

# Study of the Dilemma of Continuing Professional Development and Coping Strategies of University Teachers in Remote Areas of China

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## Abstract

The continual production and dissemination of diverse information in this digital age is driving higher education institutions to innovate and integrate their knowledge. This further encourages teachers to continually update their professional development. However, as university teachers still encounter numerous difficulties in this respect, the purpose of this study is to conduct in-depth qualitative analysis to explore this issue from four perspectives: peer support, external support, collaborative development, and continuous professional development online. By conducting in-depth interviews with 28 administrators and teachers from four northwestern universities in China, this research adopts qualitative methods to explore the current dilemmas in teachers' continuing professional development and information technology ability, and proposes corresponding improvement strategies based on the dilemmas. The results are expected to show that the needs of individual teachers are neglected, there is no plan for complete professional development, and there is a lack of outstanding university management talents in this information society. Therefore, it is suggested that a clear plan for the continuation of teachers' professional development should be proposed, along with the establishment of a professional development center. At the same time, university teachers should take the initiative to enhance their personal growth, and university administrators' foresight should not be ignored. The continuing professional development of university teachers in remote areas can only be achieved with unified cooperation in various aspects.

**Keywords:** remote areas in China, university teachers, continuing professional development

## 1. Introduction

Guo and Niu (2019) defined continuing professional development as the continuous and proactive self-renewal and continuous development of teachers' learning process. The core of CPD is to maintain teachers' professionalism and promote the sustainable development of teachers' career (Guo & Niu, 2019). Liu and Li (2022) point out that CPD is a dynamic process of continuous development and improvement of teachers' professional knowledge, ability and emotional literacy. Teachers' CPD can promote the application of international knowledge, thereby improving teachers' ability of information technology processing (Liu & Li, 2022). CPD can help teachers improve their professional ability, knowledge and technology, as well as psychological cognition and attitude, which is beneficial to both higher education institutions and teachers (Almerich et al., 2016; Collie & Perry, 2019; Rich, Mason, & O'Leary, 2021).

According to Meesuk (2021), it is crucial that the quality of teachers' performance is improved through teacher development programs and, as CPD is deemed to improve the overall performance of the education system, it makes the debate about school type, school performance and class size seem irrelevant. Several researchers have proved that teachers' professional development plays an important role in changing their teaching methods and enabling them to go beyond understanding new ideas or innovative surface features to gain a deeper understanding. CPD is an important way to cultivate excellent teachers in China, which is mainly implemented in four modes: peer support, external support, collaborative CPD, and virtual environment CPD (Bragg, Walsh, & Heyeres, 2021; Zhao, Li, & Xu, 2021). Therefore, it is clear that teachers' professional development needs to be an ongoing process because learning itself is a lifelong process. If teachers fail to keep pace with global changes, especially technological advances, they will be unable to adapt to this era; hence, the use of CPD is a priority.

When combining diverse definitions by different researchers, it could be said that CPD is a program of further training for professionals designed to enhance their skills and expertise based on activities that promote interaction with other professionals. In the context of higher education, CPD refers to the content of activities, including self-study, formal programs (conferences, workshops, seminars and certificates/degree awards), community, and organizational development programs (Sandra, 2020).

Previous studies have been focused on the CPD of diverse learning activities and new approaches (Avila et al., 2021; Ballangrud & Nilsen, 2021; Geldenhuys & Oosthuizen, 2021). However, there has been little research on the CPD of university teachers in remote areas of China, despite the serious lack of university and college teachers in those areas in recent years, which has resulted in increasing the differences in the quality of higher education (Yu & Guo, 2021). A CPD model suitable for the continuing development of university teachers in remote areas of China would enable them to improve their students' performance (Kintz et al., 2021). At the same time, talents would be retained and the education situation would be stabilized in remote areas, which would increase teachers' chances of promotion or a better salary to advance their career (Geldenhuys & Oosthuizen, 2021). Therefore, based on previous studies, and taking four universities in remote areas of China as the research scope, the qualitative method is used in the form of in-depth interviews to explore two questions: (1) What is the current status of the CPD of university teachers in remote areas of China? and (2) What would be the most effective strategy to promote the CPD of university teachers in remote areas of China? The purpose of the study is to fill the gap in the literature and compensate for the absence of existing research in this context in relation to university teachers in China's remote areas.

