

EDITORIAL: Governance Dynamics in Complex Decentralised Education Systems

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Growing attention is being given to fundamental changes in governing education systems in the academic literature and policy documents (Kooiman, 2003; Pierre & Peters, 2005; Honig, 2006; Osborne, 2010; Ostrom, 2010; Burns & Köster, 2016). Various strands of research, taking different angles, have described how administrative and governing relationships between state and non-state educational organisations and their stakeholders have changed in the last three decades. The relations and interactions between and among actors involved in educational governance have changed, as have their responsibilities. In many countries, the locus of administrative decision making has been decentralised, with more autonomy being granted to local authorities, school governing boards and educational organisations. Market mechanisms such as demand sensitivity, competition, and greater student and parental choice have been introduced. Direct citizen participation in education governance, policy making and implementation at regional and local levels has also been enhanced. Long term developments, such as the changing economic and social structures and associated shifts in labour markets, changing views on the nature and delivery of quality education, including the individualisation of teaching and learner empowerment and more and better use of information and communication technologies are seen to be related to these administrative changes.

Governing education is complex because providing equitable access to good quality, cost-efficient, education is contested and requires balancing different and sometimes conflicting interests. The developments and changes mentioned above have made education systems and their governance significantly more complex, as in current information-driven societies, governance and policymaking require a substantiated, preferably evidence-informed-, dialogical, and participatory approach. To better respond to these demands, policy makers have taken decisions to decentralise education systems and their governance to varying degrees and in different ways. The already important question of how to govern and steer such education systems becomes even more complex because, in many countries, the public still holds the national government accountable for the quality of education. This issue of the Journal addresses the difficult endeavour of governing complex decentralised education systems. The emerging governance dynamics are studied with the concepts 'multi-level education systems', 'multi-layered and fragmented systems', 'complex adaptive systems', 'multi-level, multi-actor or network governance'. Despite their differing theoretical angles, they share many essential characteristics:

- Reference to systems theory, taking a systemic approach;
- Distinguishing actors (state and non-state) at different levels or layers, engaging in different (mutual) actions, interactions and relationships;
- Focus on interdependency between and among actors;
- Focus on network steering;

- The perception of steering as moving in a direction by agenda-setting and as exerting deliberate influence, rather than control (see: Denhardt & Denhardt, 2000);
- Acknowledgement of a certain degree of unpredictability in complex decentralised systems and anticipation of non-deliberate, unintentional and unforeseen consequences.

Four important themes run through this issue of the Journal.

- First, does complexity refer to the complication or to the unpredictability of the system? Or to the process of delivering good quality education? And what are the consequences of these meanings for the use of governance modes in complex education systems?
- Second, the role of data, information, knowledge and evidence, and their flow through the system are addressed. As ICT developments provide easily accessible monitoring information about school performance and student achievement, this theme is related to the recurrent discussion about the benefits and drawbacks of an evidence/research- informed or -based approach to governance, steering and policymaking.
- Third, the phenomenon of soft governance is highlighted by various authors. Soft modes of steering are fairly flexible, reflecting communication and information, whereas hard governance modes are more rigorous, using regulatory and fiscal sanctions. Soft governance is meant to trigger, initiate, facilitate and reinforce policy goals and system-wide change, whereas hard governance modes are meant to command, implement and control. Research indicates that soft modes of governance are fairly effective (Branden, Boogers & Tops, 2004).
- The fourth and final key theme is trust, although it is implicitly covered in the various contributions of this issue. Trust works as a glue in complex, decentralised systems, since it sustains the alignment of roles and responsibilities across the system, helps actors to cooperate, interact and take risks and reduces the need for control and accountability mechanisms (Burns & Köster, 2016).

