

University teaching induction programmes. A systematic literature review

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In recent decades, there has been growing concern about teacher preparation at university and the link to educational quality. As a result, higher education institutions have designed programmes to help faculty teachers further their development in their professional careers. However, the literature pinpoints a lack of empirical evidence on professional development (PD) policies at university level due to the limited tradition of research and evaluation at this educational stage. The aim of this research is to provide an overview of the actions and programmes for the professional learning of new academics at university institutions. To this end, we conducted a systematic review of the international literature, based on 262 papers from three international databases, of which a total of 18 were analysed in depth. This study examines the types of programme, content and learning outcomes. The findings show that most programmes deploy mentoring versus other modalities, although duration and content are heterogeneous. In addition, mentor selection and training is revealed as a key element for programme success. Finally, we present a number of lessons learned that may be useful for university induction programme design.

Keywords: professional development; induction; novice teachers; systematic review; higher education

Introduction

Strengthening the teaching profession is a main concern today in Europe (European Commission 2018, European Council 2021) and internationally. Teachers are key to achieving the proclaimed quality, and their care is a cornerstone of education policy (European Commission 2017a; Houston and Hood 2017). In the increasingly digital context of rapid changes and growing social demands in which we live, universities must strive to design environments that allow their teachers to carry out their work in the best possible conditions. Teaching in higher education presents its own set of unique curricular and instructional challenges (massification of students, a broad and increasingly heterogeneous student profile, shared activity, such as research and knowledge transfer, competitiveness between universities, digitalisation and so forth). To address these challenges, many universities have established centres of teaching and learning devoted to professional development (PD) for faculty (Zimmerman 2021).

PD has become increasingly important for universities as it is linked to enhancing the quality of teaching (Darling-Hammond and Richardson 2009; Floyd 2019) and to improving student learning experiences (Knapper 2013). Although the need for academic PD has grown, the existing literature in the field reports a lack of sound evidence of faculty training effectiveness (Chalmers and Gardiner 2015; Gibbs and Coffey 2004). Research in this field at higher education institutions (HEIs) is still fragmented and scarce (Inamorato et al. 2019).

PD can be seen as a process of critical review that can improve practice, uncover problems faced by university teachers, seek solutions and construct knowledge about the learning process (Duta and Rafaila 2013). Although it has a variety of configurations and dimensions (Scribner 1999), it is a lifelong process, which encompasses all types of knowledge facilitation and comprises formal activities and other informal learning opportunities targeted to strengthen the theoretical expertise, skills and conceptions of

academics (Kneale et al. 2016; Malik et al. 2016). PD is also referred to as academic or educational development (Fraser 1999) for faculty members in (1) teaching, learning, assessment and curriculum, (2) research and (3) service (Bath and Smith 2004). However, PD is an ‘umbrella term’ (Inamorato et al. 2019; Young 2022) primarily connected with teaching, albeit with a positive impact on pupils’ learning (King 2014), HEI culture and career progression (Stes et al. 2013).

Therefore, PD policies should pay particular attention to supporting arrangements for university teachers, especially for early-career faculty members (Johannes et al. 2013). This initial phase in an academic’s career is also referred to as induction or entry to the profession and covers the transition process from novice to autonomous professional (Guskey and Huberman 1995; OECD 2019). It should be conceived as a period in which novices must master many new facets: learning institutional norms, taking on service roles, and continuing and expanding research and teaching (Meizlish et al. 2018). Some of the problems that concern university teaching staff (Caena 2021; Sánchez and Mayor-Ruiz 2006) are connected to teaching (planning, methodology, evaluation, staging), management (roles and responsibilities within the university organisation chart, communication channels, protocols for processing projects and grants) and interpersonal relations (with colleagues and students). Inamorato et al. (2019) have compiled a list of other obstacles to academics’ participation in PD at HE level, which we have reconceptualised as three main tensions:

(1) Tension between research and teaching: there is an imbalance between these two activities, and greater importance is attributed to research (scientific outputs) than teaching performance in terms of promotion and remuneration schemes.

(2) Tension between traditional and new teaching practices: university faculty are not obliged to provide evidence of teacher training qualifications at most European HEIs. This may explain why academics rarely apply new teaching methods because they may lack confidence and prefer traditional approaches (influenced by their beliefs and own experiences as students).

(3) Tension between the capacity and expertise of the institution: HE systems often lack the skills and capacity to implement effective PD programmes. Advancing towards collaborative work policies and scant collegial collaboration culture also remain a challenge.

These obstacles are more evident for early-career academics who may face economic precariousness, excessive bureaucracy, crushing workloads and research performance requirements (Ratle et al. 2022), resulting in a lack of time for PD. With limited time and energy to devote to PD, novice faculty members must figure out how to balance teaching and developing their research agendas (Zimmerman 2021).

The early years at an HEI are key to building academics’ identity and socialisation (Kelchtermans 2019). In fact, initial experiences will form the basis of the teacher model, which will condition personality traits, motivations and attitudes throughout their professional careers (Wenger 1998). Moreover, Feixas (2002) considers that experiences during the first year of teaching will have a greater impact on the personal and professional lives of academics than at any other time in their careers. The way this stage is approached is therefore vitally important and can shape the possibility of becoming an adaptive teacher (Bransford et al. 2005; Orland-Barak 2021).

