുണ്ട്?
 - പുതിയതായി ജോയിൻ ചെയ്യുന്നവരെ നിങ്ങൾക്ക് മെന്റർ ചെയ്യാൻ കഴിയാറുണ്ടോ?
 - ഓരോ ക്ലാസ്സിന് ശേഷവും നിങ്ങളുടെ പ്രവർത്തനങ്ങളെ സ്വയം വിലയിരുത്താറുണ്ടോ? എങ്ങനെ?
 - അധ്യാപനത്തിൽ സാമ്പ്രദായിക മാർഗങ്ങളിൽ നിന്നും മാറി സഞ്ചരിക്കാൻ നിങ്ങൾ ആഗ്രഹിക്കുന്നുണ്ടോ? ഉണ്ടെങ്കിൽ വിദ്യാലയം എങ്ങനെയാണ് നിങ്ങളെ പിന്തുണക്കുന്നത്?
 - അടിസ്ഥാന യോഗ്യതകൾ പഠനം തുടരാൻ ശ്രമിക്കാറുണ്ടോ? ഇല്ലെങ്കിൽ എന്തുകൊണ്ട്?
4. അധ്യാപക ശാക്തീകരണ പരിപാടികളെക്കുറിച്ചുള്ള നിങ്ങളുടെ അഭിപ്രായം?
- പരിശീലനങ്ങൾ നടക്കുന്നതിന് മുൻപ് നിങ്ങളുടെ ആവശ്യങ്ങൾ എന്തൊക്കെ എന്ന് പങ്കുവെക്കാൻ അവസരം ലഭിച്ചിട്ടുണ്ടോ?
 - പരിശീലനങ്ങൾക്ക് ശേഷം അവ ക്ലാസ്സിൽ പ്രയോഗിക്കാൻ എത്രമാത്രം കഴിഞ്ഞിട്ടുണ്ട്?
 - നിങ്ങളുടെ സമയവും സൗകര്യവും പരിഗണിക്കാറുണ്ടോ?
5. അധ്യാപക ശാക്തീകരണ പരിപാടികളിൽ നിങ്ങൾ സജീവമായി പങ്കെടുക്കുന്നതിനോ/ വിട്ടുനിൽക്കുന്നതിനോ ഉള്ള കാരണങ്ങൾ?
- സെഷൻസ് നയിക്കുന്ന RP മാരുടെ പ്രകടനത്തെക്കുറിച്ചുള്ള പൊതു അഭിപ്രായം ?
 - വിദ്യാഭ്യാസ ഓഫീസർമാരുടെ മോണിറ്ററിങ് സഹായകരമാണോ? ഇല്ലെങ്കിൽ എന്തുകൊണ്ട്?
6. ശാക്തീകരണ പരിപാടികളിൽ നിങ്ങളെ ഏറ്റവും ആകർഷിച്ച പരിപാടികൾ ഏതൊക്കെയാണ്? കാരണങ്ങൾ ?
- ഉള്ളടക്കം?
 - രീതി?
 - സംഘാടനം?
 - പ്രായോഗികത

Appendices

7. പരിശീലന പരിപാടികൾ നടത്തപ്പെടേണ്ടത് പ്രവൃത്തി ദിവസങ്ങളിലാണോ അവധി ദിവസങ്ങളിലാണോ? എന്തുകൊണ്ട്?
8. പരിശീലനങ്ങളും പരിപാടികളും നടക്കുന്ന സ്ഥലങ്ങൾ, അവിടെ ഏർപ്പെടുത്തിയിരിക്കുന്ന സൗകര്യങ്ങൾ എന്നിവയെക്കുറിച്ചുള്ള അഭിപ്രായം?
9. സ്വയം നവീകരണത്തിന് നിങ്ങൾ നേരിടുന്ന വെല്ലുവിളികൾ വിശദീകരിക്കാമോ?
10. പരിശീലന പരിപാടികൾ മെച്ചപ്പെടുത്തുന്നതിന് അധ്യാപകർ എന്ന നിലയിൽ നിങ്ങൾക്കുള്ള നിർദ്ദേശങ്ങൾ?

