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Innovating Professional Development in Higher Education

An analysis of practices

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Title:

Innovating Professional Development in Higher Education: An Analysis of Practices

Abstract:

This report presents a discussion on how innovative professional development practices in higher education can help improve the teaching and the career progression of academics. It explores successful models and provides policy recommendations for higher education institutions and EU Member States. It accompanies the technical report 'Innovating Professional Development in Higher Education: Case Studies', JRC 2019.

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Foreword

Professional development (PD) is known to be one of the key determinants for improving the quality and relevance of education and learning. There are, however, quite a number of barriers and limitations to effective professional learning among academics working in higher education. This report provides a synthesis and analysis of 11 innovative and emergent practices for academics' professional development that have the potential to overcome the known obstacles academic staff face when aiming to improve and innovate teaching practices. It is accompanied by a technical report that contains the background literature review as well as a more detailed account of 11 cases: 'Innovating Professional Development in Higher Education: Case Studies', JRC, 2019.

This study was undertaken on behalf of the European Commission's Directorate General Education and Culture (DG EAC). Education policy at the European and MS levels is very aware of the challenges and opportunities that PD in higher education bring about. The Communication '[A renewed agenda for higher education](#)' (European Commission, 2017) argues for higher education institutions and systems that are effective in education, and for their modernisation. The PD of academics is key to ensure that teaching and learning take place at the highest possible quality, and that academics have appropriate recognition of their work.

The JRC just recently released a similar report on innovating PD for teaching professionals in compulsory education, 'Innovating Professional Development in Compulsory Education: an analysis of practices aiming at improving teachers PD'. Both studies provide evidence that can support education policymakers at all levels in re-thinking the professional development of educators. The evidence is not only focused on digital learning opportunities, it embraces non-digital professional training as well. Unsurprisingly however, analogue and digital activities are increasingly becoming blended.

Both studies are part of the JRC research on 'Learning and Skills for the Digital Era', which since 2005 has undertaken more than 20 major studies on these issues, resulting in more than 120 different publications. Recent work has focused on the development of digital competence frameworks for citizens ([DigComp](#)), educators ([DigCompEdu](#)), educational organisations ([DigCompOrg](#)) and consumers ([DigCompConsumers](#)). A framework for opening up higher education institutions ([OpenEdu](#)) was also published in 2016. The JRC has also published a competence framework for entrepreneurship ([EntreComp](#)). Some of these frameworks are accompanied by self-reflection instruments such as [SELFIE](#), focused on digital capacity building of schools.

Additional research has been undertaken on Learning Analytics, MOOCs ([MOOCKnowledge](#), [MOOCs4inclusion](#)), Computational thinking ([Computhink](#)) and policies for the integration and innovative use of digital technologies in education ([DigEduPol](#)). In 2017, a report on the potential of [blockchain in education](#) was released and more recently, in November 2018, a report on the impact of [Artificial Intelligence on learning, teaching and education](#).

More information on all our studies can be found on the JRC Science hub: <https://ec.europa.eu/jrc/en/research-topic/learning-and-skills>.

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This report is based on a number of in-depth interviews with stakeholders in Member States. Interviewees provided key insights and valuable information both for the analysis and the case studies produced in this report. Their engagement made this research possible:

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Executive Summary

Introduction

This study focuses on innovative ways of improving teaching in higher education via professional development (PD) practices. The premise is that appropriate and innovative PD would improve academics' capacity to use new pedagogical models for teaching, while at the same time contributing to career progress.

This study is based on a series of case studies that highlight innovative practices in PD of academics, and on a literature review which provides examples of current states of play in different European contexts.

In particular, the study aimed to answer the following questions:

1. How do innovative PD practices address the obstacles to academics' participation?
2. How have higher education institutions (HEIs) been supporting academics in innovative teaching practices? And how can they best do that?
3. How could academics' training in digital technologies and pedagogical practices become a part of their career progression paths? Do successful models already exist?
4. What actions by Member States (MS) would help academics achieve the necessary skills to implement innovative teaching practices?

In this report an analysis of the data addressing the questions above is provided, as well as policy recommendations to help HE institutions, Member States (MS) and the European Commission (EC) tackle the growing need for training and PD in higher education.

Conceptualisation of academics' PD

Both in the literature and during the research process for this study, there was no clear distinction between the terms "professional development" (PD), "continuous professional development" (CPD) and "training and development" (T&D). Instead, they were used interchangeably by the various interviewees and in the academic articles consulted. In the higher education context, training can mean both "pre-service" training for doctoral students, aimed at developing pedagogical skills, and training in the sense of on-demand learning opportunities, aimed at developing skills such as new teaching methodologies or the use of specific tools or digital technologies.

It is not the aim of this study to provide ultimate definitions for these concepts, nor to limit their use into any specific context. Instead, mirroring what happens in the real world, all the above terms are used in this study, in an attempt to reflect the instances in which they were encountered. But, for the sake of simplicity, professional development (PD) will be considered more generic, a type of umbrella term. Overall, there was no focus on training for pre-service academics (PhD students).

Even though the literature on PD of academics has been expanding, it is still very fragmented and often contradictory, not only in relation to the impact of PD on the quality teaching and on student satisfaction, but also with regard to the definition of PD itself. In general terms PD is usually referred to as those processes that, through strengthening and extending the knowledge, skills and conceptions of academics, lead to an improvement in their teaching and consequently to an enhanced learning experience for students. Additionally, while the ultimate goals of PD are better teaching quality and improved students' learning, some research suggests that effective academics' PD can potentially have a positive impact on other aspects, such as a university's institutional culture and academics' career progression. So far, the most common types of PD practices have been 'sit-and-listen' courses where information is provided in a lecture-like environment. On the other hand, innovative PD practices are initiatives that:

- Often use alternatives to long-established learning methods, including active learning, collaboration, coaching, expert support, feedback and reflection and open online resources.
- Provide a sustainable environment for academics' long-term development.
- Are not yet widely accepted as common practices across European higher education institutions (HEIs).

Drivers for the growing need for CPF in higher education

It is consistently noticed across the literature that the need for the PD of academics has grown. The three most commonly mentioned reasons are:

- The massification and marketisation of HE: student enrolment ratios have been rising quite rapidly for the past three decades. Simultaneously, students have become active participants in their academic development, i.e. they engage in the co-production of the education they receive. Hence, student-centred models of HE have emerged where they are more frequently positioned as 'consumers of' rather than 'partners in' or 'products of' HE. The costs and benefits of such shifts are contested across the literature, but it is clear that they have a profound impact on PD demand. This is because HEIs are increasingly concerned with meeting their students' needs – typically the need to receive a high-quality education (Fahnert, 2015). Consequently, as competition between universities is becoming much stiffer, new measures are necessary in order for HEIs to stay competitive in the global HE market. Innovative PD is seen as one of the ways to enhance HEIs' educational offers and their quality, thus increasing their attractiveness to students.
- The digitalisation of HE: the importance of digital technologies (both in distance and conventional learning) in HE is growing. It is argued that technology used in an optimal way can enhance students' learning experiences. However, a considerable number of academics seem to lack 'digital literacy'. PD focused on technology assimilation and its applicability for teaching is necessary to harness the benefits that technology has to offer in HE, for instance through the use of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs).
- Changes in the nature of professional competition: it is argued that professional success no longer lies in an employee's job or organisation but in their own skills, knowledge and experience. Hence, PD practices are perceived to be a major investment that academics (just like any other professionals) can make for their own development to build their value either as employers or as employees in their sector.

Even though in theory these trends should lead to academics' participation in PD practices, in practice this seems only rarely to be the case. And when they do get involved in PD, they do so unsystematically. Consequently, the positive results expected from PD practices tend not to be achieved. Therefore, we have argued that there are some major obstacles to academics' participation in PD activities. We have also acknowledged that currently prevalent PD practices – the 'traditional' ones – fail to address these obstacles, and hence are insufficient in encouraging professional development among academics. In light of the above, this study discusses innovative PD practices that might potentially help to overcome these obstacles.

Obstacles to academics' participation in PD activities

We have acknowledged that obstacles to academics' participation in PD exist at all levels – from individual attitudes through to HEIs' strategies and priorities, to national HE policies. We identified the following four main obstacles:

- **Academics' resistance to moving away from traditional teaching practices:** Academics often find it challenging to commit to learning and applying new teaching approaches. There are two possible reasons for that. Firstly, in most

European HE systems academics are not fully exposed to formal pedagogical training. Consequently, some academics might be unaware of the weaknesses of traditional teaching methods and/or the availability of more effective didactic approaches. Secondly, even if academics are aware of alternative teaching methods, they are often resistant to implementing those methods because of a strong attachment to tradition. Teaching and learning traditions are especially argued to be deeply rooted in the HE environment as academics' teaching is influenced by their own experiences as students as well as their colleagues' habits and solutions.

- **Lack of formal requirements or incentives for teaching development in HEIs:** Even if academics are aware of innovative teaching methods and are willing to develop their teaching skills and practices, they often lack the encouragement to do so. They are rarely obliged to prove their teaching competences through any formal certification. The systems of promotion and remuneration are also, in most HE systems, skewed towards scientific outputs rather than teaching performance. All this results in a lack of motivation for academics to learn and innovate with regard to their teaching.
- **Lack of time for PD among HE staff:** Academics often cannot or do not want to dedicate enough time to PD activities. The imbalance between research and teaching in terms of requirements, remuneration and promotion schemes results in teaching being seen as less important to successful academic careers than research. Therefore, most academics consider that their success as an esteemed expert will be based mostly or even solely on work that they have carried out as researchers within their discipline. Additionally, most academics have more than one job: they are lecturers, supervisors, researchers, etc. Hence they often struggle to balance their workload and often simply lack the time for PD. They often decide to allocate time for their core activities for which they are rewarded (research) rather than for 'extracurricular activities' such as teaching-related PD.
- **HEIs' lack of pedagogical expertise and institutional capacity to develop effective PD schemes:** Even assuming that HEIs are motivated to provide better-quality education and manage to prioritise teaching and incentivise staff to develop their pedagogical skills, there are still serious obstacles to effective PD provision. HEIs often lack the skills (e.g. pedagogical expertise) and capacity (e.g. technology, evidence base) necessary to implement effective PD programmes. They especially tend to have insufficient knowledge of which practices work and which do not. The evaluations of PD programmes are rare, and hence the evidence regarding their outcomes in terms of enhancing teaching and student learning is limited and often incoherent. Therefore decision makers often lack guidance on how to successfully implement PD.

It has been noted that individual, institutional and systemic obstacles are closely inter-related and are the underlying problem of *the imbalance between research and education* in HE. Academics' lack of motivation and time to develop their teaching stems from universities' expectation that they should focus on research rather than education. This imbalance between research and education has roots in long-established norms and policies on a systemic level that are skewed towards the scientific outputs of HEIs.

Innovative PD practices

We acknowledge that traditional PD practices such as 'sit-and-listen' courses often fail to address the aforementioned obstacles and are therefore argued to be rather ineffective in improving teaching quality in HE. On the other hand, innovative PD practices are supposed to encourage and foster academics' learning by overcoming these obstacles. In particular they are expected to raise awareness about the importance of teaching innovation; to increase participation in PD programmes by offering high-value content in an attractive format; to provide a research and evidence base for PD organisers; and to

contribute to the discussion on the imbalance between research and teaching in HE. Such practices include:

Practices that can inform academics' on innovative teaching methods:

- **Academics' conferences on teaching skills:** Large PD events such as conferences and teaching days help to overcome the obstacle of academics' unawareness about innovative teaching methods. This is especially relevant for countries with less developed HE systems where PD is still relatively unpopular. For instance, the 'Teaching for Learning' conference organised by the University of Tartu works as a platform for presenting the results of research on PD and sharing good practices with colleagues, and is a way to incorporate PD into the academics' work.
- **Staff mobility as PD for academic and academic-related staff:** Staff mobility enables academic and academic-related staff to learn from each other in different contexts (and countries), while at the same time increasing collaboration between HEIs and their academics. A number of EU-level initiatives support and integrate staff mobility. For example, under the IMOTION project, a unique platform presenting centralised information on HEIs' non-academic staff training and mobility opportunities was introduced.
- **Collaborative, informal and ad-hoc PD opportunities:** Informal and collaborative PD practices might encourage staff to open up to innovation in teaching, since they are more willing, and find it more pleasant, to learn from each other rather than from external experts. One such practice is implemented at Dublin City University, where under the 'Sipping Point' initiative academics meet up during lunch to hear about and discuss various teaching approaches used by their peers.

Practices that can provide incentives for teaching innovations:

- **Formal proof of pedagogical competences:** Formal teaching-related requirements for inexperienced lecturers are a first step towards the fostering of teaching innovation. For instance, the University Teaching Qualification is a proof of didactic competences for academics in the Netherlands, and is an outcome of inter-university collaboration rather than state legislation. However, ensuring the *continuity* of academics' pedagogical development is also crucial to keeping them updated with the most recent educational trends throughout their careers.

Practices that can easily fit into academics' schedules:

- **Provision of self-learning materials:** An appealing way to overcome the obstacle of academics' lack of time is by providing self-learning materials or organising online courses. Their availability at any time and in any place might contribute to academics' willingness to develop their teaching, as long as the materials are in an attractive format and, ideally, complemented by additional PD activities. For example, academics at the London School of Economics and Political Science can access OERs on how to develop and innovate their teaching through the university's website. The materials include guidance, for example on how to interact better with the students, how to assess their work and how to introduce technology into in-class teaching.

Practices that can improve HEIs' institutional capacity:

- **Maximising use of internal resources:** A possible solution for those HEIs with limited expertise in the effective design and implementation of PD programmes (e.g. pedagogical or technical skills) is to maximise the exploitation of those specific capacities that already exist within the institution. For example, Pompeu Fabra University takes advantage of their strong technical and technological base

for video production (such as equipment and software) to produce high-quality MOOCs.

- **Networks, partnerships, and collaborations:** Inter-university collaboration such as national and international networks might be an effective solution in broader PD provision due to the economies of scale and dissemination of knowledge across institutions. For instance, U4 is an international partnership with a broad scope that involves joint activities in areas of innovative and specialised mobility, research, professional development, and other. ENUCE is an informal and voluntary network that focuses on University Continuing Education (UCE) and brings together specialists from six public Estonian universities. UNIPS is a digital solution offering flexible, open and research-based online pedagogical training for eight Finnish universities.
- **International leadership programmes:** Top-down training opportunities, especially at the European level and especially those aimed at HEIs' strategic management, can equip universities with skilled leaders who will then disseminate PD lessons across their institutions. D-TRANSFORM was an EU-funded project that targeted university leaders and focused on digital resources as a lever for university transformation. Similarly, the Empower Online Learning Leadership Academy (EOLLA) is an initiative based on the premises of active learning that targets decision makers responsible for the introduction of a variety of open, online and flexible learning opportunities at their HEIs.

Recommendations

HEIs' strategies for PD

The HEIs analysed varied in the level of attention they provide to teaching innovation as well as in their approaches to the organisation and development of PD schemes. In general terms it is recommended that HEIs have a unit dedicated exclusively to the pedagogical development of their staff as this creates positive synergies and there are economies of scale. Those units should be legitimised by university authorities, and their educational goals included into a broader university strategy. Units should employ professional pedagogues and cooperate with other university bodies (e.g. libraries or IT departments) to ensure high(er) levels of pedagogical and technological expertise and include students who can provide essential feedback on PD outcomes into the process. Additionally, since many of the aforementioned practices are complementary and serve some specific but limited goals, it is essential that universities provide a broad range of PD opportunities, and offer personalised support to help academics choose the right development path (i.e. the specific kind(s) of PD each academic needs). Finally, it is essential that PD schemes have a positive and measurable impact on academics' career progress, and that these schemes are evaluated in order to provide more robust evidence on which practices actually work well and which do not.

HEIs can also support innovative teaching beyond PD schemes. It is often argued that the modernisation of HE is focused mostly on the digitalisation of content and teaching and learning practices, and so HEIs should also be investing in the transformation of physical spaces that facilitate the use of technology for learning (e.g. interactive classrooms) and collaborative learning spaces. Furthermore, HEIs can facilitate educational research that would provide more evidence on the effectiveness of different teaching and learning methods, and foster the dissemination of this evidence across a broader spectrum of academic staff. Finally, the most crucial and impactful action would probably be to include the need for '*teaching competence*' in job profiles, salary scales and promotion schemes. It is essential that the teaching element is also included in 'general' promotion rules, since 'teaching-only promotion' as an addition tends to only attract already good teachers, while those actually requiring more training are rarely affected.

The role of national or regional governments in encouraging PD

National or regional governments can scale up some of the actions typically taken by HEIs. They can establish formal requirements or mandatory PD at their levels. In countries where national bodies are responsible for academics' promotion schemes, it has been identified that they should consider addressing the **imbalance between the value of research and teaching practices** in academics' career progressions. Since, as is often argued, PD is organised most efficiently at the university level, governments could simply encourage and support (mostly financially) HEIs in their attempts to implement effective PD schemes – and make these efforts recognised through funding allocated to HEIs.

Finally, for the same reasons that HEIs should have centralised PD units, governments can establish national/ federal bodies dedicated to the pedagogical support of HEIs. Such bodies could set standards for professional development, guide the design, evaluation and funding of programmes, and integrate and coordinate professional learning between HE institutions, ministries and other organisations.