In a context of increasing concern for quality (Weuffen et al. 2020), it is a challenge for HEIs to become flexible organisations that facilitate broad social access to knowledge and people development, in accordance with the prevailing needs of the 21st century (Beatty et al. 2020). A new phenomenon has emerged in professional education, which requires approaches in HE other than the traditional. University teachers have been trained in a specific knowledge discipline, yet are not required to have any pedagogical accreditation to perform their teaching duties (Johannes et al. 2013; Norton et al. 2005). Moreover, as cradles of specialised knowledge, universities value faculty staff who are experts in their subject over their pedagogical qualities (Weuffen et al. 2020). Induction programmes should therefore be the institutional response to the need to provide junior academics with a favourable environment for their professional growth and development (Marcelo and Vaillant 2017).

Within an articulated framework that defines the PD of university teaching staff, this period of accompaniment can become an ally in achieving true educational quality (Bower 2007; Lomas and Kinchin 2006; Mullen 2008). Furthermore, it can have an impact as a strategic element of positive institutional differentiation (Beatty et al. 2020). This process aims to ensure a smooth transition into the university context and to equip faculty with the necessary teaching devices (Billot and King 2017). Furthermore, the design of such programmes has been shown to improve job satisfaction and effectiveness (Smith and Ingersoll 2004), allow teachers to focus on designing opportunities for students to learn, actively reflect on their practice, collaborate with other teachers and be encouraged to be more confident and use new teaching methods (Chalmers and Gardiner 2015; Ingvarson et al. 2005).

However, early-career staff are not exposed to teacher training or preparation in many European universities (Dysart and Weckerle 2015). In fact, according to the report *The Preparation of University Teachers Internationally* (ICED 2014), only some countries have introduced national or regional policies for faculty PD (e.g. Norway, Denmark, Sri Lanka, Ethiopia, UK, Ireland, The Netherlands and Japan), either as a legal requirement or as a national framework for professional standards or accreditations which are not enforceable by law. Most of these countries have a policy requiring newly appointed university teachers to successfully complete a teaching qualification. In some countries, faculties or ‘types’ of university (e.g. teacher training studies are required in polytechnics in Finland, and in medical faculties and universities of Applied Sciences in Germany and Switzerland). But most PD programmes are isolated activities of individual HEIs and are not implemented on a large scale (country-wide) (European Commission 2017b). A study by the European Commission (2017b) on academic staff in higher education shows that few PD programmes are aimed at improving teaching competences. This confirms the findings of other studies (Floyd 2019; Gibbs and Coffey 2000; Vezub 2011), which note the lack of empirical evidence on PD policies in the university environment due to the limited tradition of research and evaluation at this educational level. Furthermore, as several authors report (Billot and King 2017; Meizlish et al. 2018), although there are programmes for new university teachers, rigorous evaluation of their impact or results is much less common and is an ongoing concern (Beach et al. 2016; Stes et al. 2013; Walker 2015). It is then important to constitute a line of research in this field in order to build an information base (Borko 2004; Iglesias-Martínez et al. 2014).

International literature spotlights some weaknesses in induction programmes within the university setting, including a) proposals with an overly technical approach, which obviates reflective processes (Bascia and Hargeaves 2000; Knapper 2013); b) previous

experience as students in their discipline (Barnett and Dinapoli 2008; Samuelowicz and Bain, 2001); c) their beliefs, which act as a filter for the incorporation of teaching competencies (Kane et al. 2002) and d) the further development of teachers' research identity (Winberg 2008). This issue has become increasingly important in HE over the last two decades (Silander and Stigmar 2018), although not enough when compared to pre-university stages (Borko 2004).

Through this study we want to expand scientific knowledge that will allow us to gather specific literature on new university teacher programmes to explore their scope, characteristics and results. More precisely, the general objective of this research is to provide an overview of HEIs' actions and programmes for professional learning for new academic staff. The research questions guiding this work are the following:

RQ1: What kind of programmes are used to prepare new faculty?

RQ2: What are the objectives and contents of education programmes for new lecturers?

RQ3: What are the main results of education programmes for new lecturers following implementation at HEIs?

Method

To answer these questions, we conducted a systematic literature review, understood as the systematic process to develop and extend theory by reviewing and analysing relevant sources in a given field of knowledge (Newman and Gough 2020).

Search strategy

The procedure followed in the systematic literature review is based on the PRISMA statement (Urrutia and Bonfill 2010); hence, the search is ethical, traceable and valid. The search string used was as follows: ("teacher induction" OR "teacher mentoring") AND ("higher education" OR "university"), limited to the period 2011–2020. The databases consulted were Scopus, Web of Science and Educational Resources Information Center (ERIC), as they are considered to be the most relevant databases in the field of international education. Figure 1 shows the stages followed with the corresponding data in the selection process of documents for analysis.