## 2. Research Framework and Research Method

### 2.1 Research Framework

CPD has proven to be beneficial to a considerable number of teachers worldwide, especially in developing countries that have perceived the benefits of CPD in relation to educational reform (Abdullah, Shamsuddin, Wahab & Muazu, 2018). China also regards professional development as a means to improve the quality of education and teachers (Guo & Niu, 2019; Liu & Li, 2022; Zhao et al., 2021). The role of higher education teachers' professional development has changed rapidly over the past two decades, and teaching methods have undergone extensive reform. Chinese college teachers have developed from the traditional blackboard teaching to the present, using technology support and artificial intelligence such as virtual reality and human-computer interaction to integrate and develop multi-modal real learning environment, and apply new technologies to effectively solve practical teaching problems in teaching and improve classroom design ability (Zhao et al., 2021). As Liu et al. (2022) said, the deep integration of information technology and education and teaching is an important content to promote the in-depth development of China's education informatization. Although lectures are feasible from an economic perspective easily managed, they are generally an unsatisfactory teaching method in terms of learning rates. Instead, new educational concepts and practices, such as collaborative learning, active learning, and community learning, have been proved to achieve higher learning outcomes (Antonio & Tannehill, 2021; Neves et al., 2021; Wang, 2020). Demirhan et al. (2021) observe that there are various forms of CPD activities, including seminars, conferences, peer mentoring, and expert mentoring. They also include demonstrations and peer observations, mentoring, junior faculty induction, rotations, teamwork and group work, school clustering and school visits, the design and execution of school improvement programs, community of practice, curriculum research, reflective supervision, and technical assistance (Correia & Portugal, 2022). Lieberman (1996) divides CPD into three types: direct teaching, study in school (e. g. peer coaching, important friendships, mentoring), At the same time, it focuses on the importance of educational reform networks and emphasizes the role of external learning in the three types (Lieberman, 1996) and external study (e. g. learning networks, visiting other schools, etc.).

Previous researchers have revealed that the curriculum was developed by external authorities with the intention of improving teachers' professional practice. These kinds of courses are usually one-off and conducted outside the environment in which the course is implemented (Zhang & Zhang, 2022). One model of professional development is called "from the outside to the inside", which, to a large extent, entails teachers absorbing the knowledge generated by external personnel and using it in practice. This model follows the traditional role of educational researchers, with external personnel often working outside the school and providing knowledge to teachers within the school. Another model, known as "from inside to inside" uses the existing knowledge that teachers gain from their school experience to encourage them to reflect on and explore their ideas based on their understanding. These models are deemed to be consistent with workplace programs that encourage teachers to be responsible for their professional development. However, they both ignore individual teachers' motivation. Both outside-in and insider-in models have advantages and limitations (Ballangrud & Nilsen, 2021). Therefore, this study attempts to incorporate both outside-in and

inside-in models of continuing professional development into the inside/outside model. The internal and external model involves two aspects: internal peer support and collaborative learning activities; External manifestations are external support and online CPD. The four ways are important learning activities to improve teachers' skills and knowledge (Bragg et al., 2021; Zhao et al., 2021). Elif, Spencer and Ereny (2023) provide evidence of the failure of career progression activities that are based on this ineffective format due to faculty members often being passive participants during and after the completion of professional development programs. Hughes, Ofstad and Fuentes (2023), faculty development should be grounded in the principles of adult education, are of the opinion that teachers should be encouraged to participate in continuous, self-motivated learning and self-directed activities, as they are likely to explain their experience based on the practices they have already constructed.