APPENDIX G

DEPARTMENT OF EDUCATION

UNIVERSITY OF CALICUT

SCHEDULE FOR FOCUSED GROUP DISCUSSION TO ASSESS THE ATTITUDE, OPPORTUNITIES AND CHALLENGES OF CONTINUOUS PROFESSIONAL DEVELOPMENT PROGRAMMES

ENGLISH VERSION

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof. (Dr.) K.P MEERA
Professor
Department of Education

QUESTIONS

1. How did your family react when you informed them that you were leaving home to attend a programme like this on your day off?
 - In what instances have you encountered similar inquiries?
 - To what extent does your family provide support for your professional development?
 - In this context, to what extent has the gender disparity experienced?
 - Do negative or unfavorable remarks hinder your progress or performance?
2. How much support does your school offer to promote your professional advancement and development as a teacher?
 - The role of the head of the institution?
 - The co-operation from colleagues?
3. In your opinion, is it primarily your own responsibility to pursue professional growth and development, or does your department has a responsibility to provide opportunities and resources for you to develop professionally?
 - To what extent are you actively involved in communities or networks that cater to teacher professional development?
 - Do you read books that assist you in your teaching profession?
 - Could you address classroom issues using a research-oriented approach?
 - To what extent have senior teachers provided support for you during your induction period?

Appendices

- Have you provided mentoring to novice teachers?
 - How will you reflect your performance after each class?
 - Are you interested in incorporating innovative ideas in teaching practices? To what extent does your school provide support in this regard?
 - Have you pursued further studies beyond the minimum qualification required for your position as a teacher? If not, what is the reason for this?
4. Share your opinion regarding the prevailing teacher empowerment programmes?
 - Have you had the opportunity to communicate your professional requirements?
 - Have you had the chance to practice in the classroom what you have learned during training sessions?
 - Do these programmes take your schedule and convenience into account?
 5. What are the reasons that contribute to your active participation or non-participation in teacher empowerment programs?
 - Can you provide your overall feedback on the performance of Resource Persons who lead the training sessions?
 - Does the monitoring conducted by educational officers helpful? If not why?
 6. Which teacher empowerment programmes have you attended that you found particularly impressive or appealing? Reasons?
 - Content
 - Approach and Strategy
 - Organisation and co-ordination
 - Applicability and usefulness
 7. What is the preferred time to conduct training programs, working days or holidays? What is the reason for your choice?
 8. What are your thoughts on the venues and amenities provided during training and other empowerment programmes?
 9. What are the difficulties you encounter in enhancing your-self initiated professional development?
 10. Could you suggest ways to enhance existing teacher empowerment programmes?

APPENDIX H
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
SEMI-STRUCTURED INTERVIEW SCHEDULE
MALAYALAM VERSION

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof (Dr.) K.P MEERA
Professor
Department of Education

