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# The educational development of university teachers: mapping the landscape

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This article presents the results of a scoping review designed to explore the current state of knowledge about the educational development of university teachers. More specifically, the study examined the definitions attributed to educational development, its aims, the factors that foster it and the variables studied in this field. A thematic analysis was conducted on 98 scholarly documents published between 2000 and 2022. The results indicate that the field of educational development is mainly characterized by ideological and political rather than scientific dimensions. Consequently, the focus is on desired changes in educational development, reflecting a high degree of desirability. Furthermore, the results highlight the individualistic nature of the starting point of professional learning process, suggesting that institutional conditions and resources should be adapted to accommodate the diversity of learning trajectories. This study contributes to a comprehensive understanding of the complex landscape surrounding the educational development of university teachers, highlighting the need for nuanced approaches to promote teaching quality and professional development in the context of higher education.

## KEYWORDS

educational development, professional learning, higher education, university teachers, scoping review

## 1 Introduction

As Higher Education institutions strive to enhance the quality of teaching and learning, educational development of university teachers has garnered significant attention. Considered a field of research and practice in and of itself (Frenay et al., 2011), educational development aspires to the rank of academic discipline (Lee and McWilliam, 2008). However Saroyan and Trigwell (2015) concluded that the field “is still nascent and a long way from becoming a fully-fledged discipline” (p. 99). Furthermore, because university teachers are hired foremost for their professional or research expertise within their disciplines (e.g., geography, nursing, history, etc.) there remains a gap concerning their professional expertise and credentials for teaching in Higher Education.

To address this gap, since the 1990s we have witnessed the growth of Teaching and Learning Centers within universities (Gosling, 2009). This trend has led to the popularization of the Scholarship of Teaching and Learning (SoTL) (Tight, 2018), the emergence of journals devoted to research in Higher Education (e.g., *International Journal for Academic Development*, *International Journal of Teaching and Learning in Higher Education*) and the continuously evolving slate of training activities offered to new teachers, some of which have been made compulsory

(Gibbs and Coffrey, 2004; Ödalen et al., 2019). Attempts to guide and support these efforts resulted in numerous studies seeking to conceptualize and explore the various dimensions of educational development.

Educational development herein refers to the efforts aimed at improving teaching and the subsequent learning of students (Ouellet, 2010; Amundsen and Wilson, 2012). Studies on this subject show that factors influencing educational development are numerous, varied, and contextualized. The role of the institution is crucial in determining the actions taken through training opportunities offered to teachers, and the contribution of institutional culture is noteworthy (Knight and Trowler, 2000; Roxå and Mårtensson, 2009; van Lankveld et al., 2017). In this regard, studies focusing on educational programs and training report positive effects on teaching and learning (e.g., Weurlander and Stenfors-Hayes, 2008; Chalmers and Gardiner, 2015; Ödalen et al., 2019). Different modalities are implemented in these trainings, namely inquiry approaches such as the Scholarship of Teaching and Learning (SoTL) (e.g., Hubball et al., 2010; Kelly et al., 2012; Rege Colet and Berthiaume, 2012; Allin, 2014) or self-study (Attard, 2014; Richards and Ressler, 2016), as well as mentoring (Balmer et al., 2011) and student evaluation of teaching (Bovill et al., 2011; Knol et al., 2013), which provide external perspectives on teaching practices. However, these different modalities do not yield the same outcomes, and diversifying educational development modalities could enhance their transformative effects (Kennedy, 2014). Various studies also demonstrate the effects of informal discussions among colleagues on teaching practices (Roxå and Mårtensson, 2009; Thomson and Trigwell, 2018), showcasing the diversity of educational development options. However, engaging in such activities is sometimes insufficient for learning to be transferred into practices (Gayle et al., 2013). Disciplinary affiliation (Lueddeke, 2003; Lindblom-Ylänne et al., 2006; Stes and van Petegem, 2011a; Kálmán et al., 2020), experience (Knight and Trowler, 2000; Huston and Weaver, 2008; Austin and Sorcinelli, 2013; Bergman, 2014; Ödalen et al., 2019), status (Quinlan and Åkerlind, 2000; Roxå et al., 2008; Gautreau, 2011), and personal theories on teaching and learning (Åkerlind, 2003; Roxå and Mårtensson, 2009; Kreber, 2010; Kálmán et al., 2020) are among numerous individual factors interfering in this process.

Given the complexity of educational development and the unpredictability of its outcomes, a scoping review deemed necessary to synthesize the broad spectrum of existing studies and identify research gaps. Thus, our goal was to investigate current trends and practices in educational development of university teachers. More specifically, we aimed to explore the literature to fathom how educational development is defined in scholarly articles, the aims it seeks to achieve, the conditions that foster or hinder educational development success, and the nature of variables included in these studies. By mapping these variables, we sought to contribute to the ongoing discourse on teachers' educational development in Higher Education. Such a review will provide a comprehensive understanding of the current state of research, highlight the diversity of educational development practices, and offer insights into the value of different development initiatives for teachers, thereby guiding future research and policy-making in university teaching development.

## 2 Methods

A scoping review methodology (Arksey and O'Malley, 2003) was used to document and provide a snapshot of the state of knowledge on the educational development of university teachers. The scoping review is a useful way of mapping, summarizing, and disseminating research findings. Unlike a systematic review, a scoping review is not intended to be exhaustive, but rather to provide an overview of a topic in order to identify themes and trends. Using Arksey and O'Malley's (2003) framework, we carried out this scoping review in five key steps: (1) specify the research questions, (2) identify relevant literature, (3) select studies, (4) map out the data, and (5) summarize, synthesize, and report the results. The research questions that guided our study were as follows: How is educational development of university teachers defined in the literature? What are the aims of educational development? What conditions promote or inhibit the success of educational development? What types of variables are examined in studies on the educational development of university teachers?