Possible actions of the European Commission

Further to the Commission's commitment to increased mobility in HE (through Erasmus+), the Commission could also have special calls targeting HEIs to develop projects on PD for academics that are collaborative, reusable, and financially sustainable beyond their funded lifecycle. These projects should aim to involve academic staff at all levels and to include HEI management and academic-related staff – as well as students whenever possible. Moreover, there could be a special focus on how to develop schemes to support career progression via the teaching route, besides the existing research route that currently tends to be the focus.

1 Introduction

1.1 Why focus on innovative practices for PD in higher education?

A recent study on the changing pedagogical landscape in the EU (Haywood et al., 2015) argued that technology is widely accepted as a normal part of university life by both students and teachers and that most of the training of educators occurs at an institutional level. However, the authors argue that the use of new technologies (such as Learning Management Systems, LMS or Massive Open Online Courses, MOOCs) does not necessarily mean the use of new pedagogical approaches in the classroom. The study even states that technology is likely to be used within and alongside largely unchanged pedagogical approaches.

On the other hand, the pedagogical approaches of academics can be improved via their professional development (PD). However, the Communication on a 'Renewed Agenda for Higher Education' (European Commission, 2017, p. 5) states that "too many higher education teachers have received little or no pedagogical training and systematic investment in teachers' professional development remains the exception. National and institutional strategies to improve career opportunities and rewards for good teachers are becoming more common but are far from standard."

To sum up, innovation in teaching at the HE level is happening at a much slower pace than the increase in the availability of digital technology. Academics need to develop new competences for teaching at HEIs so as to effectively use technology and improve their teaching, improve student learning, and as a result achieve higher career progress. HEIs need to be innovative in the area of the PD of academics to achieve these results. This study aims to expand the knowledge base on the innovative PD of academics by delivering a series of case studies that will highlight innovative practices in the PD of academics.

The methodology of this study was based on two main methods: literature review and case studies. Both the literature review and case studies were developed following a number of steps or criteria (see section 2) to select the essential sources and most relevant cases for further analysis. This final report presents the main results of the study.

1.2 Key concepts in academics' PD

The literature review and desk research for this study revealed that there is no unanimous understanding of the notion of academics' PD among researchers. First of all, 'PD of academics' is not the only term used to describe the processes of academics' learning. It is sometimes substituted by synonymous terms such as "professional learning" (e.g. King, 2014; Malik, Nasim & Tabassum, 2015, Darling-Hammond, Hyler & Gardner, 2017), "technological, pedagogical, and content knowledge (TPACK) of faculty" (Kim & Kim, 2018), or "faculty training" (Jacob, Xiong & Ye 2015). More importantly, there are some major disagreements on how to define these terms.

One of the most common problems in defining PD is its scope. Some researchers interpret PD exclusively as organised, structured and intentional modes of learning. For instance, PD is referred to as "centralized professional development opportunities" (Dysart & Weckerle, 2015) or "a product of both externally provided and job-embedded activities" (Darling-Hammond et al., 2017). Others use a broader definition of PD that also includes informal or unintentional learning. For example, Malik et al. (2015) state that "professional development encompasses all types of facilitating knowledge opportunities, and ranges from university degrees to formal assignments, conferences and informal learning opportunities located in practice". Similarly, according to Kneale et al. (2016), PD comprises "any activity targeted to strengthen and extend the knowledge, skills and conceptions of academics". Hence, there is no consensus as to whether the informal and unintentional practices of learning can and should be referred to as part of PD.

Furthermore, it is sometimes unclear what skills and aspects of academic work should be the aim of PD practices. The most important categories mentioned in the literature include ⁽¹⁾:

- **Faculty development**, which focuses on individuals and their pedagogical roles. It incorporates training in teaching skills, class organisation, evaluation methods, etc.
- **Instructional development**, which is more content-based, focuses on the course and curriculum, and includes the development of course structures, teaching strategies, etc.
- **Organisational development**, which aims at maximising effectiveness through the development of personal skills such as communication or stress-management.

Finally, the definitions used in the literature vary in terms of the expected impact of PD programmes. The first level of impact is on the academics' quality of teaching through their improved pedagogical skills and knowledge. For instance, Kneale et al. (2016) claim that PD aims to strengthen and extend the knowledge, skills and conceptions of academics in a way that will lead to changes in their thinking and their educational behaviour. Other definitions go beyond impact on teaching quality and include the expected influence on students' experience. For example, Darling-Hammond et al. (2017) define PD as "a structured professional learning that results in changes to teacher knowledge and practices, and improvements in student learning outcomes". Additionally, while the ultimate goals of PD are growth of teaching quality and pupils' learning (King 2014), some research suggests that effective academics' PD can potentially have a positive impact on additional aspects, such as universities' institutional culture and academics' career progression (Stes et al., 2013; Chalmers and Gardiner, 2015). Nonetheless, the existing literature on the *actual* impact of PD is scant, often confusing or contradictory, and does not provide enough robust evidence on the results of PD programmes on the above-mentioned aspects (Cordingley et al., 2015; Whitworth & Chiu, 2015).

⁽¹⁾ The Professional and Organizational Development (POD) Network in Higher Education. *What is Educational Development?* Available at: <https://podnetwork.org/about-us/what-is-educational-development/> [accessed on 05.08.2018].

The reviewed literature also does not contain a straightforward conceptualisation of the innovative aspects of PD practices. In broad terms, innovation is considered to be “the implementation of a new or significantly improved product (good or service) or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations” (OECD and Eurostat, 2005). In education, innovation is commonly defined as the introduction of a new external or internal factor into a previously used method (Bates, 2015). According to Bates (2015) and Cordingley et al. (2015), so far the most common type of PD practice has been ‘sit-and-listen’ courses where information is provided in a lecture-like environment. Innovative PD can include not only a brand-new method (e.g. open online courses) but also the introduction of a new factor or tool into some more traditional PD methods (e.g. into ‘sit-and-listen’ courses). A more holistic approach towards innovative PD practices has been introduced by Jensen and Iannone (2018), who link the idea of innovative PD in HE to the overall work environment that enables and encourages employees to learn, develop, and innovate. According to them, this environment should be built and supported at the political level (macro), institutional level (meso), and professional communities’ level (micro- and meso).

Considering all of the above, for the purpose of this report **we define innovative PD for academics as initiatives that:**

- Use alternatives to long-established learning methods, including active learning, collaboration, coaching, expert support, feedback and reflection and open online resources
- Provide a sustainable environment for academics’ long-term development
- Are not yet widely used as a common practice across European higher education institutions (HEIs).

1.3 Academics' PD: the state-of-the-art

It is widely agreed among researchers that the need for academics' PD has grown. They consistently point to three main drivers for this growing need for PD in HE. These include: (1) the massification and marketisation of HE, followed by the spread of a student-centred approach in teaching; (2) the growing importance of modern technologies in education; and (3) changes in the nature of professional competition, with individual skills becoming the main determinant of professional success.

Firstly, student enrolment ratios have been rising quite rapidly since the 1990s, challenging the traditional form of universities as centres of elite education where only a select few gain access (Hornsby & Osman, 2014). Competition between universities has therefore become much stiffer, and new measures are necessary for HEIs to stay competitive in the global HE market. PD is one of the ways to enhance universities' educational offers and their quality, and thus increase their attractiveness to students. The massification of HE is closely related to the emergence and spread of student-centred approaches. For instance, Mark (2013) and also Kneale et al. (2016) claim that, with the evolving HE landscape, students are more frequently positioned as 'consumers of' rather than 'partners in' or 'products of' HE.

This trend, which has recently become a widely discussed and contested phenomenon in the HE field, is often referred to as the marketisation of HE (see, for example, Brown, 2015; Marginson, 2016; Hall, 2017; Ball, 2018). As fee-paying customers, students become active participants in their academic development, i.e. engage in the co-production of the education they receive (Mark, 2013). Supporters of marketisation underline the benefits of direct interaction between universities and students (rather than with the government acting on the students' behalf) (Brown, 2015). This is expected to make universities more flexible, more efficient and more responsive to the needs of society, the economy and students, since students are the ones who 'know best' and should be empowered to act as customers (Hall, 2017). Other arguments in favour of marketisation include the need to cover the growing costs of enlarging HE systems (as a result of the massification of HE) and competitive demands for public support (e.g. healthcare) – so private contributions might be necessary to maintain education quality (Brown, 2015). On the other hand, opponents of marketisation claim that too much competition might be damaging since competing for status tends to lead to uncontrolled and unjustified price rises, as observed in the US HE sector (Brown, 2015). As a result, HEIs might be tempted to charge students far more than necessary to provide a good education. This might lead to HE becoming elitist and neglecting the positive social and cultural externalities of broad and free access to HE such as reduced economic inequality, or positive effects on democracy and human rights (Marginson, 2016).

Regardless of the actual advantages and drawbacks of the marketisation of HE, most authors agree that the impact of marketisation on PD growth is indeed strong. This is because HEIs are more and more concerned with meeting their students' needs that typically focus on receiving a high-quality education (Fahnert, 2015). As a result, as Jacob, Xiong and Ye (2015) argue, HE systems with the best developed PD schemes are the ones with the most customer-oriented goals. Such HE systems include not only commercialised systems in the UK, Ireland and the Netherlands, but also Scandinavian models whose student-centrism derives from their strong perception of education as a driver for economic and societal development, rather than from the commercialisation of HE.

Secondly, the increased need for academics' PD can be explained by the growing importance of digital technologies (such as Open Education Resources – OER and Massive Open Online Courses – MOOCs) in HE. It is argued that technology used in optimal and appropriate ways can enhance teaching and learning experiences (see, for example, Haywood et. al., 2015; Jacob, Xiong & Ye, 2015). Nonetheless, a considerable number of academics seem to lack teaching skills and are unable to introduce modern technologies in the courses they teach (e.g. they might not be aware of or know how to use a

teaching-enhancing application such as Padlet ⁽²⁾) (Dysart & Weckerle, 2015). Therefore, academics' PD focused on technology assimilation and its applicability for teaching is an important step towards the modernisation and digitalisation of HE.

Finally, PD is essential not only to ensure HEIs' competitiveness but also to build the value of individuals as professionals, either as employers or employees in their sector. Megginson and Whitaker (2017) state that the need for PD arises because professional success no longer lies in the job or organisation people work in, but in their own skills, knowledge, and experience. PD practices are a major investment that academics (just like any other professionals) can make for their own development. Therefore it can be assumed that academics want to invest their time in PD if they wish to be professionally successful.

In theory, the trends described above should lead to academics' greater participation in PD. In practice, however, it seems that academics only rarely participate in PD activities, and that when they do they take an unsystematic approach (Aškerc and Kočar, 2015; Töytäri et al., 2016). Consequently, the positive results expected from PD tend not to be achieved. Therefore, we have argued that there are some major obstacles to academics' participation in PD, especially in terms of academics' reluctance to move away from traditional teaching practices, lack of formal requirements or incentives for teaching development at HEIs, lack of time for PD among university staff, and lack of HEIs' pedagogical expertise and institutional capacity to develop effective PD schemes (see section 3 for a detailed analysis of obstacles). We have also acknowledged that currently prevalent PD practices – the 'traditional' ones – fail to address these obstacles and are therefore insufficient in encouraging professional development among academics. In light of the above, this study discusses innovative PD practices that might potentially help to overcome these obstacles.

Overview of the methodology

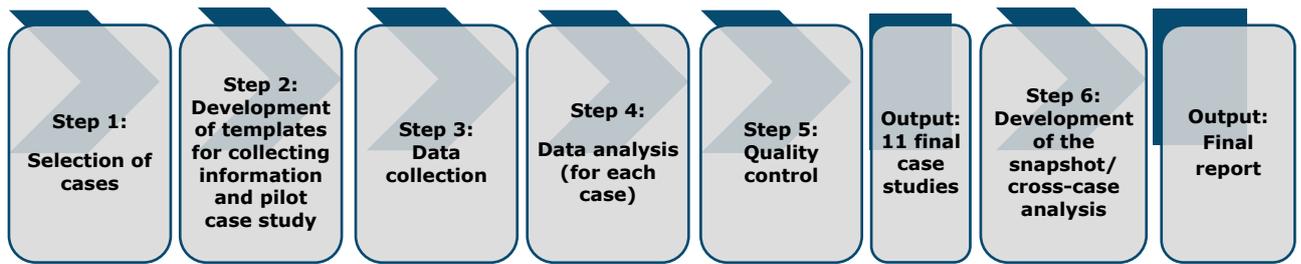
The methodology of this study is based on two main methods: literature review and case studies. The main aim of the literature review was to answer the question of what the main obstacles to academics' participation in professional development are. In addition, the method also helped (1) to analyse how the PD of academics is conceptualised in the scientific literature, and what the impact of innovative PD activities is; and (2) to clarify how to overcome obstacles to academics' participation in PD. The literature review has been carried out based on Petticrew and Roberts' (2008) method for systematic reviews in social sciences. Using it the most relevant sources were selected based on the following five main steps:

- Formulation of research questions.
- Definition of the search terms and selection of appropriate databases.
- Selection of inclusion and exclusion criteria, which guide the further literature search.
- Evaluation of the scientific quality of publications found using predefined quality criteria. Studies that do not meet quality requirements are excluded from the literature review.
- Extraction of relevant information from publications that meet the criteria.

The other key method of the study was case studies. Case studies were developed following a number of steps (see Figure 1).

Figure 1. Case study development strategy

⁽²⁾ Padlet is an application to create an online bulletin board that you can use to display information for any topic. See: <https://padlet.com/> [accessed on 19.10.2018].



A first and major step in the development of case studies was the selection of cases. In total we applied seven criteria for selecting innovative practices:

- Criteria for choosing individual cases: (1) the proposed case is an innovative PD practice; (2) the proposed case addresses known obstacles to academics' participation in PD; and (3) the proposed case has contributed to better career progress, teaching and student learning.
- Criteria for ensuring representativeness of all selected cases: (4) cases cover different regions; (5) cases differ in terms of the type of the practice; (6) the scale of selected practices varies (e.g. not only university but also national and international level); and (7) selected cases should together cover specific topics ⁽³⁾:

Applying the above criteria resulted in a longlist of practices (the longlist of other cases is provided in Annex 2). The contractor, together with JRC IPTS and DG EAC representatives, used it as a basis for selecting final cases to study in depth.

⁽³⁾ These include the following: mandatory PD courses, virtual or physical mobility of academics, remuneration system based not only on research outputs but also on quality of teaching, and university as a catalyst for change beyond learning in the classroom.

2 Obstacles to academics' participation in PD

Based on the literature review (see Technical Report) and interviews with PD experts, we acknowledge that obstacles to academics' participation in PD exist at all levels – from individual attitudes through to HEIs' strategies and priorities to national HE policies. We identified the following four main categories of obstacles:

1. Academics' reluctance to move away from traditional teaching practices,
2. Lack of formal requirements or incentives for teaching development at HEIs,
3. Lack of time for PD among university staff, and
4. HEIs' lack of pedagogical expertise and institutional capacity to develop effective PD schemes.

Firstly, academics often find it challenging to commit to learning and applying new teaching approaches (Aškerc and Kočar, 2015; Dysart & Weckerle, 2015; Postareff & Nevgi, 2015; Kim & Kim, 2018). The reasons for such an attachment to established teaching methods are twofold. One group of researchers emphasises the idea that some academics might be unaware of the weaknesses of traditional teaching methods, and/or the availability of more effective didactic approaches. The underlying problem seems to be that in most European HE systems academics are not fully exposed to formal pedagogical training (Dysart & Weckerle, 2015). Consequently, as Kim and Kim (2018) argue, even though academics are typically considered to be experts in their research domains, they have somewhat limited knowledge of pedagogical theories and practices.

Other researchers claim that academics tend to be aware of alternative teaching methods but are often resistant to implementing those methods because of a strong attachment to tradition – especially teaching and learning traditions are argued to be deeply rooted in the HE environment (Postareff & Nevgi, 2015; Kim & Kim, 2018). For instance, a study by Watty, McKay and Ngo (2016) revealed that 93 per cent of academics interviewed indicated resistance as a key obstacle to technology adoption in academic teaching. Haywood et al. (2015) and Bovill et al. (2016) explain that academics' teaching is influenced by their own experiences as students, and that habits towards existing practices and solutions are inherited from colleagues. Additionally, Postareff and Nevgi (2015) note that changing teaching behaviour requires academics to shift their roles from experts in their fields to novices in another area (pedagogy) which is often an uncomfortable position. They also draw attention to the so-called "intermediate phase trap", acknowledging that people in their mid-careers might have a fear of making commitments and, either consciously or unconsciously, tend to avoid change. As a result, the perceived risk associated with innovation is generally high.

Secondly, even if academics are aware of innovative teaching methods and are willing to develop their teaching skills and practices, they often lack encouragement from their HEIs, or from the national agencies, to do so. The lack of teaching-related criteria for the appointment of academic staff or incentives for the development of pedagogical skills throughout their careers result in the lack of motivation for academics to learn and innovate (based on experts' interviews). Fahnert (2015) as well as Aškerc and Kočar (2015) acknowledge that in most developed, including European, countries, academics are rarely obliged to prove their teaching competences through any formal certification. The system of promotion and remuneration is also, in most HE systems, skewed towards scientific outputs rather than teaching performance. Quite often salaries, promotion and reward schemes, but also peer esteem, depend on academics' publications rather than the quality of their teaching (Fahnert, 2015; Graham, 2015; Kim & Kim, 2018; experts' interviews). This is an area where national policies (e.g. setting a country-wide system of teaching quality certification) might have biggest impact, especially in cases where national bodies are entirely responsible for accreditation and promotion of academic staff (based on experts' interviews).

