



OECD Teachers' Professional Learning (TPL) Study

Design and Implementation Plan

Table of Contents

1. Background.....	3
1.1. Introduction – Why study teachers’ professional learning	3
1.2. Background – Building on the Initial Teacher Preparation (ITP) Study	5
1.3. Purpose of the study.....	5
1.4. Related OECD work	6
1.5. Context and trends	7
2. Analytical framework	11
2.1. Theoretical background	11
2.2. Scope of the framework.....	14
2.3. Types of professional learning activities	14
2.4. Analytical dimensions.....	17
2.5. Levels of analysis.....	21
2.6. CPL outcomes	23
3. Methodology.....	27
3.1. Modes of participation	27
3.2. Main components of the study	28
3.3. Provisional timeline for the study:	30
3.4. Governance of the study	31
3.5. Outputs.....	31
3.6. Dissemination	31
References.....	33
Annex A. National co-ordinators for country diagnoses.....	41
Annex B. Key issues and questions for analysis.....	42
1. Motivation: What shapes teachers’ motivation to engage in CPL?	42
2. Access: How accessible is CPL for teachers?.....	44
3. Provision: How and by whom is CPL provided?.....	46
4. Content: How are CPL contents selected and developed?.....	48
5. Quality: How is the quality of CPL ensured?	50

Tables

Table 2.1. Examples of professional learning activities	15
Table 3.1. Indicative timeline for the participation in a TPL country diagnosis (Strand II)	29

Figures

Figure 1.1. Conceptual framework of the ITP study	5
Figure 2.1. Models of Teachers' Continuing Professional Development	13
Figure 2.2. Levels of analysis and analytical dimensions	21
Figure 2.3. Outcomes of continuing professional learning	24

1. Background

This document proposes a design and implementation plan for the OECD Teachers' Professional Learning (TPL) Study. It incorporates feedback on an earlier version of this document, which was discussed at the project's launch meeting on 27-28 June 2019 at the OECD Boulogne Conference Centre in Paris. For further information on the study, please contact the project leader, Deborah Nusche (Deborah.Nusche@oecd.org).

1.1. Introduction – Why study teachers' professional learning

Effective teaching is at the heart of a successful education system and there is a growing recognition that supporting teachers' professional learning from the beginning to the end of their career is critical to foster high-quality teaching. Teachers' professional learning enables them to develop the knowledge, skills, and practices necessary to be effective educators, support their peers, contribute to the collective improvement of the profession and gain the trust, status and self-efficacy to carry out their work with a high degree of professionalism. While the selection into the teaching career and teachers' initial education are critical to ensure that new teachers are competent and prepared for their work, initial preparation alone cannot prepare teachers for all challenges they will face during their career. Continuing professional learning is therefore vital for teachers to refresh, develop and broaden their knowledge, to keep up with changing research, tools, practices and students' needs.

For school systems, continuing professional learning is critical to compensate for shortcomings in teachers' initial preparation, to continue improving the quality of the teaching workforce and to retain effective staff over time. The growing diversity of learners, the greater integration of students with special needs in mainstream schools and classrooms, the increasing use of information and communication technologies as well as changing requirements of the modern workplace all demand that teachers continuously upgrade their skills. A lifelong learning approach to teacher development is therefore essential. By expanding the scope of the Initial Teacher Preparation (ITP) study beyond the first years in teaching, the Teacher Professional Learning (TPL) study can take this holistic approach to teacher education. It thereby aims to study initial teacher education, induction and continuing professional learning (CPL) as part of a continuous process of teachers' professional growth.

The importance of effective teacher education has been reaffirmed at the highest levels during the 2016 G7 meeting in Japan and the 2018 G20 meeting in Argentina. In their Kurashiki Declaration, G7 Education Ministers stated that “[b]ased on our common recognition that expectations for the teaching profession have broadened significantly and that demands on teachers have grown in response to increasing social diversity and complexity, we express our commitment to collaborative support for professional development of teachers in G7 members to improve their quality and effectiveness.”¹ Likewise, the G20 Education Ministers' Declaration endorsed policies to “invest in teacher education through initial professional preparation of teachers and their continuing professional development, as well as satisfying working conditions that improve the quality, attractiveness and status of the teaching profession” and to “promote efficient investment for key policy areas such as high quality teacher professional development [...]”² Teachers' professional development (PD) was also at the core of discussions during

the French G7 Ministerial meeting in Sèvres on 4 July 2019, which resulted in a joint declaration affirming the aim to “promote access to individual and collective professional development, as part of a progressive and coherent continuum.”³

Yet, many countries are still a long way from attaining these goals and reforming their TPL systems in an efficient, equitable and sustainable way. This task is far from trivial, even when the need for a paradigm shift is widely recognised. The latest TALIS 2018 data confirms that a large share of teachers do not participate in the types of development that are most effective in supporting their progress (OECD, 2019^[1]). Likewise, many schools are yet to embrace a culture of collaborative learning and to build the structures necessary to sustain it, just as school systems as a whole often fail to embrace a coherent approach to the entirety of teachers’ professional learning, connecting their ITP and CPL systems. Moving towards a culture of continuous professional growth also has profound implications for the teaching profession. It calls for teachers’ central involvement in the process, but also for policies that create the conditions that enable them to embrace a professional growth mind-set.

Pursuing all of these goals is a considerable challenge, not least given the complexity of TPL systems and the wide range of stakeholders that co-construct them. These include not only governments, schools and teachers, but also teacher education institutions, research organisations, teacher unions, professional associations, private actors and civil society. For a sustainable improvement of TPL systems, these stakeholders need to work together to reflect on, develop, evaluate and reform practices as well as to monitoring the quality of ITP and CPL and creating active feedback loops to drive continuous improvement.

The TPL study seeks to help countries in addressing these challenges and seeks to support the development of effective teacher learning systems at both the system-level and the school-level:

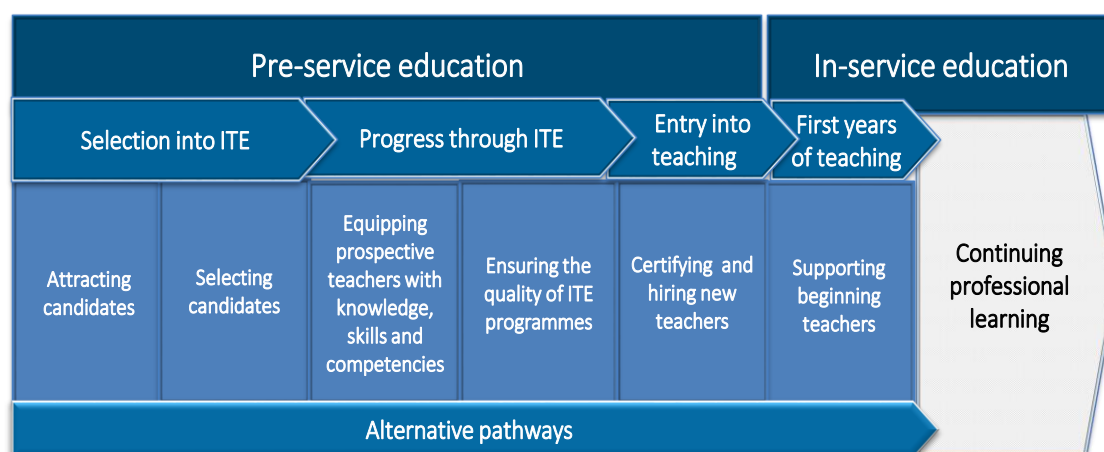
- At the system-level, the TPL study will support the development of policy frameworks to strengthen initial teacher preparation and continuing professional learning through policy diagnosis, peer learning, data collection and analysis. The study will also foster peer learning by highlighting common strengths and challenges that countries face as they move towards a culture of teachers’ continuous professional growth.
- At the institutional and school levels, and even at the individual level, the TPL study will enable stakeholders to use the OECD findings (including through the interactive *TeacherReady!* platform [www.oecdteacherready.org]) to expand the existing community of practice on teacher preparation and continuous growth initiated by the ITP study in the previous biennium.

This paper presents a design and implementation plan for the Teachers’ Professional Learning (TPL) study. It sets out a proposed theoretical and analytical framework, key questions and issues for analysis, and suggestions for the study’s methodology, timeline and resource requirements. The paper also seeks to explain how the TPL study can complement the OECD’s wider work – past and present – on teacher policies and make the most of the OECD’s greatest strengths by providing a setting where governments can compare policy experiences, seek answers to common problems, and identify and share good practices.

1.2. Background – Building on the Initial Teacher Preparation (ITP) Study

The OECD Teachers’ Professional Learning (TPL) study builds on its precursor, the OECD Initial Teacher Preparation (ITP) study (2016-2018), and expands its scope beyond the first years of teaching to include teachers’ continuing professional learning (CPL). Depending on national priorities, countries may choose to participate in a TPL study of their initial teacher preparation system (Strand I), of their continuing professional learning system (Strand II), or both. The results of the ITP study (which corresponds to Strand I of the TPL study) are documented on the *Teacher Ready!* platform (www.oecdteacherready.org) and in the report *A Flying Start: Improving Initial Teacher Preparation Systems* (OECD, 2019^[2]). This document focuses on the newly added second strand of the study by proposing an analytical framework and methodology for the analysis of teachers’ continuing professional learning systems. It thus builds on the Teacher Education Pathway model (Roberts-Hull, Jensen and Cooper, 2015^[3]), which formed the conceptual framework of the ITP study (Figure 1.1) and expands it to include in-service education beyond the first years of teaching.

Figure 1.1. Conceptual framework of the ITP study



Source: OECD (2019), *A Flying Start: Improving Initial Teacher Preparation Systems*, OECD Publishing, Paris, <https://doi.org/10.1787/cf74e549-en>, adapted from Roberts-Hull, K., B. Jensen and S. Cooper (2015), *A New Approach: Reforming teacher education*, Learning First, Australia.

1.3. Purpose of the study

The purpose of the OECD Teachers’ Professional Learning (TPL) study is to develop analyses, foster peer learning and provide policy relevant advice aimed at improving teachers’ professional learning to support high-quality teaching. The study aims to cover the entire cycle of teachers’ professional learning, ranging from initial teacher education and the first years in school to the continuing professional learning they undertake over the entire course of their career. This requires the TPL study to take a comprehensive analytical approach and to systematically build on the extensive evidence base on teachers’ professional learning. In order to do so, the TPL study will:

- Develop an analytical framework to support the diagnosis of strengths, challenges, opportunities and threats in countries’ professional learning systems;

- Synthesise the evidence base on effective initial teacher education programmes, supporting new teachers and enabling teachers' continuing professional growth;
- Facilitate peer exchange around countries' policy experiences and common challenges in this area;
- Provide participating countries with diagnoses that help them in fostering quality teaching by strengthening their TPL systems;
- Identify and share successful, innovative policies and practices at the system or institutional level with policy makers and practitioners worldwide.

1.4. Related OECD work

In addition to the ITP study, the Teachers' Professional Learning (TPL) study will complement and build on a broad range of projects and evidence generated within the Directorate for Education and Skills and elsewhere in the OECD.

The TPL study will draw on the wealth of INES/NESLI system-level indicators related to teacher's professional learning reported in recent volumes of **Education at a Glance**. The internationally comparative data covers aspects related to requirements and incentives for teachers' participation in professional development (EAG 2014, 2015, 2016, 2018), its role in appraisal frameworks (EAG 2015), PD providers (EAG 2014), the governance of PD contents and the process for determining the activities undertaken by individual teachers (EAG 2014), as well as the funding of PD (EAG 2014, 2018) (OECD, 2014^[4]; OECD, 2016^[5]; OECD, 2018^[6]; OECD, 2015^[7]).

The OECD's **2018 Teaching and Learning International Survey (TALIS)** provides vital quantitative data on teachers' experience engaging in PD, which the TPL study will draw on for secondary analyses. TALIS 2018 covered teachers' initial education, induction, and continuing professional learning. It includes questions on the content, format, quantity and perceived effectiveness of professional development received, teachers' educational needs, as well as barriers and supports for their participation. The TPL study will also complement the development of the **TALIS Video Study** report on teacher practices and the Global Teaching InSights digital initiative, which seeks to make quality teaching practices from around the world visible through video.

Results from **PISA 2018** provide additional evidence on the policies and practices associated with students' educational achievement and equity, including school-level practices around teachers' professional development. The TPL study will also add to the discussion of effective PD practices in PISA's previous thematic work on teacher policies in high-performing school systems (OECD, 2018^[9]).

The TPL study will also build on the directorate's in-depth thematic research on policies related to teachers and teaching. These includes *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* (OECD, 2005^[8]) and the **OECD School Resources Review's** comparative report *Working and Learning Together: Rethinking Human Resource Policies for Schools*, which analyses policies to support the development of school professionals within the context of resource trade-offs (OECD, 2019^[10]). It will also complement work conducted by the OECD on **Schools as Learning Organisations (SLOs)**.

The TPL study will benefit from and feed into the **Education 2030** project, which is working to develop a teaching framework to build a common understanding of the

knowledge, skills, attitudes and values that teachers will need to prepare their students for the world of the future.

In light of the OECD's wider work on teachers, the main added value of the TPL study will be to systematically analyse system-level policy environments related to ITP and CPL. The study will combine country-specific diagnoses and international comparative research to identify policies that can systematically promote the success of teachers' professional learning. In addition, the study will provide opportunities for countries to engage in peer learning based on common strengths and challenges.

1.5. Context and trends

A number of contextual developments and trends have increased the importance of teachers' continuing professional learning for policy makers in many OECD countries. While some of these trends have given rise to new challenges that effective TPL systems are expected to address, others have created new opportunities that school systems hope to capitalise on. A selection of these trends and developments are discussed below:

1.5.1. *Changing learning objectives and students' needs*

Teachers need to be prepared to respond to changing learning objectives and students' needs, which affect both what and how we expect them to teach. Global developments have put subjects like environmental education and global citizenship high on school systems' agenda. Moreover, the United Nations' Sustainable Development Goals have reaffirmed a strong commitment to the inclusion of children with special educational needs and supporting vulnerable children and those with migration backgrounds (United Nations, 2015_[10]). Similarly, in some systems national school curricula undergo frequent changes as governments seek to operationalise their manifestos, respond to socio-economic changes and newly emerging evidence. The accelerating pace of social change is likely to translate into growing pressures for a constant evolution of school curricula (OECD, 2018_[11]). Although we only start to understand how curricula changes can be implemented so as to lead to meaningful pedagogical change in the classroom, we know that teachers and their professional learning systems must be at the heart of this process (OECD, 2019_[2]).

Teachers and schools also play a central role in preparing children for an increasingly technology-rich world and evidence suggests that teachers' own digital competencies are instrumental for their students' capacity to make the most of these trends. There is a significant positive relationship between teachers' problem-solving skills in technology-rich environments and students' performance in computer problem solving and computer mathematics. At the same time, teachers are currently less likely than other tertiary-educated graduates to possess these skills. Amidst an increasing expectation to work with data in the classroom and integrate technology in their pedagogical practices, many teachers report needing training in ICT skills for teaching. There is therefore a growing consensus that governments need to shift their approach from squarely focussing on investments in digital resources to ensuring teachers have the necessary training and tailored support to use these tools effectively (OECD, 2019, p. 180_[12]).