To identify relevant literature, we searched for empirical and theoretical texts relating to educational development of university teachers using specific keywords in five databases (Table 1). Criteria used for selection were restricted to peer-reviewed articles published in French and English between 2010 and 2022. However, a snowballing technique was used to identify relevant documents cited by selected papers which were published before, or during, the time period initially covered by our review. Texts concerning teachers in clinical settings were excluded from our search since teaching conditions in such settings are known to differ greatly from the university settings.

To map out the data and provide a wide-angle view of the subject, we used a thematic analysis approach (Braun and Clarke, 2006, 2022; Paillé and Mucchielli, 2016) which started by VJ (1) familiarizing with the data through reading the selected articles. Using NVivo 12, the following steps consisted of (2) extracting and coding data according to initial research questions, (3) generating initial and emerging themes, and (4) refining, defining, and naming themes. After (5) mapping out the data in a table, (6) VJ shared and discussed the results with MB until reaching agreement on themes and coded data. The next step conducted by VJ consisted of (7) summarizing, synthesizing, and reporting the results. At last, the data analysis phase was concluded thorough (8) reviewing and validating the results with MB and NF.

## 3 Results

The selection process resulted in 98 documents, including 12 theoretical texts, 8 literature reviews, 74 articles presenting the results of empirical research and 4 doctoral theses. Of these, 29 were published between 2000 and 2010, 39 between 2011 and 2015 and 30 between 2016 and 2022. In terms of empirical research, we note an over-representation of research from English-speaking geographical areas ( $n = 39$ ), compared with Scandinavian ( $n = 14$ ), French-speaking ( $n = 12$ ), other European (Germany, Netherlands, etc.) ( $n = 10$ ) or multiple ( $n = 3$ ) geographical areas. As for the methodologies employed, 42 studies used a qualitative design, 21

TABLE 1 Keywords and criteria used for the selection of relevant literature.

Keywords	Educational development
	AND teacher OR educator OR faculty OR academic teacher
	AND higher education OR university
	//
	développement pédagogique
	ET enseignant OU formateur
	ET enseignement supérieur OU université
Databases	CAIRN
	ERIC
	ProQuest
	Education Source
	Google Scholar
Inclusion criteria	Document type: peer-reviewed articles
	Languages: French and English
	Time period: 2010-2022
Exclusion criteria	Educational development of teachers in clinical settings

used a quantitative design and 15 used a mixed methodology. The studies are composed of samples of varying sizes: 31 studies have fewer than 25 participants, 26 studies have between 25 and 100 participants, 15 studies have between 101 and 500, and 6 studies were composed of more than 500 participants.

It's worth mentioning that when searching for relevant texts, we were confronted with numerous texts recounting experiences, such as educational inquiry for professional development purposes or evaluations of various initiatives related to the educational development of university teachers. While the primary purpose of a scoping review is not to assess the quality of studies (Rumrill et al., 2010), we noticed varying degrees of quality in texts that could have met the established inclusion criteria (peer-reviewed and relevant to the topic). However, despite the conceptual and methodological rigor of some of them, we have given priority to empirical studies, even if the boundary between text types can sometimes be confusing.

### 3.1 Definitions given to the educational development of university teachers

There is no consensus on how to name the phenomenon of learning to teach in a university context, and like others before us (Stes and van Petegem, 2011a; Amundsen and Wilson, 2012; Saroyan and Trigwell, 2015), we note a variety of terminologies to refer to it, both in English and in French. Among the terms most frequently used in English are *faculty development*, *academic development*, *educational development*, *instructional development*, *professional development*, *continuing professional*

*development*, *professional learning* and *professional growth*. While several terms are used synonymously by authors (Amundsen and Wilson, 2012; Mårtensson, 2014), others distinguish between the terms (Frenay et al., 2011; Stes and van Petegem, 2011a; Demougeot-Lebel and Lison, 2022). Some even go so far as to say that professional development and its translation in French (*développement professionnel*) do not quite refer to the same thing (Demougeot-Lebel and Lison, 2022), or add new synonyms by saying, for example, that “the terms faculty development and Scholarship of Teaching and Learning are interchangeable” (Bridges, 2012, p. 3). This lack of definition greatly contributes to the confusion and makes consensus difficult.

There seems to be a more perceptible distinction whether the term is “development” or “learning.” On the one hand, it seems that the term “development” can be confusing and lends itself to a variety of interpretations. It is likely to be interpreted as an insufficiency, or as a gap to be filled (Nicholls, 2005; van Schalkwyk et al., 2015), where gaps are usually determined by external mechanisms such as standards or administrators (Nicholls, 2005). As a result, the use of the term “development” may encounter resistance on the ground (Thomas et al., 2011). However, in her study of variations in the meanings given to the development by university teachers, Åkerlind (2003) shows that the subjects interviewed tended to perceive development as the growth of something. It would be therefore essentially a question of perspective, between a gap to be filled or a gain to be achieved. On the other hand, the definitions given to development (professional, pedagogical, etc.) tend to adopt an institutional point of view, meaning that the focus is more on the activities and resources offered to support teachers in improving their teaching practice and/or student learning (King, 2004; Steinert et al., 2006; Bridges, 2012; Mårtensson, 2014; Taylor and Znajda, 2015). By directing attention to the supply aspect of the equation, important parameters of the developmental process are overlooked, such as the value of experience, reflection, interaction, and feedback, as well as the influence of contexts, professional identity, and personal agency throughout this process. Following this, many researchers prefer “not to use the term “development” [...] so as not to undermine the role and agency of academics in the development process” (Saroyan and Trigwell, 2015, p. 93). While some definitions that use the notion of development still consider the individual perspective (e.g., Nevgi and Löfström, 2015; Demougeot-Lebel and Lison, 2022), many will instead use the concept of professional learning (Knight et al., 2006; Webster-Wright, 2009; Saroyan and Trigwell, 2015; van Schalkwyk et al., 2015; Ambler et al., 2020), taking greater account of the interactions between structural and individual dimensions. Thus, we identify a tendency to position teachers as learners in a given context, and in this perspective, some studies mobilize conceptual frameworks related to learning, and more specifically to theories related to adult learning (Bridges, 2012; Gayle et al., 2013; Phillipson et al., 2018; Tinnell et al., 2019).

