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Professional educational programmes under pressure. Organizational challenges related to strengthening research

Silje Maria Tellmann, Trude Røsdal and Nicoline Frølich

NIFU, Oslo, Norway

ABSTRACT

Higher education institutions embed a large variety of organizational practices regarding how to organize, plan, and implement managerial decisions and processes. This variation is amongst others related to the multiple relationships the institutions, disciplines and professions have in their networks, formal agreements, and practical cooperation with the actors and agencies of surrounding societies. Here, we focus upon the challenges and contradictions experienced by leaders of educational programmes within teacher education, engineering and health and social care. The professional educational programmes have increasingly been under pressure to strengthen their research capacity. At the same time, these programmes are characterized by strong relationships with the community of practitioners. How does leadership of these programmes seek to solve the challenges and contradictions between on the one hand catering for the relevance of the programmes and on the other hand strengthening the research capacity of the programmes?

KEYWORDS

Professional education;
organizational reform;
management; role of higher
education; leadership

Introduction

Professions represent forms of social organization that claim jurisdiction of specific occupational territories, based on their professional expertise and knowledge. Importantly, professional identity is regarded as a product of professional socialization and training, producing a strong sense of professional autonomy and thus resistance towards external attempts at intervention in the professional educational programmes. Hence, professional educational programmes can be analysed as arenas of conflict and tension (Bucher and Strauss 1961; Freidson 1994). Along the lines of Clark (1983) knowledge can be conceived as the basic building block of higher education, forming the primary source for the belief systems of individual staff as well as the core of disciplinary communities or fields. As such, the higher education institutions consist of different 'small worlds' (Michelsen et al. 2017) of disciplines and professions with different languages, values and identities (Becher 1989; Becher and Trowler 2001; Clark 1983; Henkel 2000). Yet, these 'small worlds' also differ in terms of the knowledge structure of their field (Muller 2009), and in their conceptions of and responses to ongoing changes.

Despite last decades' thorough governance reform policies, higher education institutions embed a large variety of organizational practices regarding how to organize, plan, and implement managerial decisions and processes. The aim of this paper is to explore the challenges and contradictions professional educational programmes strive to resolve. Here, we focus upon the challenges and contradictions experienced by deans and heads of departments (e.g. leaders) within teacher education,

CONTACT Nicoline Frølich  nicoline.frolich@nifu.no  Research Professor, NIFU, Økernveien 9, 0369 Oslo, Norway

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engineering and health and social care. In this context, these professions stand out as particularly interesting. They have all been subject to the same higher education reforms, placing them under increased pressure to strengthen their research capacity. At the same time, these programmes are embedded in different knowledge fields, characterized by strong relationships with different communities of practitioners. Considering recent developments aiming at enhancing the research capacity of professional educational programmes, this paper discusses the following questions: Which contradictions between on the one hand catering for the relevance of the programmes and on the other hand strengthening the research capacity of the programmes do leaders of professional educational programmes experience? How do they seek to solve these challenges and contradictions? We explore challenges and contradictions experienced by deans and heads of departments related to ambitions of strengthening research. More specifically, we explore some of the means to strengthening research used by the leaders of these different professional programmes, and the challenges and contradictions related to the organizing of research groups as well as the recruitment of academic staff. In the context of the overall Bologna transformation, the study sheds light on the organizational challenges of professional educational programmes within a system that is under transition from a differentiated system towards a more unified system at the structural level driven by an intrinsic academic drift. It is thus illustrative of the challenges following from the more general transformation of professional educational programmes observed in most European countries in the wake of the Bologna process and the introduction of the Qualification Framework for the European Higher Education Area, whereby professional education programmes have transformed to integrate in tertiary education.

In concrete terms, the study explores the challenges leaders of professional educational programmes face even after more than two decades of integration of the Bologna scheme in the higher education system. Furthermore, the study should be read in light of the slow but steady transformation of the Norwegian higher education system from a binary to a more unitary system since the early 1990s. The empirical material of the study is based on an open-ended survey with educational leaders within teacher education, engineering and health and social care as well as qualitative interviews with selected leaders.