1.5.2. *New evidence on effective (and less effective) CPL practices*

Over the course of recent decades, a wealth of new evidence on the effects of CPL has caused a paradigmatic shift in the way we conceive of effective forms of professional development. Traditionally, professional development has often taken the form of single or

short series of externally provided learning courses. Many have expressed concerns regarding the effectiveness of these forms of CPL and evaluations frequently find that they fail to produce meaningful improvements in teaching quality or student outcomes (Garet et al., 2008_[13]; Garet et al., 2016_[14]; Glazerman et al., 2010_[15]; Jacob and Lefgren, 2004_[16]; Harris and Sass, 2011_[17]).

To overcome these shortcomings, various new approaches to CPL have emerged and there is evidence to suggest that some of them are more promising ways to improve learning outcomes than others. This includes school-based, teacher-led improvement projects that focus on classroom practices and emerge directly from teachers' needs, but also different forms of collaboration (Opfer, 2016_[18]) and individualised instructional coaching, based on designated teacher coaches (Blazar and Kraft, 2015_[19]; Kraft and Blazar, 2017_[20]) or matching effective teachers with less effective ones (Papay et al., 2016_[21]). In a systematic review of the empirical literature, Darling-Hammond et al. (2017_[22]) find that successful professional development with demonstrated benefits for student learning generally displays one or more of the following seven characteristics:

1. It is content focused
2. It incorporates active learning utilizing adult learning theory
3. It supports collaboration, typically in job-embedded contexts
4. It uses models and modelling of effective practice
5. It provides coaching and expert support
6. It offers opportunities for feedback and reflection
7. It is of sustained duration

Despite the widespread stated interest in shifting from single course offerings towards systems of job-embedded and collaborative professional development, evidence from TALIS 2018 suggests that teachers' participation in activities like peer or self-observation, coaching and collaboration remains comparatively low (OECD, 2019_[11]). Translating the mounting evidence on effective CPL practices into meaningful change on the ground thus remains a challenge for school systems to address.

1.5.3. New technologies and modes of CPL delivery

Over the last decade, technological innovations have provided new avenues for teachers' professional learning. A broad range of digital, online and open educational resources (OERs) are now freely available to support teachers' work and massive open online courses (MOOCs) offer new modes of delivering education. In the United States, teachers already account for a large share of MOOC participants (Seaton et al., 2015_[23]) and as the European Commission's Joint Research Centre has documented in a recent inventory of innovative teacher CPL practices, some school systems have already started to embrace these innovative forms of online delivery and blended formats to support their teachers' professional growth (Vuorikari, 2018, p. 22_[24]). The adaptability of OERs has arguably allowed teachers to tailor educational resources to the educational environment in which they teach and facilitate collaboration around the production and application teaching resources. At the same time, experience shows that teachers' require guidance, training and explicit support to effectively use OERs for their professional development (Orr, Rimini and van Damme, 2015_[25]). Likewise, relatively little is known about the quality of MOOCs

and their effects on skills development, but they appear to hold promise as a tool to facilitate teachers' lifelong learning (OECD, 2019_[12]).

If the necessary infrastructural conditions (e.g. fast broadband internet), are in place, open education resources and MOOCs also hold the potential to mitigate geographical and other inequalities arising from the absence of high-quality teacher trainers and resources. At the same time – as for most forms of adult education and training – those who are most likely to participate in MOOCs are the highly educated and highly skilled (OECD, 2019_[12]). Systems therefore face several challenges, including to better understand how online learning opportunities can help all teachers in their professional development, to define standards and good practices, to find ways to measure and signal their quality and to effectively integrate them into TPL systems alongside both traditional and collaborative modes of CPL (OECD, 2019_[12]; Music, 2016_[26]).

1.5.4. Greater diversity in teachers' pathways into the classroom

Although the majority of teachers in most OECD countries enter the profession after having completed a tertiary teacher education programme, some countries, including the United States, have seen a growth of “alternative pathways” to teaching over the past decades. This includes alternative certification processes, lateral entries and tailored pathways for second-career teachers. These alternative pathways can be effective means to address general teacher shortages, to fill vacancies in high-need areas or to attract candidates who might not have otherwise considered a career in teaching. However, they also carry the risk of diminishing the value of initial teacher education and its ability to instil a common set of standards and competencies in beginning teachers (OECD, 2019_[2]).

As more teachers are entering the profession through alternative pathways, countries not only need to devise different mechanisms to safeguard the quality of beginning teachers, but also reflect on the role that CPL should play in responding to the needs of a more heterogeneous teacher workforce. Mid-career professionals making a lateral move into teaching will have very different needs than graduates of fast-track university courses. Teachers' CPL systems therefore face the challenge of providing each teacher with learning opportunities that are accessible and relevant without assuming their grounding in a common initial teacher education.

1.5.5. Increasing emphasis on resource efficiency in education systems

Ever since the global financial crisis of 2008 has led to increased fiscal pressures, government spending on education has come under intense scrutiny and a range of countries have implemented austerity measures impacting their school systems. Between 2005 and 2015, the share of government expenditure on primary to tertiary education decreased by 0.5 percentage points on average across OECD countries and in more than 70% of the countries with available data. Although 27 of 35 OECD countries with available data have increased their overall government expenditure between 2011 and 2015, in 18 of them the growth in education spending has not kept up. In six OECD countries, absolute spending on education even dropped over the course of this period while overall government expenditure rose (OECD, 2018, pp. 290, Table C4.3_[6]).

When systems' and schools' budgets come under pressure, there is a risk for professional development to be one of the areas of investment that will suffer first, given that it is a “soft target” and the negative impacts of cuts may take a relatively long time to materialise. At the same time, stakeholders have raised justified concerns whether resources for professional development are spent where they mattered the most and the evidence clearly

indicates that some CPL investments are more effective than others in supporting teachers' professional growth. Making a strong case for the importance of investing in professional learning – especially at a time when budgets are under pressure – therefore requires a particular focus on its effectiveness to achieve the best possible outcomes for teachers and teaching.

2. Analytical framework

The following sections present the proposed extension to the Initial Teacher Preparation (ITP) study's analytical framework, which will underpin the TPL study. For Strand I of the study, i.e. the analysis of teachers' pre-service training and induction, the OECD Secretariat proposes to continue following the ITP study's original framework (see Figure 1.1). This framework was organised around six themes:

1. Attracting candidates into ITE programmes;
2. Selecting the most suitable candidates for ITE programmes;
3. Equipping prospective teachers with the right mix of knowledge, skills and competencies;
4. Ensuring the quality of ITE programmes;
5. Certifying and hiring new teachers; and
6. Supporting beginning teachers.

To complement this framework, the following sections will focus exclusively on those elements of teachers' professional learning that did not feature in the ITP study, namely teachers' continuing professional learning (CPL) beyond the induction during their first years in service. Nevertheless, countries participating in a diagnosis of their CPL systems (Strand II of the TPL study) may choose to include induction programmes that occur after the completion of teachers' initial education and the links between induction and CPD within the scope of their country visit.

2.1. Theoretical background

Drawing on definitions advanced by the OECD's TALIS survey (OECD, 2016, p. 86_[27]) and the *Education at a Glance* data collection (OECD, 2015, p. 502_[7]), the TPL study proposes, at this stage, to adopt a broad definition of teachers' continuing professional learning as *formal and informal activities that aim to update, develop and broaden the skills, knowledge, expertise and other relevant characteristics of in-service teachers*.

On the basis of this definition, the study seeks to reflect recent advancements in the theory and practice of teachers' CPL. It aims to do so by (1) including informal or non-formal activities such as personal study and collaborative learning, (2) using a broad definition of CPL contents and goals to account for teachers' changing development needs and the holistic nature of their professional learning, and (3) shifting the emphasis from the individual teacher and their role as a recipient of CPL towards teachers' collective professional capacity and their agency in the learning process.

The discussion of teachers' continuing professional learning has an intellectual lineage that can be traced back at least as far as the early 20th century. John Dewey, for example, influentially argued for the importance of preparing teachers to be "thoughtful and alert students of education [...] Unless a teacher is such a student, he may continue to improve in the mechanics of school management, but he cannot grow as a teacher, an inspirer and director of soul-life" (Dewey, 1904_[28]). The renewed interest in teachers' CPL during the second half of the 20th century comes in the context of a wider recognition that modern societies need to provide educational opportunities throughout adult life. This case was

notably made by UNESCO's 1972 Faure Report (Faure et al., 1972_[29]), which popularised the concept of lifelong education (*education permanente*), as well as its successor, the 1996 Delors Report (Delors et al., 1996_[30]), which put forward a vision for lifelong learning (*education tout au long de la vie*).

Despite the long-standing emphasis placed on teachers' continued improvement, a substantial body of historical education research has documented the limited opportunities that teachers have had for ongoing learning and collaboration. In the 1980s and early 1990s, the research and policy community grew increasingly aware of the isolated nature of teachers' work and the limited opportunities for peer feedback and collaboration. In response, significant interest developed in the conditions that can promote professional development by facilitating cross-teacher and cross-school collaboration (Little, 1993_[31]; Garet et al., 2001_[32]).

As discussed in more detail below, the TPL study regards teachers' engagement in professional learning as the result of both extrinsic and intrinsic motivation. Externally motivated behaviour is typically understood to refer to activities that actors engage in for instrumental reasons, i.e. due to their association with a desired consequence (including both tangible rewards and implicit approval). Intrinsically motivated behaviour, by contrast, is autonomous and driven solely by the actor's interest in or enjoyment of a given activity. Although activities that are not interesting or enjoyable in and of themselves generally require some extrinsic motivation, in practice, many forms of behaviour are driven by a combination of both intrinsic and extrinsic motivation, for example where externally defined goals associated with an activity are in line with the actors' own values and beliefs (Gagné and Deci, 2005_[33]).

Traditional system-led approaches to continuing professional development (CPD) have often invited criticism for casting teachers in a passive role, for failing to recognise their professional agency, or for their overreliance on extrinsic incentives and external controls (Day, 1999_[34]; Fraser et al., 2007_[35]). Evidence also suggests that interventions aimed at providing extrinsic motivation (compulsion or incentives) can crowd out teachers' intrinsic motivation if they are perceived as too controlling, i.e. if teachers do not see them as aligned with their own self-selected goals (Christian, Jacobsen and Andersen, 2013_[36]). Environments in which teachers have little or no involvement in defining their own learning goals and the ways to achieve them but are instead directed to engage in CPD to fill externally identified learning gaps are sometimes referred to as the "deficit model" and continue to prevail in some contexts (Kennedy, 2005_[37]).

Nevertheless, there is also a significant tradition of teachers forming professional learning communities in which they autonomously organise activities to advance their professional growth. The TPL study seeks to capture this important dimension of teachers' learning activities by extending its analytical scope beyond traditional system-led CPD and defining CPD as one component within a much larger system of continuing professional learning (CPL). It thereby seeks to capture the need for ensuring the professional competency of teachers in line with system goals, as well as to understand teacher agency as an important factor in this process.

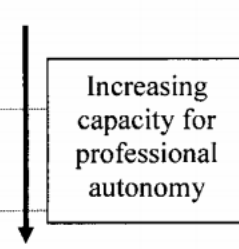
When extending the analytical framework of the ITP study to include teachers' continuing professional learning, several challenges presented themselves. The structure of ITP systems lent itself to a framework based on a model of linear progression and an assumption of relative homogeneity: Initial teacher preparation has a clearly defined starting point (teachers' entry into ITE), an end (teachers' entry into the classroom or completion of induction programmes) and parallel trajectories for the majority of teachers (although

alternative pathways are increasingly common). By contrast, continuing professional learning is a process with varying degrees of (dis)continuity and lacks a pre-defined end point. In addition, it can very different shapes from one teacher to another and – in some cases – provides teachers with a significant amount of autonomy in shaping its trajectory. Mapping different systems’ approaches to CPL, Kennedy identifies at least nine models of professional development (Kennedy, 2005_[37]), some of which explicitly reject the notion of extrinsically defined goals and insist on the teacher’s central role in giving shape to their own CPL pathway. Both of these stand in contrast to the ITP model’s structural assumptions (see Figure 2.1).

Kennedy distinguishes different CPL models based on the types of knowledge acquisition they support; their varying focus on individual vs. collective development; the degree to which they see CPL as a tool for accountability; the role they assign to teachers’ professional autonomy; and their orientation towards transmission vs. the facilitation of transformative practice (Kennedy, 2005_[37]). The “deficit model” of CPD, for example, emphasises performance management and positions individual teachers on the receiving end of a developmental offer designed to overcome their identified deficit relative to externally defined goals. By contrast, models based on “action research” place greater emphasis on teachers’ intrinsic motivation and their autonomy in directing their professional growth through reflective inquiry and the dialogic examinations of their practice within communities of teachers and schools (Burbank and Kauchak, 2003_[38]).

Figure 2.1. Models of Teachers' Continuing Professional Development

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



Source: Kennedy, A. (2005), “Models of continuing professional development: A framework for analysis”, *Journal of In-service Education*, Vol. 31/2, <http://dx.doi.org/10.1080/13674580500200277>.

In practice, elements of more than one of these CPL models may coexist within a school system since each of them is designed to address distinct but overlapping sets of challenges. Finding the right CPL models to serve a system’s needs depends on a range of factors and questions, some of which are addressed below. At this point, taking note of the variety in CPL models merely serves to underline that a useful framework for the analysis of CPL systems needs to be sufficiently flexible to accommodate significant variation in the goals, actors, methods and procedural orientations involved.

Another characteristic that distinguishes teachers’ continuing professional learning from their initial education is that a significant share of it may take the form of informal or unstructured activities. These practices may take place in private, informal settings or through immediate work activities and the social relations embedded in them (OECD,

2017, p. 140_[39]). Although the importance of informal activities for teachers' professional development is widely recognised, they often lie outside the remit of formal regulations and measuring their incidence and quality presents a significant challenge.

2.2. Scope of the framework

While the focus of traditional continuing professional development has often been on short-term, externally provided formal learning courses, the TPL study seeks to comprehensively include informal, school-based and collaborative practices, as well as teachers' private learning activities that may require system level support and empowerment. Following the definition proposed above, the study's proposed analytical framework focuses on in-service teachers and does not cover the professional learning of non-teaching, administrative and leadership staff who are not engaged in classroom instruction. However, school leaders and middle-leadership staff who exercise their roles on a part-time basis or engage in a significant amount of classroom instruction for other reasons (e.g. in small schools) may be included within the scope of this framework insofar as their teaching-specific CPL is concerned.

The study covers the professional development of teachers in school education from the primary to upper secondary level (ISCED 1-3), although countries engaging in a country diagnosis may choose to focus on one or more of these levels, based on their interests and needs. Likewise, while the proposed analytical framework is designed to generally apply to CPL across all school education, individual country diagnoses could be tailored to place greater emphasis on the challenges and practices of a specific sector. This could include, for example, professional learning in the vocational sector, in SEN education, or the differences between public and publicly funded private schools.

Following the definitions above, the proposed analytical framework covers any CPL aimed at developing the skills, knowledge, expertise and other relevant characteristics of teachers. It also covers activities aimed at developing leadership skills in in-service teachers, which may include both pre-service training for aspiring school leaders, but also activities aimed to strengthen the leadership capacity of classroom teachers as part of more broadly defined forms of distributed leadership.