Some researchers argue that such an underappreciation of teaching in comparison to research is related to the challenges of establishing robust criteria for teaching excellence (Cashmore, Cane & Cane, 2013). Measuring research outputs is quite straightforward (e.g. number of citations, number of articles published in most-cited journals), while teaching performance is more subjective and intangible (Graham, 2015). Therefore, inadequate and subjective assessments sometimes seem unfair and thus might be avoided by most HEIs. However, most literature highlights a deeper issue within the HE sector that underpins the lack of focus on teaching. As Gibbs (2016) argues, due to national policies in many countries (e.g. Research Excellence Framework in the UK), research-related accomplishments had gained dominance in the past and powerfully shaped the values and strategies of universities. Consequently, research has a higher status than teaching in HE because it is a source of prestige at a national, or even global, level (Blackmore, 2016). As a result, the attention of managers and academics is diverted to scientific rather than educational activity. This situation is also reflected in the HE funding – in most countries research attracts much more public investment than teaching, and if teaching funding is provided, it is in fact often redirected to support research anyway (Norton & Cherastidham, 2015; Blackmore, 2016). Additionally, many voices across the literature recognise the lack of bargaining power of students as an important reason for the disparity between teaching and research (Fahnert, 2015; Kneale et al., 2016).

Ultimately, students care about the quality of the education they receive. Even though it might be expected that good researchers are also good teachers due to their authority in a given field, this does not seem to be confirmed in the literature. For instance, a study by Figlio and Schapiro (2017) demonstrated no relationship at all between research and teaching excellence, while the research by Palali et al. (2018) actually showed that teachers regarded as good researchers received lower scores in student evaluations. This point is also apparent, for instance, in the UK, where the 2016 Student Academic Experience Survey revealed that students “place a premium on staff demonstrating teaching skills, ahead of research expertise” and “value staff who demonstrate PD in teaching and subject knowledge” (4). Nevertheless, in HE systems where students are treated as ‘products’ rather than ‘customers’ of HE – which is often the case in Europe – their voices tend to be insufficiently heard and their needs not fully met (Fahnert, 2015).

Thirdly, academics often cannot or do not want to dedicate enough time to PD activities. The aforementioned imbalance between research and teaching at an institutional level, as well as requirements, remuneration and promotion schemes biased towards research, results in teaching being seen as less important to successful academic careers than research (Postareff & Nevgi, 2015). Therefore most academics consider that their success as an esteemed expert will be based mostly or even solely on work that they have carried out as researchers within their discipline (based on experts’ interviews). Additionally, academics often struggle to balance their workload and often simply lack time for PD (UCU, 2016; experts’ interviews). Most academics have more than one job: they are lecturers, supervisors, researchers, etc. So they often find themselves in a situation where they need to choose how to spend their time: on their core activities for which they are rewarded (research), or on ‘extracurricular activities’ such as teaching-related PD (Jacob, Xiong & Ye, 2015).

Finally, even assuming that HEIs are motivated to provide better-quality education and manage to prioritise teaching and incentivise staff to develop their pedagogical skills, there are still serious obstacles to effective PD provision. HEIs often lack the skills (e.g. pedagogical expertise) and capacity (e.g. technology) necessary to implement effective PD programmes (Dysart & Weckerle, 2015; based on experts’ interviews). More importantly, HEIs tend to have neither a sufficient knowledge of which practices work nor the know-how necessary for the implementation of a successful PD programme.

(4) See: The 2016 HEPI / HEA Student Academic Experience Survey. Available at: <http://www.hepi.ac.uk/wp-content/uploads/2016/06/Student-Academic-Experience-Survey-2016.pdf> [accessed on 27.07.2018].

Chalmers and Gardiner (2015) argue that academics' PD is a very recent and largely under-researched topic, especially in terms of outcomes of PD programmes on enhancing teaching and student learning. Kennedy (2014) points out that the existing literature is predominantly small-scale in nature, and characterised by theoretical incoherence. Thus, the literature fails to produce coherent findings and does not provide an evidence base that could inform the practice. Therefore, even in some more developed HE systems, where PD is rapidly evolving, decision makers often lack guidance on how to successfully improve it.

Overall, the obstacles to academics' participation in PD exist on individual, institutional and systemic levels and are strongly inter-related. Academics' lack of motivation and time to develop their teaching stems from expectations of universities to focus on research rather than education. This imbalance between research and education has roots in long-established norms and policies on a systemic level that are skewed towards scientific outputs of HEIs. Even though the literature recognises a trend of shifting the focus from research to teaching at all levels, these changes happen almost exclusively in most developed and student-oriented HE systems in the UK, the Netherlands, and Scandinavia (Chalmers & Gardiner, 2015). Simultaneously, most European countries still rely on traditional teacher-centred approach and fail to fully embrace relevant changes (Jacob, Xiong & Ye, 2015).

Finally, we acknowledge that traditional PD practices such as 'sit-and-listen' courses often fail to address the aforementioned obstacles and are therefore argued to be rather ineffective in teaching quality improvement in HE (based on experts' interviews). Thus, this document focuses on innovative PD practices that are supposed to encourage and foster academics' learning by overcoming these obstacles. In particular they are expected to raise awareness about the importance of teaching innovation; to increase participation in PD programmes by offering high-value content in an attractive format; to provide research and evidence base for PD organisers; and to contribute to the discussion on the imbalance between research and teaching in HE.

3 Case studies summaries

3.1 Case study: The Sipping Point – Enabling the Power of Communication among Academics ⁽⁵⁾

Dublin City University (Ireland)

The Sipping Point is an initiative implemented at Dublin City University (DCU). A group of academics meet up for one hour once a month to hear about and discuss various teaching approaches used by their peers. The Sipping Point does not specify what skills should be strengthened as a final aim. The main idea of the initiative is to enable the power of communication among academics. The basic premise is to try to foster a climate where staff across all disciplines can potentially learn from colleagues about different aspects of teaching practice. Furthermore, during each session academics take on the roles of learners and teachers at the same time. In contrast to time-consuming formal courses, The Sipping Point was designed as a one-hour session organised once per month during lunchtime. There is no commitment to regularly participate in The Sipping Point or to do additional work prior to or after the sessions. All of these aspects make The Sipping Point stand out from the more common Continuing Professional Development (PD) activities.

The Sipping Point is organised by the Teaching Enhancement Unit (TEU), a service unit that provides support and advice to academic staff in order to improve the learner experience for students at DCU. In addition to The Sipping Point, TEU offers a variety of different PD activities. For example, DCU academics can participate in formal accredited courses where they follow strict requirements and get a qualification or in one-time, one-theme workshops. In addition to organising PD activities, DCU applies policies aiming to support academics' PD and the implementation of innovative teaching practices (e.g. academics who decide to take paid PD courses outside of DCU can ask for compensation; academics who spend their personal time on external PD activities "get their time back"). All PD practices implemented by TEU are part of the university's teaching and learning strategy.

Sipping Point sessions are organised during lunch breaks and catering is provided. Every session has a different topic related to teaching practices (e.g. group work, students' assessment, feedback practices). Each session starts with two or three 5- to 10-minute presentations by academics who describe what innovative teaching methods they use or what strategies they apply to solve common pedagogical challenges. Presentations by the academics are followed by an open discussion. There is also a private online community for members to continue their conversations in between sessions. Funding for the practice is provided by DCU; it was 757 EUR in total for the 2017-2018 academic year.

According to the organisers, the main positive result of The Sipping Point is that it "sparks" interest: participants leave sessions with new ideas, insights on possible teaching strategies, enthusiasm to find out more, and knowledge of where to look for information. Furthermore, representatives of TEU claim that The Sipping Point sessions were really helpful for them in becoming more informed about effective and unusual teaching practices implemented by the academics at DCU. The Sipping Point can be expected to have indirect effects that would be useful to the careers of academics. Increased knowledge about the existence of different innovative teaching methods creates favourable conditions for an improvement in teaching quality.

The idea of The Sipping Point can be easily adapted to different contexts. The practice takes advantage of the experience and expertise of different academics working at DCU, removing any need for external experts. The budget of The Sipping Point is therefore especially low – less than EUR 800 per year. Informal PD practices cannot effectively replace all other forms of PD, but one of the success factors of The Sipping Point is that it

⁽⁵⁾ See: <https://www.dcu.ie/teu/Non-formal-Professional-Development-PD-Options.shtml> [accessed on 20/11/2018]

works as an effective addition to more formal activities. During periods when academics do not have enough time to participate in formal PD modules, they can at least participate in the informal one-hour discussions with their colleagues about teaching practices. Furthermore, organisers and participants claim that The Sipping Point has exceeded their expectations. So why not invite academics from different HEIs for a cup of tea and a discussion with their colleagues?

3.2 Case study: University pedagogical support – UNIPS (6)

The University of Turku (Lead) and seven other Finnish universities

University Pedagogical Support (UNIPS) is a digital solution that develops academics' PD by offering flexible, open and research-based online pedagogical training. Eight Finnish universities are involved in planning and implementing UNIPS online modules. The University of Turku is leading the project.

UNIPS was developed for the needs of small and medium-sized universities in Finland, which have had limited financial and staff resources for organising face-to-face pedagogical development courses. Specifically, it has been difficult for doctoral students and early-career staff to attend the courses because more experienced academics have filled the available places. In addition, international staff have not been able to attend PD courses because the courses have been in Finnish. Furthermore, participation in lengthy courses requiring active attendance in face-to-face seminars is challenging for many academics. UNIPS responded to these challenges with short, easy-to-access online modules focusing on pedagogical development, offered in the English language.

UNIPS contains small online modules that include audio-visual materials, glossaries, quizzes and short videos. The content of the modules covers the basic elements in university pedagogy and is based on pedagogical research. Currently, 12 modules have been developed or are under development.

The materials of UNIPS modules can be freely used for self-study or as parts of pedagogical training. Through adding an online collaborative phase to the self-study phase, the modules can be converted into 1 ECTS courses. The self-study of the modules is always available for academics and for doctoral students, but formal completion of a 1 ECTS course requires that the organising university establish the online collaborative phase.

UNIPS has made it possible to offer pedagogical support to a large number of academics (currently around 250 teachers complete at least 1 ECTS yearly at the University of Turku). According to feedback from the participants, they have been satisfied with the ease of use of the online learning environment, highly motivating content and digital solutions for self-study (e.g. videos, quizzes, glossaries). In addition, the opportunity to complete courses at the very beginning of a teaching career in English has been highly valued. Scientific research shows that the concepts of teaching of inexperienced staff can be changed from teacher-focused to a learning-focused direction by studying UNIPS modules (Vilppu, Murtonen & Postareff, 2018).

UNIPS modules are designed in a Finnish university context, but the content of the modules is based on contemporary international research on teaching and learning in HE. Therefore, the modules can be utilised in diverse contexts. UNIPS modules can be freely used by academics for self-study in different universities and contexts without a licence. If the modules are to be used as formal 1 ECTS courses, universities need to organise opportunities for the formal completion of the 1 ECTS courses (i.e. the collaborative phase or something else to make them equal to 27 hours of work), which requires an investment of staff resources.

(6) See: <https://unips.fi/> [accessed on 21/11/2018]

3.3 Case study: The international U4 network as a pool of resources (7)

Ghent (BE), Groningen (NL), Göttingen (DE), and Uppsala (SE) Universities

The U4 is a network comprising Ghent, Groningen, Göttingen and Uppsala universities. It is a novel approach to university partnerships as it is a small network with a history of cooperation among its members. These characteristics aid close connections at all levels and provide for efficient and non-bureaucratic communication, which facilitates the smooth development of activities. Pooling different types of resources allows for the utilisation of the partners' complementary strengths to offer a wide variety of high-level activities and to constantly adapt to the needs of the participants. This flexible yet focused approach to PD helps the network to address known barriers to academics' participation in PD activities. The pooling of resources and a bottom-up approach ultimately leads to the network's comprehensiveness.

Ghent, Groningen, Göttingen and Uppsala universities are all comprehensive, research-dominated universities with similar rankings, established traditions, and are situated in very strong university cities. All of the participating universities have been paying considerable attention to the PD of their staff, ensuring thorough support from the institutions for academics to be innovative in their curriculum and methods. The history of cooperation and the basis of an existing analysis and joint programmes culminated in having the top management levels of the universities initiate the U4. It was an attempt to grasp an existing opportunity by establishing a supportive programme for joint collaboration initiatives in education, research, and institutional management.

The U4 is organised around four academic clusters, each hosted by one partner university: Humanities; Social Sciences, Economics and Law; Medicine and Pharmacy; and Science and Technology. Additionally, the cluster of Institutional Management covers all institutional level activities and is managed by all participating universities collaboratively. The most common areas addressed by the projects involving teaching academics are cross-curricular skills, teaching in multilingual and multicultural settings, dealing with the diversity of ESL learners, and work-based learning. The most common practices organised by the network are observation visits to other educational institutions, peer observation, education conferences, seminars, individual or collaborative research, and workshops. While the projects' methods of delivery vary, the methods of provision (provided by one of the participating universities) and funding are constant. The 'sending' university funds the travel and accommodation costs of their own outgoing staff, while the 'host university' covers any organisational costs related to the activity.

While the network has not yet identified a way to appropriately measure its impact on teaching quality or the students' experience, some indicators of the U4's success can be seen in the numbers of collaborations encouraged or established by the network. The network's collaborations encouraged the rise of EU-funded projects with some or all of the U4 partners involved. There are currently 11 ongoing EU projects run by the network. Additionally, in 2017 the U4 organised 391 short-term mobilities, over 50 joint U4 activities, 12 U4 summer schools, and many other activities (Webpage of the U4, About, 2018).

There are many university collaborations that have existed over a period of time, connecting universities of similar backgrounds in different or even the same countries. These HEIs may find it useful to apply this small and structured network's approach with the bottom-up logic. Another important recommendation is to have a dedicated administrative staff as well as managerial support that would ensure the efficiency and maintenance of the network's activities. Finally, the collaborative financing model is useful in ensuring the financial sustainability and longevity of the project. The funding model allows for flexible participation, since there are no official requirements for the

(7) See: <http://www.u4network.eu/> [accessed on 21/11/2018].

number of events organised by a participating HEI. Thus, if organising a project event would be too much of a financial burden, the university would not be obliged to do it. Thus, the network is financially sustainable, as long as each university devotes at least some funds for covering the travel and maintenance costs of the participating staff members.

3.4 Case study: Nationally recognised proof of didactic competences –University Teaching Qualification (UTQ) ⁽⁸⁾

14 Dutch research universities

The University Teaching Qualification (UTQ, nl. *Basiskwalificatie Onderwijs*) provides proof of didactic competences for academics in higher education institutions (HEIs) in the Netherlands. A country-wide teaching requirements' framework is a rare phenomenon in Europe and in the world in general, and the UTQ is a unique approach to the enforcement of PD at HEIs. The UTQ provides HEIs with significant autonomy as it was not developed by the government but rather by universities and for universities. One of the UTQ's success factors is its focus on results – the UTQ provides a goal and a framework for the practice, leaving the method of obtaining the qualification for HEIs and individual academics to choose for themselves. Furthermore, the system of mutual recognition results in a clear positive impact on academics' career paths, which is an important motivational factor.

Dutch universities can be regarded as pioneers of professional development for teaching academics and innovative pedagogies. Despite this, in the 1990s, lecturers in HEIs were not required to have any pedagogical training. In light of student protests, changes were implemented, which in 1996 culminated in Utrecht University's decision on a teaching qualification scheme requiring all teaching staff to meet basic pedagogical requirements. In 2008, all 14 research universities signed the Mutual Agreement of UTQ. Following this, each participating university has developed its own training and development policy and programmes based on the country-wide UTQ standards.

Although the agreement established general guidelines on which to base the certification process and the criteria for obtaining competences, universities were given autonomy to develop their own specific systems and support schemes as they saw fit. It usually consists of two parts:

- The official part for which a qualification is awarded is a portfolio documenting achieved competences and providing examples of the teaching practices used in their work.
- The second part – consists of support schemes (various types of training, informal learning, support in writing the portfolio, etc).

The UTQ requirements are designed to develop or evaluate pedagogic competences – designing the courses, teaching, assessment, and evaluation. However, the content area is not limited to traditional methods of practice. Often the aims of the UTQ support schemes include development of the didactic skills of teaching staff in the direction of facilitating active learning, digital competences, interdisciplinarity and internationalisation.

By 2016, 58% of teaching academics had obtained the UTQ. While the UTQ makes it easier to quantify the UTQ-qualified share of lecturers in HEIs, the potential impact of this on teaching quality or students' experience is difficult to measure accurately. The UTQ is expected to have had some impact, as since its adoption the quality of teaching has been rated increasingly highly at Utrecht University and the number of students and the graduation rate are at record levels. However, it is on academics' career paths that the UTQ has the most straightforward impact. As the UTQ is embedded in each university's HR policy, it plays a part in the hiring, selection, and promotion processes.

The UTQ system is adaptable in different contexts, as long as universities find the motivation to start discussions and manage to come to a mutual, country-wide agreement on the most important criteria for the didactic skills of their teaching academics. The most important factor in establishing such a scheme, or a similar one, is a simple and logical framework, ideally created by and agreed on by several universities.