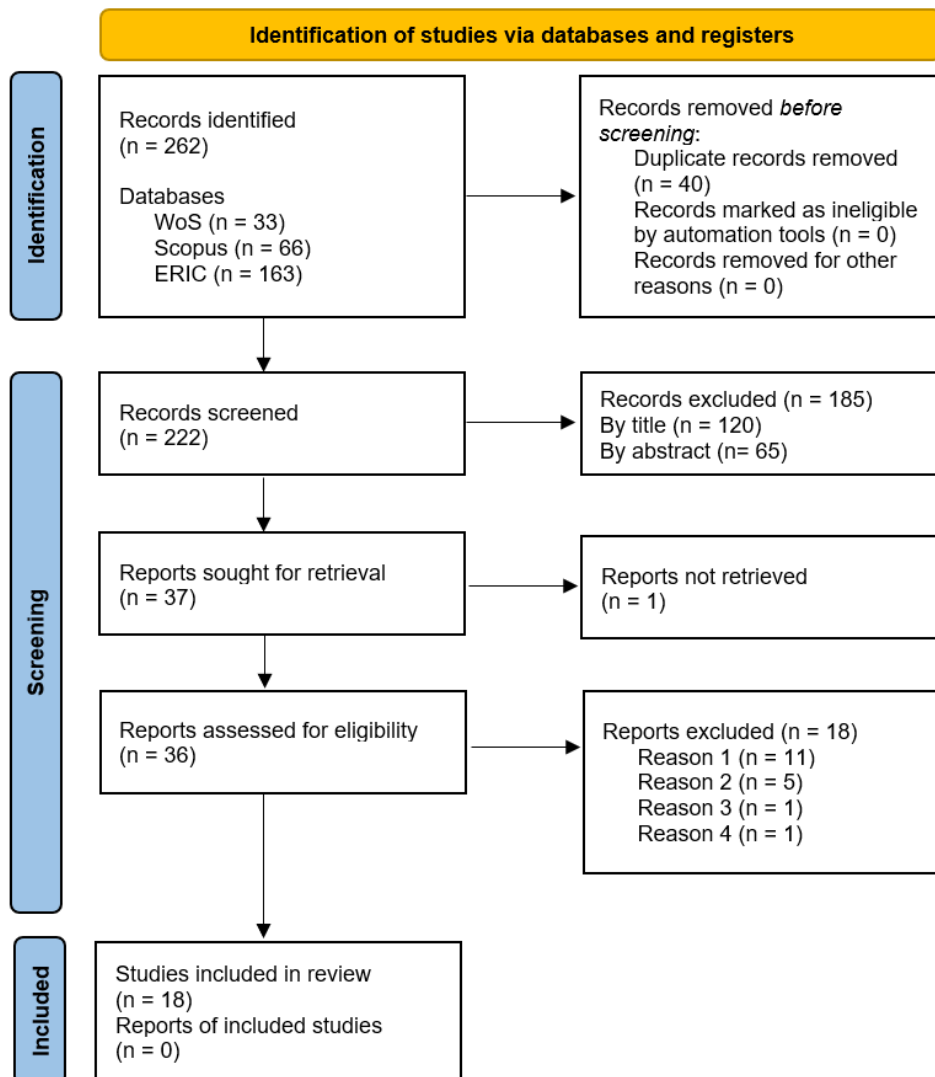


Figure 1. Prisma flow diagram

Criteria and data analysis procedure

In the first phase of identification, 262 files were obtained from the different databases. Of this total, 40 were eliminated due to duplication. Four researchers participated in the screening phase. By reading the title and abstract, they excluded a total of 120 documents, according to the previously agreed inclusion and exclusion criteria (Table 1). Each document was reviewed by two researchers and, in the event of doubt, another researcher was asked to review it. To complete the final selection, 36 full-text documents were screened and, in accordance with the aforementioned criteria, 18 were finally selected for in-depth analysis (Table 2). To analyse the selected papers, they were added to a database where they were categorised according to the research questions, and the roles of the researchers were divided. The methodology followed for data extraction was reviewed and approved by all authors. One of the authors listed the papers according to their identification and extracted data about authorship, title, year and country, the methodological approach (theoretical, qualitative, quantitative or mixed) and the focus of the paper (perceived

usefulness, motivation, effectiveness). The remaining researchers, led by the first author, analysed and collected the evidence regarding the research questions in this database according to the following issues: type of programme, programme content and results.

Because multiple researchers participated, the principal researcher supervised the entire process to minimise risks of bias and inconsistency, and discussions were held to adjust criteria (Mallett et al. 2012).

Table 1. Inclusion and exclusion criteria

| | Inclusion criteria | Exclusion criteria |
|----------|---|---------------------------------------|
| Reason 1 | Higher education | From other educational levels |
| Reason 2 | Focus on new teacher | No focus on new teacher |
| Reason 3 | Propositive (contain a proposal or programme) | Theoretical reviews - not propositive |
| Reason 4 | Written in English, Spanish, Catalan, Portuguese or Italian | Written in other languages |

Table 2. Identifying data and methodological approach of the articles analysed

| No. | Authors | Year | Country | Method | Programme |
|------------|----------------|-------------|----------------|---------------|------------------|
|------------|----------------|-------------|----------------|---------------|------------------|

| | | | | | |
|----|-------------------------|------|--------------|--------------|---------------------------------|
| 1 | Aguirre and Faller | 2017 | Philippines | Qualitative | Mentoring programme |
| 2 | Beatty et al. | 2020 | Australia | Qualitative | Community of practice |
| 3 | Billot and King | 2017 | New Zealand | Mixed | Other |
| 4 | Dixon et al. | 2012 | South Africa | Qualitative | Mentoring programme |
| 5 | Donnelly and McSweeney | 2011 | Ireland | Qualitative | Mentoring programme |
| 6 | Faurer et al. | 2014 | USA | Quantitative | Mentoring programme |
| 7 | Fenton-Smith and Torpey | 2013 | Japan | Qualitative | Orientation/induction programme |
| 8 | Gartland et al. | 2013 | UK | Qualitative | Interactive events |
| 9 | Gebru | 2016 | Ethiopia | Qualitative | Other |
| 10 | Johannes et al. | 2013 | Germany | Mixed | Training programme |
| 11 | Kalipci | 2018 | Turkey | Qualitative | Mentoring programme |
| 12 | Meizlish et al. | 2018 | USA | Quantitative | Teaching Academy |
| 13 | Reddy et al. | 2016 | South Africa | Qualitative | Training course |
| 14 | Sadler | 2012 | UK | Qualitative | Other |
| 15 | Thomas and Goswami | 2013 | USA | Mixed | Mentoring network |

| | | | | | |
|----|-------------------------|------|-------------|-------------|--|
| 16 | Thomas et al. | 2015 | USA | Mixed | Training programme / peer-to-peer exchange |
| 17 | van den Bos and Brouwer | 2014 | Netherlands | Qualitative | Training programme |
| 18 | Weuffen et al. | 2020 | Australia | Mixed | Induction programme |

The geographic distribution of the experiences analysed (Figure 2) encompassed three papers from Africa (1 Ethiopia and 2 South Africa), three from Asia (1 Japan and 1 Philippines), four from North America (4 USA), six from Europe (1 Ireland, 1 Germany, 1 Netherlands, 1 Turkey, 2 UK) and three from Oceania (2 Australia and 1 New Zealand).