2.3. Types of professional learning activities

To account for the rich and changing landscape of teachers' continuing professional learning and its heterogeneity across countries, the TPL study proposes to take a comprehensive approach. Many of the learning activities that matter for teachers' professional growth stay under the radar of policy makers or emerge from practices that are not officially recognised or formally structured. The TPL study therefore seeks to consider the full spectrum of CPL, including both formal and more informal learning activities. Table 2.1 provides a tentative, non-exhaustive list of learning activities that could be considered by the TPL study, organised based on the setting in which they usually occur and their typical degree of formality. As described below, in the context of this study and for the purpose of this illustration, formality is considered as a continuum along which learning activities can be situated, rather than a set of clear-cut categories.

Table 2.1. Examples of professional learning activities

Setting	more formal ←	Typical degree of formality	→ less formal
Private	Online courses and seminars		Exchange on online platforms
	Self-study with monitored outcomes		Self-study without monitored outcomes
School-based	Workshops and on-the-job training		Professional learning communities (1)
	Structured induction programmes		Peer exchange and collaboration
	Observation as part of formative appraisal		Peer and self-observation
	Structured coaching and mentoring		Ad-hoc coaching and mentoring
Off site	External courses and seminars		Inter-school exchanges
	Qualification programmes		Teacher networks
	Teacher conferences		

Note: (1) Professional learning communities (PLC) refer to school-based groups involving staff in collaborative professional development activities to improve teaching practices. They may be based on subject areas or grade levels and tend to involve sharing and critically interrogating practices in an ongoing, reflective, collaborative, learning-oriented way (Stoll et al., 2006₍₄₀₎).

2.3.1. Settings

Teachers pursue professional learning activities in a range of settings, including in their private time in settings of their choice (e.g. at home or in a library), on site in their own school, or off site (e.g. in training institutes, higher education institutions or teacher professional organisations). Of course, the extent to which teachers engage in private study at home depends on how they are expected to spend their non-teaching time. In systems where it is required or common for teachers to spend their non-teaching time in their school and where the necessary facilities are available, a significant share of self-study might take place on school premises. Likewise, some types of CPL combine activities taking place in different settings, involving for example a combination of peer observation with subsequent self-study, or blending on-site training with online courses.

2.3.2. Formats and degrees of formality

The literature on professional learning frequently characterises activities based on their degree of formality (Werquin, 2010₍₄₁₎). On this spectrum, the most formalised learning involves actors' intentional participation in organised, structured activities with the explicit goal to promote the acquisition of knowledge, skills and competences. In the context of teachers' professional learning, these activities tend to be initiated by schools or education authorities and – whether mandated or not – they tend to be officially recognised and to yield evidence of teachers' participation. Examples of professional learning activities with a typically high degree of formality include the attendance of courses or seminars, the pursuit of formal qualification programmes, formal coaching, structured induction programmes, and observations embedded in teachers' formative appraisal cycle (see Table 2.1).

By contrast, the most informal forms of teachers' professional learning emerge from the daily activities related to their work. They are not organised or structured with pre-determined objectives and are not necessarily perceived or intentionally initiated as learning activities by those who engage in them. Examples for learning practices with a typically low degree of formalisation include ad hoc peer exchange on professional matters, teachers' exchange on online platforms or the participation in teacher networks and informal mentoring arrangements. These learning activities, although they are often hidden from the view of policy makers, are integral to teachers' professional growth and in some

cases, what begins as informal learning evolves into or sparks more formal learning experiences later on.

Between these two poles are a wide range of professional learning practices with intermediate degrees of formality that are sometimes characterised as “non-formal activities” (Werquin, 2010_[41]). These are usually initiated by teachers or groups of teachers and are often intentionally conceived as learning opportunities. Their goals and structures tend to be developed by those who engage in them and may evolve over time. Although participation in these non-formal learning activities may be externally supported, it is usually not regulated or covered by teachers’ official learning requirements or entitlements. Examples for learning activities with such intermediate degrees of formality may include teachers’ self-directed study and participation in online courses, meetings in professional learning communities or grassroots teacher-led learning events.

It is worth noting that any given type of learning activity can exhibit varying degrees of formality depending on the policy environment and context in which it is embedded. On-the-job mentoring, for example, can take the informal form of ad hoc advice based on personal relationships between colleagues and without a formal framework or guidelines. In other contexts, mentorship may take more structured forms and could be carried out by individuals with formal mentoring responsibilities and resources, and whose practice is monitored by schools in compliance with a central regulatory framework. Likewise, learning activities can undergo a process of formalisation over time, for example when structures become established through protocols and other means of codification or when teachers’ engagement becomes officially recognised and validated.

2.3.3. Actors and providers

A wide range of actors and providers can lead CPL activities and teachers themselves initiate or guide much of their private professional learning. In doing so, they may draw on resources provided by third parties, such as the research community, textbook publishers, peers and other organisations. Some types of CPL – particularly those based on collaboration and exchange – rely on peers or groups of teachers to initiate the learning experience. This can take the form of private exchanges in online discussion forums, school-based mentoring, peer observation or exchange in informal teacher networks but also in more formalised professional learning communities (PLCs) (Stoll et al., 2006_[40]).

School-based actors including school leaders and their teams, as well as dedicated school staff, can also play a critical role in facilitating CPL activities. This includes not only providing teachers with structured induction programmes but also supporting, initiating and leading opportunities for informal exchange and collaboration. Furthermore, schools can provide other schools with peer learning opportunities, for example by inviting staff from other providers to observe their practices or – in some systems – sell CPL services to other schools.

The market for formal off-site CPL is particularly diverse and differs markedly across systems. In most of the 34 OECD and partner countries with available data for 2013, professional development for lower secondary teachers was provided by educational institutions (HE or ITE institutions and schools), but also private companies. In about two thirds of the countries, public agencies for teachers’ professional development, teachers’ professional organisations, teacher unions and local education authorities also provided PD and in around a quarter of countries, the inspectorate played a role in its provision too (OECD, 2014, pp. 527, Table D7.4C_[41]).

2.4. Analytical dimensions

Based on some of the key policy issues identified in the research literature and previous OECD work (see Annex B), the TPL study proposes to organise its analysis of teachers' professional learning around five dimensions: motivation, access, provision, content, and quality (see Figure 2.2 for an illustration). These broad areas of analysis are suggested to underpin the study's analytical framework and to guide the collection of qualitative information through country background reports (CBRs).

In addition to the policy issues pertaining to each of these five dimensions, several questions at the heart of the TPL study require a comprehensively multi-dimensional approach and could guide the policy diagnosis within each of the five dimensions. These crosscutting issues include:

- What **vision and strategic objectives are guiding CPL policies and practices**, who is involved in setting them, and how are various stakeholders' goals aligned?
- How can school systems adapt to new forms of CPL provision and support a **re-orientation towards the most effective practices** at all levels?
- Which policies and resourcing strategies can **ensure that teachers in all schools benefit from relevant and accessible CPL** that addresses their needs and helps them to improve their practice?

The TPL study's purpose is to help countries improve their professional learning systems in order to support their educational goals related to quality teaching and, ultimately, improved student learning. In doing so, the study seeks to be mindful of countries' own definitions of these terms and objectives, of their different educational priorities and of the other goals they may hope their professional learning systems to accomplish (e.g. teacher professionalism and teacher well-being).

2.4.1. *Motivation: What shapes teachers' motivation to engage in CPL?* (Dimension 1)

Providing teachers with the right incentives to engage in CPL while recognising the importance of their self-initiated and autonomous engagement in professional learning activities is a central challenge in building holistic CPL systems. The TPL study seeks to understand the factors that shape teachers' extrinsic motivation and those that strengthen teachers' intrinsic motivation to pursue continuous professional growth throughout their careers. On the one hand, this dimension covers the factors shaping teachers' extrinsic motivation to engage in CPL through incentives or requirements. This includes, for example, formal appraisal or certification processes, as well as direct and indirect links between professional development and teachers' career progression or compensation.

On the other hand, the dimension considers the factors that stimulate teachers' intrinsic motivation to engage not only in formalised CPL but also in private and self-initiated autonomous learning practices. Intrinsic motivation is an important factor driving teachers' engagement in CPL and its recognition and support is critical to foster teacher professionalism. Intrinsic motivation can be the product of personal dispositions, affinities, perceived needs and the satisfaction derived from professional learning, but it is also shaped by its interaction with extrinsic incentives and their alignment with teachers' self-selected goals, values and beliefs.

This dimension, therefore, aims to capture policy approaches and systems that shape teachers' extrinsic motivation and strengthen teachers' intrinsic motivation to engage in CPD. It also considers how systems can build trust and overcome cultural barriers that may impede teachers' willingness to open their classrooms up to peer learning and collaboration. In addition, the dimension covers the incentives for other actors, including schools, professional organisations, HE institutions and private actors to engage in or promote the provision of CPL. Relevant questions for this dimension include:

- How to foster trust and other norms that support teachers' willingness to engage in professional learning, both individually and collectively?
- How to create a culture in which teachers are willing and open to engage in different forms of professional learning, including on externally set priorities and content?
- How can teachers be provided with meaningful incentives to participate in CPL without crowding out their intrinsic motivation to develop their practice?
- How can actors across the system be incentivised to contribute to the promotion and provision of effective CPL?

2.4.2. Access: *How accessible is CPL for teachers? (Dimension 2)*

Many teachers and principals report barriers and constraints that prevent them from engaging in collaborative or self-directed CPL and from accessing learning opportunities provided by external actors. This dimension considers where these barriers and constraints arise as well as the policies that can enable schools and teachers to overcome them. The analysis will cover, among other things, (1) which entitlements and requirements exist around teachers' engagement in CPL, (2) the barriers that individual teachers face, e.g. due to time or resource constraints, and (3) the policies that can help alleviate these barriers and ensure that all teachers have access to professional learning opportunities adapted to their needs and working conditions (including those of part-time teachers).

The analysis will not only investigate the quantity, but also the quality of the learning opportunities available to teachers, schools and other institutions and whether the right conditions are in place for teachers to shape and access the types of professional learning that are most effective and relevant for their particular contexts. The dimension also considers how the funding of CPL can exacerbate or alleviate inequities in access and what policies can ensure that teachers can engage in high-quality CPL, regardless of their school size, location or backgrounds. Finally, the dimension looks at how teachers are guided and supported in their own engagement in professional learning and in their search to access the CPL that matches their personal needs, as well as those identified by schools and the wider education system. Relevant questions for this dimension include:

- How can systems design CPL entitlements/requirements to support teachers' access to learning opportunities regardless of their career stage and working arrangements?
- How can systems diversify access to (or diversify the providers of) CPL opportunities, so that schools and teachers have possibility to choose professional learning opportunities relevant to their development needs and desires?
- What policies can help teachers to overcome time and financial constraints that inhibit their engagement in collaborative learning or access to training?

- What policies can ensure that socially and geographically disadvantaged schools have the capacity, financial and material resources to let their teachers access high-quality CPL?
- What information and guidance is available at different levels to support teachers in navigating the CPL offer to access the most relevant training?

2.4.3. Provision: How and by whom is CPL provided? (Dimension 3)

This dimension looks into the ways in which CPL is provided in different systems, including teachers' role in its delivery and their level of agency in designing and shaping it. It considers teachers both as recipients and as providers of CPL, both individually (e.g. as coaches, mentors and team teachers) and collectively (e.g. via networks, professional associations and unions). The analysis is interested in both the provision of formal professional development and the process of understanding and supporting effective CPL activities that are led by school-level actors and practiced in private and/or informal spaces.

The means by which teachers engage in professional learning – its setting, format, frequency and providers (including the level of their training or quality) – has a significant impact on its effectiveness. Therefore, a central question for school systems is how they can systematically re-orient and extend their CPL systems to support teachers in engaging in the most effective forms of provision. The dimension analyses the various actors involved in providing CPL, the terms on which they engage in its provision and the co-ordination between them. It also examines how various formal and informal ways of engagement in CPL – on site and in private settings – interact and how each of them can best support teachers' continuous professional growth. Relevant questions for this dimension include:

- Which forms of CPL provision are officially recognised and supported at different levels?
- How can the format, timing and duration of CPL activities be adapted to most effectively support different learning goals and contents?
- What structures exist to facilitate teachers' engagement in individual or collaborative CPL practices within, outside of and between schools, in both formal and informal settings?
- How do systems ensure sufficient capacity for the provision of relevant learning opportunities, including the supply and training of teacher educators?
- What actors provide CPL, how do they interact and what rules govern their engagement in the market for teacher training?

2.4.4. Content: How are CPL contents selected and developed? (Dimension 4)

In light of changing learning objectives and student needs, school systems need to ensure that CPL contents remain relevant and fit each school's and teacher's needs. This dimension addresses how the contents of CPL are selected and developed as well as the mechanisms by which they are matched to different actors' learning needs. In particular, it examines the process by which teachers', schools' and system-wide training and learning needs are identified or forecast and translated into corresponding developmental activities. While some learning needs arise from system-wide processes (e.g. curricula reforms and other policies that place new demands on teachers), others are identified by teachers

themselves and emerge from their specific professional environment and practices. This dimension therefore looks at how various stakeholders are involved in the co-creation of CPL contents and in finding a balance between what teachers need to learn and what they wish to learn in their CPL activities. It also considers how system-wide training contents can be aligned (and the role, e.g. of professional standards in this process) to ensure their internal consistency and their complementarity with ITP.

This dimension also considers different strategies to codify and mobilise effective teaching practices and how the tacit knowledge that emerges from teachers' professional experience can benefit professional learning in the wider teaching community. This includes processes to identify effective practices and determining their generalisability or the particular school contexts and communities in which they are applicable. While causal research designs on the effectiveness of teaching practices are costly and time-intensive, an intermediate level of evidence may consist of collecting insights across multiple teachers and across schools (OECD, 2019_[42]). In this context, the study will consider the availability of systems to share professional learning contents within and across schools, and whether teachers are supported in collaborating across different levels and sectors. There are also questions about how teachers are supported in interpreting CPL contents, making them relevant to their own context and applying them in their classroom. Relevant questions for this dimension include:

- How are emerging professional learning needs forecast or identified at different levels of the system?
- What mechanisms exist to steer the contents of the CPL offer to ensure their alignment with these changing needs?
- What role can the CPL offer play in codifying and spreading teachers' tacit knowledge?
- How are teachers supported in transferring CPL contents to their classrooms and applying them in practice?

2.4.5. *Quality: How is the quality of CPL ensured? (Dimension 5)*

This dimension is concerned with how school systems can assess and raise the quality of their teachers' CPL. To use available resources to the greater possible effect, it is critical to ensure the quality of professional learning. However, this presents a range of challenges, given the variety of CPL settings, providers, actors and formats. In light of these difficulties, the dimension considers (1) how the various providers and actors in CPL systems define the objectives and desired quality of professional learning activities, (2) how they measure and evaluate the results of CPL activities, and (3) how policy approaches and measures to improve CPL systems are developed on this basis.