⁽⁸⁾ See: https://www.vsnu.nl/en_GB/utq [accessed on 21/11/2018].

The UTQ does not require any financial resources since its establishment is fully financially sustainable. Preparation courses and additional support for those wishing to obtain the certificate require funds, expertise and time, so the financial sustainability of support programmes may be quite demanding. At least in the initial stages, government support in the form of financial incentives for a certain percentage of lecturers' obtaining the UTQ could be very helpful for a wide adoption of the practice.

3.5 Case study: Support for MOOC production – the Centre for Learning, Innovation, and Knowledge (CLIK) ⁽⁹⁾

Pompeu Fabra University (Spain)

Pompeu Fabra University's (UPF) support for MOOC production is an example of how specific expertise and resources that already exist within an institution can be maximised to create a successful PD scheme. The 'smart' use of those resources (i.e. the technical and technological base for video production, such as equipment and software) allows UPF not merely to make MOOC production possible but also to design courses that stand out in terms of their form and user-attractiveness, i.e. they are truly innovative. A crucial factor that pushes academics to engage and experiment with innovative teaching practices is the UPF's institutional strategy and culture, which encourages and rewards such efforts. The MOOCs are one of the outputs of such an approach. Simultaneously, they contribute to worldwide promotion of the university and further reinforce its status as an innovation leader.

The practice is led by UPF's Centre for Learning, Innovation, and Knowledge (CLIK). CLIK is a central unit for the promotion and support for innovative teaching methods at UPF. In addition to assistance with MOOC production, it also offers faculty training for the academic staff, provides them with resources (both technical, e.g. ICT tools, and technological, e.g. online learning solutions) and advice related to innovative didactics, and contributes to the disruption of knowledge by publishing educational studies as well as by organising regular workshops, conferences and symposia related to teaching and innovation.

UPF started creating MOOCs very early on, in 2012. MOOC development has been gaining speed since then to reach more than 180,000 students enrolled in 23 MOOCs in the academic year 2017-2018. Even though the initiative is coordinated by CLIK, the UPF MOOC team includes many affiliates from across the university. There are typically three core actors in MOOC development: a lecturer who provides the idea for the MOOC and the academic knowledge for the contents; CLIK, which coordinates the whole process and leads the pedagogical support; and La Factoria+ (a unit responsible for digital production at UPF), which provides the lecturer with all technical equipment and audio-visual assistance.

This practice addresses two important barriers to the implementation of an effective PD programme. Firstly, through the use of specific internal technical and technological resources and know-how, the barrier of lack of capacity (both in terms of technology and expertise) is overcome. Additionally, the successes of past MOOCs, as well as the perceived benefits, drive the demand for MOOC production among the staff and hence overcome the problem of the lack motivation among academics.

Through the process of MOOC design, academics can develop their pedagogical, communication and digital skills, and learn how to adapt their teaching to different conditions. Importantly, MOOC tutors tend to incorporate new teaching methodologies into their in-class teaching, including digitalisation of learning materials and the use of more attractive and interactive pedagogical tools. It might also be possible that, through a broader recognition within and beyond the university, they increase the number of citations in research. Finally, students from within as well as outside UPF benefit from the MOOCs since they can access the educational offers of UPF for free whenever they want.

The biggest drawback of the practice is that it is very costly and time-consuming, which limits the number of MOOCs UPF can produce, and hence narrows the coverage of the practice. A related challenge, and a trend among MOOC producers, is to seek a solution that would make the MOOC provision financially sustainable, but would not 'kill' the idea of free and open education which is the core idea behind the MOOCs.

⁽⁹⁾ See: <https://www.upf.edu/web/clik> [accessed on 19/11/2018].

3.6 Case study: Provision of online materials for teaching development –Teaching and Learning Centre (TLC) ⁽¹⁰⁾

London School of Economics and Political Science (LSE, the UK)

Academics at LSE can access OERs on how to develop and innovate their teaching through the university's website. The materials include guidance, for example on how to interact better with students and how to assess their work, or how to introduce technology into in-class teaching. In general the provision of educational resources for self-learning as a stand-alone strategy is not considered an effective or innovative tool for fostering innovative teaching development. However, in the case of the London School of Economics and Political Science (LSE), the innovativeness comes not from the materials in themselves but from the way they are used. During individual consultations with academics, TLC's academic developers offer wraparound guidance regarding the online materials – for instance, they provide ideas on how the teaching practices described in the materials can be adjusted and used in a specific teaching context. Additionally, guidance from TLC as well as financial support in the form of LSE funds dedicated to the development of innovative teaching often lead to some teaching and learning enhancement measures which are then shared in the form of TLC resource materials, such as case studies.

All the PD opportunities at LSE are offered by a centralised educational unit – the Teaching and Learning Centre (TLC). TLC has been recently restructured and enlarged following a recent trend in the UK's HE system, as well as within LSE itself, to focus more on teaching and learning rather than exclusively on research. This trend is visible, for instance, in the introduction of the Teaching Excellence Framework (TEF) and the 'LSE Education Strategy 2015-2020'. The TLC website that offers online resources was started about five years ago, and has been developed since. Its goal is to gather best practices and innovative ideas in teaching in one place, make them easily accessible to academics, and disseminate them across LSE.

The provision of learning materials for the academics is probably among the most effective PD activities in overcoming the barrier of their lack of time, since the materials are available at all times from any place, and thus do not collide with academics' busy schedules. It can also be argued that the practice copes with the problem of academics' lack of awareness about innovative teaching methods. They are clearly presented and easily accessible for every academic within and even outside LSE, as the materials are published on the TLC website and are available for everyone with no restrictions. Additionally, the employment of professional educational advisors within TLC overcomes the common barrier of a lack of expertise and know-how about effective teaching and learning practices within the university.

The nature of the practice makes its results very difficult to assess. The expected direct impact of the initiative is on academics' skills and competences since they learn about innovative pedagogies and ways to incorporate active learning in their classrooms. Additionally, the academics' use of learning materials should have an impact on their quality of teaching, and their students' performance, but these impacts are hard to track since there are simply too many factors influencing the academics' teaching and students' learning. It is unlikely that the practice has any impact on academics' career paths, since in a research-intense university such as LSE, promotion and remuneration depends highly on research outcomes, rather than teaching performance.

The most important challenge is the academics' insufficient motivation to develop their teaching. This is especially relevant to providing materials for self-learning, in which academics are required to act on their own initiative in order to develop their teaching. To increase their use, TLC is working on making the materials more attractive and user-friendly. Another way forward is to make the practice more collaborative and create a repository of resources shared directly by and for academics. Nonetheless, based on the

⁽¹⁰⁾ See: <https://info.lse.ac.uk/staff/divisions/Teaching-and-Learning-Centre> [accessed on 19/11/2018].

interviews, a significant increase in the use of self-learning materials for teaching development is rather unlikely as long as disproportionate value continues to be attributed to research outputs in terms of reputation and career progress at LSE as well as at the systemic level.

3.7 Case study: Technology Enhanced Learning in Health Education –iTEL Hub ⁽¹¹⁾

King's College London (the UK)

PD development at King's College London is supported by different groups of staff helping academics produce digital resources that are required for online and blended professional development courses. The iTEL Hub is one of these service teams. It provides support for developing digital learning resources at the Faculty of Dentistry, Oral & Craniofacial Sciences (FoDOCS; Formerly Dental Institute) and the Florence Nightingale Faculty of Nursing, Midwifery & Palliative Care (FNFNMPC) at King's College London (King's). The hub collaborates with lecturers and students in co-creating curriculum resources and implements digital technologies required by the faculties.

The iTEL Hub was established in 2012 to help implement the King's Technology Enhanced Learning (TEL) strategy at one of the faculties – FoDOCS. Most teachers in the faculty are part-timers; therefore they have a limited amount of time to develop innovative teaching resources. Also, most of them do not have a formal educational qualification, which makes it challenging to use technology-enhanced pedagogies. Moreover, academics find it hard to move away from traditional teaching practices and lack guidance on the use of digital technologies in teaching.

The iTEL Hub provides comprehensive theoretical and practical information on digital technologies suitable for the departments, and constantly looks for new developments in the field, thus informing academics about technological advances and how they can be applied in teaching. In order to alleviate the time-burden of the academics, the administration of the faculties, together with the support of the iTEL Hub, offer online courses and individual consultations characterised by considerable time-flexibility. Resistance to change is addressed at the university level, as King's offers PD opportunities. Student interns are employed in order to help academics with creating teaching materials and incorporating digital technologies into their courses. This facilitates collaboration between the academic staff and students and provides education that fits students' needs. All of the iTEL Hub's services are offered free of charge to the staff.

The iTEL Hub is an example of an initiative that has the potential to change the staff's attitude towards digital technologies in that the hub provides the guidance academics need to be digital educators. Moreover, the work of the hub has resulted in enhancing digital teaching resources, which have been appreciated by the students.

Implementation of the iTEL Hub is resource intensive as it requires an investment in staff and production tools. The investment return may take time. Nevertheless, the benefits are tangible. One example is the university's improved rank and prestige as a result of better teaching and improved learning facilities. However, this initiative has its own challenges: the staff's underestimation of the time needed for the development of resources, and quickly changing technologies that make it difficult to create sustainable and robust teaching materials.

⁽¹¹⁾ See: <https://www.kcl.ac.uk/dentistry/innovation/itelhub/index.aspx> [accessed on 21/11/2018].

3.8 Case study: University Collaboration as a PD Driver in Estonia – ENUCE and ‘Teaching and Learning’ conference ⁽¹²⁾

The Estonian Network for University Continuing Education (ENUCE) and the University of Tartu (Estonia)

The Estonian Network for University Continuing Education (ENUCE) is an informal and voluntary network that unites specialists (educational developers) of the University for Continuing Education (UCE) of six Estonian public universities. It promotes collaboration in the design of PD provision through informal and necessity-based meetings of university staff that organise PD. The University of Tartu supplements the activities by organising a conference series on higher education. Both practices are innovative solutions to support PD at HEIs and to further promote the implementation of modern pedagogical approaches at HEIs.

ENUCE was created in 2001 as an initiative of the European University Continuing Education Network (EUCEN) in order to provide a meeting ground for educational developers (support staff) responsible for UCE provision at different Estonian universities. Initiated by the University of Tartu (UT), it is a platform for educational developers to deal with the problems they are facing by using each other’s know-how.

The Teaching for Learning conference is organised by UT as part of a series of yearly conferences on HE that have taken place since 2011. The conferences work as a platform for presenting the results of research on PD and sharing good practices with colleagues, and are a way to incorporate PD into the academics’ work. The university also offers PD opportunities to its academic staff in other areas through the UT’s Centre for Professional Development, and incentivises them to improve their teaching by the granting of a Lecturer of the Year Award for outstanding teaching performances.

Activities within ENUCE include irregular informal meetings and an e-mailing list for sharing information and holding discussions. The topic of each meeting is set by the organising partner and covers problems that participants have encountered when implementing PD practices. Primarily, discussions revolve around providing high-quality continuing education for different target groups and include the following topics: new teaching methods, differences in field-specific teaching, the role of leadership in ensuring quality teaching and learning participation of teachers in PD, the technical organisation of PD, its financing, and various regulations related to organising UCE. The goal of ENUCE is to increase the confidence and expertise of educational developers in the provision of PD. The informal nature of the network supports the interaction between members and direct approaches with specific questions. The participants discuss good practices and the successful implementation of PD at HEIs. Moreover, they work together to overcome issues in the design and implementation of PD that have arisen at their HEIs. The PD providers at the HEIs are able to directly interact with policy-makers and vice versa, and thus create and improve their HEIs’ official PD structures.

The conference encourages academics to participate in PD practices and share their stories about improving teaching. It is an exceptional event for disseminating a positive attitude towards teaching improvement. Speakers include local and foreign experts who present their research on PD and good practices in the field. The academics are more likely to implement the introduced strategies as they observe that the strategies are beneficial for their colleagues. Including foreign experts increases the expertise and the know-how, and showcases how PD practices have been implemented elsewhere.

The costs of implementing a network such as ENUCE are quite low. Through alternating the organisation of the meetings between the six partner universities and keeping them informal, expenditures are limited to the costs of travel, refreshments and the provision of a venue and basic digital technologies. The organisation of a conference requires substantially more financial and human resources due to its scope and duration. As of

⁽¹²⁾ See: <https://www.ut.ee/en/studies/continuing-education/enuce> [accessed on 21/11/2018].

now, these costs have been primarily the burden of the University of Tartu. Both practices are a valuable tool in developing and implementing PD practices. They have certainly contributed to the wider spread of PD in at least some current Estonian HEIs.

3.9 Case study: Leadership development through active learning – Empower Online Learning Leadership Academy (EOLLA) ⁽¹³⁾

European Association of Distance Teaching Universities (EADTU)

The Empower Online Learning Leadership Academy (EOLLA) was designed to address the leadership gap, particularly observable in the area of innovative approaches to teaching and learning. Hence, it targets the decision makers responsible for the introduction of a variety of open, online and flexible learning initiatives at their HEIs. The main innovativeness of EOLLA lies in its delivery model. As opposed to traditional 'sit-and-listen' courses, which are widely considered ineffective, EOLLA is designed around the principles of active learning. It aims to develop participants' leadership skills, and encourages creative problem-solving and strategic thinking in response to new and emerging models of teaching and learning. It includes a mix of methods such as short presentations, open discussions, and small group work. However, most importantly, it is anchored around seven genuine future scenarios of universities that participants had to engage with and identify appropriate solutions.

EOLLA was initiated by the European Association of Distance Teaching Universities' (EADTU) as part of the Empower programme. A key strategic partner in the first iteration of EOLLA was the European Consortium of Innovative Universities (ECIU). ECIU is a European partnership focused on HEIs' roles in innovation, creativity and societal impact. EADTU is Europe's leading network focused on Open, Distance Learning (ODL) in higher education. The Empower project is a part of EADTU's commitment to sharing the expertise of ODL universities with traditional face-to-face ones in their transition to harnessing the potential of technologically enhanced teaching and learning.

There have been two editions of EOLLA so far. Both took place in Brussels: the first in June 2016 and the second in May 2017. Both events lasted two days, included 11 (2016) and 14 (2017) participants, and were led by four facilitators so as to ensure intimacy and interactivity at the meeting. Each was preceded by an 'Online Primer' during which participants were introduced to each other, given access to a number of online resources and asked to carry out some initial primer activities. Similarly, after the event in Brussels, participants were invited to an online 'Reflection and Evaluation' debrief. In addition, an institutional version of EOLLA was offered in Greece in 2017 with 24 participants.

As in many similar cases, the EOLLA events are not followed by any robust evaluation – hence there is no certainty about their actual impact. This is partly because it is very difficult to assess an impact of a single event on the long-term strategic decisions of leaders at HEIs, since there are a number of different factors that influence the leaders' behaviour. Additionally, measuring the impact, especially over such a long period, requires sustained administrative support as well as additional financial and human resources which the EOLLA organisers currently lack. Nonetheless, EOLLA is expected to help leaders in the efficient transformation of their universities in terms of innovative models of teaching and learning by providing them with relevant knowledge and solutions to emerging challenges. A successful implementation of online and blended learning tools is expected, by definition, to improve the HEIs' education quality and enhance students' learning experience. After all, the feedback from participants showed a high degree of satisfaction about all three editions of EOLLA. Some positive externalities of the programme were also observed – for instance, two papers related to the EOLLA context were published by the participants, that indicates some continuity of their involvement. Some networking effects were also acknowledged.

Since EOLLA is only partially funded by an external body, the question of financial sustainability for such initiatives is often raised. Some argue that in the European environment, where many opportunities are available for free (which is, all things considered, a great thing), people might be reluctant to pay for PD activities. However,

⁽¹³⁾ See: <https://empower.eadtu.eu/eolla> [accessed on 19/11/2018].

based on the analysis of EOLLA, as well as comparable EADTU events, this does not seem to be the main constraint. What does constrain people from participating, in reality, is probably their reluctance in the face of unknown learning modes or fear of sharing their problems in an open forum.

Case studies with a focus on university leaders and non-academic staff

The next two cases are related to non-teaching professionals at higher education institutions. The first case relates to university leaders. These can be academics who have assumed leadership positions, such as faculty deans, rectors or vice-rectors, or simply administrative staff in leading positions. The second case refers to non-academic staff (also known as academic-related staff), who despite not having teaching responsibilities are still very important for the general student experience. These professionals can be, for example, technicians, librarians or and student services officers.

3.10 European-level leadership project: D-TRANSFORM ⁽¹⁴⁾

EU Project Coordinator: FMSH (Fondation Maison Des Sciences De L'Homme, France)

This case is not geared towards the PD of teaching academics but instead to the PD of academics who no longer teach (or teach reduced hours) due to having taken up managerial duties, and to HEIs' leaders in general, regardless of whether they have been academics in the past. It is about the PD of academics who have become, for example, faculty deans, vice-rectors and rectors, and need to develop leadership in order to perform their managerial duties effectively at their higher education institution.