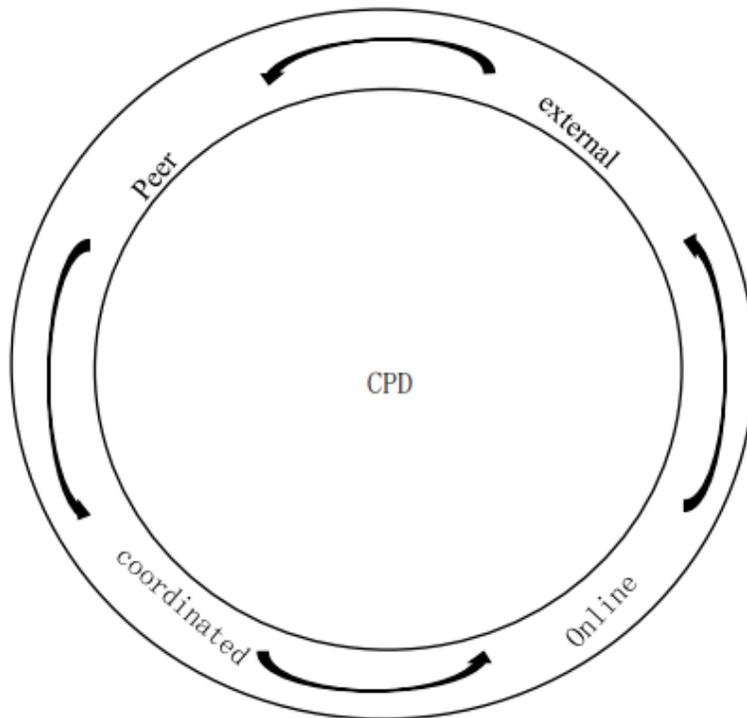


Figure 1. CPD components

In summary, a single external or internal perspective cannot really enhance the role of teachers in their CPD due to the limited strength of interpretation. Therefore, the literature review of Model I is combined with an internal and external binding model for a comprehensive analysis in this study, as shown Figure 1.

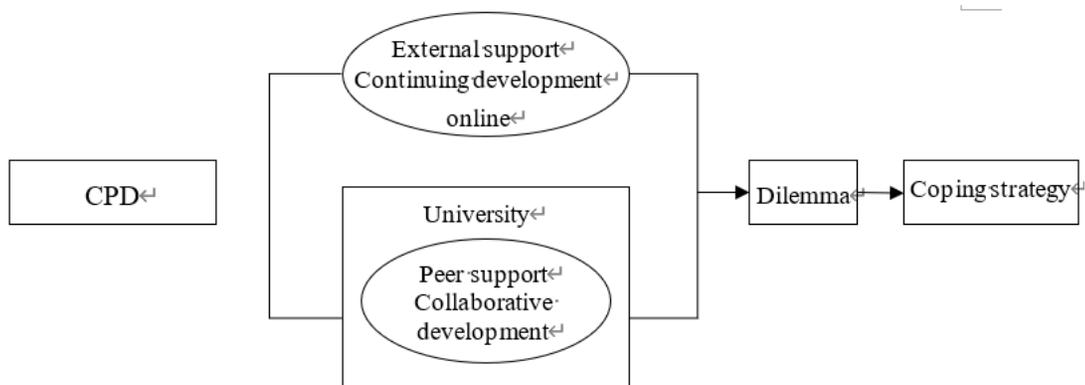


Figure 2. Research Framework for the Dilemma and CPD Strategy of University Teachers in Remote Areas of China

## 2.2 Research Method

### 2.2.1 Research Subjects

The sample for this study was four universities in Xinjiang and Qinghai Province, all of which are remote areas of China, which conform to the geographical scope of this study and can clearly reflect the difficulty of implementing development strategies and practices, which also represents the research purpose. Four university administrators, who were teachers with practical experience and insights into CPD, were each subjected to four interview lasting for about 1.5 hours each time. Their personal information is shown in Table 1.