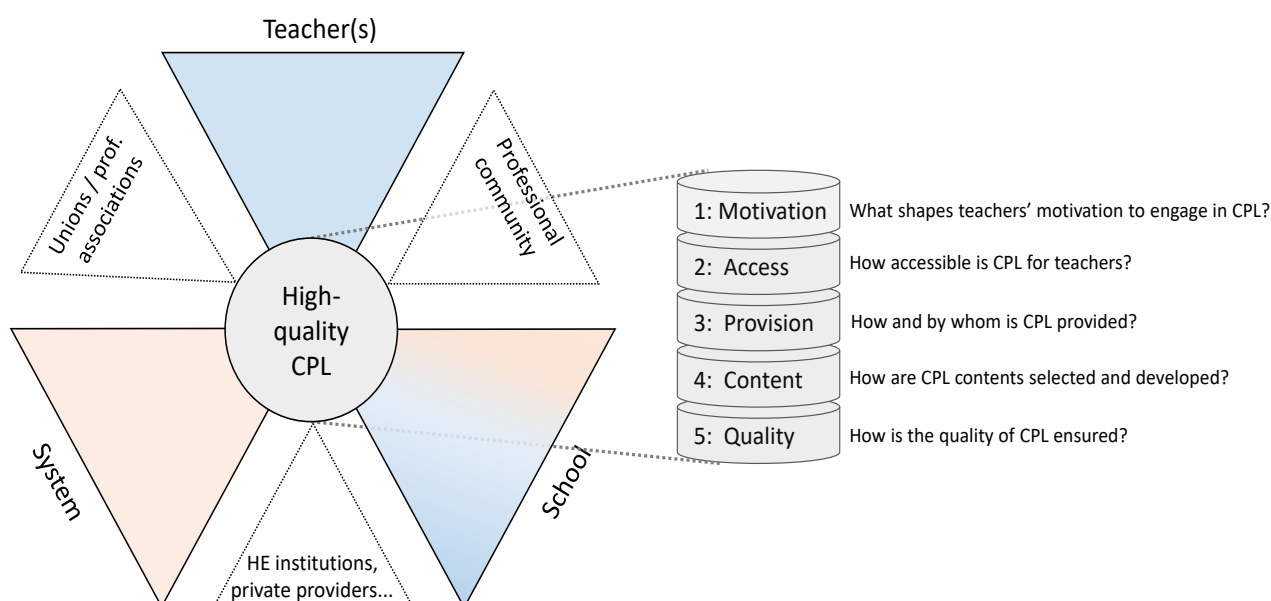
The dimension examines, for example, how guidelines and standards for high-quality CPL are developed across diverse providers and actors, for different types of provision and applied at different levels of the system. It also covers the use of accountability and quality assurance mechanisms, including the accreditation of external providers as well as the evaluation of programmes, materials and school-based initiatives. It will also examine how these external quality assurance mechanisms are linked to individual, school and system-wide (self-)evaluation and improvement plans. Relevant questions for this dimension include:

- How are the goals for CPL defined and what parameters are used to measure its effectiveness?
- How are CPL practices integrated into a culture of continuous growth at the level of the teacher, the school and beyond?
- What systems exist to monitor the quality of different types of CPL, including new formats like MOOCs (and for teachers to monitor their self-directed CPL)?
- What accountability structures around CPL exist for teachers (e.g. appraisal), schools (e.g. inspections) and external providers (e.g. accreditation)?

2.5. Levels of analysis

The TPL study's framework considers three levels of analysis: A) teachers – individually and collectively – who can be both recipients and providers of TPL, for example through peer coaching, professional learning communities or teacher networks, B) the school, including its leadership team and C) the system, including a range of actors who shape teachers' professional learning, such as different levels of the school administration, higher education institutions, teacher unions or professional associations and private training providers (see Figure 2.2).

Figure 2.2. Levels of analysis and analytical dimensions



2.5.1. *Teacher(s)*

Although individual teachers may be primarily thought of as recipients of CPL who interpret and respond to incentives in light of their practice and career development (Dimension 1), they can play a critical and active role across all dimensions of the TPL study's analytical framework. Teachers are important providers of CPL, e.g. through formal or informal mentorship activities (D-3); they can shape the content of CPL by providing feedback on their needs or actively engaging in the development of learning contents (D-4); they face and work to overcome barriers and invest resources to access CPL (D-2); and they can contribute to quality assurance by providing feedback on the quality of their CPL through different channels, including their formative appraisal (D-5).

Teachers also play a vital *collective* role in CPL systems. The professional teacher community plays a central role in creating a vision for teacher professionalism and creating an ethos of continuous improvement that motivates teachers to engage in CPL (D-1). The teacher community is also an important co-creator and provider of professional learning opportunities (D-3). This can take various forms, ranging from informal professional exchange in schools or online platforms to collaborative work in professional learning communities, and formalised training provided by teachers' professional associations and unions. The TPL study will also consider the role of the organised teacher profession as a stakeholder representing teachers' professional interests and engaging in the policy-making process, as well as the responsibilities they assume for communicating teachers' professional needs (D-4) and helping teachers access learning opportunities, e.g. through inter-school teacher networks (D-2).

2.5.2. *Schools and leadership teams*

Schools are an important site to build trust among teachers and foster a culture of continuous improvement. At the school-system interface, school leadership teams are a key intermediary responsible for ensuring that teachers acquire new expertise required by system-level policies while also ensuring teachers' continuous learning to respond to local and school priorities. School leadership teams have an important share of responsibility for ensuring that teachers remain motivated to engage in professional growth (D-1). Schools are also one of the sites where teachers' professional learning takes place and they play an important role in its delivery. As part of their instructional leadership role, principals and their leadership teams may play an important role in assigning or proposing development opportunities and initiating school-based learning activities (D-3) based on the identified needs of their teachers (D-4). The TPL study also considers inequities in the access to professional learning opportunities across schools and how school-level decisions (e.g. on the management of staff time) affect teachers' opportunities to engage in collaborative practices and other forms of peer learning (D-2). Finally, schools occupy a central position in the quality assurance process. They can be held accountable for the improvement of their staff while at the same time exercising their role in monitoring and evaluating their continuous professional growth (D-5).

2.5.3. *Systems*

At the system level, the TPL study will consider the role of educational authorities, as well as HE institutions and other external CPL providers. These actors can take a wide range of roles in CPL systems. HE institutions, for example, are an intermediate actor between education authorities and schools, often bringing nationally defined content to schools while also working with schools to understand and mobilise knowledge that emerges within

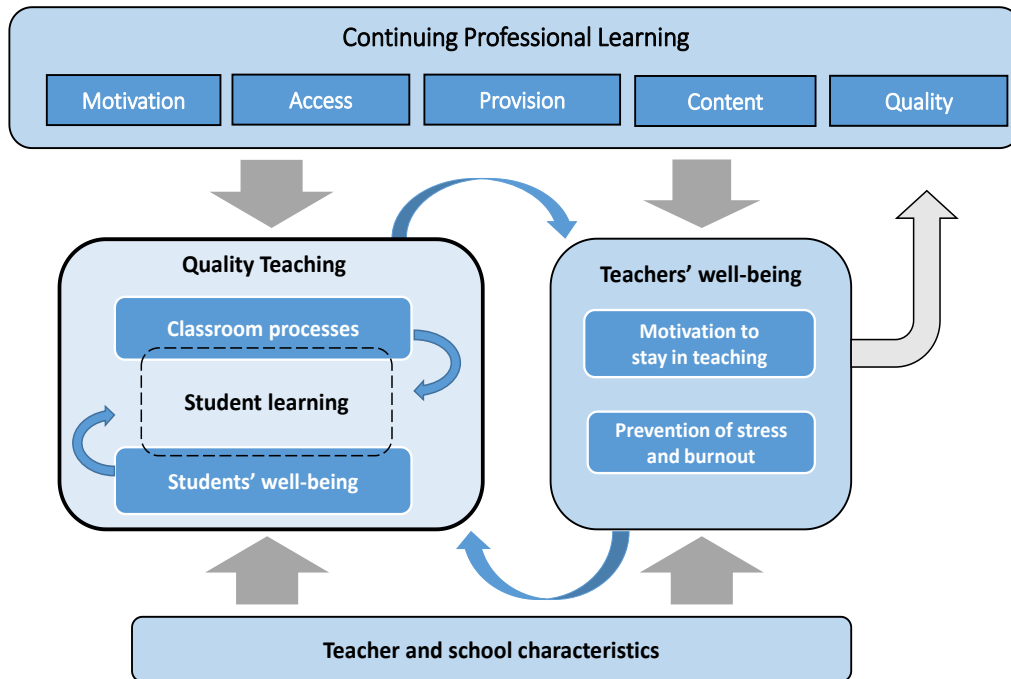
schools. Central governments, regional and local authorities play a critical role setting policies and making decisions that affect teachers' continuing professional learning. This may include legislation or key strategic documents setting out the vision and priorities for teachers' professional learning. It may also include policies affecting teachers' requirements to engage in CPL or their entitlements to do so, as well as any links to compensation and career progression (D-1). Authorities at the central, regional and local level can be important providers of teachers' professional learning too. This includes training in schools (e.g. through the deployment or funding of instructional coaches and learning consultants) and off site, e.g. in the form of formal qualification courses, training seminars or certification programmes, which may be delivered centrally through HE institutions and various other providers (D-3). In many systems, authorities at different levels of the system also play an important role in supporting teachers' access to CPL by designing funding mechanisms for teachers' engagement in continuing education or providing accessible information on available CPL opportunities (D-2). System-level authorities can also directly intervene in the quality assurance process through accreditation requirements for CPL programmes and providers; or indirectly by setting frameworks for quality assurance processes at the school level (e.g. through the criteria included in school inspection frameworks) (D-5).

2.6. CPL outcomes

In light of reports noting the limited evidence on the effectiveness of traditional teacher professional development (Yoon et al., 2007^[44]; TNPT, 2015^[45]), there is a growing sense that some widespread approaches to teachers' professional learning have failed to deliver on their promises. Yet, although traditional models of large-scale, top-down development based on short-term courses may be of limited effectiveness, recent research has provided cause for optimism and generated convincing evidence that some forms of CPL do increase teacher effectiveness. This particularly includes context-specific and school-based interventions that are sustained over time and involve individualized coaching (Papay et al., 2016^[21]; Powell et al., 2010^[46]; Allen et al., 2011^[47]). Strong professional learning environments in schools have also shown to help teachers improve their effectiveness well beyond the first ten years on the job, thus challenging the widely held conception that teachers reach a "performance plateau" after about five years of experience (Kraft and Papay, 2014^[48]).

Besides quality teaching, CPL can have a range of desirable secondary effects, e.g. related to teachers' well-being and other desirable outcomes, such as improved job satisfaction and retention. While many of these secondary effects in turn influence teachers' capacity to engage in quality teaching, they are also important for their own sake. The TPL study therefore proposes to consider them as distinct outcomes. As illustrated in Figure 2.3 and elaborated below, improved teachers' well-being may also – in turn – affect their motivation to engage in further professional learning. The following sections are aligned with and draw on definitions developed as part of the OECD Teacher Well-being for Quality Teaching Project (Viac and Fraser, n.d.^[49]).

Figure 2.3. Outcomes of continuing professional learning



Note: Adapted from the OECD Teacher Well-being for Quality Teaching Project

2.6.1. Quality teaching

Quality teaching here denotes the teachers' ability to be effective in the workplace and positively influence student learning and other desired non-cognitive outcomes (such as student well-being and motivation). The ability of teachers to provide quality teaching is widely recognised as one of the most important factors for the success of education systems (Schleicher, 2018^[50]; Darling-Hammond et al., 2017^[51]). Effective teachers have been shown to improve not only students' educational outcomes (Rivkin, Hanushek and Kain, 2005^[52]), but also their long-term economic outcomes (Chetty, Friedman and Rockoff, 2014^[53]), as well as their self-efficacy and their happiness (Blazar and Kraft, 2017^[54]). Continuing professional learning, in turn, can help teachers to improve in some of the areas most closely associated with their effectiveness, including their content knowledge and their pedagogical content knowledge (Opfer, 2016^[18]; Guerriero, 2017^[55]; Metzler and Woessmann, 2012^[56]).

For the purpose of this study, the notion of student learning is defined broadly to encompass their acquisition of academic skills but also that of social, emotional and ethical skills. Beyond this, teachers are expected to encourage students' engagement and responsibility, to respond to students from different backgrounds with different needs, and to ensure that students feel valued and included (OECD, 2019^[2]). Following the OECD Teacher Well-being for Quality Teaching Project, quality teaching is expected to promote student learning through its positive influence on *classroom processes* and *students' well-being*.

CPL impact on classroom processes

Classroom processes here refers to all teacher practices in the classroom that may lead to sustaining or improving students' learning. Over the past decade, research has consistently shown that the variance in pupil outcomes is greater at the classroom level than at the school level and that much of the classroom-level variance can be explained by what teachers do in the classroom (Muijs et al., 2014^[57]). Based on a forthcoming OECD literature review (Viac and Fraser, n.d.^[49]), the classroom processes that matter the most for students' learning are 1) students' active engagement with teachers; 2) the reinforcement of content and feedback; 3) the classroom climate and 4) teacher co-operation. The TPL study is therefore interested in the extent to which teachers' CPL can help them acquire the knowledge, skills, and practices necessary to put these four classroom processes into practice. Since the effects of CPL have been shown to be mediated by the school environment as well as teachers' prior knowledge and beliefs, it will be important to consider these contextual school and teacher characteristics (Opfer, 2016^[18]; Richardson, 2003^[58]; Fishman et al., 2003^[59]).

CPL impact on students' well-being

Students' well-being here refers collectively to the desirable outcomes of instruction for students – following the OECD Teacher Well-being for Quality Teaching Project. This includes students' academic performance but also their motivation, confidence and life satisfaction. Building strong and supportive relationships with their teachers allows students to feel safer in the school setting, feel more competent, form more positive connections with their peers, and make greater academic gains. In contrast, conflictual relationships with teachers may impede students' ability to draw on the academic and social resources offered within classrooms and schools, setting them on a trajectory towards school failure (Pianta and Hamre, 2009^[60]). A forthcoming literature review has identified four areas affected by students' well-being: 1) their achievement; 2) their motivation and attitude towards learning; 3) their self-efficacy; and 4) their subjective well-being (Viac and Fraser, n.d.^[49]). Accordingly, the TPL study will consider teachers' ability to foster students' well-being as an important outcome of effective CPL.

CPL impact on student achievement

Student achievement is affected by a great variety of factors, many of which are beyond the control of teachers (e.g. students' economic social and cultural status). As described above, insofar as teachers do have a profound impact on student achievement, it operates primarily *through* their ability to improve classroom processes and students' well-being. This ability of teachers, in turn, can be enhanced through CPL. The impact of CPL on student achievement is therefore not direct, but rather the product of a variety of mediated effects with different underlying mechanisms. Nevertheless, student achievement has been the primary and often the only outcome considered in empirical studies of CPL effectiveness. The TPL study hopes to widen this perspective by explicitly acknowledging the complexity of this relationship and contextualising student achievement within a structure of related (and potentially independently desirable) CPL outcomes that tend to receive less attention.

2.6.2. Other outcomes

CPL impact on teachers' well-being and retention

In teaching, as in any other professional domain, opportunities for training and learning are an important part of what makes a job fulfilling and satisfying. The OECD's *Guidelines for Measuring the Quality of the Working Environment*, for example, consider on-the-job training as one of the major job resources, alongside work autonomy, perceived opportunity for career advancement, and intrinsic rewards. These resources contribute to the quality of the working environment by helping employees to balance their professional demands and thereby avoid job strain (OECD, 2017_[39]). Evidence from TALIS 2018 and previous OECD research confirm that teachers' participation in impactful professional development is associated with an improved sense of confidence and job satisfaction (OECD, 2016_[27]; OECD, 2014_[61]; OECD, 2019, p. 160_[11]). This may increase teachers' motivation to invest in their long-term professional growth and their willingness to engage in additional CPL, thereby creating a virtuous circle of improvement (Viac and Fraser, n.d._[49]). Teachers' well-being also has a range of desirable corollaries related to their capacity to engage in high-quality teaching and willingness to stay in the profession. Excessive teacher turnover can be profoundly disruptive and impairs student learning, especially in schools serving disadvantaged communities (Ronfeldt, Loeb and Wyckoff, 2013_[62]). High quality induction programmes have been shown to reduce dropout rates among early career teachers (OECD, 2019_[2]). By extension, CPL may help to motivate and retain effective teachers throughout their career by boosting their efficacy and job satisfaction.