D-TRANSFORM (Transforming Universities for the Digital Age) was an EU-funded project that targeted university leaders and focused on digital resources as a lever for university transformation. Unlike the majority of PD programmes, it did not target the broad spectrum of academics but focused primarily on a narrow audience of high-level university officials (such as rectors and vice-rectors, deans of faculties, as well as directors of operational units). Nonetheless, addressing this narrow group of decision makers can potentially make them rethink and help re-design university policies, and thus have a large spill-over effect on a broader community of academics. D-TRANSFORM was also a multi-level project that managed to combine a number of different activities despite a limited time span. This allowed it to effectively overcome a number of barriers typical for PD programmes, including a lack of awareness, lack of time, and an insufficient evidence base.

D-TRANSFORM ran for three years between 2014 and 2017 and was implemented by an international partnership of four European universities (Budapest University of Technology and Economics, Hungary; Universitat Oberta de Catalunya, Spain; Politecnico di Milano - METID, Italy; and Université de Lorraine, France) as well as two private organisations (the FMSH – Fondation Maison Des Sciences De L'Homme, France; and Sero Consulting, UK) and one European educational network (the European Distance and E-Learning Network – EDEN). The project involved, firstly, research on aspects related to the digitalisation of HE that resulted in the provision of research-based guidelines on digital innovations and strategies for HEIs. Those guidelines were used in two leadership schools – events involving the training of high-level university officials, which were the core of the project. The main conclusions were then summarised in the MOOC that aimed to disseminate the information to broader audiences.

Both leadership schools attained successful participation, and the internal evaluation showed a very positive feedback from the participants. The project is expected to equip university leaders with knowledge on the most recent trends about digital resources as a strategic factor for university transformation, with a special focus on teaching and learning processes, and provide them with ideas on how to deal with those challenges. Additionally, a number of informal side events provided experience sharing and networking opportunities, and are believed to have contributed to the emergence of a number of follow-up initiatives and partnerships in related areas.

D-TRANSFORM has proven inter-university and international collaboration to be highly beneficial in the implementation of projects directed for high university authorities. The organisation of such projects must come from institutions that are above the management of a single university – i.e. national, or preferably international, environments. In this context the EU can effectively work as a catalyst for innovation across universities and national HE systems. EU patronage can also serve as an authority legitimising the project – after all, high-level university officials are rarely accessible for such commitments and engaging them requires raising the profile of the project.

⁽¹⁴⁾ See: <http://www.dtransform.eu/> [accessed on 21/2/2019].

3.11 Centralisation of information on PD opportunities for non-academic HEI staff – IMOTION ⁽¹⁵⁾

Network of Universities from the Capitals of Europe (UNICA)

This case does not focus on teaching academics but on academic-related HEI staff. It is about PD programmes that aim to enhance the overall experience of HEIs' employees and to improve their career paths, which in turn can also result in a better student experience.

Integration and Promotion of Staff Training Courses at Universities across Europe (IMOTION) was a project that culminated in the IMOTION staffmobility.eu online platform, containing PD opportunities for HEIs' non-academic¹⁶ staff. The platform allows higher education institutions (HEIs) to promote their staff training such as staff weeks, job shadowing, job-related conferences, and workshops for technical and administrative staff. There is virtually no other platform presenting such centralised information on HEIs' staff training and mobility opportunities. IMOTION is an innovative step as it has created a user-based interface and avoids the high-costs of maintaining a platform. It does not encourage a high volume of information flow but rather systemises and centralises the information which makes the invitations reach a wider audience and eases the process of finding training and selecting participants. Additionally, it is directly aimed at increasing the international mobility of HEIs' staff in Europe. Finally, IMOTION has the potential to include HEIs' staff as a whole, including teaching academics. This would make IMOTION an unprecedented platform, extremely helpful in improving the quality of European HEIs.

IMOTION was a one-year project co-funded within the European Union's Lifelong Learning Programme, launched in October 2013. On the initiative of Professor Luciano Saso, UNICA's president, it was established by a consortium led by UNICA (Network of Universities from the Capitals of Europe) and partner organisations. The ultimate objective of the project was to achieve the better promotion of mobility opportunities and to increase the overall quality of Erasmus training for non-academic staff. Its main goal was to ensure the swift exchange of non-academic staff between all different university units and to activate full awareness of the existence and scope of such opportunities.

Activities promoted through IMOTION are assigned to various content areas, which also allows it to adapt searches to specific 'target groups': International relations, Academic and students' affairs, Research and development, Human resources, Placements and careers guidance, PR and communication, ICT, Libraries and learning centres, Finance and accounting, Doctoral education, Infrastructure and Facilities, and others. Most of the activities offered are specific to a job role, but many include training in personal skills such as cultural, language, or leadership training.

The most commonly offered type of PD activities – staff weeks – are multi-layered. Firstly, they are observation visits to other HEIs, specific units, organisations, businesses and countries in general. Secondly, they involve workshops, short courses, excursions, lectures and thus are delivered onsite in and out of HEI. The costs are shared – organisers may cover the facilities, courses, local travel (depending on the university), and so on, while participants are supposed to pay for their international travel, accommodation, meals, and sometimes for the programme itself. Participants are encouraged to apply for an Erasmus+ mobility grant within their home institution to cover the costs of travel and subsistence.

The providers of IMOTION are convinced that the project can have a great impact. Currently, the platform lists over 200 staff mobility weeks. Moreover, in 2017 there were 85,871 unique visitors (an increase of 37% compared to the previous year) and 52.2% were returning visitors. So the popularity of the platform is growing, and is expected to

⁽¹⁵⁾ See: <http://staffmobility.eu/> [accessed on 21/11/2018].

¹⁶ In some HEIs, "non-academic staff" are also referred as "academic-related staff".

continue doing so as the website expands and includes new target groups and new types of training opportunities (e.g. activities for teaching academics).

IMOTION has not been supported by any external funds since the end of the Lifelong Learning Programme funding in 2014, and has therefore faced a significant sustainability challenge – a lack of financial resources to further develop and maintain the platform. Despite the human and financial challenges of managing, monitoring and updating the constant flow of large amounts of information, UNICA succeeded by employing a strategy in which the management of the platform is user-based. This leaves UNICA's representatives responsible only for reviewing and verifying the profiles of universities' representatives.

4 Cross-case analysis

In this analysis, the following questions are addressed:

1. What kinds of PD examples can be found in the European Member States that overcome the known obstacles to academics' participation in professional development activities?
2. How have HEIs been supporting academics in their professional development, and how can they best do that?
3. How could academics' training in pedagogical practices and digital technologies become part of their career progression paths? Do successful models already exist?
4. What actions by Member States (MS) and HEIs would support academics in achieving the necessary skills to implement innovative teaching practices?

These questions are addressed via the cross-case analysis below, in which examples of practices are brought together from the case studies.

4.1 Q1: How do the innovative PD practices address the obstacles to academics' participation?

Below are the four main obstacles to academics' participation in PD ⁽¹⁷⁾, in no particular order of importance:

1. Reluctance to move away from traditional practices.
2. Teaching qualifications are often not a requirement for hiring or for career progression.
3. Academics' busy schedule and lack of time for PD activities.
4. Lack of institutional capacity to develop effective PD schemes.

4.2 Some academics are reluctant to move away from traditional teaching practices

The first obstacle identified is the academics' reluctance to move away from traditional teaching practices. This may derive from:

- a) academics' lack of awareness about the drawbacks of some traditional methods, and/or about the existence of more effective teaching approaches,
- b) academics' attachment to traditional practices and resistance to change.

The lack of awareness has been primarily addressed by HEIs via the organisation of large events for PD promotion, conferences or *teaching days*, for both academics and senior management. Such PD activities are not necessarily 'innovative', instead being the most typical kinds of PD in HE. However, they can have different formats, such as being carried out as part of a network of HEIs, in which case there is potential for further collaboration and the exchange of practices and resources. They can also be done online or target different groups, such as university managers.

For instance, the 'Teaching for Learning' conference (section 4.10, ENUCE, Estonia) is an international convention that targets not only academics but also academics' pedagogical trainers and academic developers, as well as HE administrators. It is dedicated to a wide range of topics related to the development of teaching and learning, e.g. new teaching tools, or differences in field-specific teaching. Furthermore, leadership schools such as the D-TRANSFORM project (section 4.5) targeted a very specific audience – high-level

⁽¹⁷⁾ They are further discussed in section 3, and in more detail in Annex 1.

university managers – and focused on digital resources as a lever for university transformation.

The 'Teachers' Conference' at the University of Stockholm ⁽¹⁸⁾ and the 'Teaching Day' at the University of Graz ⁽¹⁹⁾ are examples of more traditional events, limited to the academic staff of a single university. They both provide opportunities for academics to participate in lectures, workshops and roundtables, and more importantly to share experiences of teaching and learning between colleagues within the institution. The latter aspect is also the main purpose of the 'Staff Summer Festival' at the London School of Economics and Political Science (LSE) ⁽²⁰⁾. It takes a more informal approach and, besides having a focus on professional and personal development, it also specifically aims to promote networking and team-building at LSE.

An allegation often made against such one-off events is their lack of longevity. For instance, Cordingley et al. (2015) indicate that in order to bring about significant organisational and cultural change, PD programmes need to last at least two terms and involve repetitive actions. Similarly, Darling-Hammond, Hylar & Gardner (2017) argue that for PD to be effective it must provide academics with adequate time to learn, experiment, implement and reflect upon new strategies and practices. Even though the aforementioned events are in most cases repeatable (most often annually), neither the participation of the same group of academics nor the continuity of the content is ensured (i.e. every edition is more of a separate event).

Nevertheless, it is acknowledged that shorter initiatives can have a positive impact as long as they focus on a narrowly defined topic (as in D-TRANSFORM, focusing on the digital transformation of HEIs), or/and aim at providing orientation, or disseminating information (as in teaching conferences) rather than learning skills and changing habits (Cordingley et al. 2015).

Academics might be unaware of existing PD opportunities. There are not many programmes that specifically target this problem. But IMOTION, for example, is an online platform (section 4.8) that centralises information about training and mobility activities, organised for university administrative and technical staff across Europe. It aims to support HEIs in the promotion of their staff training events and to help university administrative staff find the appropriate training they are looking for.

The most common practice for encouraging participation in PD is personalised support, often offered by universities' teaching enhancement units. Individual or group consultations usually address both aforementioned issues – a lack of awareness about the innovative teaching methods, and about PD opportunities offered within and outside the HEI. This is one of the most important types of PD practices, as highlighted in the literature as well as during experts' interviews. Postareff & Nevgi (2015) call for a more personalised approach to PD provision, accounting for socio-cultural differences among academics and differences in approach towards pedagogy. Similarly, Cordingley et al. (2015) view the recognition of differences between individuals' beliefs, starting points and environments as crucial to bringing about an improved outcome. In other words, neither academics' needs nor their preferred mode of learning are homogenous. Hence, PD should be adjusted to the so-called personal learning environment (PLE) ⁽²¹⁾, which determines how academics can learn most effectively (based on experts' interviews). Some examples of such practices can be found, for instance, at Umea University. At this

⁽¹⁸⁾ See: <https://www.su.se/ceul/english/education/teachers-conference> [accessed on 04.10.2018].

⁽¹⁹⁾ See: <https://lehr-studienservices.uni-graz.at/en/lehrrservices/lehrkompetenz/teaching-day/> [accessed on 03.10.2018].

⁽²⁰⁾ See: <https://info.lse.ac.uk/staff/our-community/what-is-the-staff-summer-festival> [accessed on 04.10.2018].

⁽²¹⁾ A Personal Learning Environment (PLE) is the combination of tools, people, and services that make up individualised resources and approaches to learning. For more information see, for example: <https://www.edweek.org/ew/articles/2013/05/22/32el-personallearning.h32.html> [accessed on 19.10.2018].

HEI, each academic can access consultancy services that are planned and designed for every individual⁽²²⁾. Similarly, at LSE, each academic department has its own dedicated departmental adviser who is available to work with faculty staff on any teaching-related matter (section 4.7).

Another underlying problem of academics' reluctance to move away from traditional teaching practices is their attachment to tradition and resistance to change. This issue is usually addressed by introducing informal PD activities. It is often argued that academics might be more willing to learn via social communication with experts from their academic field, rather than from external pedagogical experts where they are treated as 'pupils' (Postareff & Nevgi, 2015; based on experts' interviews). For instance, both the 'Teaching Bites' at University of Bristol⁽²³⁾ and the 'Sipping Point' at Dublin City University (DCU) (section 4.1) involve themed sessions taking place during lunch breaks over a cup of tea or coffee or a sandwich (provided by the organisers). Sessions offer an opportunity to share and reflect upon participants' own teaching experiences in an informal environment.

4.2.1 Innovative teaching practices are often not a requirement for hiring academics or for career progression in HEIs

The second obstacle identified is the lack of formal requirements or incentives for teaching qualifications to enter the HE teaching profession. In this section we show some initiatives that deal with this matter. For instance, to be eligible for a teaching position at Umea University it is necessary to present documentation proving that one has had HE lecturer training, other training relevant to teaching within an HEI, or actual teaching experience⁽²⁴⁾. In the Netherlands, 14 universities within the Association of Universities in the Netherlands (VSNU) have agreed upon a broadly applied standard for hiring lecturers and introduced the University Teaching Qualification (UTQ) – a certificate of teaching quality for lecturers (section 4.4). The UTQ provides uniformity both in the competences that academic lecturers must acquire and in how these competences are tested. At the same time, there is scope for each university to put forward their own training schemes to meet those standards.

To ensure the continuity of academics' development, some universities also set up compulsory training schemes for their employees. For instance, University College London (UCL) facilitates the PD of its staff by requiring them to undertake a minimum of three learning events per year (they can include attendance at a workshop, course or conference, e-learning, a coaching or mentoring session, etc.)⁽²⁵⁾. Similarly, Uppsala University's initiatives include mandatory courses for newly appointed academics and PhDs (section 4.3).

An alternative way to have better-trained staff is to encourage, rather than enforce, teaching innovation. One of the most popular incentives across European HEIs is to award academics for their outstanding teaching performance. For instance, at the Graz University of Technology, a 'Prize for Excellence in Teaching' is awarded every two years⁽²⁶⁾. Similarly, the University of Glasgow hands out two Teaching Excellence Awards (TEA) every year⁽²⁷⁾. Except for directing academics' careers more towards teaching

⁽²²⁾ See: <https://www.umu.se/en/centre-for-educational-development/education/> [accessed on 06.10.2018].

⁽²³⁾ See: <http://www.bristol.ac.uk/staffdevelopment/academic/learningandteaching/teaching-bites/> [accessed on 19.10.2018].

⁽²⁴⁾ See: <https://www.aurora.umu.se/en/employment/skills-development/> [accessed on 06.10.2018].

⁽²⁵⁾ See http://www.ucl.ac.uk/hr/od/resources/mandatory_training.php [accessed on 12.10.2018].

⁽²⁶⁾ See: <https://www.tugraz.at/en/studying-and-teaching/teaching-at-tu-graz/prize-for-excellence-in-teaching/> [accessed on 12.10.2018].

⁽²⁷⁾ See: <https://www.gla.ac.uk/myglasgow/leads/staff/awardsandfunds/teachingexcellenceawards/> [accessed on 12.10.2018].

excellence, those practices also increase the visibility of innovative teaching concepts, and might therefore inspire other lecturers and/ or kick-off discussions on recent didactical trends. Hence, although not being a scalable practice, these teaching awards contribute to raising awareness about teaching innovation. But a point to consider is that since the submissions are voluntary, they do not apply to all academic staff. Instead they appeal mostly to the academics who already have above-average teaching skills, and tend to be ignored by those who need more training in this respect.

4.2.2 Academics are busy and lack time for PD

Academics' lack of time has probably been the most frequently mentioned obstacle during the interviews. The most common solution is to provide academics with guiding materials on how to improve their teaching, usually in the form of OERs, that can be accessed at any time and in any place, and thus can be easily fitted into their busy schedules. In fact, this is a relatively popular practice – for instance the Teaching and Learning Centre (TLC) at LSE supplies its employees with online guidance materials on topics such as designing a new course, assistance with programme review or developing teaching practices (section 4.7). The PD resources can be also more interactive, and developed collaboratively by different HEIs. The University Pedagogical Support (UNIPS) (section 4.2) is an online learning environment covering eight Finnish universities. It allows academics not only to access content for PD, but also to take online courses and gain credits. This interactivity has made learning more appealing, and earning credits provided an additional motivation for staff to pursue professional development in didactics, something that is often missing. The element of collaboration allows institutions to share knowledge and to cut the costs of sustaining and developing the online learning environment.

On the other hand, the provision of PD resources as a stand-alone strategy is not considered to be a particularly effective or innovative tool for fostering teaching development. In fact, Cordingley et al. (2015) argue that didactic models in which academics are simply told what to do or are given materials without opportunities to apply their skills do not have any significant impact on their teaching practices or on student learning. Instead, active learning ⁽²⁸⁾ is widely agreed to be superior to passive learning (Stewart, 2014; Darling-Hammond, Hyler & Gardner, 2017). Active learning typically includes methods such as discussion, group work, games, and learning by teaching. However, one way to improve the efficiency of online materials for self-study is to provide them along with other PD activities rather than as a core or a stand-alone strategy. In the case of LSE the online resources are inter-related with other opportunities provided by TLC, especially with the individual consultations. For instance, TLC experts consult on how the teaching practices as described in the learning resources can be adjusted to a specific teaching context (section 4.7).