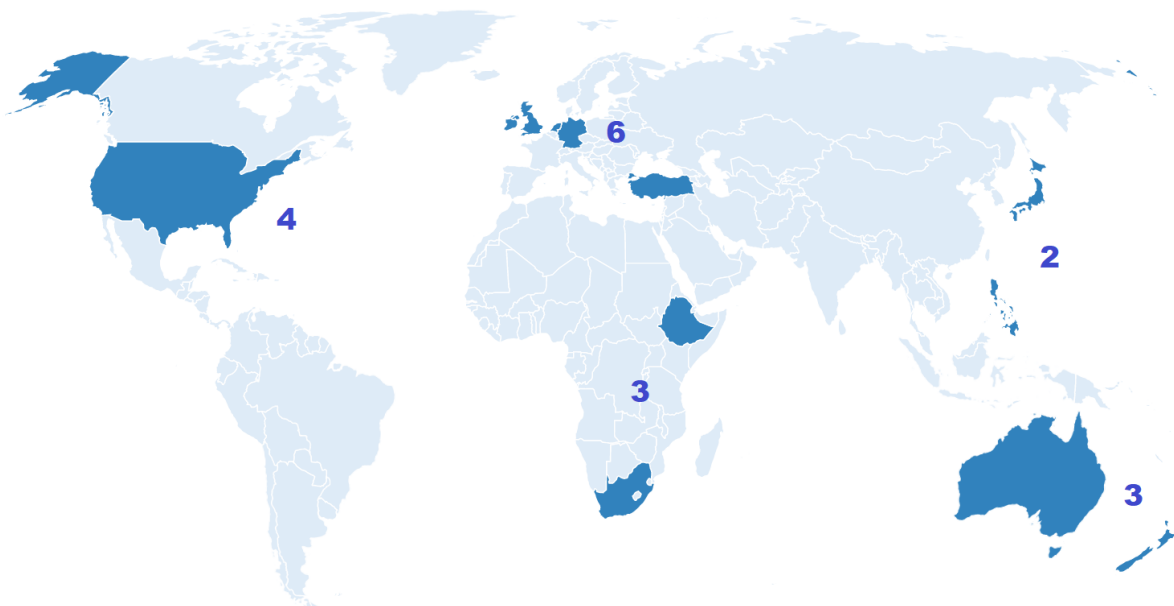


Figure 2. Geographic distribution of the experiences reviewed

Results

The results are presented below according to the order of the research questions. First, we address the types of programmes in terms of activity layout, duration, actors involved and evaluation mechanisms. Second, we tackle programme objectives and content. Third and finally, we examine the programme outcomes, taking an evaluation model as a reference to analyse the information gathered.

RQ1. Types of programmes

University induction programmes for new academics are extremely varied. According to the results of this systematic review, the most common format is mentoring programmes

(Aguirre and Faller 2017; Dixon et al. 2012; Donnelly and McSweeney 2011; Faurer et al. 2014; Thomas et al. 2015), followed by activities designed as courses, workshops or events (Gartland et al. 2013; Reddy et al. 2016; Thomas and Goswami 2013; van den Bos and Brouwer 2014), where the number of sessions varies between three and seven in-person or online training meetings (Weuffen, 2020). Some mentoring programmes establish a monthly periodicity for mentoring (Thomas and Goswami, 2013), while other studies combine training sessions with initial and follow-up mentoring, readings or team reflections (Dixon 2012; Kalipci 2018). Other studies also mention other types of strategies, such as networking or more informal activities, such as group meals, to build community (Thomas and Goswami 2013).

The vast majority of these programmes last for one year (Donnelly and McSweeney 2011; Faurer et al. 2014; Gartland et al. 2013; Gebru 2016; Johannes et al. 2013; Meizlish et al. 2018; Reddy et al. 2016; van den Bos and Brouwer 2014), others for two (Dixon et al. 2012; Thomas and Goswami 2013; Thomas et al. 2015), while some universities allocate only two weeks (Fenton-Smith and Torpey 2013). At the other extreme are one-day programmes, with an online workload of eight hours (Weuffen et al. 2020). It is important to note that only one article highlights the fact that this programme takes place during the teachers' first year at the university (Meizlish et al. 2018).

Agents participating in these programmes are mainly novice or new university lecturers (i.e. those who have recently joined) (Dixon et al. 2012; Donnelly and McSweeney 2011; Fenton-Smith and Torpey 2013; Gartland et al. 2013; Gebru 2016; Johannes et al. 2013; Meizlish et al. 2018; Thomas and Goswami 2013; Thomas et al. 2015; van den Bos and Brouwer 2014; Weuffen et al. 2020). Tenured, senior, experienced and managerial teachers also participate as mentors (Dixon et al. 2012; Kalipci 2018; Thomas et al. 2015) or as experienced teaching consultants (Meizlish et al. 2018). Their main role is to accompany novice teachers throughout the programme. No prominent information was found on subject areas or disciplines, or on gender issues.