CPL impact on employee mobility and skills obsolescence

Within the wider economy, training and learning opportunities for adults (both on and off the job) are crucial to prevent skill obsolescence, to increase employees' professional upwards-mobility and to reduce their risk of unemployment (OECD, 2017, p. 140_[39]). Although building skills that can be applied outside of the teaching context is not usually a focus of teachers' CPL, it can play an important role in preparing teachers for positions in school leadership or educational administration. Similar considerations might also be at play in systems that seek to expand teachers' horizontal career structures and permit them to engage in specialised roles within the school (e.g. as librarians or ICT specialists). While these roles may be assumed on a part time basis and not spell the end to a teacher's career in school education, they may require skills that go beyond conventional teaching practice.

3. Methodology

The methodology of the TPL study is designed to explore countries' challenges and strengths, provide them with timely advice and opportunities for peer learning based on a SWOT policy diagnosis approach that has been tested and refined during the ITP study (2016-2018). The sections below describe the different ways in which countries can engage in the TPL study and provide a detailed description of its main components, methodology, timeline and cost.

3.1. Modes of participation

3.1.1. *Two thematic strands*

The TPL study is comprised of two thematic strands covering the full cycle of teachers' professional learning. Strand I covers initial teacher preparation (ITP). Strand II covers continuing professional learning (CPL). Participating countries can choose to engage in a country diagnosis of one of the two strands, or both. This section outlines the methodology for countries participating in only one of the strands.

Country diagnoses that combine Strand I and II would require an adapted methodology that accounts for their greater scope. They would likely require the preparation of a more extensive country background report, adjustments to the length of the diagnostic visits, a broader selection of stakeholders, as well as the commitment of additional resources. The process and methodology for combined diagnoses will be defined in close collaboration with interested countries.

3.1.2. *Three levels of participation*

Participation in the TPL study is open to all OECD member countries, invitees and observers to the Education Policy Committee, as well as other partner countries. Countries can choose between three levels of participation:

- **Attendance of project meetings:** Contribution to peer learning and policy exchange during the annual project meetings.
- **Country background report (CBR):** Preparation of a CBR by the concerned country, which will feed into the comparative analysis and peer learning on Strand II of the study.
- **Country diagnosis:** Organisation of a country diagnostic visit by the OECD Secretariat, which provides an external diagnosis to the concerned country.

Participation in a country diagnosis requires the preparation of a CBR. Countries preparing a CBR or engaging in a country diagnosis appoint a national co-ordinator to oversee their participation in the study. The role and typical profile of national co-ordinators are outlined in Annex A. The national co-ordinator is encouraged to attend the annual project meetings, which guide the methods, timing and principles of the project. Participation in the project meetings is optional and countries are free to send other or additional representatives if they wish.

3.2. Main components of the study

3.2.1. *Identification of key policy issues and questions for analysis*

The first phase of the TPL study will serve to develop the analytical framework for country diagnoses and identify key policy issues and questions to guide the analysis. This document constitutes the first step of this preparatory work and presents a selection of policy issues for discussion, drawing on a targeted literature review and synthesis of quantitative and qualitative evidence on CPL. It also proposes an analytical framework for the analysis of teachers' continuing professional learning systems that will complement the ITP study's framework to guide country diagnoses conducted as part of the TPL study.

The TPL study's launch event on 27-28 June 2019 gave countries the opportunity to comment on the proposed analytical framework and discuss key policy issues and questions for analysis. The study's design and implementation plan was revised based on this feedback and will guide the OECD Secretariat's analyses and help it in identifying the information it needs to collect from participating countries prior to diagnostic visits.

3.2.2. *Country background reports*

All countries engaging in a country diagnosis will complete a country background report (CBR) following the study's conceptual framework and detailed guidelines. The CBR is designed to assist the expert team to understand the national context prior to the diagnostic visit and to target their questions accordingly. The CBRs' common framework will also facilitate comparative analyses and create opportunities for countries to learn from each other. The CBR should include contextual information on the education system in general and teachers' ITP/CPL in particular. It should also include information on relevant recent reforms, innovations, concerns and challenges. Draft guidelines for the completion of the CBR have been prepared by the OECD Secretariat and shared for delegates' review and comments.

3.2.3. *Country diagnostic visits*

The Secretariat will work with national co-ordinators of participating countries to establish an itinerary for a diagnostic visit. The OECD visit team is comprised of two members of the OECD Secretariat and two international experts selected based on their expertise in one or more of the TPL study's thematic areas. In addition, national co-ordinators of other participating countries can participate in the country visit as observers if the host country agrees. A critical friend within the OECD Secretariat may provide general policy insights and feedback on preparatory documentation.

The country visits will span a period of four days and a fifth day reserved for the presentation of initial findings (see below). During the visit, the OECD visit team will conduct site visits and interview a wide range of stakeholders based on protocols covering each of the study's key areas. Relevant stakeholders may include, among others, officials in national ministries, officials in municipalities/states/boards of education, new teachers, experienced teachers, mentor teachers, second career teachers, school boards, school leaders, researchers in teacher training institutions, trainers and teacher educators, as well as teacher unions.

The information collected during the visit will inform a diagnosis of the system's key strengths, weaknesses, opportunities and threats (SWOT diagnosis) related to teachers' continuing professional learning.

3.2.4. *Workshop / webinar on initial findings*

Following the visit, the OECD team will present the initial findings of the SWOT policy diagnosis and facilitate an informal discussion of its results. The initial impressions of the visit team will not be made public and serve as the basis for internal discussions only. The audience will therefore be restricted to national co-ordinators and ministry officials of the host country and – if the host country agrees – to the national co-ordinator teams of the other countries participating in the TPL study. Countries can choose to host the discussion of initial findings in the form of a workshop or a webinar:

- **Workshops** would take place on Day 5 of the OECD team visit.
- **Webinars** would take place in the week following the OECD team visit.

Shortly after the event, the OECD visit team will adjust its initial findings in light of the discussions and submit the draft (in bullet point format) to national co-ordinators. The OECD visit team will then develop a more detailed diagnosis of the country's professional learning system, which will be included in the country's national diagnostic report (see below).

3.2.5. *National diagnostic reports*

Within two months following a country visit, the SWOT diagnoses and case studies resulting from the visits will be compiled into national diagnostic reports of about 20-30 pages that will allow countries to see all information pertaining to their TPL systems at a glance and easily share them.

The OECD team will also explore possibilities to disseminate the findings through an interactive online platform. This platform could be modelled on or function as an extension of the ITP project's *Teacher Ready!* platform (<http://www.oecdteacherready.org/>). This infographic-style platform is designed to appeal to a wide range of stakeholders, including policymakers, teachers and researchers and will provide them with an easy means to access their countries' results and explore common strengths and challenges across the TPL study's countries.

Table 3.1 provides an indicative timeline for a country's participation in Strand II of the TPL study.

Table 3.1. Indicative timeline for the participation in a TPL country diagnosis (Strand II)

Time from the agreed start date	Output / process stage
Months 1-3	Preparation of the CBR (can be adjusted in line with country needs)
Month 3	Revisions to the CBR and country visit preparation
Month 4	Country visit (5 days)
At the end of the diagnostic visit	Workshop / webinar on initial findings
Month 6	National diagnostic reports shared with country (and potentially on interactive platform)

3.2.6. *Synthesis phase and final comparative report*

In the second half of 2021, if more than five countries have joined the project and the Education Policy Committee (EDPC) agrees to include the TPL study in the 2021-22 PWB

along with dedicated central OECD (Part I) funding, the OECD Secretariat will prepare a comparative report and convene a webinar or conference to present and discuss the study's findings. The final report will focus on Strand II of the study, covering teachers' continuing professional learning and thereby complement the ITP study's final report on initial teacher preparation (OECD, 2019_[2]). The comparative report will describe common challenges in designing and sustaining systems for teachers' continuing professional learning and present promising strategies to address them, based on international evidence and practices identified in the study. The report will serve as a resource for policy makers, teacher educators, educational leaders, teachers and the research community.

3.2.7. Project meetings

Following the TPL study's launch meeting on 27-28 June 2019, the OECD Secretariat will convene annual project meetings to facilitate peer-exchange and allow countries to share their lessons and experiences related to teachers' professional learning. The meetings will also serve to guide the methods, timing and principles of the project and to provide feedback on its comparative outputs. Participation in the project meetings will be open to all OECD member countries and observers to the EDPC and – subject to the EDPC's permission – to other interested countries as well as to the Trade Union Advisory Committee to the OECD (TUAC) and the Business and Industry Advisory Committee to the OECD (BIAC).

For each project meeting, the OECD Secretariat will also propose a set of substantive policy issues related to the project's initial teacher preparation strand or the continuing professional learning strand for discussion. Participants will be invited to present their countries' experience of the issue, related challenges and policy initiatives. In addition to the countries' presentations, international experts and key stakeholders will be invited to contribute to the debate.

3.3. Provisional timeline for the study:

The following provisional timeline for the TPL study is based on a scenario in which more than five countries participate and the EDPC agrees to include the TPL study in the 2021-22 PWB, with resources to support the preparation of a final comparative report in 2021.

3.3.1. June – September 2019

- The Secretariat convenes the launch meeting of the Teachers' Professional Learning (TPL) Study on 27-28 June 2019 in Paris
- The Secretariat refines the analytical framework and CBR guidelines based on the feedback received at the launch meeting
- The first set of countries confirm their participation by September 2019

3.3.2. October 2019 – June 2021

- Countries prepare CBRs
- The Secretariat schedules country visits in consultation with countries
- OECD visit teams conduct the country visits and deliver their findings

- Results of country visits (SWOT diagnoses and case studies) and country background reports are disseminated
- Additional countries confirm their participation
- The Secretariat organises annual project meetings to facilitate peer-exchange and review the study's progress

3.3.3. *June– December 2021*

- The Secretariat prepares and publishes a final comparative report
- The Secretariat convenes a launch event or webinar

3.4. Governance of the study

The TPL study is overseen by the EDPC. It is designed to deliver Strand 1 of Output 2.3 “Teachers and Teaching: Supporting Teachers’ Professional Learning and Well-being for Quality Teaching” of the EDPC’s 2019-20 Programme of Work and Budget (PWB) [EDU/EDPC(2018)25]. Over the course of the project, the OECD Secretariat will organise meetings of country representatives and – if proposed and approved by the EDPC – an informal working group (IWG) could be established to guide the study. Alternatively, the mandate of the Group of National Experts on School Resources could be expanded to oversee policy work related to teacher policies. Progress on the study will be reported back to the EDPC at regular intervals using the framework established for all outputs. The Committee will also be invited to comment on the draft of the final comparative report, as was the case for the ITP report.

3.5. Outputs

The TPL study will produce a number of outputs:

- An analytical framework for the analysis of CPL systems
- Country background reports providing information on ITP/CPL systems
- Workshops or webinars with national co-ordinators and ministry officials to present and discuss the country visits’ initial findings
- National diagnostic reports presenting case studies and the results of the TPL study’s SWOT diagnoses (and potentially an interactive platform)
- Annual project meetings to facilitate peer-exchange and to review the study’s progress
- Depending on inclusion of the TPL study in the EDPC’s 2021-22 PWB and the availability of dedicated Part I resources, a final comparative report that will draw out key lessons for policy makers to improve their CPL systems

3.6. Dissemination

Like its precursor, the TPL study seeks to explore innovative formats for the dissemination of its findings and emphasises the integration of peer learning opportunities into this process. Besides the presentation of the country visits’ initial findings, national diagnostic reports will be shared and the OECD secretariat will explore the possibilities to disseminate

them through an interactive infographic-style platform. The platform would be designed to appeal to policy makers, teachers, trainers and teacher educators, mentors, researchers and others. Besides the national and comparative reports, the platform would bring together information about the study, its conceptual framework, methodology and contributors, as well as the evidence base on continuing professional learning, drawing on the latest international data, research and policy findings. The study's final comparative report will also be disseminated to the Education Policy Committee through O.N.E. Members & Partners and to the public through the OECD website. Participating countries may also choose to organise national dissemination events to present and discuss the study's findings.

Notes

¹ <http://www.g7.utoronto.ca/education/G7-Kurashiki-declaration-2016.pdf>

² http://www.g20.utoronto.ca/2018/2018-09-05-g20_education_ministers_declaration_english.pdf

³

https://cache.media.education.gouv.fr/file/English_contents/63/7/Declaration_of_the_G7_Ministers_of_Education_2019_4th_July_2019_1153637.pdf

References

- Allen, J. et al. (2011), “An interaction-based approach to enhancing secondary school instruction and student achievement”, *Science*, Vol. 333, pp. 1034–1037, <http://dx.doi.org/10.1126/science.1206954>. [47]
- Bénabou, R. and J. Tirole (2003), “Intrinsic and extrinsic motivation”, *Review of Economic Studies*, Vol. 70/3, pp. 489-520, <http://dx.doi.org/10.1111/1467-937X.00253>. [63]
- Bierly, C., B. Doyle and A. Smith (2016), *Transforming schools: How distributed leadership can create more high-performing schools*, Bain & Company, Boston, https://www.bain.com/contentassets/228ddab6ab224e9bbb2d0b9ae9cf77b1/bain_report_transforming_schools.pdf (accessed on 11 October 2018). [74]
- Blazar, D. and M. Kraft (2017), “Teacher and teaching effects on students’ attitudes and behaviors”, *Educational Evaluation and Policy Analysis*, Vol. 39/1, pp. 146-170, <http://dx.doi.org/10.3102/0162373716670260>. [54]
- Blazar, D. and M. Kraft (2015), “Exploring mechanisms of effective teacher coaching: A tale of two cohorts from a randomized experiment”, *Educational Evaluation and Policy Analysis*, Vol. 37/4, pp. 542-566, <http://dx.doi.org/10.3102/0162373715579487>. [19]
- Burbank, M. and D. Kauchak (2003), “An alternative model for professional development: Investigations into effective collaboration”, *Teaching and Teacher Education*, Vol. 19/5, pp. 499-514, [http://dx.doi.org/10.1016/S0742-051X\(03\)00048-9](http://dx.doi.org/10.1016/S0742-051X(03)00048-9). [38]
- Burns, T. and L. Cerna (2016), “Enhancing effective education governance”, in *Governing Education in a Complex World*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264255364-13-en>. [68]
- Charner-Laird, M. et al. (2017), “Gauging goodness of fit: Teachers’ responses to their instructional teams in high-poverty schools”, *American Journal of Education*, Vol. 123/4, pp. 553-584, <http://dx.doi.org/10.1086/692663>. [75]
- Chetty, R., J. Friedman and J. Rockoff (2014), “Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood”, *American Economic Review*, Vol. 104/9, pp. 2633-2679, <http://dx.doi.org/10.1257/aer.104.9.2633>. [53]
- Christian, B., J. Jacobsen and L. Andersen (2013), “Command and motivation: How the perception of external interventions relates to intrinsic motivation and public service motivation”, *Public Administration*, Vol. 92/4, pp. 790-806, <http://dx.doi.org/10.1111/padm.12024>. [36]
- Cooc, N. (2018), “Who Needs Special Education Professional Development?: International Trends from TALIS 2013”, *OECD Education Working Papers*, No. 181, OECD Publishing, Paris, <https://dx.doi.org/10.1787/042c26c4-en>. [87]