The institutional and professional context of the study programmes

The Norwegian higher education system has undergone several reforms throughout the past decades which have altered both the institutional landscape of higher education institutions as well as the internal organization of institutions and educational programmes. These reforms have particularly transformed the institutional and professional context of professional education programmes, of which education in teaching, engineering and health and social care form the largest educational programmes. While arising outside of the higher education system, these programmes now form an integrated part of the higher education system in Norway. They are administered under the same public acts and are subject to similar claims and expectations as traditional research-intensive educational fields. For institutions offering education in teaching, engineering and health and social sciences, this development involves a shift from an emphasis on the relevance and practice-orientation of departments, towards greater emphasis on the academic profile and research capacity of the departments. This can be outlined as a process of academic drifting, which is commonly understood as the tendency of non-university institutions to imitate universities and to introduce activities that brings them closer to the image of a university (Kyvik and Lepori 2010). In the following sections, we first give an account of the process of gathering the professional educational programmes under a common institutional umbrella within a binary system. We then outline some measures taken to facilitate academic drift in professional education programmes within the binary system before the government launched a wave of mergers between higher education institutions contributing an academic drift through vertical integration (Kyvik 2009).

From a differentiated to a binary system of higher education

Qualification to the professions used to be offered as shorter vocational education programmes, spanning two to three years, in small-size professional schools whose task was to offer training for designated professional fields. Teaching schools qualified for teaching, engineering schools qualified for engineering, and so on. Training was specialized, and its purpose was to qualify for professional careers, and to supply working life with competent labour. Much of the schooling also took place as practical training in work organizations to prepare students for the tasks they were expected to perform as professionals. Accordingly, the body of teachers in these schools was themselves trained in the professional field, and they were selected on grounds of their vocational experience and skills. Teaching was based on teachers' professional competences – conveying the 'fruits of knowledge' rather than researching new knowledge (Agevall and Olofsson 2014, 30). The content and structure of professional education programmes were founded on the needs and claims of the field of practice, and the professions' influence on the content and organization of training have been prominent (Smeby 2015).

On an institutional level, the system with specialized professional schools was characterized by differentiation and diversification (Kyvik 2009). Each school catered for the special needs of single professions, characterized by different vocational norms and values, as well as different competencies and qualifications of staff. Also, their organizational forms differed, with diverse funding and admission systems. The public regulation of professional schools was manifold, adjusted to the requirements of each sector and profession. On the other hand, each institution represented in themselves homogenous entities, with shared social and professional identities, values and qualification systems.

The image of a differentiated and diversified system attenuated over time as schools gradually entered the higher education system throughout the 1980s. Since then, professional schools and colleges have been the subject of several state-initiated reforms of Norwegian higher education. The reforms transformed the sector into a binary system, which culminated with the merging of 98 professional schools and colleges into 26 state colleges in 1994 (Kyvik 2009). The binary system was founded on a division of labour between university institutions on the one hand, and state colleges on the other hand regarding the conduct of research vis a vis the training of future professionals. Universities and specialized university institutions were responsible for the conduct of basic research and graduate education as well as research training. State colleges, on their side, offered professional and vocational educational programmes under a unified regime of standards and regulations. For the sake of education in teaching, engineering and health and social work, the binary system implied that these programmes now were grouped under the same institutional umbrella, adhering to similar sets of institutional standards and regulations.

Accommodating for academic drift in professional educational programmes

The reform of 1994 was followed by a set of decisions and resolutions which gradually dissolved the binary organization of the Norwegian higher education system. Firstly, a joint act regulating all higher education institutions were introduced in 1995, asserting among other that all institutions should engage in research, and that teaching should be research based (Larsen and Kyvik 2010). Also, a joint academic rank system between colleges and university institutions were introduced, putting in motion a joint academic career system between universities and colleges. Other measures were the introduction of common administrative and economic regulations, and a joint degree structure. Last, but not least, the Government allowed state colleges to apply for the formal status as universities on grounds of the fulfilment of a set of minimum requirements. Such requirements included a minimum share of research competent academic staff, and the running of approved PhD programmes. These steps contributed to a structural convergence between universities and colleges (Kyvik 2009), with colleges adopting distinct formal features of universities, or even advancing to university status.