Another way to address academics' tight agendas is to ensure that the PD activities would not collide with their schedules. Aforementioned examples of such attempts are the 'Teaching Bites' and 'The Sipping Point' initiatives, which get academics together during lunch breaks to discuss teaching innovation. Furthermore, academics can sometimes be offered a reduction of their teaching obligations. For example, at Pompeu Fabra University (UPF), academics who dedicate time to creating a Massive Open Online Course (MOOC) (section 4.6) are relieved from some of their teaching load – i.e. they teach fewer hours so as to have time to produce the MOOC.

Nevertheless, the important underlying problem of academics' lack of time is the imbalance between the research and education functions of universities. Academics tend to focus on producing scientific outputs, which is a major source of their reputation and

⁽²⁸⁾ Active learning is any approach to instruction in which all students are asked to engage in the learning process rather than just passively receive knowledge from an expert. For more information see, for example: <https://www.cambridge-community.org.uk/professional-development/gswal/index.html> [accessed on 18.10.2018]

career advancement, rather than on improving their teaching. There is no PD practice that can possibly overcome this obstacle – it is a systemic issue and has to be addressed at a systemic level (based on experts' interviews). In other words, as long as research performance is valued more highly than teaching quality, academics are unlikely to commit more of their time for teaching improvement compared to research tasks.

4.2.3 HEIs often do not have sufficient expertise and institutional capacity to develop effective, scalable PD schemes

A lack of relevant expertise might stem from insufficient research on innovative teaching methods or a lack of evidence of the effectiveness of PD schemes. Insufficient institutional capacity can manifest itself in, for instance, limited funding, a shortage of skilled pedagogical staff or equipment, or ineffective leadership. The first aspect – insufficient research on innovative teaching – is not so much a problem in itself. There are quite a few examples of HEIs supporting research in the educational development of academics. UPF's CLIK experts regularly publish educational studies and also disseminate innovation and knowledge in the form of internal publications (section 4.6). Members of the DCU's Digital Learning Research Network produce an impressive number of publications and scholarly outputs each year (e.g. 36 outputs in 2018) ⁽²⁹⁾. Nonetheless, a bigger issue is to combine the knowledge and make it useable for academics.

A recent innovative approach which is an answer to this challenge is the idea of Scholarship of Teaching and Learning (SoTL). The SoTL focuses on the dissemination of research outcomes in an attractive format, e.g. evaluated teaching materials, software, videotapes and workbooks, scholarly blog posts, and websites. For instance, the University of Glasgow's 'beSoTLed' is an online resource that provides open access to practical resources on teaching and learning (e.g. links to and information about useful papers, relevant journals, and funding opportunities) ⁽³⁰⁾. Such a practice comes at a relatively small cost – it does also include primary research that requires funding, but mostly collects knowledge and makes it more easily accessible and 'user-friendly'.

Another issue is the need for evidence on the effectiveness of certain types of PD programmes in different contexts – HEIs need to be sure how to direct their PD investments more efficiently. Unfortunately, robust evaluations of PD initiatives are very rarely carried out. In the cases analysed, the impact is measured predominantly, if at all, by questionnaires that focus on participants' satisfaction after participation in the PD initiative. Even though these provide some feedback to the event organiser, they contribute very little to understanding the impact of PD on academics' careers and teaching skills, or on student learning outcomes (Kneale et al., 2016). Some more comprehensive evaluation frameworks do exist (e.g. a Seven Impact Dimensions Evaluation Framework by the Irish National Institute for Digital Learning ⁽³¹⁾), but their implementation still poses a number of challenges. Firstly, the impact of PD is difficult to grasp since academics' teaching and students' learning depend on many factors including, for example, class size and classroom organisation (King, 2014). Secondly, participants' attitudes and beliefs play a significant role in the sustainability of the practices (*ibid.*). Hence, how to measure the impact of a particular programme on long-term changes in teaching behaviour, and on students' performance, are frequently asked questions. Finally, evaluation requires organisers to dedicate additional time, human and financial resources which they so often lack. Therefore, some might prefer to focus their capacities on the PD activities themselves rather than on evaluating their impact.

The latter issue brings up another matter in terms of HEIs' ability to develop PD, namely insufficient funding. The imbalance between the research and educational functions of HE is not only visible at an individual but also at an institutional level, since research

⁽²⁹⁾ See: <https://www.dcu.ie/nidl/research/scholarly-outputs.shtml> [accessed on 08.10.2018].

⁽³⁰⁾ See: <https://www.gla.ac.uk/myglasgow/leads/staff/sotl/> [accessed on 08.10.2018].

⁽³¹⁾ See: <https://nidl.blog/2016/03/> [accessed on 08.10.2018].

capacity is the main source of reputation in many global university ranking scores (Gibbs, 2016). It is also the case with national funding allocations that when governments decide how to grant funds to HEIs, their research capacity tends to be considered a more important factor than their teaching capacity. In Spain, for example, there is a national accreditation agency (ANECA ⁽³²⁾) and also regional accreditation systems run by the autonomous regions ⁽³³⁾. For an academic to qualify to start working as a lecturer, they must pass an exam that would grant them an HE teaching accreditation from these organisations. In the Andalusia region, for example, to qualify as a lecturer at a private or public university, 50% of an applicant's evaluation is based on prior experience in terms of research and publications, 40% on teaching experience and 10% on academic background. Government funding policies and criteria for the selection of teaching personnel together influence the tendency for HEIs to dedicate more funds to research than to teaching.

However, some HEIs do have allocated funding for teaching. It often serves to develop some PD practices within the HEI, and to maintain the operations of a teaching enhancement unit. There are also cases of allocating grants for academics' own initiatives in the area of teaching and learning. For example, LSE has developed a comprehensive 'Teaching and Learning Funding' scheme which awards grants for individuals, departments, or heads of departments (section 4.7). 'PlaCLIK' grants at UPF are offered to academics or groups of academics who need support in developing their ideas for teaching innovation and improvement (section 4.6). Nevertheless, in most cases, funding for PD is very limited and universities are not so eager to change it.

Additionally, HEIs might lack relevant know-how, especially regarding pedagogical and technological skills (Dysart & Weckerle, 2015). A way to address this issue is to maximise the benefits of the specific kind of expertise that already exists within the university. For instance, UPF has a strong Department of Communication covering fields such as journalism, media and advertising (section 4.6). Hence, they used their strong technical and technological expertise and their know-how in video production to create a support scheme for MOOC production. Not many universities have such strong, inbuilt capacities, however. Therefore, another solution is to partner with other institutions which have complementary skills (e.g. content knowledge and pedagogical skills) or resources (e.g. teaching funding and technological expertise). Inter-university collaborations can also be sustained in the form of national (ENUCE – see section 4.10) or international (U4 – see section 4.3) networks. Not only do they ensure a diversity of perspectives but also they create synergy effects and ensure more effective use of financial, human, and knowledge resources. Mobility programmes also have the potential to foster the exchange of ideas between universities. The role of the EU, especially the Erasmus+ programme, is also invaluable in this respect since it provides a centralised organisational framework and the necessary funding ⁽³⁴⁾.

Finally, an HEI's successful transition into a more innovative teaching model requires vision and effective leadership. The need for support for academics' PD from top university authorities is often raised in the literature and in interviews, since academics are less likely to engage in activities that are not legitimised by the top hierarchy (Jacob, Xiong & Ye, 2015; Jensen and Iannone, 2018; experts' interviews). Hence, initiatives focused on decision makers at HEIs can have large spill-over effects to broader communities of academics. D-TRANSFORM (section 4.5) and EOLLA (section 4.11) initiatives aim to raise awareness among university leaders about trends and challenges in the rapidly changing HE environment, especially in relation to its digitalisation. They then, for instance, equip the leaders with research-based guidelines for HEI governance

⁽³²⁾ See: <http://www.aneca.es/> [accessed on 19.11.2018].

⁽³³⁾ See, for example, Junta de Andalucía: <http://deva.aac.es/?id=acreditacion> [accessed on 19.11.2018].

⁽³⁴⁾ See: https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-b/three-key-actions/key-action-1/mobility-higher-education-students-staff_en [accessed on 08.10.2018].

(as in D-TRANSFORM), or challenge them to find creative solutions to real-life scenarios (as in EOLLA).

4.3 Q2: How have HEIs been supporting academics in innovative teaching practices in HE? And how best could they do that?

HEIs can adhere to some general rules regarding the organisation of universities' PD. A relatively common practice is to have a unit within an institution specialised in and dedicated exclusively to teaching and learning development (see, for example, the Teaching Enhancement Unit at DCU in section 4.1). Those units often hire pedagogical experts and/or involve academics from a given university who are mostly interested and engaged in teaching innovation. They then provide and develop PD practices for the whole university. This concentration of personnel dedicated to PD within a centralised unit brings about considerable benefits such as synergy effects and economies of scale. There are instances of such centres being limited to a single or a couple of faculties – such as the iTEL Hub, which provides PD for staff from the dentistry, nursery, and midwifery fields (section 4.9). This allows for more content-adjusted PD activities. In other cases, PD activities are developed within some larger university bodies, e.g. KU Leuven provides courses through its HR Department ⁽³⁵⁾. Nevertheless, the existence of an independent unit brings about a greater recognition of the unit's distinct function and therefore is treated more 'seriously' by academic staff (based on experts' interviews).

The legitimisation of such a unit and the PD opportunities it provides from universities' authorities are considered absolutely essential in order for HEIs' PD strategies to be effective (Jacob, Xiong & Ye, 2015; experts' interviews). This can be done by either the engagement of the university's top management (i.e. rector, vice-rector, etc.) or by embedding PD into the university's broader strategy – usually both take place at once. Two very similar success stories are those of LSE and UPF. Both universities developed educational strategies – the 'LSE Education Strategy 2015-2020' ⁽³⁶⁾, and UPF's 'EDvolution' ⁽³⁷⁾. Both strategies are supported by high-level officials (a Pro-Director for Teaching and Learning, and a Vice-Rector for Innovation Projects). Both resulted in the reorganisation and enlargement of educational centres (i.e. the Teaching and Learning Centre – TLC, and the Centre for Learning Innovation and Knowledge – CLIK). In both cases, more financial and human resources were allocated to teaching development (see, for instance, LSE's £11m investment ⁽³⁸⁾). More importantly, such supportive actions send a message to academic staff that teaching enhancement is important and appreciated (based on experts' interviews).

Finally, it is essential that HEIs, or educational centres within them, have multiple professional development offerings rather than a single or just a few options (Jacob, Xiong & Ye, 2015). Most PD practices identified seem to be effective within a limited scope, for example: events raise awareness about innovative teaching; teaching awards incentivise participation in PD; personalised consultations help identify individual needs, etc. Therefore, it is important to offer a combination of complementary practices – formal and non-formal; online, blended and face-to-face; personalised and collaborative, and so on.

⁽³⁵⁾ See: https://admin.kuleuven.be/personeel/english/training/HR_course_overview [accessed on 09.10.2018].

⁽³⁶⁾ See: <http://www.lse.ac.uk/About-LSE/Image-assets/PDF/Education-Strategy.pdf> [accessed on 09.10.2018].

⁽³⁷⁾ See: <https://www.upf.edu/web/edvolucio/project> [accessed on 09.10.2018].

⁽³⁸⁾ See: <http://blogs.lse.ac.uk/education/2016/02/11/lse-major-investment-in-education-explained/> [accessed on 09.10.2018].

4.4 Q3: How could academic's training in digital technologies and pedagogical practices become part of career progression paths? Do successful models already exist?

Research shows that the impact of PD on career progression can be considered in two ways. Firstly, enhanced teaching skills increase the academics' chances of being promoted and can result in reward opportunities from their university (Wall, 2013). However, in line with the aforementioned research-teaching imbalance in HE systems, academics' career advancement often mostly depends on their research rather than teaching performance. Nevertheless, some successful practices including teaching excellence into career progression can be already observed. Newcastle University has launched the scheme 'Promotion on the Basis of Excellent or Exceptional Teaching' ⁽³⁹⁾, for example. Academics can apply for this line of promotion based on the evidence that proves their teaching methods have an exceptionally positive impact on student learning experiences. Such evidence can include student evaluation data, Head of School's comments, educational theories that support the teaching methods used as evidence of innovation, etc. Even though it is still quite a subjective means of evaluation, it overcomes to some extent the problem of how to measure teaching excellence and it allows academics to be promoted based on teaching rather than research merits. However, teaching-only promotion schemes have a downside similar to that of teaching awards – they are most attractive to academics who already have above-average teaching skills. A more common practice is to include teaching as part of the reviews of academics' overall performance that form a basis for their remuneration and promotion (see, for example, LSE in section 4.7). However, in the great majority of cases, such reviews attribute far less importance to teaching engagement than to academics' research outputs (based on experts' interviews).

Secondly, participation in PD can impact academics' careers indirectly as it can, for instance, demonstrate their commitment to the profession, enrich their CVs, make them more adaptive to a dynamically changing professional environment, or help them develop new skills (Wall, 2013; Megginson & Whitaker, 2017). This is especially relevant for PD focused on new technology assimilation since digital and technological skills are typically also useful in other areas of work beyond teaching. For instance, the support of the application of technology to assist teaching at the Faculty of Dentistry at King's College London, offered through the iTEL Hub (section 4.9), benefits participants in terms of their professional careers outside the academia. They learn how to apply some state-of-the-art technology to their work as dentists, and can even patent some new solutions that they develop at the hub. Teaching- and technology-related PD can also influence academics' research performance. For instance, academics who benefited from the support for MOOC production at UPF (section 4.6) often reported an increased number of citations after the MOOC had been published, arguably as a result of their broader recognition within and outside the university.

4.5 Q4: What actions by Member States (MS) would help academics achieve the necessary skills to implement innovative teaching practices?

Most governments' actions on HE tend to focus on education quality assurance and on the setting of rules for accreditation and the promotion of academic staff. However, some countries have focused on PD for higher education. For example, Latvian legislation obliges all academic staff to complete at least 160 hours of training programmes within the first six years of employment ⁽⁴⁰⁾. Nevertheless, there is a significant risk that compulsory courses and formal requirements would be treated by academics as a

⁽³⁹⁾ See: <https://www.ncl.ac.uk/ltds/professional/reward/> [accessed on 20.10.2018].

⁽⁴⁰⁾ See: https://eacea.ec.europa.eu/national-policies/eurydice/content/continuing-professional-development-academic-staff-working-higher-education-36_ro [accessed on 12.10.2018].

'necessary evil'. They might simply want to 'tick the box' rather than genuinely learn and apply that learning in practice (based on the experts' interviews). Furthermore, it is worth noting that in a well-functioning and competitive HE system, formal, top-down requirements are not necessary – HE institutions are self-motivated to promote PD in order to improve their competitiveness and the competences of their staff (see aforementioned example of the Dutch UTQ – section 4.4).

Another approach is to encourage HEIs to improve their education quality by evaluating universities rather than enforcing requirements on individuals. For instance, the UK's Teaching Excellence Framework (TEF) ⁽⁴¹⁾ is a scheme for recognising excellent teaching at HEIs. The TEF aims to provide information to help prospective students choose where to study by awarding a gold, silver or bronze prize reflecting the excellence of HEIs' teaching, learning environment and student outcomes.

In some countries, national bodies such as quality-assurance agencies are responsible for academics' accreditation and promotion. For example, the professional promotion of academics in Spain takes place according to the standards of the National Agency for Quality Assessment and Accreditation ⁽⁴²⁾ and does not depend on universities. Even though teaching is considered as a criterion for promotion, the agency values research more highly (based on experts' interviews). One way to encourage development in innovative teaching, therefore, could be to strike a better balance between teaching and research achievements when it comes to academics' evaluations. However, once again, it might be even more effective to support HEIs in the development of efficient promotion schemes rather than enforce a unified framework for their career progression. For instance, the UK's Higher Education Academy (Advance HE) published a benchmarking guide to assist HEIs in enhancing academic promotion processes related to teaching ⁽⁴³⁾.

Another line of government action that is often recommended is to establish a national institution focused on pedagogy in HE (Darling-Hammond et al., 2017; based on experts' interviews). Such an institution is expected to set standards for professional development, guide the design, evaluation and funding of the programmes, and integrate and coordinate professional learning between HE institutions, ministries and other organisations. It can also potentially have enough institutional capacity to scale up some PD practices run by single HEIs, such as funding programmes (e.g. Dutch Teacher Development Fund ⁽⁴⁴⁾), and research and SoTL platforms (such as Netherlands Initiative for Education Research ⁽⁴⁵⁾). A successful story in this respect is the UK's Advance HE. In addition to the aforementioned actions such as introducing a Teaching Excellence Framework (TEF) and offering strategic advice (e.g. guidance on teaching-based promotion), it also facilitates and virtually coordinates all types of PD – for example it provides a platform for knowledge-sharing (Knowledge Hub ⁽⁴⁶⁾), organises training and events (such as Advance HE Teaching & Learning Conference 2018 ⁽⁴⁷⁾), grants funding, and awards teaching prizes (e.g. National Teaching Fellowship in the UK ⁽⁴⁸⁾).

⁽⁴¹⁾ See: <http://webarchive.nationalarchives.gov.uk/20180319121020/http://www.hefce.ac.uk/lt/tef/whatistef/> [accessed on 19.11.18]

⁽⁴²⁾ See: <http://www.aneca.es/> [accessed on 19.11.2018].

⁽⁴³⁾ See: https://www.heacademy.ac.uk/system/files/resources/good_practice_benchmarks_web.pdf [accessed on 10.10.2018].

⁽⁴⁴⁾ See: https://eacea.ec.europa.eu/national-policies/eurydice/content/continuing-professional-development-academic-staff-working-higher-education-49_de [accessed on 12.10.2018].