- Cordingley, P. (2008), "Research and evidence-informed practice: focusing on practice and practitioners", *Cambridge Journal of Education*, Vol. 38/1, pp. 37-52, <http://dx.doi.org/10.1080/03057640801889964>. [91]
- Darling-Hammond, L. et al. (2017), *Empowered Educators: How High-Performing Systems Shape Teaching Quality Around the World*, Jossey-Bass, San Francisco. [51]
- Darling-Hammond, L., M. Hyler and M. Gardner (2017), *Effective Teacher Professional Development*, Learning Policy Institute, Palo Alto, CA, https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_REPORT.pdf (accessed on 26 March 2019). [22]
- Day, C. (1999), *Developing Teachers: The Challenges of Lifelong Learning*, Routledge, London, <http://dx.doi.org/10.4324/9780203021316>. [34]
- Delors, J. et al. (1996), *Learning: The Treasure Within*, UNESCO Publishing, Paris, http://www.unesco.org/education/pdf/DELORS_E.PDF (accessed on 15 May 2019). [30]
- Dewey, J. (1904), "The relationship of theory to practice in education", in *The Third Yearbook of the National Society for the Scientific Study of Education*, Public School Publishing Company, Bloomington, IL. [28]
- Echazarra, A. and T. Radinger (2019), "Learning in rural schools: Insights from PISA, TALIS and the literature", *OECD Education Working Papers*, No. 196, OECD Publishing, Paris, <https://dx.doi.org/10.1787/8b1a5cb9-en>. [77]
- European Commission (2017), *Networks for Learning and Development Across School Education: Guiding Principles for Policy Development on the Use of Networks in School Education Systems*, European Commission, Brussels, https://www.schooleducationgateway.eu/downloads/Governance/2018-wgs5-networks-learning_en.pdf (accessed on 19 June 2019). [80]
- Faure, E. et al. (1972), *Learning to Be: The World of Education Today and Tomorrow*, UNESCO, Paris. [29]
- Fishman, B. et al. (2003), "Linking teacher and student learning to improve professional development in systemic reform", *Teaching and Teacher Education*, Vol. 19/6, pp. 643-658, [http://dx.doi.org/10.1016/S0742-051X\(03\)00059-3](http://dx.doi.org/10.1016/S0742-051X(03)00059-3). [59]
- Fraser, C. et al. (2007), "Teachers' continuing professional development: Contested concepts, understandings and models", *Journal of In-service Education*, Vol. 33/2, pp. 153-169, <http://dx.doi.org/10.1080/13674580701292913>. [35]
- Fryer, R. (2017), "Management and student achievement: Evidence from a randomized field experiment", *NBER Working Paper*, No. 23437, <http://dx.doi.org/10.3386/w23437>. [71]
- Gagné, M. and E. Deci (2005), "Self-determination theory and work motivation", *Journal of Organizational Behavior*, Vol. 26, pp. 331-362, <http://dx.doi.org/10.1002/job.322>. [33]

- Garet, M. et al. (2008), *The impact of two professional development interventions on early reading instruction and achievement (NCEE 2008-4030)*, US Department of Education, Institute of Education Sciences. [13]
- Garet, M. et al. (2016), *Focusing on mathematical knowledge: The impact of content-intensive teacher professional development (NCEE 2016-4010)*, U.S. Department of Education, Institute of Education Sciences. [14]
- Garet, M. et al. (2001), “What makes professional development effective? Results from a national sample of teachers”, *American Educational Research Journal*, Vol. 38/4, pp. 915-945, <http://dx.doi.org/10.3102/00028312038004915>. [32]
- Giles, C. and A. Hargreaves (2006), “The sustainability of innovative schools as learning organizations and professional learning communities during standardized reform”, *Educational Administration Quarterly*, Vol. 41/1, pp. 124-156, <http://dx.doi.org/10.1177/0013161X05278189>. [84]
- Glazerman, S. et al. (2010), *Impacts of comprehensive teacher induction: Final results from a randomized controlled study (NCEE 2010-4027)*, U.S. Department of Education, Institute for Education Sciences. [15]
- Guerriero, S. (ed.) (2017), *Pedagogical Knowledge and the Changing Nature of the Teaching Profession*, Educational Research and Innovation, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264270695-en>. [55]
- Hargreaves, A. and R. Dawe (1990), “Paths of professional development: Contrived collegiality, collaborative culture, and the case of peer coaching”, *Teaching and Teacher Education*, Vol. 6/3, pp. 227-241, <https://valerievacchio.files.wordpress.com/2011/10/paths-of-professional-development.pdf> (accessed on 19 June 2019). [70]
- Harris, D. and T. Sass (2011), “Teacher training, teacher quality and student achievement”, *Journal of Public Economics*, <http://dx.doi.org/10.1016/j.jpubeco.2010.11.009>. [17]
- International Relations Directorate of the Federation Wallonia-Brussels (2016), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for the French Community of Belgium*, International Relations Directorate of the Federation Wallonia-Brussels, <http://www.oecd.org/education/schoolresourcesreview.htm>. [82]
- Jacob, B. and L. Lefgren (2004), *The impact of teacher training on student achievement: Quasi-experimental evidence from school reform efforts in Chicago*, <http://dx.doi.org/10.2307/3559005>. [16]
- Johnson, S., M. Kraft and J. Papay (2012), “How context matters in high-need schools: The effects of teachers’ working conditions on their professional satisfaction and their students’ achievement”, *Teachers College Record*, Vol. 114/10, pp. 1-39, https://scholar.harvard.edu/files/mkraft/files/johnson_kraft_papay_teacher_working_conditions_final.pdf (accessed on 8 January 2019). [66]

- Kennedy, A. (2005), “Models of continuing professional development: A framework for analysis”, *Journal of In-service Education*, Vol. 31/2, <http://dx.doi.org/10.1080/13674580500200277>. [37]
- Kraft, M. and D. Blazar (2017), “Individualized coaching to improve teacher practice across grades and subjects: New experimental evidence”, *Educational Policy*, Vol. 31/7, pp. 1033-1068, <http://dx.doi.org/10.1177/0895904816631099>. [20]
- Kraft, M., D. Blazar and D. Hogan (2018), “The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence”, *Review of Educational Research*, Vol. 88/4, pp. 547-588, <http://dx.doi.org/10.3102/0034654318759268>. [85]
- Kraft, M. and J. Papay (2014), “Can professional environments in schools promote teacher development? Explaining heterogeneity in returns to teaching experience”, *Educational Evaluation and Policy Analysis*, Vol. 36/4, pp. 476-500, <http://dx.doi.org/10.3102/0162373713519496>. [48]
- Little, J. (1993), *Teachers’ professional development in a climate of educational reform*, <http://dx.doi.org/10.3102/01623737015002129>. [31]
- Metzler, J. and L. Woessmann (2012), “The impact of teacher subject knowledge on student achievement: Evidence from within-teacher within-student variation”, *Journal of Development Economics*, Vol. 99/2, pp. 486-496, <http://dx.doi.org/10.1016/j.jdeveco.2012.06.002>. [56]
- Muijs, D. et al. (2014), “State of the art - teacher effectiveness and professional learning”, *School Effectiveness and School Improvement*, Vol. 25/2, pp. 231-256, <http://dx.doi.org/10.1080/09243453.2014.885451>. [57]
- Music, A. (2016), “Massive open online courses (MOOCs): Trends and future perspectives”, No. EDU/CERI/CD/RD(2016)5, OECD. [26]
- Nusche, D. et al. (2016), *OECD Reviews of School Resources: Austria 2016*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264256729-en>. [72]
- Nusche, D. et al. (2016), *OECD Reviews of School Resources: Denmark 2016*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264262430-en>. [69]
- OECD (2019), *A Flying Start: Improving Initial Teacher Preparation Systems*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/cf74e549-en>. [2]
- OECD (2019), *Getting Skills Right: Future-Ready Adult Learning Systems*, Getting Skills Right, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264311756-en>. [86]
- OECD (2019), *OECD School Resources Review (forthcoming report on human resources)*, OECD Publishing, Paris, <http://www.oecd.org/education/school-resources-review/>. [42]
- OECD (2019), *OECD Skills Outlook 2019 : Thriving in a Digital World*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/df80bc12-en>. [12]

- OECD (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris, <https://dx.doi.org/10.1787/1d0bc92a-en>. [1]
- OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/eag-2018-en>. [6]
- OECD (2018), *Effective Teacher Policies: Insights from PISA*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264301603-en>. [9]
- OECD (2018), *The Future of Education and Skills - Education 2030: The Future we Want*, [http://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf) (accessed on 29 May 2019). [11]
- OECD (2017), *OECD Guidelines on Measuring the Quality of the Working Environment*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264278240-en>. [39]
- OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264276147-en>. [78]
- OECD (2016), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.187/eag-2016-en>. [5]
- OECD (2016), *Supporting Teacher Professionalism: Insights from TALIS 2013*, TALIS, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264248601-en>. [27]
- OECD (2015), *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/eag-2015-en>. [7]
- OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/eag-2014-en>. [4]
- OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264196261-en>. [61]
- OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264190658-en>. [64]
- OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/19901496>. [8]
- Opfer, D. (2016), “Conditions and Practices Associated with Teacher Professional Development and Its Impact on Instruction in TALIS 2013”, *OECD Education Working Papers*, No. 138, OECD Publishing, Paris, <https://dx.doi.org/10.1787/5jlss4r0lrg5-en>. [18]
- Opfer, V. and D. Pedder (2011), “Conceptualizing teacher professional learning”, *Review of Educational Research*, Vol. 81/3, pp. 376-407, <http://dx.doi.org/10.3102/0034654311413609>. [43]

- Orr, D., M. Rimini and D. van Damme (2015), *Open Educational Resources: A Catalyst for Innovation*, Educational Research and Innovation, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264247543-en>. [25]
- Paniagua, A. and A. Sánchez-Martí (2018), “Early Career Teachers: Pioneers Triggering Innovation or Compliant Professionals?”, *OECD Education Working Papers*, No. 190, OECD Publishing, Paris, <https://dx.doi.org/10.1787/4a7043f9-en>. [90]
- Papay, J. et al. (2016), “Learning job skills from colleagues at work: Evidence from a field experiment using teacher performance data”, *NBER Working Papers*, No. 21986, <http://dx.doi.org/10.3386/w21986>. [21]
- Pianta, R. and B. Hamre (2009), “Conceptualization, measurement, and improvement of classroom processes: Standardized observation can leverage capacity”, *Educational Researcher*, Vol. 38/2, pp. 109-119, <http://dx.doi.org/10.3102/0013189X09332374>. [60]
- Powell, D. et al. (2010), “Effects of an early literacy professional development intervention on head start teachers and children”, *Journal of Educational Psychology*, Vol. 102/2, pp. 299-312, <http://dx.doi.org/10.1037/a0017763>. [46]
- Radinger, T. et al. (2018), *OECD Reviews of School Resources: Colombia 2018*, OECD Publishing, Paris. [89]
- Révai, N. (2018), “What difference do standards make to educating teachers?: A review with case studies on Australia, Estonia and Singapore”, *OECD Education Working Papers*, No. 174, OECD Publishing, Paris, <https://dx.doi.org/10.1787/f1cb24d5-en>. [92]
- Richardson, V. (2003), “The dilemmas of professional development”, *Phi Delta Kappan*, Vol. 84/5, pp. 401-406, <http://dx.doi.org/10.1177/003172170308400515>. [58]
- Rivkin, S., E. Hanushek and J. Kain (2005), “Teachers, schools, and academic achievement”, *Econometrica*, Vol. 73/2, pp. 417-458, <http://dx.doi.org/10.1111/j.1468-0262.2005.00584.x>. [52]
- Roberts-Hull, K., B. Jensen and S. Cooper (2015), *New Approach: Reforming Teacher Education*, Learning First, Melbourne, <http://www.learningfirst.org.au>. (accessed on 29 May 2019). [3]
- Ronfeldt, M., S. Loeb and J. Wyckoff (2013), “How teacher turnover harms student achievement”, *American Educational Research Journal*, Vol. 50/1, pp. 4-36, <http://dx.doi.org/10.3102/0002831212463813>. [62]
- Sandor, E. (2011), *Part-Time Work in Europe: European Company Survey 2009*, Publications Office of the European Union, Luxembourg, <http://dx.doi.org/10.2806/116>. [76]
- Santiago, P. et al. (2016), *OECD Reviews of School Resources: Uruguay 2016*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264265530-en>. [65]
- Santiago, P. et al. (2017), *OECD Reviews of School Resources: Chile 2017*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264285637-en>. [81]

- Santiago, P. et al. (2016), *OECD Reviews of School Resources: Slovak Republic 2015*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264247567-en>. [73]
- Schleicher, A. (2018), *World Class: How to Build a 21st-Century School System*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/4789264300002-en>. [50]
- Seaton, D. et al. (2015), “Teacher enrollment in MITx MOOCs: Are we educating educators?”, *EDUCAUSEreview*, <http://dx.doi.org/10.2139/ssrn.2515385>. [23]
- Shewbridge, C. et al. (2016), *OECD Reviews of School Resources: Czech Republic 2016*, OECD Reviews of School Resources, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264262379-en>. [93]
- Stecher, B. et al. (2018), *Improving Teaching Effectiveness: Final Report*, RAND Corporation, Santa Monica, CA, <http://dx.doi.org/10.7249/RR2242>. [79]
- Stoll, L. et al. (2006), “Professional learning communities: A review of the literature”, *Journal of Educational Change*, Vol. 7/4, pp. 221–258, <http://dx.doi.org/10.1007/s10833-006-0001-8>. [40]
- The Education and Training Foundation (2018), *Training Needs in the Further Education Sector*, https://www.et-foundation.co.uk/wp-content/uploads/2018/04/1331_Training-Needs-Analysis-Final-.pdf (accessed on 5 June 2019). [88]
- Timperley, H. et al. (2007), *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration*, New Zealand Ministry of Education, Wellington, <http://educationcounts.edcentre.govt.nz/goto/BES> (accessed on 26 March 2019). [67]
- TNPT (2015), *The mirage: Confronting the hard truth about our quest for teacher development*, https://tnpt.org/assets/documents/TNTP-Mirage_2015.pdf (accessed on 7 June 2019). [45]
- United Nations (2015), *Transforming our world: the 2030 Agenda for Sustainable Development*, <https://sustainabledevelopment.un.org/post2015/transformingourworld>. [10]
- Viac, C. and P. Fraser (n.d.), “Teachers’ well-being for quality teaching: A framework for analysis [forthcoming]”, *OECD Education Working Paper*. [49]
- Vuorikari, R. (2019), *Innovating Professional Development in Compulsory Education: An analysis of practices aimed at improving teaching and learning*, Publications Office of the European Union, Luxembourg, <http://dx.doi.org/10.2760/948518>. [83]
- Vuorikari, R. (2018), *Innovating Professional Development in Compulsory Education: Examples and cases of emerging practices for teacher PD*, Publications Office of the European Union, Luxembourg, <http://dx.doi.org/10.2760/734136>. [24]
- Werquin, P. (2010), *Recognising Non-Formal and Informal Learning: Outcomes, Policies and Practices*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264063853-en>. [41]

Yoon, S. et al. (2007), *Reviewing the evidence on how teacher professional development affects student achievement*, U.S. Department of Education, Institute of Education Sciences, <http://ies.ed.gov/ncee/edlabs> (accessed on 6 June 2019). [44]

Annex A. National co-ordinators for country diagnoses

The OECD's experience has shown the national co-ordinator to play a critical role in ensuring the success of country diagnoses. This annex therefore sets out the role and typical profile of national co-ordinators to assist countries in selecting an appropriate candidate.