The increased emphasis on the research component of professional educational programmes in state policies towards higher education form part of larger tendency of academic drift in this part of the higher education sector. The term academic drift originally referred to the isomorphic processes where non-university institutions imitate universities and introduce activities that makes them more similar to universities (Kyvik and Lepori 2010). This includes the introduction of disciplinary programmes and more theory in the curriculum at the expense of practice. Later years, more attention is however drawn to the role of research for the academic drift of professional education programmes, which is inter alia observed in the introduction of research as an ordinary activity alongside teaching (Kyvik and Lepori 2010). This trend has been most prominent in professional educational programmes with a shorter research tradition, which traditionally has had little resources to perform research. In these programmes, the 'research drift' is motivated by a number of different concerns, including professionalization and the drive for increased status and prestige of the professions (Smeby 2015). Modelling professional educational programmes after more prestigious educational programmes is believed to strengthen the position of professions vis a vis other groups on the labour market (Freidson 2001). Moreover, the quest for a more research-based knowledge base of professional practice has been a common argument in favour of the introduction of research in these programmes. Academization of professional educational programmes is thus promoted as a process to increase the quality of both education and practice (Terum and Smeby 2014).

Despite a structural convergence in the Norwegian higher education system since 1995 and a deliberate research drift in the university colleges, the research profiles of traditional universities and colleges were still marked by noticeable differences a decade after the joint act for universities and colleges were introduced. Academic staff in colleges were awarded a lower share of research time, and both research activities and qualifications of staff were still at a lower level than in the traditional universities. In 2006, 35.3% of academic staff in state colleges were associate professors/professors, whereas the corresponding figure for universities was 72.3%. By 2015 the equivalent numbers were 52.8 and 80.5%, respectively (Ministry of Education and Research 2016).

Also, the internal differences in research output among professional educational programmes in teaching, engineering and health and social care are considerable. Measured in terms of research competence, educational programmes in engineering have overall the largest share of professors as well as staff with PhD (more than 40%), whereas educational programmes in health and social care have the lowest share (less than 30%) (Frølich, Sivertsen, et al. 2016). In terms of the number of scientific articles published, educational programmes in engineering published more articles than educational programmes in teaching and in health and social work. Educational programmes in teaching published the fewest (Frølich, Sivertsen, et al. 2016). Differences are also apparent in terms of publication output which exhibit a large variation among institutions within all three educational programmes. In both teacher education and in engineering, a few institutions have a considerable larger research output than the remaining institutions.

Academic drift through vertical integration

Due to the observed differences between institutions, as well as between educational programmes, several state-initiated efforts have been launched to increase the research quality and capacity of the higher education sector. Among these is the SAK-policy, whose aim is to stimulate collaboration, division of labour and concentration between higher education institutions and academic communities. Collaboration refers to increased efforts to coordinate research initiatives and projects, or that institutions launches joint initiatives to strengthen their shared profile. A division of labour encourages increased specialization of academic communities and correspondingly that research efforts and capacities are concentrated rather than being spread out thinly. Later structural reforms in the Norwegian higher education sector may also be an indicator of the increased emphasis on the research capacity of professional educational programmes. By merging institutions into larger higher education institutions, the stated goal has been to strengthen research communities, and to increase

the quality of research and higher education. In the White paper on the structural reform, 'Concentration for quality' (Ministry of Education and Research 2015), concern was expressed over the quality of research in 'professions with a shorter research tradition'. More specifically, this referred to research in teaching, engineering and health and social work respectively, which were singled out as research areas with a weaker research quality, and where previous policies had failed to lift research activity adequately. As a response, the White paper promoted the development of nationally leading research capacities, which implied that strong research environments should agree on a division of labour among them to avoid that scarce resources were scattered thinly over the institutions. Instead, institutions should specialize in fields where they had documented strengths.

Educational leaders – facing contradicting demands?

The institutional implementation of both the SAK-policy and the structural reform were introduced as voluntary policy initiatives, in the sense that the government has not forced any interventions. Instead, the government has arranged for bottom-up processes, where the institutions themselves negotiate and implement prospective collaborations, reorganizations or mergers. Institutions were urged to commence a stronger and more binding cooperation with other institutions, and to take the profiles of other institutions in consideration when developing own strategies and ambitions (Frølich, Trondal, et al. 2016). This implies that the ministry has transferred more strategic autonomy to the institutions, which in turn reinforces the pressure on educational leaders as they are to play a vital role in the fulfilment of national policy goals on the structure and division of labour within the higher education sector.

In managing higher education, leaders of professional educational programmes are however expected to make sense of a complex web of stakeholder expectations, facilitating high quality, high relevance and innovative solutions (Caspersen and Frølich 2015). This includes the managing of potentially conflicting, complex and contradictory demands and expectations from stakeholders such as academia, management, the profession, students, the field of practice, international and supra-national actors as well as governmental actors.