More generally, it appears that the notions used to designate the learning process in higher education are poorly defined and conceptualized in the scholarly work in our sample. Educational development and related terms are therefore frequently used in a common-sense perspective, with no specific theoretical

underpinnings. When concepts are defined, the foundations of the proposed definitions appear to be weak and tend to be based mainly on the authors' personal reflections. Research by Åkerlind (2003) stands out for having empirically probed the meanings attributed to growth and development by university teachers (perceived as a gain). As indicated by Webster-Wright (2009), a study conducted by Friedman and Phillips (2004), who also investigated definitions attributed to continuing professional development among practicing professionals, revealed three categories of perceived meanings: (1) updating, (2) training, and (3) from an institutional point of view, regulating and structuring the profession. Such variation in meanings given to educational development, along with its growing popularity both in practice and research, raises the question of its purposes in the university context.

### 3.2 Aims of educational development in university

Many of the definitions presented in the articles identify teaching improvement as the goal of educational development, ultimately leading to improving student learning (Weurlander and Stenfors-Hayes, 2008; Sutherland, 2018). This argument greatly limits the scope for debate, and the question it raises is why these improvements are now considered a "necessity" (Saroyan and Trigwell, 2015). The justifications found in this sense are at cultural, contextual, pedagogical and individual levels, allowing us to identify external and internal forces that shape the aims of educational development.

First, the need for educational development is largely justified by the contextual and cultural changes in which academic institutions are evolving, and which are having an impact on academic cultures. Neoliberal logic and the application of New Public Management principles are pointed by many to explain the changes universities are undergoing (Ylijoki and Henriksson, 2017; McCune, 2019; Laiho et al., 2020). These external forces weighing on universities inevitably generate cultural changes within academic institutions. As Leibowitz (2014) points out "the focus and purpose of academic development is influenced, if not determined, by the policy and cultural environment in which it functions" (p. 358). This can be seen, for example, in economic pressures and constraints (Ferman, 2002; Åkerlind, 2005), a climate of competitiveness (Ylijoki and Ursin, 2013; McCune, 2019; Kálmán et al., 2020), the increasing influence of governing bodies and the market in university institutional policies (Mathieson, 2011; Skelton, 2012) and by increased accountability of academic and institutional performance (Åkerlind, 2005; Smith, 2017). This frames what is expected of higher education, namely quality education designed to prepare competent students for a competitive workplace (Skelton, 2012; Laiho et al., 2020). In this perspective, researchers are observing a rise in standards linked to the quality of teaching (Ferman, 2002; Shaw, 2018) as well as a desire to professionalize higher education (Lueddeke, 2003; Skelton, 2012; Austin and Sorcinelli, 2013; Albero, 2015; Bailly et al., 2015; Shaw, 2018; Ödalen et al., 2019), justified in particular

by a lack of initial teacher training (Ferman, 2002; Amundsen and Wilson, 2012; Leibowitz, 2014) and a lack of preparation for teaching (Steinert et al., 2006; Demougeot-Lebel and Perret, 2011a; Taylor and Znajda, 2015; Ménard et al., 2020). We also note that educational development can be presented as a political injunction, particularly in articles from the UK (King, 2004; Nicholls, 2005; Knight et al., 2006; Pickering, 2006). Following this, educational development can be encouraged with the aim of supporting institutional change in higher education toward a particular worldview (Steinert et al., 2006; O'Sullivan and Irby, 2011; McQuiggan, 2012; Austin and Sorcinelli, 2013).

In addition to the massification of higher education (Ferman, 2002; Austin and Sorcinelli, 2013) and technological advances (Gautreau, 2011; McQuiggan, 2012) that generate pressure on university teachers, pedagogical arguments are also raised to legitimize the need for educational development. Among the desired pedagogical changes, we find the adoption of a student-centered approach (Åkerlind, 2007; Skelton, 2012; Jääskelä et al., 2017), active methods (Phillipson et al., 2018; Vermote et al., 2020), evidence-based teaching practices (Webster-Wright, 2009; Gibbs, 2013; Tinnell et al., 2019) and a scholarly approach to teaching (Roxå and Mårtensson, 2009; Thomas et al., 2011). The adoption of a student-centered approach appears to be the most frequently studied desired change, particularly in relation to the effects of teacher training. To achieve this, many studies have used the Approaches to Teaching Inventory (ATI) questionnaire developed by Prosser and Trigwell (1999) (e.g., Lueddeke, 2003; Gibbs and Coffrey, 2004; Norton et al., 2005; Lindblom-Ylänne et al., 2006; Postareff et al., 2007; Hanbury et al., 2008; Light et al., 2009; McKenna et al., 2009; Stes and van Petegem, 2011b; Lameul et al., 2014; Nevgi and Löfström, 2015; Taylor and Znajda, 2015; Ödalen et al., 2019).