The role of national co-ordinators

National co-ordinators are responsible for communicating with the OECD Secretariat about the study; communications within the country about the study; ensuring that the Country Background Report is provided to the OECD Secretariat on schedule; liaising with the OECD Secretariat about the organisation of the team visit; co-ordinating country feedback on draft materials; and assisting with dissemination activities. National co-ordinators are also encouraged to attend the annual project meetings, which guide the methods, timing and principles of the project.

Typical profile of national co-ordinators

Depending on whether countries choose to engage in the ITP or the CPL strand of the study or a combined diagnosis, the national co-ordinator should have in-depth knowledge of the country's system of initial teacher preparation, teachers' continuing professional learning, or both. They should have some responsibility for the respective areas within the education ministry or education agencies. The national co-ordinator is also expected to be in a good position to co-ordinate the work across the different agencies with responsibilities for teachers' professional learning. Preferably, the national co-ordinator should have a good knowledge of international developments in the area of teachers' professional learning and some familiarity with OECD work.

Annex B. Key issues and questions for analysis

The overarching policy question that the TPL study seeks to explore is “What policies can support teachers’ professional learning for quality teaching?” with Strand I of the study focusing on teachers’ initial preparation and Strand II focusing on teachers’ continuing professional learning. This Annex contains a non-exhaustive set of key issues and questions for analysis, which illustrates the types of topics that Strand II of the study proposes to address. Around each of these issues, the study proposes to facilitate peer-exchange and identify common challenges, strengths and innovations in order to support participating countries/economies in developing answers to the study’s central questions. The material below draws on previous OECD work, as well as the recently launched TALIS 2018 report (OECD, 2019_[11]) and the OECD School Resources Review’s forthcoming comparative report on human resources (OECD, 2019_[42]).

1. Motivation: What shapes teachers’ motivation to engage in CPL?

Fostering teacher’s intrinsic motivation to engage in CPL

Providing teachers with the right incentives to engage in CPL and recognising the importance of their self-initiated and autonomous professional learning is a central challenge in building holistic CPL systems. Lower secondary teachers in the majority of OECD countries are mandated or may be required by their schools to engage in professional development during their statutory working time (OECD, 2018, pp. 395, Table D4._[6]). Although requirements for teachers’ engagement in CPL are relatively minimal in most OECD countries, others mandate teachers to engage in a significant amount of CPL or provide them with strong extrinsic incentives to do so (e.g. by making teachers’ salary progression, promotion or recertification conditional on the completion of a given number of training hours) (OECD, 2014, pp. 528, Table D7.1c_[4]). Experience has shown that such incentives are not always effective and risk turning CPL into a bureaucratic checklist to complete, rather than an opportunity for true skill and capacity development, and in the worst cases crowd out teachers’ intrinsic motivation to learn (Bénabou and Tirole, 2003_[63]; Christian, Jacobsen and Andersen, 2013_[36]; OECD, 2019_[42]). In addition, it is widely acknowledged that many of teachers’ professional learning activities are informal, self-initiated or happen in private settings. Yet, not all systems have adequate means to formally recognise the value of these activities for teachers’ professional growth and to support them in their autonomous learning activities.

Linking CPL with teachers’ appraisal and career advancement

Teachers’ regular formative appraisal provides an opportunity for school leaders and teachers to engage in an ongoing exchange to identify the learning opportunities that might help teachers at all levels of experience to maximise their potential for professional growth. Nevertheless, in many systems, the formative function of appraisal as a tool to build capacity and inform teachers’ professional learning is underdeveloped. In some systems, it occurs rarely, not at all, or only on a voluntary basis (OECD, 2019_[42]). In other systems, evaluations are conducted more frequently but fail to effectively inform teachers’ professional learning (OECD, 2013_[64]). Even where these links exist there is a risk that teachers perceive their evaluation as a high-stakes accountability tool, rather than an opportunity for developmental growth (Santiago et al., 2016_[65]; OECD, 2019_[42]).

Links between teachers' appraisal and their CPL have traditionally focussed on the identification and alleviation of teachers' perceived deficits. In 2015, 10 of 19 OECD countries with available data reported to follow up on teachers' negative appraisal results with compulsory training. Although this deficit-oriented approach is still dominant in many systems, the appraisal process can also assume more growth-oriented forms and give teachers greater agency in shaping their professional learning trajectories. Five of 19 OECD systems reported to reward teachers' positive appraisal results with additional opportunities for in-service professional development (OECD, 2015, pp. 496, Chart D7.2_[7]). Rather than informing the individual teacher's CPL activities, appraisal results can also be aggregated to generate topics for collective professional development plans at the school level. This recognises the ecological context in which educators work and acknowledges that teachers improve most when they work alongside peers seeking to improve on similar dimensions (Johnson, Kraft and Papay, 2012_[66]; OECD, 2019_[42]).

Schools and school systems may also seek to link teachers' engagement in professional development activities to their professional advancement. In 2015, 16 of 28 countries with available data reported that participation in professional development activities had a high or moderate influence on the career advancement of lower secondary teachers (OECD, 2015, pp. 503, Table D7.6_[7]). Linking CPL to teachers' career advancement in the form of input-based requirements (e.g. the completion of a given number of hours of training) can create a risk for CPL activities to be perceived as mere requirements with little intrinsic value. On the other hand, links between CPL and career advancement may be more indirect and output-based, e.g. where promotions are granted based on a rigorous appraisal of the competencies that teachers may have built through CPL.

Fostering trust and a school culture that supports teachers' collaborative learning

Teachers' engagement in peer observation, feedback and collaborative learning communities holds significant promise to improve teaching practices (Stoll et al., 2006_[40]). Learning communities can provide safe environments for teachers to challenge tacit assumptions on what works and why (Timperley et al., 2007_[67]). Collaboration also help to build up trust and social capital in schools that enables teachers to reflect on their habits, to develop new understandings and practices, and to solve collective action problems (Burns and Cerna, 2016_[68]). For teachers to engage in these effective forms of collaborative development, they require not only opportunities and resources, but also a professional culture in support of these practices. In some systems, teachers are not used to engaging in peer learning and may be reluctant to open up their classroom to peers, mentors or school leaders. The experience of countries like Denmark has also shown that external support for collaborative practices is most effective in schools whose school leaders are already promoting a horizontal culture and explicitly make available time for collaboration in teachers' schedules (Nusche et al., 2016_[69]).

Creating a school culture that tolerates and encourages constructive peer-to-peer feedback between colleagues and suggestions to attempt different instructional strategies is not easy. Scholars have long pointed to the risk that administratively imposed forms of collaboration can create "contrived collegiality," rather than a genuinely collaborative culture (Hargreaves and Dawe, 1990_[70]). Administrative leadership and facilitation can certainly play a role in creating the conditions for teachers to develop collaborative relationships with their peers, but interventions that are seen as intrusive and controlling can be counterproductive. More effective system-level levers to bring about a cultural shift that encourages the development of collaborative CPL in schools may aim to strengthen

pedagogical leadership and foster teachers' professionalism by giving them greater ownership and responsibility for their professional learning.

Preparing teachers to become educational leaders

Professional development activities that permit teachers to grow professionally not only by improving their practice, but also by expanding their professional responsibilities can be an important source of teachers' motivation to engage in continuing learning. The cultivation of leadership capacity is a particularly important aspect of CPL in this regard. Given the significant effect that well-prepared school leaders can have on their students' learning outcomes (Fryer, 2017^[71]), researchers and policy makers increasingly recognise the importance of providing principals with appropriate training before they assume their role. Effective CPL systems therefore ensure that teachers who aspire to or are on track to becoming school leaders have access to learning opportunities to prepare them for role's responsibilities before taking office. While TALIS 2018 finds that school leaders benefit from and intensively participate in continuing professional learning activities once they are on the job, they often lack pre-service training on leadership-specific skills prior to taking up their duties (OECD, 2019^[11]). Some systems, such as Austria and the Slovak Republic, have sought to address this problem by offering CPL opportunities to aspiring leaders and requiring school principals to engage in part of their training prior to appointment (Nusche et al., 2016^[72]; Santiago et al., 2016^[73]).

At the same time, leadership training need not have the sole aim of preparing teachers to assume administrative school leader roles. Building on a broader conception of leadership (Bierly, Doyle and Smith, 2016^[74]), many countries have embraced the value of fostering leadership skills in classroom teachers to empower them to become leaders of learning and teaching and to use their experience to support others. The Scottish College for Educational Leadership, for example, offers dedicated development programmes in teacher leadership targeted at all teachers.¹

2. Access: How accessible is CPL for teachers?

Lifting barriers that inhibit individual teachers' engagement in CPL

Besides a perceived lack of incentives and prohibitive participation costs, scheduling conflicts and a lack of time are the most widely reported barriers to CPL participation in TALIS countries (OECD, 2019^[11]). Creating time in teachers' schedules is an important precondition to promote their engagement both in formal and informal forms of professional learning. Not all systems ensure that teachers have sufficient time to engage in CPL and self-directed learning often happens in teachers' free time. In addition, some schools may experience challenges in securing substitute teachers to permit staff to leave their classrooms for professional learning activities, even where they may be formally entitled to a given amount of CPL. At the same time, creating time in teachers' schedules will not be sufficient to foster collaborative professional learning practices in and of itself, since it needs to be accompanied by supportive structures, teacher leadership, protocols and attention to school culture (Charner-Laird et al., 2017^[75]; Kraft and Papay, 2014^[48]).

Barriers to access CPL may be more pronounced for some teachers than for others. Entitlements and supports may be more restricted for teachers on non-permanent contract types or for those working as substitutes, for example. Likewise, time constraints and scheduling difficulties may be particularly acute for teachers working on a part-time basis or under flexible working arrangements, thus reducing the amount or quality of their

training and learning opportunities. This disconcerting pattern holds not only in the teaching profession. Across the EU, only 19% of part-time employees working 11-20 hours reported access to opportunities for training in 2005 (compared to 28% of full-time workers) and only 10% of those working less than 10 hours reported access. The same pattern held for employees' perceived opportunity to learn something new at work (Sandor, 2011^[76]). This lack of learning opportunities associated with part-time work can create a dynamic of entrapment in the longer term (OECD, 2017, p. 65^[39]). Since teachers' engagement in part-time work or flexible working arrangements at some point in their careers is the norm rather the exception in many countries and at some levels of education, ensuring that CPL opportunities are available to all teachers is an important policy priority.

Overcoming school-level inequities in CPL access

Schools vary with respect to their teachers' learning needs, but also their capacity and resources to support CPL activities that foster teachers' professional growth. Not all schools may have the facilities for teachers to engage in collaboration during the school day and those with excessive teacher turnover or staff shortages may face additional challenges in providing their teachers with the continuity and time to engage in effective, sustained collaboration and peer-learning. Likewise, schools serving disadvantaged student populations and those in rural areas often have less experienced teachers who may have greater development needs (Echazarra and Radinger, 2019^[77]) and geographic inequities in the access or proximity to training providers can reinforce these challenges.

Inequities in schools' access to high-quality CPL can exacerbate existing discrepancies in teaching quality, with damaging consequences for the learning outcomes of students in disadvantaged schools. System level policies can play an important role in identifying and addressing some of the sources driving these inequities. Needs-based funding systems, for example, may be designed to ensure that all schools have the capacity, financial and material resources support their teachers' engagement in high-quality CPL based on their development needs. External learning consultants or targeted training to strengthen principals' pedagogical leadership can be used to similar effect. Authorities can also support networks of schools to collaborate on professional learning programmes or share resources to increase their collective capacity and provide their teachers with richer opportunities for professional learning and exchange. Finally, new technologies, such as blended or online learning and digital platforms for professional exchange can help teachers with limited access to or opportunities for face-to-face interactions with peers.

Designing effective funding mechanisms for CPL

Although an increasingly wide range of opportunities for teachers' self-directed professional learning is accessible online and available for free, some of the most effective forms of professional learning are resource-intensive and require substantial investments. School systems therefore need to devise funding mechanisms to raise and allocate resources for these activities and ensure that they are used equitably and to the greatest effect. This is particularly relevant since a substantial amount of teachers describe costs as a barrier to their professional development (OECD, 2019^[11]). Teachers engaging in CPL may encounter both direct cost (e.g. course participation fees or the cost of learning materials) and indirect costs in the form of foregone earnings.

In around half of OECD and partner countries with available data, teachers receive paid leave for their absence during compulsory CPL. Likewise, all countries reported that the cost of teachers' compulsory professional development at the lower secondary level was

either fully subsidised or shared by the government (14 countries) or partially subsidised (8 countries). Nevertheless, the mechanisms that systems use to fund teachers' development activities vary considerably (OECD, 2014, pp. 522 ff., Charts D7.3a and D7.3b_[4]). In some countries, for example, funding for professional development is allocated to schools in staff expenditure block grants with a high level of spending discretion at the local level. Teachers in some of such systems without earmarked CPL funding have reported difficulties in accessing resources for professional development (OECD, 2017_[78]).

Likewise, most systems expect teachers to cover some of the cost of non-compulsory professional development (OECD, 2014, pp. 522 ff., Charts D7.3a and D7.3b_[4]) and public support may be restricted to specific types of CPL or those offered by officially recognised providers. In contrast to the attendance of courses, workshops and conference, for example, teachers are more frequently required to pay some or all of the cost of participating in qualification programmes (OECD, 2016_[27]). Authorities at multiple levels of administration may be involved in decisions concerning the allocation of CPL resources (OECD, 2018, pp. 141, Table D6.8_[6]) and policy makers need to be mindful of potential inequities that can arise at both the school and the teacher level, as well as unintended consequences that funding conditions may have on teachers' CPL engagement.

Supporting teachers in navigating the CPL offer to access the most relevant training

CPL systems must ensure that each teacher can engage in learning opportunities that correspond to their needs and contribute to their professional growth. This requires systems to individualise the CPL offer, but also support teachers in finding the right CPL for their needs. There are different mechanisms for doing so, e.g. by linking the choice of CPL to their ongoing appraisal process (see above). Ensuring that teachers and school leaders have sufficient information about the formal professional learning activities on offer is also critical, particularly where they are expected to make autonomous decisions on which compulsory or non-compulsory learning opportunities to pursue. In 2013, nearly all OECD and partner countries reported that school management plays a role in circulating information about professional learning activities and in around two-thirds of countries central/state education authorities played a role in the dissemination process (OECD, 2014, pp. 527, Table D7.4c_[4]).