Kyvik and Lepori (2010) emphasize four external relationships which are important to grasp the challenges these leaders face. In addition to state authorities, which are important sources for several steering instruments, supra-national organizations, academia and societal stakeholders are assumed to impact the development of professional educational programmes. The practice of leadership of professional educational programmes can accordingly be characterized as balancing the demands and expectations that these actors bring upon the profile and activities of the educational programmes. The multi-institutional setting of educational leadership consists amongst others of academic norms, generic leadership expertise, professional knowledge and standards, the field of practice/working life, international trends and frameworks, governmental rules and frameworks. All these aspects are developed, promoted, safeguarded and embedded in a wide range of stakeholders of the institutions.

Leaders of professional educational programmes are particularly exposed to the special tensions that emerge between state authorities' and academia's norms and claims for a strengthened research profile on the one side, and the practice-domain on the other side. Educational programmes of teaching, engineering, health and social work have all pursued strong links with the community of practitioners, and the prominence awarded to the vocational demands of the profession have been at the heart of these educational programmes. The core of professionalism is the ownership and control of the professions over professional knowledge and expertise, as well as the power to define the nature of problems and to propose solutions to identified problems (Abbott 1988; Evetts 2006). From the perspective of professionalism, the education of future professionals is one of the core pillars of the development of professional knowledge and expertise, belonging to the jurisdiction of the profession itself. Accordingly, academization and larger emphasis of research in professional education programmes have been met with suspicion from actors in the field of practice, as

well as from educators with a strong professional orientation. The strong practice-orientation have been particularly prominent in schools which qualified for health and social work, where the links between training in schools and the field of practice have been tight (Heggen 2010). But teacher and engineering education have also pursued close relations with the professions and the value of relevance to the field of practice.

In this paper, we shed light on the choices and solutions that leaders of these educational programmes initiate to increase the research capacities of departments, and how they manage the contradictions that are brought upon them in the form of differing expectations and demands in this process.

Design and methodology

The paper is based on a qualitative oriented survey conducted early in 2016 as well as personal interviews conducted during spring 2016 targeting deans and heads of departments responsible for shorter professional educational programmes in teaching, engineering and social work and health programmes. The unit of analysis was accordingly faculties and departments which offers one or more professional educational programmes within one or more of the three fields of subject, rather than the institution as such. The target population was established on the basis of a register of all higher education institutions in Norway administered by the Nordic institute of innovation, research and education. Units which offered these educations as a 6-year programme of professional study or an integrated master's programme only, where not included. All in all, 78 units were targeted, and deans or alternatively department leaders received the survey, depending on the organizational structure of the institution. Five respondents reported that they did not consider their unit as part of the target population. (Table 1)

An important purpose of the survey was to gain insight into the informants' assessments of the challenges they faced, as well as the steps they had taken to solve the tasks they were supposed to meet. The survey contained mainly open-ended questions, and questions covered a range of issues, including priority areas of R&D, organization of R&D activities, organizational strategies and what they considered to be the main challenges in the implementation of strategies, what steps they had taken to strengthen the research activity and recruitment practices regarding academic staff. To probe into the information gathered through the survey, we conducted qualitative, open-ended interviews with eight strategically selected deans. These were representatives from each of the three educational programmes, as well as different sized institutions. All informants who were interviewed had also participated in, as well as completed, the survey. The interviews were conducted by phone, and the information was gathered through notes and shared among the researchers conducting the study. All the data were analysed on the basis of a common protocol for coding, ensuring a corresponding analyses of the data across institutions and educational programmes.

Findings

Ambitions to strengthen research

The national policy ambition that professional educational programmes should develop its research capacity aimed at a professional division of labour between the institutions in the higher education landscape had gained a foothold among nearly all the educational leaders included in the study. Both

Table 1. Respondents of the survey.

	Teaching	Engineering	Health and social care	Total
Number of respondents	10	13	24	47
Target population	20	19	34	73

from the survey and from the interviews we conducted, the informants tell us that during the last years there is a notably greater focus on research activity within the entire higher education sector as well as within the educational programmes discussed in this article. They experience that an extended use of available resources for strengthening research is accepted and even more; is expected. Accordingly, they in general report that the actual leeway for research initiatives is growing. In line with this, most educational leaders across all three educational programmes reported explicit aims at strengthening research capacity as well as develop national research capacity in one or more fields in line with national policy ambitions. This implied that they had selected specific areas or subfields in which they aimed to become 'nationally leading', and that they moreover developed explicit strategies for how to meet these goals.