Although the articles present little data on the compulsory nature of programme participation, the situation can be said to be very balanced, with almost 50% stating that participation is compulsory to continue working at the university (Gebru 2016; Meizlish et al. 2018; Reddy et al. 2016; Thomas and Goswami 2013) and the other half saying that it is voluntary (Gartland et al. 2013; Thomas et al. 2015; van den Bos and Brouwer 2014; Kalipci 2018). Only one paper states that it is compulsory for novice teachers and voluntary for all other teachers (Donnelly and McSweeney 2011).

The evaluation mechanisms for these programmes varied widely. The main tool was an online survey or questionnaire that, in many cases, aimed to assess satisfaction with the event or course (Faurer et al. 2014; Fenton-Smith and Torpey 2013; Gartland et al. 2013; Johannes et al. 2013; Meizlish et al. 2018; Thomas and Goswami 2013; van den Bos and Brouwer 2014; Weuffen et al. 2020). These surveys were designed to be administered in a pre- and post-test format in some cases (Gartland et al. 2013; Meizlish et al. 2018; van den Bos and Brouwer 2014). Qualitative instruments were also used to a lesser extent, including focus or discussion groups (Dixon et al. 2012; Donnelly and McSweeney 2011; Fenton-Smith and Torpey 2013; Thomas and Goswami 2013), personal interviews (Aguirre and Faller 2017; Donnelly and McSweeney 2011; Fenton-Smith and Torpey 2013; Gebru 2016; Kalipci 2018; Thomas et al. 2015;), autoethnographic-reflexive discourse (Dixon et al. 2012; Reddy

et al. 2016) and document analysis (Dixon et al. 2012; Fenton-Smith and Torpey 2013; Gebru 2016).

RQ2. Programme objectives and content

Firstly, the objectives of the different programmes described in the articles analysed were reviewed. One of the most reiterated objectives was to improve novice teachers' own competences. The different competences mentioned include the following: (1) skills related to productivity and efficiency (Donnelly 2011; Faurer 2014); (2) aspects linked to disciplinary knowledge and access to resources specific to their area of knowledge (Gartland 2013; Kalipci 2018); (3) pedagogical and didactic skills for design and delivery, and student assessment (Donnelly 2011; Johannes 2013; Kalipci 2018); (4) abilities to foster active and participatory education (van den Bos and Brouwer 2014) and (5) interpersonal and emotional competences (Fenton-Smith 2013).

Other studies emphasise the importance of fostering novice academics' personal and professional growth, promoting their PD (Gebru 2016; Reddy 2016; Thomas et al. 2015) and self-awareness as teachers (Kalipci 2018), and encouraging reflection on their own practice (Donnelly 2011; Gartland 2013). On the other hand, another set of studies focuses on improving the acclimatisation of new academics (Faurer 2014), teaching them about the local context, and aspects of management and administration of the university itself (Fenton-Smith 2013; Meizlish 2018), providing them with basic resources to function, especially in the first semester (Weuffen et al. 2020). Finally, another group of studies explicitly mentions more varied objectives, such as integrating ICT in teaching (Thomas and Goswami 2013) and emphasising the importance of mentoring (Dixon, 2012; Thomas et al., 2015) or networking (Gartland, 2013).

The contents addressed in the different strategies analysed reveal that most initiatives focus on aspects of pedagogy and didactics, highlighting constructivist approaches and cooperative strategies (Gebru 2016), promotion of active learning (van den Bos 2014) or management of different learning paces and attention to diversity (Weuffen 2020). Some strategies also focus on managing difficult classroom situations and inappropriate student behaviour (Beatty 2020; Gartland 2013; Thomas et al. 2015).

Some studies also point to initiatives focusing on student feedback, monitoring and assessment (Gartland 2013; Reddy 2016; van den Bos 2014), with an emphasis in some cases on criterion-referenced assessment (Gebru 2016) and the creation of assessment rubrics (Beatty 2020). Other strategies focus on aspects more related to teacher management, such as curriculum design and evaluation (Thomas and Goswami 2013), or on PD, reflection or action research (Gebru 2016; van den Bos and Brouwer 2014).

Some actions are more disparate and focus on preparing and writing grants and seeking funding, or on community engagement and use of local and community resources (Thomas and Goswami 2013; Thomas et al. 2015), or on learning in virtual teaching-learning environments or Learning Management Systems (Weuffen, 2020). Finally, it is worth mentioning that, while some studies claim that programme content design is based on teachers' own interests (Gartland 2013) or that courses are designed à la carte (Thomas and Goswami 2013), in most studies this aspect is not mentioned.

RQ3. Programme outcomes

To analyse the results of the programmes, we drew on standard methods to assess their effectiveness. For this purpose, we used Kirkpatrick's (1990) and Guskey's models (2000) as key references. Both share a similar model of evaluation, in that they consider the impact of the programme being measured at different levels, in relation to participants' reaction, learning, application/transfer to practice and results. Finally, we chose Kirkpatrick's proposal for two reasons. Firstly, according to Guskey's model, one stage is related to context, that is, organisation support and change. However, the studies analysed did not include university characteristics and attributes. This is a limitation and will be taken up later. Second, Kirkpatrick's model is explicitly mentioned in some of the articles studied (Donnelly and McSweeney 2011; Meizlish et al. 2018). In fact, Johannes et al. (2013) endorse the suitability of this approach to study outcomes, as it is also aligned with similar proposals by other authors (Chalmers and Gardiner 2015; Langer et al. 2011; Stes et al. 2010).