3. Provision: How and by whom is CPL provided?

Reorienting provision towards school-based, collaborative CPL formats

Traditionally, professional development offered by public education authorities, teacher education institutions and other tertiary education institutions, professional organisations or private and non-governmental providers has often taken the form of single or short series of externally provided learning courses. Many have expressed concerns about the effectiveness of these types of provision (Garet et al., 2001_[32]; Stecher et al., 2018_[79]) and results from the OECD's TALIS survey and the research literature concur to suggest that school-based and collaborative forms of professional learning have more promising effects on teaching practices and student achievement (Stoll et al., 2006_[40]). Nevertheless, participation in activities like peer/self-observation, coaching and networking remains comparatively low (OECD, 2019_[1]). In addition, although teachers play a critical role in initiating, collectively shaping and providing collaborative learning opportunities to their peers, many systems fail to recognise and support teachers' role in this process. This often

results in a lack of structural supports to facilitate their engagement in sustained, collaborative CPL practices within and across schools.

Systems have pursued different strategies to promote and support teachers' engagement in collaborative CPL as well as their work in networks within or beyond their school, which are increasingly recognised as an important site for self-directed collaborative CPL (European Commission, 2017_[80]). Given the great variety of forms that these collaborative networks can take (online, blended, offline, local or cross-border networks), it is likely that different strategies are needed to support them. Encouraging collaborative learning through system-level policies will also require authorities to consider the supports that need to be in place for the successful design and implementation of CPL at the school level. Local initiatives are often best placed to ensure that the focus of their training is responding to locally identified needs and considers the school specific context.

In some systems, such as the French Community of Belgium and Chile, authorities have sought to encourage collaborative work within schools by requiring them to develop corresponding strategies as part of their school development plans (Santiago et al., 2017_[81]; International Relations Directorate of the Federation Wallonia-Brussels, 2016_[82]). Other systems, such as Ontario, Canada, have developed large-scale approaches to facilitate effective collaboration within and between schools by codifying such practices through protocols and technical support (OECD, 2019_[42]). Other approaches may include investments in school-level personnel with responsibilities to encourage and develop teamwork opportunities.

Recognising teachers' participation in informal or non-traditional CPL (e.g. as counting towards required PD hours), can be another means of encouraging teachers' participation in these practices and lend recognition to their efforts. In Iceland, for example, education authorities are now officially recognising teachers' participation in *Education Plaza*, which offers a variety of social media-based activities that bring together educators, educational administrators, policy makers, the academic community and other stakeholders working in communities of practice, both online and in physical spaces (Vuorikari, 2019_[83]).

Scaling and sustaining innovative models of CPL

Education systems have an interest in encouraging school or teacher driven initiatives as a means to develop effective models of CPL that are responsive to local contexts and needs, as well as in identifying and spreading good practices and innovative ideas. Scholars have pointed to the inherent tensions involved in such efforts to formalise and "scale up" successful practices and the risk of large-scale standardised reforms displacing locally initiated innovation (Giles and Hargreaves, 2006_[84]). Sustaining the success of innovative local initiatives and encouraging the spread of new ideas while avoiding cyclical dynamics of overreach, entropy and entrenchment therefore requires policy makers to strike a delicate balance.

Some forms of CPL, such as intensive coaching, have proven difficult to scale up. A recent meta-analysis of 62 studies employing causal designs to estimate the effects of coaching on teachers' instructional practice and student learning outcomes documents improvement on the order of 0.49 standard deviations on instruction and 0.18 standard deviations on achievement (Kraft, Blazar and Hogan, 2018_[85]). However, the benefits of coaching were substantially reduced in larger programmes serving over 100 teachers at a time (Kraft, Blazar and Hogan, 2018_[85]). Several explanations may account for this variation across coaching programme size – most importantly, the challenge to identify high-quality coaches for larger numbers of teachers. The selection and preparation of trainers and

teacher educators can constitute a significant challenge for the provision of high-quality learning opportunities, particularly in new and emerging subjects areas, as well as regions with less developed infrastructures for professional learning (OECD, 2019_[42]).

Governing the market for CPL providers

Many countries see an increasingly diverse set of CPL providers, including third party suppliers, competing for public funding and teachers' resources (or, at a minimum, for their limited time). In many cases, teachers are drawing on a range of sources to access materials that support them in their self-directed learning, including online resources, discussion groups, videos, more traditional formats (e.g. guidebooks) and commercial training services. Likewise, schools may find themselves confronted with an increasingly extensive and difficult to navigate set of training options to support their teachers in their school-based CPL practices.

Limited capacity or a desire to encourage greater efficiency and innovation can motivate authorities to enter partnerships with third party providers, to officially recognise their activities or to more broadly encourage market dynamics in the provision of CPL. If done effectively, this could help school systems to respond more effectively to changing demands for PD, especially on newly emerging topics (Vuorikari, 2019, p. 56_[83]). To guarantee that training providers and programmes comply with minimum quality requirements, countries might develop certification mechanisms or labels that signal their quality and help teachers or schools to make informed choices about their training investments (OECD, 2019_[86]). In some countries, the licensing of programmes or accreditation of providers can also serve as a means to decide on the official recognition of training opportunities or the financial support for teachers' participation. Such licensing or certification procedures can be developed in close collaboration with teachers' professional associations and other stakeholder groups.

4. Content: How are CPL contents selected and developed?

Forecasting and identifying CPL needs at different levels of the system

The identification of teachers' training needs is a crucial prerequisite to support teachers in their professional learning activities and to design relevant training opportunities (Opfer and Pedder, 2011_[43]). In the TALIS 2018 survey, teachers report significant needs for training, especially on teaching students with special needs, the use of ICT and teaching in a multicultural or multilingual setting (OECD, 2019_[1]). Further evidence suggests that these training needs are not evenly distributed across the teaching population. The 2013 TALIS survey, for example, suggests that teachers working with SEN students expressed particularly high levels of CPL needs (Cooc, 2018_[87]). These training needs may arise for a range of reasons including changing student needs, technological innovation, changes in teachers' initial education and educational reforms. Many OECD countries have also recognised the importance of promoting students' acquisition of "21st century skills," which will require changes across many elements of the education system, including teacher education and professional development (Guerriero, 2017, p. 247 ff._[55]).

Different mechanisms can help school systems to identify such development needs as they arise, to effectively respond to them, and to feed them into the development of the CPL offer by different actors and across all levels of the system. Some systems have used sector-wide Training Needs Analyses (TNA) to identify gaps in teachers' knowledge and skills to be addressed by CPL (The Education and Training Foundation, 2018_[88]) or conducted

teacher surveys to this end (Vuorikari, 2019_[83]). Since many education reforms (e.g. inclusion policies or curricula reforms) place new demands on teachers, designing tailored learning opportunities to accompany their implementation can be a critical factor in their success (Vuorikari, 2019, p. 57_[83]).

Matching CPL contents to different actors' needs

Ensuring that teachers' learning supports their professional growth requires CPL contents to respond both to their externally identified training needs in line with system goals and to their personal learning interests. Steering the development of the formal CPL offer along these lines requires effective channels to communicate teachers', schools' and system needs to the actors and institutions responsible for the development and provision of formal training.

Some education systems steer the development of the CPL offer by aligning funding decisions with national priority areas for development. To create a better match between CPL contents and teachers' or schools' immediate needs, some are also supporting school-based development initiatives and place a greater emphasis on learning opportunities developed by teachers for teachers. Colombia, for example, recently launched the Scholarships for Teaching Excellence programme, which supports teachers' further studies and encourages them to develop and implement improvement projects centred on classroom practices in their own schools (Radinger et al., 2018_[89]). The autonomy that both schools and teachers have in deciding which professional learning contents to seek out (or develop themselves) is another important factor that shapes a system's ability to match learning opportunities to teachers' need (OECD, 2014, pp. 520, Table D7.3c_[4]).

Connecting initial and continuing teacher education

Although teachers' initial education, induction and CPL have historically been thought of and developed independently, a growing body of research calls for the need to strengthen the links between them and develop them as part of a continuum of teachers' professional learning (Paniagua and Sánchez-Martí, 2018_[90]). Although it is still the exception rather than the norm, some countries have undertaken efforts to ensure that the curricula of ITP, induction programmes and CPL are consistent, well connected and complementary. This holistic approach to teacher education may require systems to systematically develop or strengthen relationships between the stakeholders involved. This can include the establishment of consultation processes, feedback loops between relevant stakeholders and – if these responsibilities are shared across several entities – collaboration between the different actors and stakeholders of initial teacher preparation and continuing professional learning systems (OECD, 2019_[2]).

However, there may be limits to the extent to which CPL can build on the skills and knowledge acquired in initial teacher education since not all teachers can be assumed to have received the same ITE (due to changes in the content and structure of ITE over time, or due to alternative teacher preparation pathways). In these cases, CPL may need to serve as a means to take stock of what teachers already know and do and close knowledge gaps if necessary. The alignment between CPL and ITP therefore needs to be flexible and differentiated to account for variation in teachers' ITE experience and prior knowledge (OECD, 2019_[2]).

Codifying and disseminating teachers' knowledge through CPL

It is important for schools and school systems to codify the knowledge they gain about effective teaching practices in order to enable educators to retain and build on this knowledge base, even when staff transitions occur (OECD, 2019_[42]). Continuing professional learning plays an important role in systems' ability to foster both the internal and external development of teachers' knowledge. On the one hand, CPL activities can support each teacher in "making their beliefs, ideas and practices explicit" (Cordingley, 2008_[91]), that is, in codifying their tacit knowledge. On the other hand, CPL practices can spread effective pedagogical practices by drawing on a knowledge base that practitioners can actively contribute to alongside the research community and other stakeholders. Research findings on the nature of student learning and teaching thus form part of a dynamic knowledge base that is transferred to and co-constructed by teachers through their individual and collective learning (Guerriero, 2017, p. 261_[55]).

Strengthening the role of CPL in the codification and dissemination of teachers' knowledge requires strong links and an ongoing exchange between teachers and their professional organisations, the research community and teacher training institutions (OECD, 2019_[42]). It may also involve the use of knowledge brokers facilitating this exchange (e.g. in the form of pedagogical advisory networks), or ICT platforms that allow teachers to codify their knowledge and disseminate it across schools. In Austria, for example, the federal ministry of education facilitates learning among New Secondary Schools (*Neue Mittelschulen*) through its Centre for Learning Schools (*Bundeszentrum für Lernende Schulen*), which provides a virtual networking and learning space to connect teacher leaders and empower them to exchange their knowledge and expertise in the areas of curriculum and instructional development (Nusche et al., 2016_[72]).

5. Quality: How is the quality of CPL ensured?

Developing standards for high-quality CPL

For teachers' CPL to have the desired effect on teaching practices and student learning, it needs to be of high quality, regardless of the format it takes or the setting in which it occurs. In some OECD countries, central teacher development institutions play an important role in steering the provision of CPL, maintaining oversight and ensuring quality by co-ordinating and accrediting the supply. In various systems, however, there is uncertainty about the quality of the professional learning provisions and the processes designed to ensure it. In some cases, these challenges are aggravated by the decentralised development of learning contents and the highly fragmented landscape of PD providers.

Developing standards for high-quality professional learning in close collaboration with schools and the teaching profession may be a powerful means to guide the development of CPL practices and align different quality assurance instruments to raise the quality of teachers' CPL. Nevertheless, the use of standards for professional learning is less widespread than e.g. in initial teacher education (Révai, 2018_[92]). In light of the great diversity of CPL practices, effective standards would not only need to take into account a range of different desirable outcomes, but also to meaningfully apply to different forms of CPL engagement, including new formats like MOOCs (Music, 2016_[26]). Not all forms of professional development are equally amenable to a standards-based approach. Nevertheless, even teachers' self-directed learning can be supported through guidelines and supports that help teachers in assessing the quality of their learning process, in monitoring their progress and ultimately in improving the effectiveness of their self-directed CPL.

Professional standards, for example, can help teachers to identify their learning needs and constitute a reference point that they can measure their progress against.

Monitoring the effectiveness of different types of CPL

Monitoring the quality of CPL provisions and providers can be a challenging task, given the great variety of different CPL formats and intended outcomes as well as the difficulty to obtain high quality information on many aspects required for a thorough evaluation. Many countries lack strong systems for tracking their teachers' engagement in CPL, let alone for analysing its quality and impact (Darling-Hammond, Hyler and Gardner, 2017, p. 22_[22]; Shewbridge et al., 2016_[93]). Nevertheless, efforts to monitor the effectiveness of CPL can make an important contribution to improving the quality of teachers' professional learning. Effective monitoring mechanisms can be a means to evaluate whether teachers' learning needs are met, to increase the accountability of providers, and to empower teachers, school leaders and others to choose the right form of CPL to match their needs. A critical condition for monitoring the quality of teachers' professional learning are strong channels of communication and feedback loops between relevant stakeholders, including teacher training institutions and teachers' professional associations.

Another challenge in monitoring the effectiveness of CPL is defining an adequate set of parameters to evaluate its success, given the diversity of its formats and the wide range of potentially desired outcomes. Many evaluations of CPL programmes focus on student achievement gains in standardised tests as the primary indicator of effectiveness (Darling-Hammond, Hyler and Gardner, 2017_[22]), which may be too narrow to capture its impact on other student outcomes, but also other desirable effects on teacher's beliefs, attitudes or classroom practices (Vuorikari, 2019_[83]). Likewise, many informal forms of professional learning, such as teachers' self-directed study or engagement in PLCs and peer-feedback currently elude the systematic evaluation of their effectiveness and may require different, teacher-driven approaches to monitoring, e.g. by supporting teachers' self-evaluation practices.

Integrating CPL practices into school and system-level improvement processes

The professional growth of teachers is closely connected to the improvement of the school they are working in and that of the system as a whole. Integrating CPL practices into improvement plans at the level of the teacher, the school and beyond can ensure that teachers' learning practices are informed by both their individual needs and those of their schools and the system more widely (OECD, 2013_[64]). It also ensures that colleagues can collaborate based on a shared set of goals and actively contribute to their school's improvement. Conversely, making CPL an explicit part of schools' improvement plans can ensure that their goal-setting goes hand in hand with the development of embedded learning opportunities that help teachers and leaders gain the skills and knowledge to achieve these goals (OECD, 2019_[42]). While many school systems expect principals to create yearly or multi-year strategies to improve learning outcomes for students, it is less common for them to create a corresponding professional development plan for their school (OECD, 2016, p. 455 and Table D6.3 and D6.4_[5]). Such development plans might involve additional collaboration time in teachers' schedules, ongoing professional development courses, support networks of school sharing similar learning goals, electronic teaching libraries, and other tools.

Creating effective quality assurance and accountability structures for CPL providers

Systems can use a range of mechanisms at different levels to hold CPL providers to account for the quality of their offer. Effective accountability structures may look different depending on the type of CPL offer in question, but also the terms upon which teachers access these learning opportunities. In a number of countries, the use of public funding for professional learning activities is restricted to programmes provided by a few organisations (teacher education institutions or agencies specialising in professional development). Especially in those countries where participation in professional development is mandated, there may be little incentives for CPL providers to engage in innovation and quality improvement unless there are complementary quality assurance mechanisms (e.g. accreditation or licensing standards for programmes and providers). Other systems rely on an open market for formal professional development activities or encourage teachers to draw on the services of private providers in order to stimulate quality improvements through competition. For these mechanisms to work effectively, however, teachers and school leaders may need to be provided with sufficient information on the quality of CPL programmes in order to make empowered choices in this context (OECD, 2014, p. 523^[4]; OECD, 2005^[8]).

Notes

¹ <https://www.scotland.org.uk/what-we-offer/>