Table 1. Summary of Participants' Information

Number	Item	Position	Seniority	Degree	Service unit
A01	individual	Dean of A University College	22	Doctor	A University
A02	individual	Director of Scientific Research, A University	17	Doctor	A University
B01	individual	Director of Management, B University	18	Doctor	B University
B02	individual	Dean of B University College	14	Doctor	B University

### 2.2.2 Data Collection and Analysis

Individual semi-structured in-depth interviews were used to collect the data for this study. In addition to understanding the respondents' attitudes and value judgments, this type of interview also avoided the limitation of herd judgment and susceptibility to others' opinions inherent in focus group interviews (Ezer & Selda, 2021).

Each participant was interviewed four times in this study and each interview lasted 1.5 hours. The software for the Tencent conference was utilized based on an online transcription mode. To encourage the interviewees to speak freely during the interview, they were given code names based on the research ethics. Post-transcriptional data were anonymized for the next analysis.

The interview outline was divided into four themes with the following content;

A: What do you think is the dilemma of peer support in the CPD of university teachers? Do you have any suggestions to improve it?

B: What do you think is the dilemma of external support in the CPD of university teachers? Do you have any suggestions to improve it?

C: What do you think is the dilemma of teamwork among teachers in the CPD? Do you have any suggestions to improve it?

D: What do you think is the dilemma of college teachers' use of cyberspace for their CPD? Do you have any suggestions to improve it?

The data was analyzed using the secondary coding of thematic analysis method, and the content validity of the interview outline was reviewed by 5 experts at professor level. The participants were asked to check their respective interview transcript to ensure that all the transcribed data were correct and accurate. A triangulation validation method was used to ensure the consistency of the data collection and analysis (Denzin, 2012). Based on the constructed framework diagram, the development dilemma and promotion strategy of teachers in remote universities are related to four dimensions: peer support, external support, collaborative development, and CPD in the online environment, as shown in Table 2.

Table 2. Summary of CPD and Information Technology Competency Coding

Level 1 coding	Level 2 coding
CPD	Dilemma of peer support
	Strategies to improve peer support
	Dilemma of external support
	Strategies to improve external support
	Dilemma of collaborative development
	Strategies to improve collaborative development
	Dilemma of CPD in an online environment
	Strategies to improve CPD in an online environment

### 3. Analysis of the CPD of Teachers in Remote Universities

#### 3.1 Peer Support

According to the interviewees, the peer support dilemma is caused by the lack of a mechanism and policy, and low willingness to participate.

Peer support is essential because the initial teacher education may not contain all the knowledge and skills that need to grow with practice. For example, alterations in the syllabus, or new problems of students, require development by peers, and change in the school's practices. Universities in remote areas should design a planned, flexible and adaptable peer-support learning activity to meet these learning needs. Some researchers have suggested that peer support promotes the discussion and exchange of teaching practices and related ideas, which is a key component of CPD (Tannehill et al., 2021). Others have emphasized that some preconditions for successful peer support learning activities, such as the school having professional coaches (or mentors), as well as abundant long-term funds and a secure support system, are the basis of peer support learning activities (Bartier et al., 2020; Kirkwood, 2021). What is more, teachers should view CPD as a lifelong (throughout the teaching career), systematic and planned continuous process to maintain and develop their long-term professional competence (Abdullah et al., 2018). In remote areas of China, peer support is basically irrelevant to matching teachers' needs, and there is a lack of long-term and targeted peer support learning activities, which makes teachers unwilling to participate.

"There was no very effective communication and discussion between peers. A lot of the external performance was not real enough." (A01)

#### 3.2 External Support

According to the interviewees, the external support dilemma of universities in remote areas of China is mainly caused by insufficient funds, short time and poor effect. The CPD of a university requires a combination of individual and university needs and objectives, and the willingness to address long-term and continuous needs (Kirkwood, 2021; Ross et al., 1999; Watson, 2021). To effectively develop teachers professionalism, universities should have a systematic and full understanding of CPD and the integration of external resources (Bartier et al., 2020; Guggemos & Seufert, 2021; Guske, 2021; Jiang & Zheng, 2021).