Finally, on an individual level, continuous learning is generally expected across all professions (Webster-Wright, 2009), and university teachers generally see it as a responsibility (van Schalkwyk et al., 2015). From this perspective, Ambler et al. (2020) conclude that "professional learning is intrinsic to being an academic" (p. 845). The motivations underlying university teachers' professional learning may differ from one individual to another. In fact, Åkerlind (2005) has identified six different motivations that may be sought when university academics consciously engage in such a process: (1) becoming more productive and efficient; (2) achieving academic credibility and recognition; (3) ongoing improvements in the quality and effectiveness; (4) ongoing accumulation of personal knowledge and skills; (5) increasing depth and sophistication of understanding in the field; and (6) contributing to disciplinary growth or social change. We also note various areas in which teachers might want to evolve, namely the acquisition of comfort and confidence in teaching, followed by mastery of teaching and learning content, teaching materials and/or teaching strategies, and student learning (Åkerlind, 2003; Gayle et al., 2013; Korhonen and Törmä, 2016). Kugel (1993) established a close relationship between these areas of development and the experience of university teachers, presenting a rather linear process that evolves with experience. Insofar as individuals are experts in the discipline being taught and begin their careers as novice teachers (Pickering, 2006), the development of teaching confidence

is thus frequently associated with novice teachers (Sadler, 2013; Mahon et al., 2022). This area of development can also be seen as a prerequisite for the development of pedagogical skills (Sadler, 2013). However, Gayle et al. (2013) suggest that this is more of a circular process, linked to variations in teaching experience (Åkerlind, 2003). Indeed, the introduction of something new (content, practice, context) is likely to generate uncertainty and lead to a loss of confidence among teachers (McNaughton and Billot, 2016), showing that this sense of discomfort is not exclusive to novices and can punctuate the career path.

### 3.3 Factors that foster educational development

Because the educational development of university teachers is highly contextualized (Nicholls, 2005; Austin and Sorcinelli, 2013; Taylor and Znajda, 2015; Laiho et al., 2020), institutional culture, practices and norms emerge as an important factor in the process. Conflicting expectations between research and teaching are often raised as a barrier to educational development (King, 2004; Nicholls, 2005; Light et al., 2009; Stes and van Petegem, 2011a; Rege Colet and Berthiaume, 2012). Since research enjoys a high profile, particularly in terms of institutional influence and professional recognition (Light et al., 2009; McCune, 2019), teachers may be inclined to focus their efforts on research rather than teaching considering that excellent teaching “would not lead to promotion or tenure” (Sutherland, 2017, p. 14). Thus, valuing teaching and supporting teaching improvement within an institution is likely to stimulate teachers’ engagement in teaching (Gibbs and Coffrey, 2004; Hanbury et al., 2008; Stes and van Petegem, 2011a; Jääskelä et al., 2017; van Lankveld et al., 2017). Valuing teaching in institutional policies is therefore seen as a facilitating condition. Consequently, a culture of support and recognition of teaching, as well as the allocation of time and resources to teachers’ educational development holds great importance (King, 2004; Mårtensson, 2014; Taylor and Znajda, 2015; van Schalkwyk et al., 2015; Jääskelä et al., 2017; Kálmán et al., 2020).

The development of teacher identity would contribute significantly to learning to teach (Warhurst, 2006; McAlpine et al., 2014), as would agentivity (Skelton, 2012), that is “how [they] construct themselves as active subjects” (Nevgi and Löfström, 2015, p. 54). In this sense, agency, commitment, and motivation to evolve in one’s role as a teacher would play a decisive role in educational development (McKenna et al., 2009; Mårtensson et al., 2011; McQuiggan, 2012; Gayle et al., 2013), and significant resistance can arise when there are insufficient reasons to motivate teaching improvement (Gayle et al., 2013). For example, some may not have aspired to teach (Nevgi and Löfström, 2015; Ylijoki and Henriksson, 2017) and in this case the desire to improve as a teacher may not be a priority. Motivations for change in the teaching role can be external, interpersonal, or personal in nature (Knight et al., 2006). In terms of motivations external to the individual, we find factors related to working conditions and context, such as salary, reward systems, career advancement, promotions, opportunities, policy compliance, etc. (Nicholls, 2005;

Knight et al., 2006; Gautreau, 2011; Sutherland, 2017). Regarding interpersonal motivations, these essentially involve exchanging and sharing experiences with other colleagues, and sowing interest in issues related to teaching and learning (Knight et al., 2006; Taylor and Znajda, 2015). Interactions with students are also important for stimulating personal motivation to improve (Pickering, 2006; Trede et al., 2012; Korhonen and Törmä, 2016; McNaughton and Billot, 2016; van Lankveld et al., 2017; Walder, 2017; Laiho et al., 2020) or constraining it, by having passive behaviors, for example (Stes and van Petegem, 2011a; Thomas et al., 2011). As for personal motivations, they are closely correlated with personal interests in teaching (curiosity, passion, etc.), personal values (Kreber, 2010; Remmik et al., 2011; Lameul et al., 2014; Warr Pedersen, 2017; McCune, 2019) and felt needs in relation to teaching and learning (Knight et al., 2006; McAlpine et al., 2009; Gayle et al., 2013; Kiffer, 2016; Thomas et al., 2016). For many, it is thus preferable that the supply of activities supporting educational development be consistent with these needs to stimulate teacher motivation and ultimately, learning (Nicholls, 2005; Gautreau, 2011; Saroyan and Trigwell, 2015; Taylor and Znajda, 2015).