അഭിമുഖത്തിന്റെ സമയം : _____

തീയതി : _____

സ്ഥലം : _____

അഭിമുഖം നടത്തുന്നയാൾ : _____

അഭിമുഖം ചെയ്യപ്പെടുന്ന വ്യക്തി : _____

ചോദ്യങ്ങൾ

1. നിങ്ങളുടെ ഡിപാർട്മെന്റ് / വിദ്യാഭ്യാസ ഏജൻസി നിലവിൽ നടത്തുന്ന പ്രൈമറി തല അധ്യാപക ശാക്തീകരണ പരിപാടികൾ ഏതൊക്കെയാണ്? LP, UP തലങ്ങളിൽ നടക്കുന്ന പരിപാടികളെക്കുറിച്ച് വിശദീകരിക്കാമോ?
2. ഇത്തരം പരിപാടികളോട് പൊതുവിൽ അധ്യാപകർ എങ്ങനെയാണ് പ്രതികരിക്കുന്നത്? അവരുടെ പങ്കാളിത്തത്തെ സ്വാധീനിക്കുന്ന ഘടകങ്ങൾ എന്തൊക്കെയാണ്?
3. അധ്യാപക ശാക്തീകരണ പരിപാടികളുടെ ഭാഗമായി നിങ്ങൾ നടത്തുന്ന മുന്നൊരുക്കങ്ങൾ എന്തൊക്കെയാണ് വിശദീകരിക്കാമോ? എല്ലാ പരിപാടികൾക്കും സമാനമായ തയ്യാറെടുപ്പുകൾ ആണോ സ്വീകരിക്കാറുള്ളത്?
4. അധ്യാപകരുടെ ആവശ്യങ്ങൾ തിരിച്ചറിയുന്നതിന് എന്തെല്ലാം മാർഗങ്ങളാണ് സ്വീകരിക്കാറുള്ളത്? ആവശ്യങ്ങൾ പ്രകടിപ്പിക്കാൻ എന്തെല്ലാം അവസരങ്ങളാണ് നൽകാറുള്ളത്? അത്തരം അവസരങ്ങളോട് അധ്യാപകരുടെ പ്രതികരണങ്ങൾ എങ്ങനെയാണ്? ആവശ്യങ്ങളെ അഭിസംബോധന ചെയ്യാൻ കഴിയാറുണ്ടോ?
5. നിങ്ങളുടെ കാഴ്ചപ്പാടിൽ അധ്യാപകരുടെ പ്രഫഷണൽ വികസനം ആരുടെ ഉത്തരവാദിത്തമാണ്? എന്തുകൊണ്ട്?

Appendices

6. ശാക്തീകരണ പരിപാടികളുടെ ഉള്ളടക്കം, നടത്തിപ്പ് രീതി എന്നിവ തീരുമാനിക്കുന്നത് എങ്ങനെയാണ്? കാലോചിതമായ മാറ്റങ്ങളെ എങ്ങനെയാണ് ഉൾച്ചേർക്കാൻ ശ്രമിക്കുന്നത്? ഇത്തരം തീരുമാനങ്ങളിൽ അധ്യാപകരുടെ പങ്ക്?
7. ശാക്തീകരണ പരിപാടികളിൽ പങ്കെടുക്കേണ്ടവർ ആരാക്കെ എന്ന് തീരുമാനിക്കുന്നത് എങ്ങനെയാണ്?
8. RP മാതൃക തിരഞ്ഞെടുക്കുന്നതിനുള്ള മാനദണ്ഡനങ്ങൾ എന്തൊക്കെയാണ്? തിരഞ്ഞെടുക്കപ്പെടുന്ന RP മാർക്ക് എന്തെല്ലാം പിന്തുണയാണ് നൽകുന്നത്?
9. അധ്യാപകർ സ്വയം നടത്തുന്ന നവീകരണ ശ്രമങ്ങൾക്ക് ഡിപാർട്‌മെന്റ് നൽകുന്ന പിന്തുണ എന്തെല്ലാമാണ്? അവരുടെ ശ്രമങ്ങളെ പൊതു വേദിയിൽ അംഗീകരിക്കാൻ എന്തെല്ലാം നടപടികളാണ് സ്വീകരിക്കാറുള്ളത്?
10. അധ്യാപകരുടെ പ്രകടനത്തെ വിലയിരുത്തുന്നതിന് നേരിടുന്ന വെല്ലുവിളികൾ വിശദീകരിക്കാമോ? വിലയിരുത്തൽ രീതികൾ എത്രത്തോളം ഫലപ്രദമാണ്? വിലയിരുത്തലിന്റെ ഫീഡ്ബാക്ക് അധ്യാപകരിൽ എത്തിക്കാറുണ്ടോ? വിലയിരുത്തൽ രീതികളോട് അധ്യാപകർ എങ്ങനെയാണു പ്രതികരിക്കാറുള്ളത്?
11. സംസ്ഥാന/ജില്ലാതലങ്ങളിലെ വിവിധ വിദ്യാഭ്യാസ ഏജൻസികളുടെ അധ്യാപക ശാക്തീകരണ പരിപാടികളെ ഏകോപിപ്പിക്കുന്നത് എങ്ങനെയാണ്? ഇതുമായി ബന്ധപ്പെട്ട വെല്ലുവിളികൾ എന്തൊക്കെയാണ്? എങ്ങനെയെല്ലാം പരിഹരിക്കാൻ സാധിക്കും എന്നാണ് നിങ്ങൾ കരുതുന്നത്?
12. ശാക്തീകരണ പരിപാടികളുടെ ഫലപ്രാപ്തി വിലയിരുത്തുന്നതിന് ഡിപാർട്‌മെന്റ് സ്വീകരിച്ചിരിക്കുന്ന മാർഗങ്ങൾ എന്തൊക്കെയാണ്?
13. ശാക്തീകരണ പരിപാടികളുടെ തുടർച്ചയും വളർച്ചയും എത്രമാത്രം ഉറപ്പുവരുത്താൻ കഴിഞ്ഞിട്ടുണ്ട്?
14. അധ്യാപക ശാക്തീകരണ പരിപാടികൾ മെച്ചപ്പെടുത്തുന്നതിന് നിങ്ങൾക്കുള്ള ക്രിയാത്മക നിർദ്ദേശങ്ങൾ പങ്കുവെക്കാമോ?
15. നിങ്ങളുടെ വകുപ്പ്/ഏജൻസി നടത്തിയ ഏറ്റവും വിജയകരമായ അധ്യാപക ശാക്തീകരണ പരിപാടികളെക്കുറിച്ച് വിശദീകരിക്കാമോ? അവയുടെ വിജയത്തെ സ്വാധീനിച്ച ഘടകങ്ങൾ എന്തൊക്കെയാണ്?
16. അധ്യാപകർക്ക് നൽകുന്ന പ്രൊഫഷണൽ വികസന അവസരങ്ങൾ നിലവിലെ ഗവേഷണത്തിനും മികച്ച സമ്പ്രദായങ്ങൾക്കും പ്രസക്തവും കാലികവുമാണെന്ന് ഉറപ്പാക്കുന്നത് എങ്ങനെയാണ് വിശദീകരിക്കാമോ?