⁽⁴⁵⁾ See: <https://www.nwo.nl/en/about-nwo/organisation/nwo-domains/nro> [accessed on 12.10.2018].

⁽⁴⁶⁾ See: <https://www.heacademy.ac.uk/hub> [accessed on 10.10.2018].

⁽⁴⁷⁾ See: <https://www.heacademy.ac.uk/training-events/hea-annual-conference-2018-teaching-spotlight-learning-global-communities> [accessed on 10.10.2018].

⁽⁴⁸⁾ See: <https://www.heacademy.ac.uk/individuals/national-teaching-fellowship-scheme/NTF> [accessed on 10.10.2018].

5 Conclusions

Higher education institutions across Europe are facing some significant challenges. The massification and marketisation of HE has increased the role of students in the design of educational offers and contributed to the intensification of the competition between universities. The digitalisation of education, especially in terms of the use of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs), has accelerated but remains constrained by the relatively low 'digital literacy' of academic staff and the conservatism of the HE sector. In light of these changes, HEIs need to become more flexible and responsive in order to remain competitive, and they also need to ensure they are providing high-quality education that will serve the needs of individuals and societies. The PD of academics can help in this respect and can also contribute to the modernisation of higher education. At the same time, the PD of academics should serve the lecturers themselves, both facilitating their career progress and contributing to making their teaching profession more personally rewarding.

This study has shown that in many European HE systems PD opportunities are limited and in some cases non-existent. Even in well-developed European HE systems, academics tend to participate rarely or unsystematically in PD activities. Four main reasons for this situation have been identified, referred to here as **obstacles to participation** in PD activities:

1. Reluctance to move away from traditional practices.
2. Teaching qualifications often not being a requirement for hiring or for career progression.
3. Academics' busy schedules and lack of time for PD activities.
4. Lack of institutional capacity to develop effective PD schemes.

It has also been acknowledged that the issue underlying those obstacles is the imbalance between research and education functions of HE, i.e. greater importance attributed to research than to teaching outputs at all levels: systemic (e.g. global university rankings); national (e.g. the long-established Research Excellence Framework in the UK); and institutional and individual (e.g. the predominance of research-based remuneration and promotion schemes).

Even though traditional PD practices (identified mostly as 'sit-and-listen' courses) seem to have proven ineffective in changing the state of play, there are some successful examples of innovative PD activities that have the potential to overcome the four obstacles. These activities are summarised below: **Practices that can help academics develop innovative teaching methods:**

- **Academics' conferences on teaching skills:** Large PD events such as the 'Teaching for Learning' conference at the University of Tartu (section 4.10) help to overcome the obstacle of academics' unawareness about innovative teaching methods. This is especially relevant for countries with less developed HE systems where PD is still relatively unpopular. In such cases the presence of international experts, preferably coming from different backgrounds, is particularly advisable in order to provide, firstly, relevant expertise and, secondly, a variety of perspectives.
- **Staff mobility as PD for academic and academic-related staff:** Staff mobility is a key action for PD in higher education (European Commission, 2017) ⁽⁴⁹⁾. It enables academic and academic-related staff to learn from each other in different contexts (and countries) while at the same time increasing collaboration between HEIs and their academics. For example, the IMOTION Project (i.e. The Integration and Promotion of Staff Training Courses at Universities across Europe) (section

⁽⁴⁹⁾ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1496304694958&uri=COM:2017:247:FIN> [accessed on 10.10.2018].

4.8) is an example of staff-mobility opportunities for PD in the sense that it enables staff to temporarily move across institutions and countries. IMOTION also centralises the information about training and mobility programmes across Europe, and makes it available for all HEIs and academic staff, serving as a type of database of PD opportunities within HEIs in Europe. A challenge related to EU-funded projects like this one is their longevity and sustainability after the funding period ends. In the case of IMOTION it is crucial to secure resources (financial and human) not only to create and maintain the database of PD offers but also to further develop it and to properly advertise it so as to increase its outreach.

- **Collaborative, informal and ad-hoc PD opportunities:** Informal and collaborative PD practices such as Dublin City University's 'Sipping Point' (discussions between academics about didactics during lunch breaks – see section 4.1) might encourage staff to open up to innovation in teaching and thus address the obstacle of their reluctance to change. The relative costs of this initiative are very low and it could easily be implemented in other HEIs as long as it is supported by other, complementary practices. One suggestion might be to invite external experts or even guest lecturers from other universities so as to share some fresh and less well-known experiences and knowledge.

Practices that can provide incentives for teaching innovations:

- **Formal proof of pedagogical competences:** An example of overcoming the barrier of no teaching-related formal requirements is the University Teaching Qualification (UTQ) certification of didactic competences of starting lecturers (see section 4.4). It might be beneficial to extend such a scheme so that it ensures the *continuity* of their pedagogical development, i.e. that they keep improving and stay up to date with the most recent educational trends throughout their careers. It is also viable to expand such a scheme geographically – in fact, some Belgian universities requested to join the UTQ system and were eventually added to the scheme as 'trend followers'.

Practices that can be easily fitted into academics' schedules:

- **Provision of self-learning materials:** An appealing way to overcome the obstacle of academics' lack of time is to provide self-learning materials (as the London School of Economics (LSE) does – see section 4.7) or to organise online courses (as in the University Pedagogical Support (UNIPS) initiative – see section 4.2). However, it is essential not to rely on learning resources for individual use as a core or stand-alone PD strategy, but instead to treat them as a support for more impactful activities. It is also a good practice to make those learning resources as attractive (format-wise) and interactive as possible since this might significantly improve both their take-up rates and efficiency.

Practices that can improve HEIs' institutional capacity:

- **Maximising use of internal resources:** A possible solution for those HEIs with limited expertise for the effective design and implementation of PD programmes (e.g. pedagogical or technical skills) is to maximise exploitation of those specific capacities that do already exist within the institution. UPF's use of their video-production technical and know-how base for Massive Open Online Course (MOOC) design is a good example of such strategy (section 4.6). Since MOOC production is relatively costly and time-consuming, one way to 'do more with less' is to partner with other universities and stakeholders and share the costs and workload with them, creating knowledge-exchange opportunities at the same time.
- **Networks, partnerships, and collaborations:** Inter-university collaboration such as national (e.g. the Estonian Network for University Continuing Education (ENUCE) – see section 4.10) and international (e.g. the international U4 network – see section 4.3) networks might be also an effective solution in broader PD provision. It is recommended, though, that HEIs involved in a network should

come from similar backgrounds (as in the U4 network) so as to be able to provide PD adjusted to their institutional cultures and teaching content; and/or be located in close geographical proximity (as in the ENUCE) in order to enhance face-to-face communication and offline activities. Another insight is that having a shared unit providing administrative and managerial support for the network's activities improves its efficiency, as was shown in the U4 case.

- **International leadership programmes:** Top-down training opportunities, especially at the European level and especially those aimed at HEIs' strategic management (such as the D-TRANSFORM project – see section 4.5; and the Empower Online Learning Leadership Academy (EOLLA) – 4.11), can equip universities with skilled leaders who will then disseminate the PD lessons across their institutions. It is highly recommended that activities targeting senior university staff are organised at the national or indeed international level. Such activities are potentially much more effective when they involve international partners and are supported by the EU, since that sends a message to university officials about the importance of the topic.

6 Policy Recommendations

Below is a set of policy recommendations that follow from this study, aiming at HEIs, Member States and the European Commission.

6.1 Recommendations for HEIs

In general terms, it is recommended that HEIs should have a **unit or department dedicated exclusively to the pedagogical development** of their academic staff, as this produces positive synergies and economies of scale. Those units should be legitimised by the top university management, either through a high-level official (e.g. vice-rector), or/and through the inclusion of educational goals into a broader university strategy. Units should employ professional pedagogues to fill the common gap of insufficient pedagogical expertise within HEIs. It is also beneficial if those units collaborate with other university bodies and external associations (e.g. libraries, IT departments) in PD design and implementation as this brings additional and very specific expertise.

In order to foster collaboration and peer-learning, **staff mobility** opportunities are also considered key actions towards the PD of academics. It enables them to share experiences and to learn new ways of doing things. HEIs can support staff mobility by having agreements for short-term staff exchange between themselves.

Also recommended is the inclusion of **academic-related staff as PD participants** – such as administrative staff, as well as students, since they can provide essential feedback on expected PD outcomes. Additionally, since many of the aforementioned practices are complementary and serve specific but limited goals, it is essential that universities offer a broad range of PD opportunities rather than one single option (e.g. collaborative and individual, online and offline, involving active learning and resources for self-development, etc.). A particularly good practice is to offer academics **personalised support**, taking into account their heterogeneous starting points and gaps, and to help them choose the right development path (i.e. the specific kind(s) of PD each academic needs). In addition, it is important that PD organisers design and implement effective **evaluation schemes**, since so far there has been very little evidence on which practices work well and which do not.

HEIs can also support innovative teaching outside formal PD organisation. It is often argued that the modernisation of HE is focused solely on the digitalisation of learning, while universities should also invest in the transformation of physical spaces that facilitate the use of technology for learning (e.g. interactive classrooms). Furthermore, HEIs can facilitate educational research that would provide more evidence on the effectiveness of different teaching and learning approaches, and can foster dissemination of this evidence across a broader spectrum of academic staff (e.g. through Scholarship of Teaching and Learning initiatives).

Finally, HEIs should also consider including **teaching performance in academics' career progression schemes**. This can be done through formal requirements for teaching competences when recruiting new staff, and through promotion schemes that reward successful teaching practices. However, to ensure continuous learning for academics and to keep them updated with new developments in the area of teaching and learning, appropriate remuneration should be established. It is essential that the teaching element is also included in the general promotion rules of the universities, since teaching-only promotion as an 'addition' to the general rules tends to attract only lecturers who already are good and innovative at teaching, while those actually requiring more training are rarely affected.

6.2 Recommendations for Member States

National or regional governments can scale up some of the actions often taken by HEIs. In countries where national bodies are responsible for academics' promotion schemes, it

is crucial that they address the imbalance between the value of research and teaching in academics' career progressions. However, it might be even better to provide incentives (e.g. teaching awards) and resources such as **performance funding as an incentive** for teaching innovation, rather than try to enforce top-down solutions.

Since PD is often organised most efficiently at the university level, governments could encourage and support (mostly financially) HEIs in their efforts to implement effective PD schemes. Finally, for the same reasons, HEIs should have centralised PD units, and governments can establish national/federal bodies dedicated to the pedagogical support of HEIs. Such bodies could set standards for professional development, guide the design, evaluation and funding of the programmes, and integrate and coordinate professional learning between HE institutions, ministries and other organisations.

6.3 Recommendations for the European Commission

The European Commission, in the 'Communication on a Renewed Agenda for Higher Education' ⁽⁵⁰⁾, has acknowledged the importance of good teaching in higher education, and the fact that most academics have received little or no pedagogical training and PD opportunities. In this Communication, the Commission states its intention to provide further support for academics via the following action:

"5. Step up strategic support for higher education teachers, doctoral candidates and postdoctoral graduates through Erasmus+ to help them develop `pedagogical and curriculum design skills through opportunities for staff mobility for pedagogical training and strengthened cooperation between teacher training centres across the EU"

(Renewed Agenda for Higher Education, p.6).

Further to the increased mobility in HE as proposed above, the Commission should continue its efforts towards calls that target HEI's PD projects that are collaborative, reusable and financially sustainable beyond their funded lifecycle. Commission initiatives such as the ones fostered by the Erasmus+ and the European Universities ⁽⁵¹⁾, for example, should remain as priorities on the EC agenda. Together, these initiatives will help build the European Education Area⁵².

It is also important to build upon the success of EC-funded projects such as EFFECT⁵³ (European Forum for Enhanced Collaboration in Teaching) by continuously providing funding and ensuring whenever possible their sustainability.

One of the recommendations of the EFFECT project is that '*Teaching is core to academic practice and is respected as scholarly and professional*' ⁽⁵⁴⁾. This recommendation is in line with the findings of this study, which has argued that training and professional development for academics will only be valued when teaching is considered as important as research within HE contexts. The EC should continue to disseminate this idea to Member States and HE institutions via its research publications, working groups, specialist groups, and calls for funding.

⁽⁵⁰⁾ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1496304694958&uri=COM:2017:247:FIN> [accessed on 19.11.2018].

⁵¹ See https://ec.europa.eu/education/education-in-the-eu/european-education-area/european-universities-initiative_en

⁵² See https://ec.europa.eu/education/education-in-the-eu/european-education-area_en

⁵³ See <https://eua.eu/101-projects/560-effect.html>

⁵⁴ See <https://eua.eu/downloads/content/ten%20european%20principles%20for%20the%20enhancement%20of%20learning%20and%20teaching16102017.pdf>

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List of abbreviations and definitions

CLIK	Centre for Learning Innovation and Knowledge
CMS	Content Management System
CPD	Continuous Professional Development
CTEL	Centre for Technology Enhanced Learning
DAAD	German Academic Exchange Service
DCU	Dublin City University
EADTU	European Association of Distance Teaching Universities
EAEC	European Association of Erasmus Coordinators
EAIE	European Association for International Education
ECIU	European Consortium of Innovative Universities
ECTS	European Credit Transfer and Accumulation System
EDEN	European Distance and E-Learning Network
EFFECT	European Forum for Enhanced Collaboration in Teaching
ELTE	Eötvös Loránd University
EMU	Estonian University of Life Sciences
ENUCE	Estonian Network for University Continuing Education
EOLLA	Empower Online Learning Leadership Academy
ESL	English as a Second Language
ESU	Educational Strategy Unit
ETMP	Erasmus+ Teaching Mobility Platform
EU	European Union
EUA	European University Association
EUCEN	European University Continuing Education Network
FIDU	Initial Training in University Teaching
FMSH	Fondation Maison Des Sciences De L’Homme
FNFNM	Faculty of Nursing and Midwifery
GDC	General Dental Council
GTA	Graduate Teaching Assistant
HE	Higher Education
HEA	Higher Education Academy
HEI	Higher Education Institution
HEIRRI	Higher Education Institutions and Responsible Research and Innovation
HR	Human Resources
IMOTION	Integration and Promotion of Staff Training Courses at Universities across Europe
IPT&L	International Perspectives on Teaching & Learning
IPTS	Institute for Prospective Technological Studies
iTEL	Informatics and Technology Enhanced Learning

JRC	Joint Research Centre
KCL	King's College London
KEATS	King's E-learning and Teaching Service
LLP	Lifelong Learning Programme
LMS	Learning Management Systems
LRN	Legal Research Network
LSE	London School of Economics and Political Science
LTI	Learning Technology and Innovation
METID	Politecnico di Milano
MOOC	Massive Open Online Course
MS	Member State
ODL	Open Distance Learning
OECD	Organisation for Economic Co-operation and Development
OER	Open Educational Resources
OLC	Online Learning Consortium
PD	Professional Development
PLE	Personal Learning Environment
POD	The Professional and Organisational Development
REF	Research Excellence Framework
SOCTAT	Studies on Cultural Transfer and Transmission
SOTL	Scholarship of Teaching and Learning
STQ	Senior teaching Qualification
T&D	Training and Development
TEA	Teaching Excellence Award
TEF	Teaching Excellence Framework
TEU	Teaching Enhancement Unit
TLC	Teaching and Learning Centre
TPACK	Technological, Pedagogical, and Content Knowledge
D-TRANSFORM	DigiTal Resources as a New Strategic Factor for the Renovation of Modernisation in Higher Education
TWE+	Teaching with Erasmus+
UCE	University Continuing Education
UCL	University College London
UCU	University College Union
UK	United Kingdom
UNICA	Network of Universities from the Capitals of Europe
UNIPS	University Pedagogical Support
UPF	Pompeu Fabra University
UT	University of Tartu

UTQ	University Teaching Qualification
VR	Virtual Reality
VSNU	The Association of Universities in the Netherlands

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Annex 1. Snapshot of cases and their innovation practices

Table 1. Snapshot of cases

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Source of funding	Short general description of innovativeness of the practice
The Sipping Point (Ireland)	Informal meetings	Lack of time, lack of awareness	Dublin City University	Internal	An informal community that involves sessions and discussions on pedagogy during lunchbreaks.
UNIPS (Finland)	Online pedagogical training	Resistance to change, lack of time, lack of HEI capacity to organise pedagogical development programmes	University of Turku in collaboration with other seven Finnish universities	External – government-funded (75%); Internal (25%)	An open, digital environment offering flexible, research-based, online pedagogical training.
The U4 Network (international)	International network	Lack of capacity (funds, facilities, expertise)	Ghent (BE), Groningen (NL), Göttingen (DE), and Uppsala (SE) universities	Internal	A strategic partnership with a goal to pool resources (funds, facilities, expertise) in order to increase the scale of joint research, professional development, mobility, and other activities.
UTQ (the Netherlands)	Unified way to prove teaching competences	Lack of formal requirements or incentives	14 Dutch research universities	No direct costs. Costs of teacher training covered internally	Evidence of lecturers' didactic competences, required and mutually recognised by all participating universities.
D-TRANSFORM (the EU)	International partnership	Lack of awareness, lack of capacity (effective leadership in innovation)	The FMSH (fr. Fondation Maison Des Sciences De L'Homme)	EU-funded (Erasmus+ programme)	A programme on leadership development in e-learning, focused on university senior leaders, created within an international public-private partnership.
Support for MOOC production (Spain)	Support for MOOC production	Resistance to change, lack of capacity (technological base and know-how)	Pompeu Fabra University	Internal (e.g. equipment, funding via grants, HR); External (national programmes, grants)	Comprehensive support for MOOC production involving mainly pedagogical advice and technological assistance for the tutors, and general management of the process.
TLC (the UK)	Self-learning materials	Lack of time	London School of Economics and Political Science	Internal	Shared resource materials, accessible for academics and used as a support for TLC's other PD activities (esp. individual consultations).
IMOTION (the EU)	Information platform	Lack of awareness	Network of Universities from the Capitals of Europe (UNICA)	Costs of platform creation – EU-funded; Costs of mobility: varied	A platform that centralises information about training and mobility opportunities organised mostly for university administrative and technical staff in Europe.
Technology enhanced learning in health education (the UK)	Content-focused PD (health)	Lack of awareness, lack of time	King's College London (the iTEL Hub)	Internal	A range of courses, workshops, seminars and consultancy services offered to the staff in the fields of dentistry, nursery and midwifery, and the provision of digital technologies specific for dental education.
University collaboration as a PD driver in Estonia	National network; international conference	Lack of financial capacity and expertise to implement PD, lack of awareness	The Estonian Network for University Continuing Education (ENUCE); University of Tartu	Internal	An informal union of Estonian universities, providing a meeting ground for educational developers responsible for University Continuing Education, and organising a conference for presenting results of higher education research and sharing good practices.
EOLLA (the EU)	Workshops	Lack of awareness	European Association of Distance Teaching Universities (EADTU)	EU-funded (EADTU capacity); Tuitions paid by participants	A training event targeted at university leaders and designed around the principles of active learning in response to new and emerging models of teaching and learning.