In addition to being consistent with perceived needs, volition also emerges as a significant condition for professional learning and the evolution of teaching practices (Knight and Trowler, 2000; Trowler and Cooper, 2002; Mälkki and Lindblom-Ylänne, 2012; Gayle et al., 2013; Saroyan and Trigwell, 2015; Jääskelä et al., 2017; McGrath, 2017; Tinnell et al., 2019). Although educational development modalities can be informal or formal and learning may be intentional or unintentional (Knight et al., 2006), when modalities are imposed, various consequences are likely to arise. According to Knight and Trowler (2000), imposition accentuates the risk of establishing a culture of conformity, in stark contrast to the culture of academic freedom (Jääskelä et al., 2017). Consequently, imposed educational development modalities can give rise to negative feelings in individuals (Knight and Trowler, 2000), decrease their motivation (Mälkki and Lindblom-Ylänne, 2012) and constrain changes in pedagogical practices (Mälkki and Lindblom-Ylänne, 2012; Jääskelä et al., 2017; McGrath, 2017; Tinnell et al., 2019; Kálmán et al., 2020). Moreover, it is generally accepted that initiatives that take place over time are more likely to have a significant impact (Stes et al., 2010; Saroyan and Trigwell, 2015; Ménard et al., 2020). Little research has focused on the long-term effects of educational development activities for university teachers. However, Tinnell et al. (2019) observe that it is common for the effects of an initiative to fade at the end of an educational development experience, although some acquired strategies persist over time.

The act of teaching is generally connected to the emergence of needs. In this sense, the role of action in learning to teach holds significance (Phillipson et al., 2018). Some researchers also note that teaching experience often precedes the need to develop (Åkerlind, 2003; Korhonen and Törmä, 2016), and that this practical experience would facilitate the integration of new learning (Ödalen et al., 2019). Moreover, introducing changes to teaching practices and challenging comfort and inertia would in itself be generators of learning (McAlpine et al., 2009; Amundsen and Wilson, 2012). In this regard, it is interesting to note that experimenting with new teaching methods is the most frequent

development activity among university teachers interviewed in the study by Kálmán et al. (2020). Critical incidents are also frequently evoked as triggers for professional learning. Critical incidents (Knight et al., 2006; Bridges, 2012; Wagenheim, 2014) could be defined by a destabilizing moment in the action, such as a confronting situation with students (Trautwein, 2018), which disrupts existing beliefs (Pickering, 2006) and triggers various emotions (Gobeil-Proulx et al., 2018). The role of discomfort (Trede et al., 2012) and the emotions experienced as a result of action would therefore have a non-negligible role in educational development (Sadler, 2013; Wagenheim, 2014).

The value of reflection about and during action for professional learning is widely recognized (Mälkki and Lindblom-Ylänne, 2012; Wagenheim, 2014; Nevgi and Löfström, 2015; Saroyan and Trigwell, 2015). In doing so, the deployment of reflexive processes is crucial for making sense of experiences, facilitating learning, and evolving within the profession (McQuiggan, 2012; Wagenheim, 2014). However, it is important to recognize that reflection can be influenced by teachers' social and professional contexts, and thus orient the process toward existing norms and expectations. In this vein, in addition to a willingness to look critically at one's own teaching, the adoption of a critical attitude toward the teaching traditions of one's faculty or discipline is an important condition for critical reflection (Kreber, 2010; Nevgi and Löfström, 2015), as is the presence of spaces and opportunities that enable it to take place (Mathieson, 2011). While some discuss self-reflection (Phillipson et al., 2018), which can notably be supported through reflective journaling (McQuiggan, 2012; Nevgi and Löfström, 2015) or by engaging in a SoTL process (Bridges, 2012; Gayle et al., 2013), reflection would be deeper when facilitated by a peer (Mårtensson, 2014). More specifically, dialogue and collaborative reflection are said to be powerful (McKenna et al., 2009) as they enable different points of view to be shared, thereby fostering awareness and prompting questioning of the implicit conceptions that influence action (Mathieson, 2011). Critical reflection, engaged with peers and informed by theories of teaching and learning, is more likely to lead to reconceptualization and transformation of practices (Warhurst, 2006).

As well as being conducive to reflection, several studies show the contribution of interactions and collaboration in bringing about effective changes in the teaching practices of university teachers (Knight and Trowler, 2000; Ferman, 2002; Mathieson, 2011; Trede et al., 2012). In this regard, conversations with colleagues, whether they occur as part of a formal activity or spontaneously, have been identified as important in the educational development process (King, 2004; Knight et al., 2006; Roxå and Mårtensson, 2009; Bridges, 2012; Thomson, 2013; Thomson and Trigwell, 2018; Tinnell et al., 2019; Kálmán et al., 2020; Ménard et al., 2020). The autonomy at the source of these exchanges would serve as a strong incentive, whether in selecting colleagues for discussions, determining topics, choosing locations, deciding on the timing, and setting the duration of conversations place (Thomson and Trigwell, 2018). Increased opportunities to meet with colleagues is likely to foster educational development (van Lankveld et al., 2017), in addition to reducing the loneliness and isolation sometimes associated with the role of university teacher (Gayle et al., 2013;

van Waes et al., 2015). However, power imbalances between colleagues can be a barrier to collegial relationships (Warhurst, 2006; van Waes et al., 2015), and particularly between novices and experienced teachers. Conversely, it appears that the development of relationships and the establishment of trust over time contribute to reducing power dynamics within those relationships. Value conflicts and lack of consensus can also have a negative impact on these relationships (Stes and van Petegem, 2011a; McNaughton and Billot, 2016). Ultimately, an institutional culture that encourages and promotes individual merit and reward systems can erode collegiality, underscoring the importance of fostering supportive and collaborative professional cultures (van Waes et al., 2015; Kálmán et al., 2020).