By focusing on the content of the evaluative model, we categorised the impact of a programme into four levels or stages: the first is linked to programme participant satisfaction; the second refers to questions of learning acquired through the programme (knowledge, skills, attitudes); the third applies to transfer and is understood as the possibility of application to practice; and the fourth is reserved for the results in the context (in our case, the classroom or university institution). According to Gairín (2010), despite being more complex, the evaluation of levels three and four provides the most reliable information, as it involves more time and valid indicators. Below, we synthesise the main findings, taking the four levels mentioned as a reference.

With regard to the most basic level of satisfaction, several studies report a positive assessment by the new teachers who took part in PD activities. They consider it a valuable programme (Beatty et al. 2020; Meizlish et al. 2018) that helped them to adapt more quickly to the teaching role (Donnelly and McSweeney 2011), although they recognise that participation is time-consuming (Thomas et al. 2015). One case reports that some additional training might have been lacking in the following areas: how to teach, how to integrate technological resources, discussion sessions with other colleagues and practice (Fenton-Smith and Torpey 2013). Only one paper reports a negative experience in terms of satisfaction (Gebu 2016). The trainers (in some cases mentors) also showed their personal satisfaction with the programme. Their reasons include a sense of pride in helping new teachers grow to be successful, being able to share knowledge and procedures of the discipline (Donnelly and McSweeney 2011), and feeling acknowledged by peers and the institution itself (Kalipci 2017).

In terms of learning (level two), we will also refer to several examples. These include improving teaching styles, preparing teaching materials (Gartland et al. 2013), detecting students' educational needs (Thomas and Goswami 2013) and learning active methodologies (Meizlish et al. 2018; Sadler 2012; van de Bos and Brouwer 2014;). Other learning has to do with an attitudinal issue, such as increased confidence or greater resistance to failure and frustration (Beatty et al. 2020; Donnelly and McSweeney 2011; Gartland et al. 2013;), as well as a changed view of formative assessment of learning (van de Bos and Brouwer, 2014). At this level, as with the previous one, learning from tutors is also reported as helping new teachers to critically reflect on their practice and question their own beliefs (Dixon et al. 2012; Kalipci 2017), even going so far as to recognise that the programme is equally beneficial to both parties.

The methodological issue and its impact on the results deserves specific mention. We would highlight the positive influence that reflective methodology has had on improving teaching skills (Beatty et al. 2020; Dixon et al. 2012; Gartland et al. 2013; Thomas and Goswami 2013), attention to reflection being fundamental for teachers, especially science teachers (Kreber and Castleden 2009). Observation, accompanied by dialogical feedback, has also led to a better understanding of teaching and a greater sense of confidence (Kalipci 2017; Thomas and Goswami 2013; van de Bos and Brouwer 2014), leading to the creation of a community of practice (Beatty et al. 2020; Billot and King, 2017; Dixon et al. 2012; Reddy et al. 2016). On this methodological issue, social mediation (i.e. the role played by other teachers, whether experienced or novice) is positioned as a key element of success in this training process.

For levels three and four, we also found references, albeit a minority, to the programme's impact. Several studies note that changes were made in teaching thanks to the programme (Gartland et al. 2013; Thomas and Goswami 2013). We can then link it to level three of the model, which refers to transfer. As for the results (level four), we find different approaches, with only a few providing contrasting evidence. Thus, Gartland et al.'s (2013) study reports that students were more involved in teaching. However, it was only based on novice teachers' self-perception and would therefore need to be contrasted. Other studies, such as that by Meizlish et al. (2018), use other, more reliable indicators and report that novice teachers participating in the programme receive better ratings as teachers in student surveys (significant differences compared to the control group), in terms of their performance and learning outcomes. Similar results are given by Beatty et al. (2020), where participating teachers have received awards for teaching excellence and also record improvements in university students' academic performance.

Results at this level also focus on other issues related to recruitment as an effective tool for faculty retention (100% in the case of Thomas and Goswami 2013 and Thomas et al. 2015), increased vocation for the profession (van de Bos and Brouwer 2014), the expansion of networking and long-lasting relationships (Faurer et al. 2014; Thomas et al. 2015), and a move towards a Scholarship of Teaching and Learning culture that links research and teaching (Beatty et al. 2020).

Discussion

University faculty PD is a key factor in ensuring quality HE (Houston and Hood 2017). Therefore, catering for faculty, especially in the early stages of the profession, is vital. Induction programmes have become increasingly important (Silander and Stigmar 2018) and can be instrumental in helping novices develop as professionals and acquire university norms and culture. Without such support, there is a risk that junior faculty will not be able to find their place in the academic community, which has an impact on their identity formation (Billot and King, 2017) and thus on the teaching-learning process.

Though not a widespread practice, at least in Europe (European Commission 2017b), there is a diversity of university induction programmes. However, there is not enough empirical evidence on PD policies due to the limited tradition of research in HE. Moreover, there is a demand for studies that include rigorous and systematic evaluation of programme impacts or outcomes (Beach et al. 2016; Walker 2015).

Therefore, through this research, we want to expand the knowledge base on PD actions and programmes delivered by HEIs for new academics in the period 2011–2020. Through a systematic review of the main international educational databases we have tried to answer three key questions: what kind of programmes are used to prepare new academics? What is the content of early-career staff education programmes? What are the main results once education programmes for new academics have been implemented?