Annex 2. List of potential cases considered in the study

Table 2. PD practices that were not selected for case study analysis because they did not entirely meet the criteria established for this study. These cases are nevertheless relevant to the topic of PD:

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
Teaching Day (Austria)	Education conferences or seminars (annual event)	Lack of time; Lack of awareness	University of Graz	University	An annual event featuring lectures, workshops and round tables. Academics representing different disciplines meet to discuss various approaches to teaching. Source: https://www.uni-graz.at/en/teaching/services/didactics-in-higher-education/centre-for-teaching-competence/
PD courses where academics and students participate in programmes together (Belgium)	Courses; Qualification programmes; Education conferences and seminars	Lack of intrinsic motivation	KU Leuven	Faculty/university	Courses for developing lecturers' competences, sometimes in partnership with both members of the administrative staff and students. Source: https://slideplayer.com/slide/7423227/
The E-learning Award at the University of Zagreb (Croatia)	Award scheme (grants); Peer review	Lack of extrinsic motivator or requirements	University of Zagreb	University	An award created to foster excellence in education by e-learning technologies, and to promote good practice of the use of ICT in education. Source: https://www.srce.unizg.hr/en/e-learning-centre/e-learning-award
Outgoing Academic and Administrative Staff (Czech Republic)	Mentoring; Peer review; Training sessions	Lack of intrinsic motivation	Charles University's	International network of HEIs	Mobility programme enabling academics to study, teach and conduct research abroad. Source: https://www.cuni.cz/UKEN-144.html
The comprehensive system of the quality assurance of lecturers (Denmark)	Feedback system; Quality assurance system	Lack of extrinsic motivators or requirements	The Faculty of Health Sciences at the University of Copenhagen (HEALTH)	Faculty	A quality assurance system designed to assess and improve lecturers' teaching competences by employing performance reviews, teaching portfolios and formal requirements. Source: https://healthsciences.ku.dk/about/qualityeducation/kvalitetssikringspolitik/
TTU Innovation and Business Centre 'Mektory' (Estonia)	Mentoring and/or coaching and/ or peer observation	Poor resources; Lack of intrinsic motivation.	Tallinn University of Technology (TTU)	University	Training aimed at providing the knowledge and skills necessary for competent, creative and effective teaching of technical subjects. Particular emphasis is placed on developing practical

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
	/ learning; Education conferences or seminars; Individual or collaborative research on a topic of interest, workshops				and entrepreneurial skills. In addition, academics have an opportunity to participate in developing and upgrading the study programmes, and to cooperate with entrepreneurs and earn an additional income. Source: https://www.ttu.ee/mektory-eng
European Learning & Teaching Forum (The EU)	Education conferences or seminars; Workshops	Lack of extrinsic motivator or requirements ; Lack of intrinsic motivation	European University Association	International network of HEIs	An event aimed at providing an opportunity for institutional representatives to meet and discuss developments in learning and teaching at European universities. The final result of the discussions is a policy statement on the core principles for the enhancement of learning and teaching across Europe. Source: http://www.eua.be/activities-services/events/event/2017/09/28/default-calendar/european-learning-teaching-forum
Helsinki Teachers' Academy (Finland)	Network of academics; Workshops; Mentoring and peer observations; Online courses	Lack of extrinsic motivator or requirements; Lack of intrinsic motivation	University of Helsinki	University/ National network of HEIs	The University of Helsinki Teachers' Academy is a network of distinguished university teachers dedicated to promoting teaching and improving its general standing in the academic community. It encourages teachers to upgrade their qualifications and rewards them for their teaching merits. Source: https://www.helsinki.fi/en/university/teachers-academy
Center for innovation and business creation, 'UnternehmerTU M' (Germany)	Workshops	Lack of resources; Lack of intrinsic motivation	Technical University of Munich	University/ National level	Publicly accessible high-tech workshop, enabling companies, startups and creatives to produce prototypes and small batches using state-of-the-art machines such as large 3D printers. Allows for cooperation between business and academia – academics can gain practical skills and 'real business' expertise. Source: https://www.unternehmertum.de/about-us.html?lang=en
Counselling services on the use of new methods of teaching, learning and testing	Counselling services; Training sessions	Lack of resources and expertise; Lack of intrinsic	Charite – Universitätsmedizin Berlin	University	A 'university hospital' combines education, research and clinical care. A department of university didactics offers counselling services on the use of new

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
(Germany)		motivation			methods of teaching, learning and testing. Sources: https://www.charite.de/en/ ; https://dsfz.charite.de/hochschuledidaktik/
Semester's Leave for Teaching (Germany)	Mobility programme	Lack of extrinsic motivator or requirements; Lack of time	Technical University of Munich	University	An incentive in the form of a semester's leave of absence, enabling academics to focus on developing and implementing new teaching methods such as e-learning scenarios or other innovative educational approaches. Source: https://www.lehren.tum.de/en/topics/awards-for-excellence-in-teaching/freisemester-fuer-lehre-en/
Trans-departmental Collaborative Teaching (Germany)	Workshops; Online courses; HEI-based collaborative PD	Lack of extrinsic motivator or requirements; Lack of intrinsic motivation	University of Konstanz	University	A programme designed to promote a trans-disciplinary approach to teaching. While creating and delivering the courses, academics share ideas and experience with colleagues representing different disciplines. Source: https://www.uni-konstanz.de/zukunftskolleg/support-measures/funding-for-cooperative-initiatives/transdepartmental-collaborative-teaching/
TUM Teaching Endowment Fund (Germany)	Grants scheme	Lack of resources	Technical University of Munich	University	A fund aimed at inspiring teaching innovation, including student advising, instruction and examination. Source: https://www.lehren.tum.de/en/topics/tum-teaching-endowment-fund/
Class visits (Germany)	Peer review	Lack of intrinsic motivation; Lack of time	University of Dortmund	University	A department of academic teaching and faculty development offering class visits during which it provides feedback on academics' teaching performance. Source: https://www.zhb.tu-dortmund.de/zhb/hd/en/home/index.html
Learning and Teaching Conference (Greece)	Education conferences or seminars	Lack of intrinsic motivation	Mediterranean College	University	An annual event providing a platform for sharing the developments in education and disseminating the best practices among academics. Source: https://www.medcollege.edu.gr/en/mediterranean-college/leading-initiatives/annual-learning-teaching-conference/
Professional Development	Unified way to prove	Lack of intrinsic	National Forum for the	National level	15 open-access programmes together with the same number

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
Digital Badges (Ireland)	teaching competences	motivation	Enhancement of Teaching and Learning in Higher Education		of digital badges, serving as a means of recognising academics who are committed to PD at a national level. Sources: https://www.teachingandlearning.ie/digital-badges/about-pd-digital-badges/ https://www.teachingandlearning.ie/digital-badges-call-submission/
PRODID (Italy)	Mentoring; Peer review; Training sessions	Lack of capacity (expertise); Lack of intrinsic motivation	University of Padova	National level	A comprehensive research project aimed at developing strategies to support academic teachers, to enhance their teaching and learning competences. A significant role is given to mentoring, coaching and scaffolding in designing and implementing courses. Moreover, the effects of training are assessed throughout the project. Sources: http://ojs.pensamultimedia.it/index.php/sird/article/view/1603 https://iris.unive.it/retrieve/handle/10278/44484/32002/Formazione%20e%20Insegnamento%2014.pdf
KTU 'EDU Lab' (Lithuania)	Mentoring and peer observations; Network of academics; Workshops; Collaborative research	Lack of intrinsic motivation; Resistance to change; Lack of capacity (facilities, expertise)	Kaunas University of Technology (KTU)	University	A creative hub established to develop lecturers' modern didactic competences through peer learning, sharing of experiences and collaborative research. Source: https://en.ktu.edu/edu_lab/
Pre-retirement programmes or/and Training and development award** (Malta)	Award scheme; Workshops	Lack of extrinsic motivators or requirements	University of Malta	University	Training adjusted to the needs of academics who are close to retirement age. PD of academics is appreciated at this university – individuals who have done most to strengthen their competences receive the Training and Development Award. Source: https://www.um.edu.mt/hrmd/services/trainingdevelopment
Utrecht Education Incentive Fund (The Netherlands)	Grants' scheme; Provision of tools	Lack of capacity (financial resources)	Utrecht University	University	A fund designed to improve the professionalisation of lecturers and to encourage education innovation. Financial support is provided for the best ideas, thereby meeting the challenge of the lack of resources. Source: https://www.uu.nl/en/education/quality-and-

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
					innovation/education-innovation/utrecht-education-incentive-fund
Educational Leadership Programme (The Netherlands)	Qualification programmes; Workshops and seminars	Resistance to change	Utrecht university	University	An educational leadership programme aimed at scientists working in the management of academic teaching. The programme consists of eight multiple-day thematic meetings, an individual project and one or two study tours. Source: https://www.uu.nl/en/education/centre-for-academic-teaching/courses-programmes/educational-leadership-programme
Comenius programme (The Netherlands)	National grants scheme	Lack of capacity (financial resources)	Ministry of Education	National level	A national-level initiative seeking to spur educational innovation by providing grants and fellowships for professionals in HE. Source: https://www.nro.nl/en/comenius-programme/
Educate-it (The Netherlands)	Grants' scheme; Provision of tools	Lack of resources (facilities)	Utrecht university	University	An initiative offering a range of IT tools that are studied beforehand so as to determine their effectiveness in improving the quality of education. In addition, the programme provides technical, practical and didactic support to teachers who embrace (one of) the elements of educational improvements and the introduction of blended learning through knowledge clips, digital assessment and IT tools. Source: https://educate-it.uu.nl/en/programme-purpose
Knowledge Pub (The Netherlands)	Peer observation and coaching; Network of academics	Lack of intrinsic motivation; Resistance to change	NOVA College	University	Peer-coaching sessions during which teachers from the same university share their knowledge and learning experiences. Source: http://docplayer.net/21357700-10-examples-of-approaches-to-continuing-professional-development-of-teachers-in-europe.html
A revised policy of the institution targeted at PD/academics' visits to external institutions (The Netherlands)	Observation visits to other schools; Peer review	Lack of extrinsic motivator or requirements; Resistance to change	University of Utrecht	University/ International level	Re-evaluation of policy for the appointment and development of academic staff – peer reviews and observation visits. Source: https://heinnovate.eu/sites/default/files/utrecht_university_-_alignment_for_impact.pdf
POS-DRU project 'Continuous training by means of	Observation visits to other	Lack of capacity (facilities,	University of Bucharest	National level	A project conducted in collaboration with different institutions and business representatives in order to

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
"blended learning" for higher education teachers' (Romania)	schools; Online courses; School-based collaborative PD; Network of academics	expertise)			develop a set of complex competences required in academia. Sources: http://www.diacronia.ro/ro/indexing/details/A15761/pdf http://www.eduworld.ro/uploads/2010/vol1.doc
Annual 'Teachers' Conference' for the academics of Stockholm University (Sweden)	Education conferences and seminars (annual event)	Lack of time; Resistance to change	Stockholm University	University	Annual event organised in order to encourage collaboration and experience-sharing among academics working in different research fields. Source: https://www.su.se/ceul/english/education/teachers-conference
Individual competence development plans or Collegial networks (Sweden)	Competence development plans; Network of academics	Lack of intrinsic motivation	Umea University	Faculty/University	A department within the university library with the overall task of promoting pedagogical development and research in the university and supporting teachers in developing the use of IT in learning. Innovative activities include individual competence development plans and collegial networks bringing together 'Educationally Awarded Teachers' / ICT coaches / pedagogical leaders'. Source: http://www.upl.umu.se/english/education/
Mandatory teaching courses for Medicine PhD students (Sweden)	Courses	Lack of extrinsic motivators or requirements	Lund University	University	Mandatory PD courses for academics in the early stages of their academic careers. Sources: https://www.med.lu.se/english/integrated/teaching_research/phd_students_supervisors/for_phd_students/courses https://www.med.lu.se/english/integrated/teaching_research/teaching/medcul_centre_for_teaching_and_learning/courses_and_workshops_in_english
The Swiss EdTech Collider (Switzerland)	Mentoring and/or coaching and/ or peer observation / learning	Poor resources (facilities, expertise); Resistance to change	the École Polytechnique Fédérale de Lausanne (EPFL)	University/ National level	A collaborative space dedicated to ambitious entrepreneurs transforming education and learning through technology. Source: https://edtech-collider.ch/
Feedback on your teaching (UK)	Learning materials; Feedback system	Lack of extrinsic motivator or requirements; Lack of	The University of Edinburgh	University	A comprehensive feedback system comprising peer observation of teaching, reviewing your teaching, mid-course feedback, feedback from students, feedback from colleagues, feedback from

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
		intrinsic motivation			course team and self-reflection. Source: https://www.ed.ac.uk/institute-academic-development/learning-teaching/staff/teaching-feedback
CREATE and a 'Teaching Bites' programme (UK)	Education conferences and seminars	Lack of time	University of Bristol	University	A professional development scheme for academics. The 'Teaching Bites' programme involves monthly sessions during which teaching practices are developed through sharing and reflecting upon participants' experiences. It works as an alternative to the longer courses that academics usually find to be too time-consuming. Source: http://www.bristol.ac.uk/staffdevelopment/academic/learningandteaching/teaching-bites/
PD programmes customised to the demographic differences of the teaching staff (UK)	Qualification programmes Courses	Lack of intrinsic motivation	Oxford Learning Institute	Faculty/ University	Professional development courses for the teaching staff. The course goes beyond learning and teaching to cover areas such as leadership, personal development and communication skills. Source: https://www.learning.ox.ac.uk/
Teaching award schemes (UK)	Award scheme	Lack of extrinsic motivator or requirements	University of Edinburgh	University	The Teaching Award ensures that lecturers get feedback from their colleagues, best practices are presented to the academic community, and academics are encouraged to focus more on their PD. Source: https://www.ed.ac.uk/institute-academic-development/learning-teaching/funding/funding
Lunchtime events (UK)	School-based collaborative PD	Lack of time	Belfast Metropolitan College	Faculty/ University	Regular events that encourage sharing of good practices and PD of lecturers. Disruption of academics' learning was minimised as an array of differentiated methodology is employed to deliver PD – multi-events on multi-campus; twilight session; use of a virtual learning environment; lunchtime events etc. Source: http://docplayer.net/21357700-10-examples-of-approaches-to-continuing-professional-development-of-teachers-in-europe.html
The Teaching Excellence Framework (TEF)(UK)	Education conferences or seminars; Workshops	Lack of intrinsic motivation; Lack of extrinsic motivator or	National level	National level	A system designed to assess the quality of teaching based on teaching, academic support and progression to employment. The system provides a resource for students to judge teaching quality in universities. Source: https://www.timeshighereducatio

Characteristic Case (Country)	Type of PD practice	Main obstacles addressed	Main stakeholder(s)	Scale of the practice	Short general description of the innovation in the practice
		requirement			n.com/student/news/what-tef-results-teaching-excellence-framework
The Higher Education Academy (HEA) (UK)	Qualification programmes Mentoring and/or coaching and/ or peer observation / learning; Workshops; Network of academics	Lack of extrinsic motivator or requirements; Lack of intrinsic motivation	Universities in the UK	National level	A national body which seeks to improve learning outcomes by raising the status and quality of teaching in HE at the national level by cooperating with governments, ministries, universities and individual academics in the UK and around the globe. On 21 March 2018, the HEA merged with the Leadership Foundation and the Equality Challenge Unit to form Advance HE. Sources: http://webarchive.nationalarchives.gov.uk/20100303160414/http://www.hefce.ac.uk/learning/heaacademy/intro.asp https://www.advance-he.ac.uk/questions-answers

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