Finally, feedback is identified as a tool of choice to support the educational development of university teachers (Knol et al., 2013). Because of a prevailing solitary teaching culture, feedback from peers appears to occur less frequently (Taylor and Znajda, 2015; Korhonen and Törmä, 2016). Nevertheless, peer feedback is said to have great formative potential, particularly for identifying strengths and weaknesses and supporting reflection on one's practices (Gobeil-Proulx et al., 2018). As students are the primary beneficiaries of the teaching experience, student feedback tends to be the most common form of feedback. According to Korhonen and Törmä (2016), student feedback is likely to support the development of self-awareness in teaching and inspire new ideas. Most universities use student feedback questionnaires to provide feedback to teachers. Nevertheless, these questionnaires are intended to aid in the educational development of teachers but also to monitor and assess teaching performance which may factor into decisions regarding tenure, contract renewal, and promotions (Kember et al., 2002). From this perspective, the purposes of this tool can become muddled, with potential confusion between its role in control and its role in development (Rege Colet and Berthiaume, 2012), thereby limiting its impact on educational development (Kember et al., 2002).

### 3.4 Significant variables in educational development

Various variables were studied in relation to the educational development of university teachers. Experience and disciplinary affiliation were the most significant variables. Variables such as status, gender, and generation (or age) were much less significant but there are several indications that suggest these might be worth considering, particularly concerning the status of the teacher. Indeed, the significance of the status might be especially noteworthy considering the changing landscape of higher education. Like Dawson et al. (2019), we observe that there are more and more teaching-only positions and contract teachers being hired to teach university courses. While Dawson et al. (2019) show that perceptions of the institution's teaching culture vary according to status, others observe how obtaining a tenured position greatly influences the development of a teaching identity (Nevgi and Löfström, 2015; Korhonen and Törmä, 2016), among other things

“because of the lack of professional learning experiences provided to sessional staff” (Warr Pedersen, 2017, p. 689). Moreover, tenure-track faculty are more involved in decision-making processes than their contractual colleagues (Dawson et al., 2019), so it is more likely that the latter’s needs and preferences are ignored.

As for the effect of gender, a study exploring the career development of new academics by Ylijoki and Henriksson (2017) shows that the difficulty of balancing teaching and research, where teaching takes up a significant proportion of working time, hindering career advancement, was experienced exclusively by women in the sample. Regarding teaching methods, Norton et al. (2005) observed that women were more oriented toward facilitating learning and men toward transmitting knowledge. Concerning the methods used by teachers for developing their pedagogical skills, Kiffer (2016) shows that men and women in the same discipline may not necessarily have the same preferences. For example, women in the science and technology discipline would have greater recourse to self-teaching, while men belonging to the same discipline would favor learning by observation-imitation. In a similar vein, Kálmán et al. (2020) point out that male teachers in the natural sciences are more reluctant to engage in professional development. As for the generational variable, so-called the Y generation, a study conducted by Demougeot-Lebel (2014) shows that generational affiliation has very little effect on pedagogical practices while, in his study, Kiffer (2018) hypothesizes the influence of this variable in explaining the tendency of novice teachers to adopt autonomous development modalities.

The influence of university teachers’ experience has been further studied and emerges as an important variable to consider in the educational development process. Depending on the different phases of their career, the needs, challenges encountered, and above all, the meaning given to different aspects of their work may vary (Thomson and Trigwell, 2018). According to Demougeot-Lebel and Perret (2011b), however, despite experience, each individual articulates a range of diverse needs associated with the desire to gain a better understanding of students, to foster easier interactions with them or to overcome a certain sense of discomfort. Some studies have specifically selected their participants based on their experience in university teaching (e.g., Nicholls, 2005; Stes and van Petegem, 2011a; Wagenheim, 2014; Bailly et al., 2015; Kiffer, 2016; McCune, 2019; Mahon et al., 2022), while in other studies, it was considered as an independent variable (e.g., Lueddeke, 2003; Mälkki and Lindblom-Ylänne, 2012; Korhonen and Törmä, 2016; Ödalen et al., 2019; Kálmán et al., 2020). Among studies focusing on a specific level of experience, we find that new teachers attract more attention than experienced teachers. This is primarily because the former are inexperienced in the profession, and that training is frequently provided for them to enhance their skills in the profession. While studies on the effects of teacher training activities may not extensively address teacher experience, it is worth noting that these activities are primarily designed for new teachers (Pickering, 2006; Ödalen et al., 2019). Note that there seems to be no consensus on the number of years of experience that determines what a novice teacher refers to: <7 years (Stes and van Petegem, 2011b; van Waes et al., 2015), <5 years (Simmons, 2011; Thomas et al., 2011; Wagenheim, 2014), <4 years (Kiffer, 2016), <3 years (Norton et al., 2005; Ménard et al., 2020), <2 years (Warhurst,

2006). As for Bailly et al. (2015), novice teachers are not determined by the number of years of experience.