This systematic review combines research from a quantitative and qualitative approach, albeit mainly from the latter. Although both approaches provide useful information in terms of evidence, there are too many variables in the programme to allow for causal inferences (Guskey and Sparks, 1996). More proof about their impact on their organisation needs to be gathered and analysed. Whether it is possible to determine if the same results have been obtained with a control group in the selected studies is a question that should be raised. Further research with studies from quasi-experimental methods is needed to provide robust evidence.

The main results reveal heterogeneity both in programme duration and format. Programmes range from eight hours to two years, although year-long programmes predominate. In terms of design, mentoring is foremost, as opposed to other modalities. This result was expected because it is one of the main programmes used in HEIs (Kalipci 2017) and has the greatest impact (Orland-Barak and Wang 2020).

Moreover, this programme is usually combined with other formats, such as workshops, reading articles and watching videos, networking or more informal sessions. In terms of content, didactic–pedagogical aspects are foremost, with a focus on teaching and the classroom (methodology, assessment and climate management, among others), the main objectives being the improvement of teaching skills and, to a lesser extent, reflection on practice itself and assimilation of institutional culture. The very core of PD programmes is aimed at improving academics’ teaching and learning, as well as the quality of university teaching in general. We acknowledge that PD programmes not only cover teaching but also have an effect on other aspects such as career progression (Stes et al 2013). However, university teachers face constraints and challenges with recognition mechanisms for teaching, teaching career pathways and career progression (Hamilton 2019). PD and learning for university teachers “will only be valued when teaching is considered as important as research within HE contexts” (Inamorato et al. 2019, p.50). According to Gibbs (2016), research has gained dominance, is seen as a source of academic prestige and attracts much more investment than teaching. Measuring good teaching is seen as more subjective (Graham 2015) than research contributions. HEIs should therefore consider including teaching performance (and innovative teaching) in academics’ career progression schemes (promotion rules) at universities or by national education authorities. This is one of the biggest obstacles facing the university system.

From the literature, we have seen that there are numerous benefits to conducting an appropriately designed programme for new faculty, in accordance with Kirkpatrick’s (1990) model for programme assessment. As we have seen, the impact has been mainly on the satisfaction and learning levels of both novice and experienced university teachers. The results show that PD activities cater for the needs of novice practitioners at universities across the board. However, there is little evidence of the impact of the results of these programmes on student academic performance, a critical aspect according to Guskey (2000). Therefore,

evidence on student outcomes is still a challenge (Gibbs and Coffey 2004), which raises the following questions: what would be the most suitable procedures for gathering information on students' academic performance? What role does organisational culture play in facilitating or hindering this type of evidence? PD is not a purely individual process, but takes place at the HEI where academics work (Operti 2021). Whether the importance of institutional structures and frameworks could enhance PD programme effectiveness would be a very worthwhile area to explore.

Practical implications and conclusions

This study also encompasses a number of lessons learned, which may be of interest for programme design and content.

a) Programme design

Firstly, it is important to clarify programme objectives based on a prior diagnosis by a team or a supervisor who are aware of novices' needs from the inside (Gebru 2016). We recommend the programme be voluntary, since compulsory attendance can generate a negative attitude among participants (Thomas and Goswami 2013). The academic calendar should also be considered and attempts made to design certain sessions in non-teaching weeks (Beatty et al. 2020). Where there is consensus, however, is on the programme being conceived as a process and not an isolated event (Stirzaker 2004).

One of the most frequently mentioned aspects is the importance of careful mentor selection and training (Aguirre and Faller 2017; Donnelly and McSweeney 2011; Faurer et al. 2014; Gebru 2016; Thomas et al. 2015; van de Bos and Brouwer 2014). Mentors should be good teachers, with a sound reputation in teaching and in stimulating reflection (Donnelly and McSweeney 2011). An in-depth knowledge of the institution and suitable interpersonal skills such as communication, observation and collaboration (Kalipci, 2017), as opposed to years of experience or professional status (Faurer et al. 2014), will contribute to building positive and lasting relationships (Dixon et al. 2012). Some studies point out that mentors should not be recruited from the exact same discipline, but a related one. Moreover, mentor assignment should be flexible so that novice teachers can switch mentors throughout the programme, according to their changing needs (Donnelly and McSweeney 2011). Mentors' roles can be to guide the novice, give feedback on key aspects, encourage them in their work and provide guidance (Kalipci 2017). Incentives should also be given to those involved (especially tutors or mentors) to encourage their continuation on the programme, such as merit recognition for career advancement (Donnelly and McSweeney 2011; Faurer et al. 2014).

Learning occurs in multiple locations and through multiple media, and blending is useful when this occurs over time and across institutions (Reddy et al. 2016). In this sense, e-mentoring could also be a good resource (Donnelly and McSweeney 2011) for fostering relationships within or between universities and for facilitating novice participation (geographical location, time availability, disability).

b) Programme content

The studies pinpoint the importance of focusing on discipline-specific aspects, which requires balancing general and specific teaching and for teachers to be guided in devising strategies appropriate to their specific working environments (Reddy et al. 2016; Sadler 2012). This concurs with other authors who suggest that a ‘one-size-fits-all’ programme may not be effective (Billot and King 2017; Gebru 2018; Thomas and Goswami 2013). Moreover, teaching theory and practice must be aligned, as there could be a risk of no real change in educational practice, despite induction programmes leading to change at the conceptual level. Systematic observation and reflection processes play a key role here (Reddy et al. 2016; van de Bos and Brouwer 2014; Wang et al. 2008).