However, there was a lack of common understanding among the leaders of what it meant to be 'nationally leading' within an area or subfield. This was an expectation that was placed upon them by national policy makers without an explicit operationalization, and educational leaders reported different interpretations of the concept. While some thought it was sufficient to have a PhD programme to be announced nationally leading, others emphasized success in winning external funding and research grants. Others pointed to having researchers or research groups that where considered to be 'particularly assertive or have a certain professional standing', as one educational leader from teacher education explained. This breadth of understanding was to some extent reflected in the strategies the deans had carved out to become nationally leading.

Strategies and means for strengthening research

Strategies for research and development are commonly developed at the faculty level, which accordingly decide on the prioritized areas of research, and to some degree also the means and measures to implement the strategy. The introduced means and measures seem fragmented, yet both external funding and the establishment of formal research groups are deemed as important measures to develop national research capacities across all three professional fields, although it would seem like engineering place less emphasis on research groups.

Nearly all educational leaders consider access to external funding as a prerequisite to become nationally leading in their prioritized area or subfield. Despite a significantly larger share of externally funded R&D in the field of engineering (see [Table 2](#)), all three fields are characterized by being predominantly financed through the basic funding received through the annual allocation of funds from the institutions and the ministry. Building organizational capacity and strengthening the ability to successfully compete in the contest for external research grants is accordingly seen as a key step towards fulfilling the goals of their strategies.

The establishment of research groups is outlined as a key step to facilitate successful grant applications. It would seem, though, that engineering, to a greater degree than teacher education and health and social care, highlights the importance of cooperation with other high performing academic communities – both national and internationally, to strengthen their own research capacity and success rate in competition for external funding. Cooperation with other higher education institutions as well as research centres is, nevertheless, an important mean to strengthen research also within the teaching and health and social care, although it seems like engineering is oriented

Table 2. Funding of R&D, 2013. Percentage.

	Basic funding	Research Council of Norway	Other sources
Engineering	70	13	17
Teaching	84	8	8
Health and social care	81	6	13

Source: NIFU, R&D-statistics.

towards a larger field of actors in the pursue of strengthening their own research, including for instance cooperation with research institutes and industry.

In addition to be a means for developing research proposals and research projects, establishment of research groups is considered a key organizational tool to strengthen research across all the three fields. At some institutions, membership in a research group is mandatory, although some institutions also report that mandatory membership does not work. The purposes and organization of research groups differ, but overall the purpose of the research groups is to enhance the academic culture and create an arena for academic discussions. The organization of research groups is mostly thematic and within the borders of the department, yet some research groups are organized across departments and even institutions. It appears that engineering has a broader understanding of how to define a research group. Some educational leaders see externally financed research project as the basis for research groups, others organize the research groups along the institute- or department borders while other uses matrix structures to be able to establish research groups. Within all three fields the size of the groups differs – some of the research groups are quite large – with more than 30 members, while others only count 3.

The field of engineering also reports more attention directed towards the establishment of new doctoral programmes as a means of strengthening research compared with the other two professional fields. Nearly half of the participating milieus from the field of engineering stated that they had plans for establishing new doctoral programmes soon. In comparison, we found that within the field of teacher education, only one institution mention that they have an ambition to establish a new doctoral programme.

Allocation of time for research is another means used by educational leaders to meet the goals of their strategies. While allocation of time for research at the individual level is mostly done using a set of established criteria related to the formal positions of academics, there is at the same time a growing awareness among leaders to the use of research time as a means towards strengthening research. Several educational leaders have accordingly begun to allocate extra research time to researchers who are considered particularly productive, or who through their research strengthen the priority areas of the decided strategy.

Challenges and dilemmas in strengthening research

With the pronounced ambitions to strengthen research, educational leaders across all fields and institutions also report inherent tensions in the implementation of the strategies. One tension relates to the challenge of balancing research and development work, which is considered one of the special characteristics which distinguishes professional educations from the discipline-based educations in higher education. Development work refers to the development of products, practices or processes for the field of practice, based on professional knowledge rather than research-based knowledge. It is regarded as an important means to cater for the needs of the fields of practice, and the educational leaders underline the benefits of development work in cooperation with industry and the field of practise. Accordingly, leaders across all the three fields claim to prioritize both research *and* development work. While they all reported considerable resources spent on development work, teaching stood out on the one side with twice as large expenses tied to development work compared to basic research. Engineering, on the other side, seemingly emphasize research compared to development work (see [Table 3](#)).