Studies that have focused on novice teachers have therefore often sought to determine the effects of training provided, and particularly on the evolution of conceptions likely to operate within the framework of such training (Gibbs and Coffrey, 2004; Light et al., 2009; Demougeot-Lebel and Perret, 2010; Stes and van Petegem, 2011a; Bailly et al., 2015; Taylor and Znajda, 2015; Ménard et al., 2020), and to a lesser extent, on the development of a sense of comfort in teaching (Sadler, 2013; Mahon et al., 2022). Researchers have put forward a variety of explanations as to why teachers differ according to their teaching experience. The social context of higher education is particularly important to consider in relation to new teachers, given that this is a new professional environment and social practice for them, involving new roles to adopt (Simmons, 2011; Trautwein, 2018). In so doing, isolation and insecurity may be greater at this stage of the career (Remmik et al., 2011; Simmons, 2011; Taylor and Znajda, 2015). The anxiety felt at the start of a career could be caused by the gap between what new teachers feel they can do, what they should be able to do and how they wish to develop (Nicholls, 2005; Remmik et al., 2011). In addition, the diversity of roles (Remmik et al., 2011; Thomas et al., 2011) and the fragmentation of identity observed in novices (Simmons, 2011) can present further challenges. In this way, new teachers’ participation in teacher training would facilitate their entry into professional life, notably by expanding their networks and acquiring a broader understanding of teaching (Remmik et al., 2011; Mahon et al., 2022). As for early-career teachers’ relationship with institutional culture, Knight and Trowler (2000) note that novice teachers are more likely to be sensitive to recurrent values, attitudes, and practices than their more experienced colleagues, for whom these elements are taken for granted. For their part, Kálmán et al. (2020) found that university lecturers with less teaching experience and in fixed-term positions were more or less aware of their institution’s professional culture.

Since a university teacher is first and foremost an expert in his or her discipline, this is the starting point for developing pedagogical skills and a teacher identity (Nicholls, 2005; Pickering, 2006; Winberg, 2008; Remmik et al., 2011; Amundsen and Wilson, 2012; Trede et al., 2012; Gayle et al., 2013; Korhonen and Törmä, 2016). In this way, disciplinary affiliation emerges as a determining variable in educational development. Firstly, it is likely to influence motivation to teach. In research by Nicholls (2005), a considerably larger proportion of new teachers in the natural sciences perceived teaching as a necessity rather than a voluntary choice. Secondly, the nature of disciplinary knowledge, like the culture associated with it, would influence teaching methods and the type of pedagogical innovations experienced by teachers (Trowler and Cooper, 2002; Norton et al., 2005; Pickering, 2006; Kreber, 2010; Mälkki and Lindblom-Ylänne, 2012; Walder, 2017), but also the educational development practices favored by them (Kiffer, 2016). Teachers familiar with methodologies from the social sciences may find it easier to engage in development projects that align with a pedagogical research approach, such as SoTL, compared to their counterparts in the natural sciences (Kálmán et al., 2020). Furthermore, except for Ménard et al. (2020) who reported no significant variation, many studies recognize

disciplinary affiliation as a factor influencing teachers' conceptions of teaching and learning (Lueddeke, 2003; Lindblom-Ylänne et al., 2006; Demougeot-Lebel and Perret, 2010; Kálmán et al., 2020). Teachers belonging to the natural sciences tend to be more focused on content transmission and teaching, whereas those in the humanities tend to focus more on fostering active student learning (Wegner and Nückles, 2015). In view of the specificities that emerge according to disciplinary affiliation, it is suggested that disciplinary diversity within educational development activities would enhance learning opportunities and broaden teachers' pedagogical practices (King, 2004; Warhurst, 2006; Remmik et al., 2011; Taylor and Znajda, 2015; van Lankveld et al., 2017). Winberg (2008) suggests that to strengthen interdisciplinary collaboration, individuals must recognize the complexity of their different ways of knowing and remain open to the potential of both generic and discipline-specific forms of teaching and learning.

## 4 Discussion and conclusion

While conducting the literature search, we encountered numerous texts that shared common features between formal educational research and studies within the realm of Scholarship of Teaching and Learning (SoTL). However, we excluded findings from SoTL-type research as it is conceived of as an educational development strategy designed to improve teaching and learning (Geertsema, 2016) within a specific context, with a focus on individual classrooms or teachers' experiences (Woodhouse, 2010). Regarding the use of SoTL as a modality for educational development, it seems that its potential diminishes when the emphasis is placed on generating pedagogical knowledge (Trigwell and Shale, 2004) or publishing for career advancement (Geertsema, 2016). Needless to say that the role and competencies of an educational researcher differ from those of a domain-expert teacher doing pedagogical research (Case, 2015).

Given that the growing popularity of SoTL is frequently associated with a desire to value teaching in a context where research may be more prestigious, it is important to examine the tension observed between teaching and research and its relationship with educational development. Research activities are often pointed out as an obstacle to educational development, and the competitive context in which universities currently find themselves places priority on research productivity and publications. In this context, it is surprising to see so much attention paid to the role of teacher when it comes to professional development, which seems somehow politically charged (Leibowitz, 2014). We therefore believe that an educational development focus potentially contributes to a fragmentation of the roles traditionally occupied by academics, insofar as educational development "often failed to attend to these other aspects of academic work and how they might complement or disrupt teaching" (McAlpine et al., 2009, p. 274). Despite the growth of teaching academics positions (teaching-only) (Rogers and Swain, 2022), professors remain the most common position within universities, involving research, teaching as well as university and community service. To this end, it might be favorable to consider a more holistic approach to academics' development (Sutherland, 2018).