Furthermore, teacher preparation for university lecturers requires attention and its link with the field of knowledge should not be neglected. In fact, there is evidence that new teachers prefer to relate to their discipline counterparts when deciding how to teach and assess their students (Healey 2000; Huber and Morreale 2002). Having a perception of control and mastery of the discipline makes early-career academics more likely to use active methodologies (Sadler 2012). According to Lindblom-Ylänne et al. (2006), science (‘hard’ disciplines) teachers tend to adopt more teaching-centred approaches than social and humanities (‘soft’ disciplines) teachers, who are oriented towards student learning.

Also, programme content should focus on teaching and not just on research (Gartland et al. 2013; Thomas et al. 2015). New academics focus mainly on their teaching activity and appear not to value the strong links between research activity and teaching (Boyd and Harris 2010). The programme should seek to create a certain commitment from the new teacher to establish links between the two fields (as in the model proposed in the scholarship of teaching and learning approach) and encourage them to publish teaching outcomes at conferences (Beatty et al. 2020).

The review found a lack of awareness of teaching as a career among junior academics (Gartland et al. 2013). Therefore, another content-related issue that needs addressing is the inclusion of issues concerning academic and administrative policy to ensure that the teaching profession is exercised in full. Issues such as the evaluation system, time dedicated to teaching, classroom allocation or preparation of teaching guides are valued by new university teachers (Aguirre and Faller 2017). As well as this political–academic content, the programme should address issues about identity. Many induction programmes focus on ‘doing’ rather than ‘being or becoming’ (Ennals et al. 2015). As noted above, identity and teaching practice are directly connected and linked to socialisation. The design should therefore incorporate training sessions, as well as (formal and informal) activities that enable socialisation and engage the learner with others in a trusting climate devoid of pressure (Beatty et al. 2020; Billot and King 2017).

c) Programme assessment

Progress on this issue is also essential, as programme and impact evaluation provide the chance to improve and adapt to the needs of the changing university landscape. Other systematic reviews of faculty programme evaluation report a lack of comprehensive evaluation models (Ahadi et al. 2021).

The Kirkpatrick model used in this analysis presents four levels of programme outcomes, which may help evaluators identify the most relevant (Frye and Hemmer 2021). However, based on the evidence available, we believe it would be interesting to design the programme with these four levels of evaluation, but also taking into account organisational information and characteristics included in Guskey’s approach (2000). University policies and practices are critical factors that determine the success of any PD effort. Moreover, these proposals could be complemented with Stufflebeam and Zhang’s (2017) flexible CIPP model, oriented to the continuous improvement of the programme, based on content analysis, starting point, process and final product, as well as the factors that drive or limit the programme’s success in each context. Regardless of which model is used, it is important to gather evidence on measures that are meaningful to stakeholders in the evaluation process.

We also strongly believe that these programmes should be designed within the contextual framework of each university (Flores and Day 2006) and country (Chalmers and Gardiner 2015). In this study, the universities where induction programmes have been devised differ in their approach, depending on whether they are more focused on research or teaching, or whether they adopt a mixed model. At universities where research predominates, it will be more challenging, and additional efforts may have to be made to ensure attendance on induction programmes, as teaching may not be priority. The context is also influenced by the country in which the university is located. As mentioned before, some countries have system-wide PD actions targeting junior academics (UK, Ireland, Sri Lanka), whereas others do not have these learning activities for newcomers. Such a diversity of context of PD programmes involves caution when comparing data presented in this research (Bamber, 2008).

Figure 3 provides a summary of the outcomes which have been addressed above. It presents the main elements to be taken into account when implementing a PD programme for early-career academics.

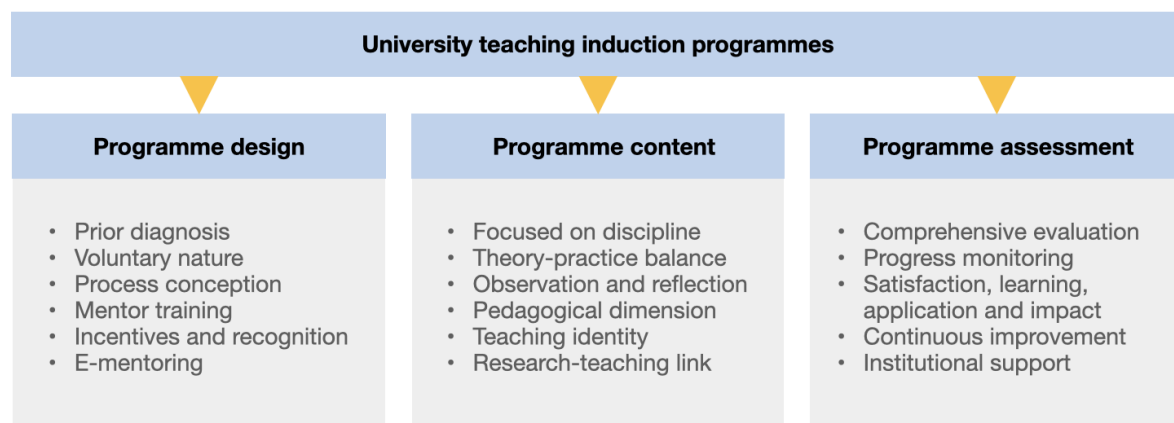


Figure 3. Key elements of university teaching induction programmes for early-career academics

Finally, these programmes are a way of demonstrating universities’ commitment to faculty PD (Donnelly and McSweeney 2011; Thomas and Goswami 2013); however, “they are not a panacea” (Donnelly and McSweeney 2011, p. 271). Significant effort is required on the part of the institution, and it must be integrated as a long-term strategy (Beatty et al. 2020).

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The authors report there are no competing interests to declare.

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