APPENDIX I
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
SEMI-STRUCTURED INTERVIEW SCHEDULE
ENGLISH VERSION

RACHANA M.V
Part-Time Research Scholar
Department of Education

Prof (Dr.) K.P MEERA
Professor
Department of Education

Time of interview : _____
Date : _____
Place : _____
Interviewer : _____
Interviewee : _____

Questions

1. What are the main teacher empowerment programmes currently offered by your department or agency? Could you provide a description of the various professional development programmes available for teachers at the LP and UP levels?
2. How do teachers generally respond to such programmes? What factors influence their participation?
3. Could you elaborate on the preparations you make for teacher empowerment programs? Do you follow the same preparation process for all programmes?
4. What techniques are used to identify the professional development needs of teachers? What opportunities are provided to express these needs? How do they respond to these opportunities, and can their needs be addressed accordingly?
5. In your view, who should be responsible for the professional development of teachers? Why do you think so?
6. What factors should be considered when determining the content and approach of a teacher empowerment programme? In what ways do you attempt to

Appendices

integrate new trends and current developments? In making such decisions, what role do teachers play?

7. What are the criteria for the selection of RPs? What kind of support will be extended to the selected resource persons?
8. How does the department support the teachers in their self-directed professional development? What steps are taken to acknowledge their efforts in public platforms?
9. How do you ensure that the professional development opportunities offered to teachers are relevant and up-to-date with current research and best practices?
10. Could you explain the challenges encountered when assessing teacher performance? How effective are assessment methods? Are teachers given feedback on their performance assessments? What is the response of teachers towards assessment methods?
11. What are the strategies for coordinating teacher empowerment programmes among different educational agencies at the state and district levels? What are the challenges related to this? How, do you think, it can be solved?
12. Could you provide instances of effective professional development initiatives that resulted in positive outcomes for both teachers and students? What were the key factors that contributed to their success?
13. What steps has the department taken to enhance the efficacy of the professional development programs?
14. How successful has the department been in ensuring the continuity and gradual development of teacher empowerment programmes?
15. Can you provide some innovative suggestions to enhance the existing teacher professional development programmes?