CPD and external support have a close relationship and the formal knowledge generated by external researchers is one of the most effective bases of CPD learning activities. However, whatever the form of CPD, it is inseparable from the most basic condition, which is the financial support of the organization (Marynowski et al., 2022). In remote areas, lecturers' pay is much lower than in urban areas, and experts are often dissatisfied with the teaching environment or facilities provided by the school. They also find it hard to accept that the teachers involved in the training not professional.

"There is a shortage of funds, especially in private universities, and sometimes it does not achieve much in this respect. The funds are limited, but our university needs to improve a lot of facilities, and many of these improvements cannot be implemented." (A02)

#### 3.3 Collaborative Development

The interviewees all agreed that the dilemma of coordination development was caused by the lack of a coordination mechanism and policy. Researchers have pointed out that universities must have a systematic and full understanding of CPD, which is the basic condition for building effective continual professional development (Guske, 2021; Jiang

& Zheng, 2021). Collaborative learning activities can change learners’ experience of learning, and they are also a way to improve their attitude toward schools, promote their achievement, develop their thinking, knowledge and skills, and support interpersonal and inter-group relationships. In terms of the teachers, they do not become automatically more engaged, considerate, tolerant, or more responsible when working with others. At the school level, the sustainable development of teachers is based on collaborative development activities that require effective support and strong policies, and the establishment of an effective organizational structure (Holmqvist & Lelinge, 2020; Yang et al., 2022).

“At present, the most important problem with coordination is the lack of a mechanism and policy, which only involves simple teaching cooperation.” (A04)

The effectiveness of collaborative learning activities depends on the structure of the group, the type of task, who the participants are, and how responsible the group is. Therefore, schools must carefully consider the purpose for designing collaborative learning activities and address any potential problems in the learning process.

### 3.4 CPD in the Online Environment

The online learning environment is an innovation in the realm of education. The interviewees suggested that it is very difficult to implement CPD for university teachers in remote areas in the online environment due to the digital divide and no flexible use. CPD requires clear, sound policies, as well as effective planning and organization to effectively promote teachers’ professional development (Bragg et al., 2021), but university administrators in remote areas have little understanding or support for CPD online, which makes it difficult to effectively support the professional growth and needs of teachers.

“Some teachers are not very good at using it because of the digital divide. They also always want to have some traditional ways, and the change is too fast.” (A03)

Therefore, universities should make every effort to meet the needs of teachers’ professional development. In fact, teachers have recognized possible improvements in online CPD, including the change of communication dynamics, and the online learning community (Johnson & Turner, 2003).

In summary, based on the research results, all four dimensions of peer support, external support, collaborative development, and CPD in the online environment have little effect. It is necessary to pay attention to the real needs of the teachers themselves, encourage them to reflect and communicate with peers, and build a network community for teachers to improve their self-development, as shown in Figure 3.