Although the relationship between teaching and scientific research may be complex and not entirely obvious (Hattie and Marsh, 1996), we can highlight certain connections that may bolster motivation for teaching. On the one hand, the dissemination and transmission of knowledge is an integral part of the research process, of which teaching represents one means. Albero (2015) argues that this moment of transmission is a source of passion toward teaching for many, as they see it as a way of passing on the desire to know and learn, to study and understand, to question and debate. On the other hand, research contributes to the updating of constantly evolving content, just as contact with students via teaching keeps teachers up to date with students' concerns, ideas, and contemporary trends. In view of the effects of personal motivations and interactions on educational development, the consideration of teaching and research as competitive roles deserves some thought. If we look at the situation in reverse, it's worth noting that the introduction of the social utility of universities, such as to prepare competent students for a competitive market, also orients the production of knowledge that takes place in universities, which contravenes the fundamental principles of the scientific approach, notably that of being free from economic or ideological pressures, even if they may be implicit. In this respect, we found limited problematizations of educational development. Often presented as a necessity, critical reflection on the subject seems weak. While cultural and contextual changes in universities are mentioned (massification, neoliberal logic, New Public Management, etc.), their effects on university teaching are at best barely touched upon. Although the interaction of contexts and individuals is frequently recognized when investigating educational development processes, most studies tend to focus on individuals, evacuating the contexts of their evolution (O'Sullivan and Irby, 2011).

Increased competitiveness and publication requirements, ever larger class sizes, accountability, administrative tasks that take up more and more space, etc. represent conditions that are certainly unfavorable to providing quality teaching, putting teaching as performance and teaching as process in tension (Roxå and Mårtensson, 2009; Gibbs, 2013). There's no denying that the pressures on academics are enormous, and psychological distress is increasingly being observed among this population (Berliner, 2017). Indeed, many academics struggle to find a work-life balance (Bartlett et al., 2021; Woolston, 2021), which can lead "to impair faculty personal and professional competencies, reduce their productivity, and increase the experience of burnout" (Sabagh, 2019, p. 2). Yet these structural constraints that weigh heavily on individuals are placed under individual responsibility, accompanied by the pretext of a lack of preparedness to teach. This phenomenon represents a fundamental characteristic of neoliberal logic, where individuals are called upon to become entrepreneurs of their own existence (Servage, 2009), and manageable workers simultaneously (Morley, 2003). This highly constraining context also seems to lead to important ideological orientations to what is and isn't desirable in teaching (Gibbs, 2013).

Pedagogically, the trend is clearly toward student-centered approaches, but in a rather dogmatic way: "student-centered good, teacher-centered bad" (MacFarlane, 2015, p. 105). While the scientific mind should be able to distinguish gray, we are clearly witnessing black and white discourse, which is counterproductive.



In view of the ideological and political orientations underlying educational development, we reiterate Saroyan and Trigwell's (2015) conclusion that educational development is far from being established as a discipline. As they pointed out, the abundance of terminologies and definitions employed - or lack thereof - to discuss university teachers' educational development poses a limitation in understanding the results of studies conducted on this research topic, as does their generalization on the basis of a cumulative body of knowledge (Saroyan and Trigwell, 2015). The weakness of its conceptualization is all the more problematic, insofar as it plays a crucial role on the focus and outcomes of both research and practice (Webster-Wright, 2009).

From a practical standpoint, we emphasize the importance of acknowledging that professional learning is an essential component of one's professional life (Webster-Wright, 2009; Ambler et al., 2020). The results tend to point to individuality as the starting point for educational development (identity, motivations, teaching experiences, etc.). Subsequently, the interaction of this individuality with the contexts and individuals in which it evolves will determine the learning achieved. To this end, institutions must be aware of the conditions they offer teachers and recognize, for example, that class size influences the quality of teaching and learning, and that the pressure to publish limits the time allowed for reflection on teaching. Given the diversity in individual interests, motivations, teaching experiences, and needs, the variety of professional learning trajectories should be valued, and educational development should be a voluntary endeavor. The importance of time and resources given to the process, as well as space to reflect and interact with other members of the academic community, must be recognized as key conditions for supporting educational development of university teachers.

Given its evolving nature (Brew, 2007; Gibbs, 2013), developing a useful conceptualization of educational development remains challenging. This may be attributable to the diversity of definitions and modalities relating to educational development. Modalities which, as described in the literature, include activities such as workshops, mentoring, reading books, consulting peers or experts, pedagogical research (e.g., Scholarship of Teaching and Learning, self-study) and communities of practice. Most importantly, the modalities that have gained most traction in Higher Education share the common aim of professionalizing university teachers while not relying on an explicit definition of what it means to professionalize in that domain of practice. Educational development can therefore be conceived of as a pathway to professionalization paralleling professional development in a given academic discipline. Although some studies have specifically focused on the identity (Kreber, 2010; Nevgi and Löfström, 2015; Trautwein, 2018; McCune, 2019; Laiho et al., 2020) or the disciplinary culture (Lindblom-Ylänne

et al., 2006; Mårtensson et al., 2011) of university teachers, our scoping review reveals that there is no comprehensive model for the professionalization of university teachers. In our previous studies focusing on student learning to become a professional, we have defined professionalization as a dynamic and continuous process resulting from acquiring professional competencies and understanding the professional culture, as well as forming a professional identity through the experience of roles in context-specific situations (Bélisle et al., 2021, 2022a,b). For future research, we feel that this professionalization framework could lead to deeper understanding about educational development of university teachers and benefit both scientifically and professionally to this field of study and practice.

## Author contributions

MB: Conceptualization, Funding acquisition, Methodology, Project administration, Supervision, Validation, Writing—review & editing. VJ: Conceptualization, Formal analysis, Investigation, Methodology, Writing—original draft. NF: Methodology, Validation, Writing—review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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