Educational leaders in engineering explain their emphasis on research compared to development work by referring to the altered status of their home institution from university college to university. This had required a much stronger focus on research activities than is normally found in institutions with university college status. Some educational leaders within teaching also stressed another important side of this issue – namely that changing institutional status requires a higher share of external funding, increased publication activity and increased formal competency among employees – all of which are dependent on prioritizing research activities, probably at the cost of development work.

Table 3. Operating expenses for R&D in 2013 by type of research. Percentage.

	Basic research	Applied research	Development
Engineering	22	57	21
Teaching	18	46	36
Health and social care	8	62	30

Source: The informants of the survey.

Others did not accept that research and development work was a choice of either or, and one educational leader within engineering stated that development work would 'gain the best results if this development work is based on research'.

In the wake of this overall challenge related to priorities between research work and development work, several leaders experience contradictions and tensions between qualifying professional educational programmes academically compared to strengthening practice. Hence, the distribution between operating expenses for R&D between basic research, applied research and development work across the three fields reflect not only different priorities, but possibly also different profiles of the academic staff in the educational programmes. Whereas about 50% of academic staff in engineering hold a PhD degree, only 30% of academic staff in teacher educations and about 25% of academic staff in health and social care hold a PhD degree (Frølich, Sivertsen, et al. 2016). While many have increased their competence through teaching-oriented career track, this does not compensate adequately for the low share of research competent academic staff in these educational programmes. This is to some degree considered a dilemma by educational leaders who wishes to strengthen research while at the same time maintain close links to the fields of practice. From the interviews, we learned that there are still questions about the actual *direction* of research within different professional fields. Moreover, there is a question about how to prioritize between research and teaching. Ideally, the educational leaders would like to recruit candidates holding a PhD degree in combination with teaching experience as well as a background from the field of practice. This combination is however rarely found, and instead, several reports that they handle this dilemma by having a distribution of candidates with different competencies among their academic staff. Others reprioritize, and report that holding a PhD is by now compulsory for new staff. Educational leaders in health and social work do however report greater challenges in recruiting academic staff with a PhD. Their stated solution is to facilitate internal competency building among their staff, e.g. by offering them scholarship for pursuing a PhD degree as well as establishing their own PhD programmes.

Allocation of time for research is another means to strengthen the research competency of staff, and several encourage their staff to apply for more time for research. However, the focus within these fields of subject has traditionally been on teaching and being a good teacher. A few educational leaders accordingly claim that some of the personnel might be lacking not just the competency but also the interest needed for conducting research. Several thus promote a more differentiated allocation of research time as an appropriate means for handling this dilemma.

Discussion and conclusions

This article highlights the organizational challenges and contradictions in professional educational programmes and analyses the tensions leadership experience in catering to the needs of both the fields of practice and national research priorities.

We have identified and described some of the strategies used by the deans to strengthen research within these professional educational programmes. As a consequence of (among others) the contradictions between policy guidelines and policy goals set for these kinds of educational programmes and the traditions or history of these programmes as well as available resources within these programmes, some important and difficult challenges, have been identified: The strategic ambitions

to strengthen research in professional educational programmes confront lack of resources in terms of research qualified staff as well as external funding. Also, the establishment of research groups seems to be a main measure to enhance research capacity, however, it is probably too early to identify the influence of these groups on the ambition to enhance research. And the need to cater for both research and education when recruiting staff members also represents a challenge. The professional educational programmes strive to recruit staff that have both PhD and experience from the fields of practice. Due to the short period of strategies aiming at strengthening research, few candidates with PhD are available and many of these do not have sufficient experience from the field of practice.

The comparative approach of the study has further exposed that there are some important differences between the respective educational programmes. Despite the overall picture of educational leaders facing a set of common challenges to which they respond with similar solutions, the degree of depicted challenges and the weighting of different instruments varies between the three. Further research should explore more in-depth the importance of differences and characteristics of professions that affect their adaptations to change processes. While both the sociology of professionalism and the study of higher education emphasize the generic characteristics of professions and educational fields, there is a need to better understand how the knowledge developed in different professions frames and influences strategic change processes.

Disclosure statement

No potential conflict of interest was reported by the authors.

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