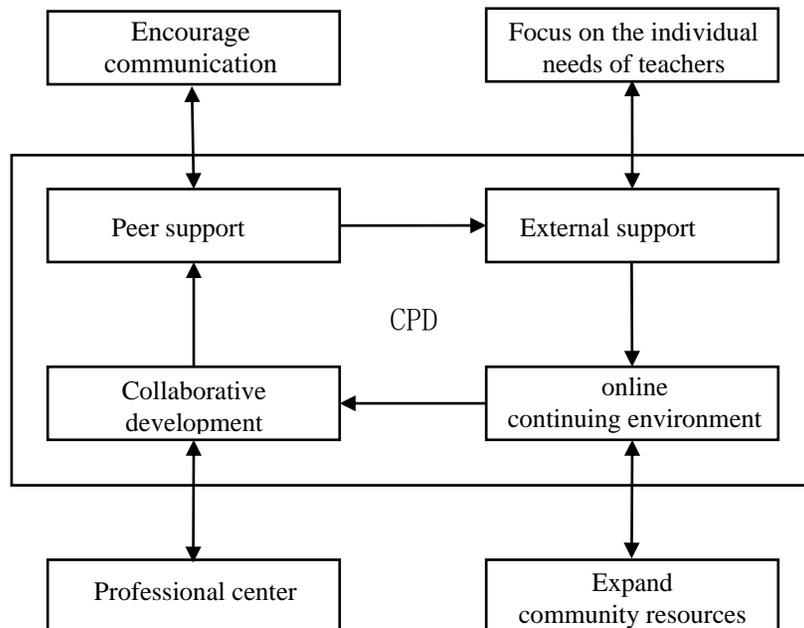


Figure 3. Model chart for continuing professional development

#### 4. Analysis of CPD Strategies of University Teachers in Remote Areas

In view of the above results of the dilemma of the CPD of university teachers in remote areas, a further in-depth analysis was conducted of the reasons for the dilemma from three dimensions: the school policy level, individual teachers' level and the overall management level.

##### 4.1 School Policy Level

###### 4.1.1 Attracting Teachers to Participate

Easton's formative definition of policy is that it "consists of a series of decisions and actions" (Eastons p. 13). Negotiating with teachers is a better starting point than the system deciding what teachers need. Teachers need to be prepared for an "effective formulation" and to take action to address complex educational issues that include both situational and teaching matters. As effective teachers use their personal knowledge and skills in their teaching, they also achieve professional development based on various learning processes. According to the CPD framework, it is essential for teachers to participate to make it a more powerful and more reliable approach (Tyagi & Misra, 2021).

"Establishing a sound peer support mechanism at school level is the most practical and effective for the professional development of teachers. It is also the most direct so that the effect would be very obvious." (A01)

School policy makers need to firstly consider how to demonstrate the effectiveness of developing learning activity expectations by clarifying the expected outcomes of participating in the activity to teachers. They need to implement a teacher professional development policy as an activity that runs throughout the teacher's career and provide a close link between before and after work and CPD.

###### 4.1.2 Incentive and Guidance Strategy

When constructing policies, school administrators must consider when to provide CPD learning activities and whether it would be better to utilize information technology, such as an online learning community, on campus or outside as part of the curriculum, or a combination of both, and through media presentations. For instance, Li Lei et al. (2022) recommend that modern universities actively build online learning communities, provide more educational choices for learners in a virtual environment, and develop participants' skills. Policy makers need to suitably consider the recognition or other forms of reward given to participants. For example, Gaible and Burns (2005) point out that teachers should be encouraged to participate in continuous, self-motivated learning activities by providing them with appropriate material incentives.

"The results are always ineffective, and we always have meetings to discuss how to improve the professional standards of teachers, and we still need professional development." (A02)

##### 4.2 Individual Teachers' Level

###### 4.2.1 Strengthen Personal Growth

According to Davies, Hirschberg, Fang and Ke (2021), the ideal teacher's qualities are enthusiasm, clear, good management of students' behavior, good interpersonal skills, ability to provide intellectual stimulation, respect for students, organized, and good speaking skills.

"I think if teachers aren't motivated to develop, they will be left behind because knowledge and technology keep evolving." (A2)

Teachers also consider how to support their development in a changing environment and whether being professional means ensuring their professionalism by participating in the continuous pursuit of their professional development.

###### 4.2.2 Active Self-learning

The key observable benefits of CPD are important for deepening teachers' content knowledge and developing a faculty teaching practice (Li, 2022). Teachers must seize the opportunity to actively express their views, and consider playing a more proactive role in designing and implementing CPD activities. There is evidence that people with a clear value system participate in research and have a keen understanding of their roles, goals and responsibilities. If teachers are familiar with the use of teaching tools, their confidence may increase and they may work harder to activate their abilities in their teaching (Adamy & Boulmetis, 2006). The teachers who participated in this study had a strong perception of themselves as contributing to a society of which they were entitled members.

### 4.3 Management Level

#### 4.3.1 Macro Control

CPD has proven to be of benefit to a considerable number of teachers worldwide. Developing countries especially reap the benefits of CPD in their education reform (Abdullah, Shamsuddin, Wahab, & Muazu, 2018). China also regards CPD as a means to improve the quality of education and teachers. School leaders adopt the development process, which is a daunting challenge, as it requires the reform of the organization’s structure, attitude and abilities. School administrators should stand at the forefront of this change and begin by emphasizing international trends and approaches to promoting and managing teachers’ learning.

#### 4.3.2 Strengthening at the Micro Level

It is difficult to provide professional training strategies that can help local teachers to develop their professionalism when university administrators in remote areas have no basic understanding of collaborative learning activities. According to the discussion of the need for CPD in higher education institutions in the literature, it is critical to demonstrate sustained professional competence as the work becomes more demanding (Ditmer, 2013). Therefore, university administrators must assist schools to prioritize the demands in order to achieve this goal. To highlight the role of continuing professional development, university administrators in remote areas should focus on management and learning, including updating their own knowledge and ability, especially in terms of understanding continuing professional development (Yan, 2022).

In conclusion, the strategic solutions obtained by the research results and literary discussion are shown in Figure 4.

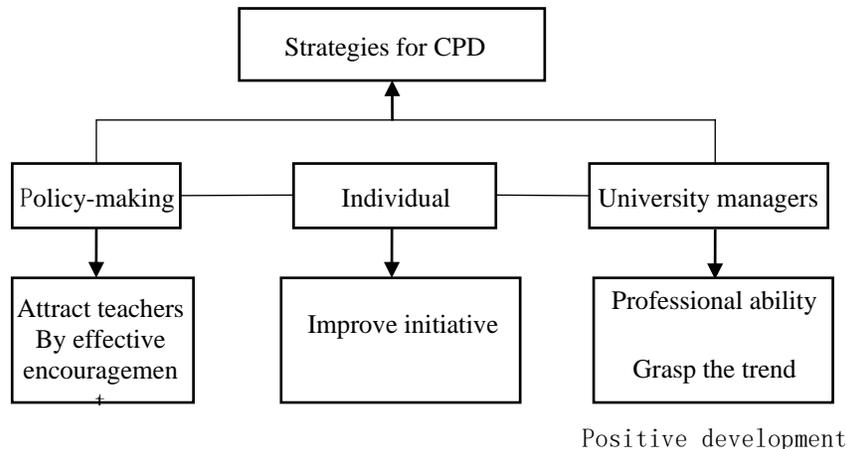


Figure 4. Continuing Professional Development Strategy map

## 5. Conclusion and Suggestions

It was demonstrated by the results of this study that current learning activities such as peer support, external support, collaborative and continual professional development, and online continuing professional development have little effect in remote areas, and this makes it difficult to effectively support the professional growth of teachers. This is clearly different from previous studies. The continued professional development of universities in remote areas is basically non-existent in terms of policies, organization, talents, learning activities and forms, plans, and the need for schools and teachers. The main problematic issues are the lack of clear mechanisms and policies, no continuing professional development talents and institutions, and no professional, long-term flexible multi-dimensional learning activities for continuing professional development based on the needs of schools and teachers.

This study was based on a combination of the literature and the suggestions of the respondents to propose some improvement strategies. To begin with, university administrators should study their professional development in depth, improve their cognition and pay attention to the significance and efficiency of external support, and take professional development as the main strategy of their university. Secondly, they should design long-term, flexible and different stages of learning activities that should be designed and carried out based on external support for teachers’ needs to promote the diverse development of teachers. Thirdly, universities should establish and improve the system of external support for learning activities based on the school’s strategies and the teachers’ needs in order to avoid external support becoming a mere formality and to grow learning activities. Fourthly, universities should incorporate educational values and endogenous motivation into the long-term development of exploratory courses in

order to enhance teachers' professional beliefs and feelings, as well as their sense of responsibility. This can be achieved by building modern virtual learning communities using network technology, providing participants with guidance and help, and answering questions to meet the needs of teachers' professional growth (Livneh & Livneh 1999; Marynowski et al., 2022; Perry et al., 2021; Stark et al., 2021).

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