The abstract and theoretical notions in this volume are illustrated with examples of governing education systems in different countries. This issue includes three thought pieces, followed by five articles. The thought pieces are more personal reflections which are written in a freer style than the articles. They take a specific angle relating to the central theme of this issue, 'Governance dynamics in complex decentralised education systems'. **Robert Edson and Sibel McGee** emphasise unpredictability as a key feature of a complex education system and look at it through the lens of a Complex Adaptive System (CAS). They assume that an education system is a CAS by its very nature, similar to other CASs such as healthcare, the labour market, terrorism, etc. Their comparative approach provides important insights for governance in education, for instance the importance of moving with and using emerging (collective) practice of education actors, rather than regulating and controlling their behaviour and interactions. In his thought piece, **Mark Mason** reflects on implementing policy change from the perspective of complexity theory. He sees potential for change in trying to reach critical mass in a system, and taking the 'tipping point' as a starting point for a new direction. This in contrast with thinking about policy change in terms of single, linear interventions and a piecemeal attempts. The idea of steering and policymaking as moving in a direction by agenda-setting and as exerting deliberate influence is reflected explicitly in this

thought piece, as he concludes: 'to do everything we can, from every possible angle, at every possible level and at every possible point of intervention' to contribute to 'the precipitation of change in a desired direction'. The third thought piece by **Lorenz Lassnigg** reflects on contradictions or paradoxes that are inherent in discourses about 'evidence-based' or 'evidence-informed' policymaking in the context of complex decentralised education systems. He problematises the conception of 'complexity' by distinguishing between two meanings: complication and unpredictability, and explores the consequences for the use and production of evidence in policies. To be able to cope with the unpredictability and insecurity that characterise complex systems, he advocates a professional approach that is oriented towards the integration of practice and knowledge production at the classroom level.

The first article in Part I by **Harald Wilkoszewski and Eli Sundby** highlights softer modes of steering that are emerging in complex decentralised education systems, not only as an analytical lens to look at policy- and decision-making in such systems, but also as a promising policy strategy at the central level. They perceive the distinction between soft and hard modes of governance as a sliding scale depending on the degree of coercion that is exercised and the extent of control, audit and sanctioning. The authors offer three examples of soft modes of governance: the Norwegian Consultation Scheme, the German education policy framework and the European Open Method Coordination (OMC), and conclude that soft and hard governance modes do co-exist, that soft governance can trigger important policy changes and that OMC has an impact on the policy agenda at the central level in many countries.

The following two articles form a diptych about steering dynamics in complex, decentralised education systems. In the first, **Henno Theisens, Edith Hooge and Sietske Waslander** explain why strong central governments have become less and less effective and describe the development towards new and more complex forms of New Public Governance. They observe that many conceptual models, such as multilevel, multi-actor or network models encapsulate the steering of decentralised complex systems, but lack a solid empirical base. To fill this gap, inspired by Foucault's perspective, the authors propose a trilogy of assumed conditions for steering to take effect in modern societies as a starting point for empirical research on how steering in complex education systems works. In the second article, **Sietske Waslander, Edith Hooge and Tineke Drewes** paint a lively picture of steering dynamics in Dutch education based on detailed empirical research. As a starting point, they take the steering trilogy as proposed in the first article. It presents assumed conditions for steering to occur: 'something' first needs to be made thinkable, calculable and practicable by different actors, and depicts an actor perspective. The 'schools as learning organisations' case is particularly suitable to study steering dynamics, since the Dutch education system is one of the most decentralised and complex systems in the world and the Government has no formal responsibility nor any direct means of control in this policy area. One striking result of their study is the importance of (policy) instruments that act as connecting devices between actors across the systems and have very concrete effects on daily practices, despite the different meanings actors attach to it.

The article by **J. Manuel Galvin Arribas** illustrates one of the conclusions of the article by Harald Wilkoszewski and Eli Sundby, i.e. how OMC used as a soft steering mode by the EU has an impact on the policy agenda at the central level in many countries. He analyses the 'ETF Torino Process' which is a soft tool to

implement European Vocational Education and Training (VET) policies aiming at building common approaches to VET policy across and around EU Member States. The application of the ETF methodology is analysed in developing countries in the Southern neighbourhood of the EU where VET systems are undergoing a transition from a centralised, supply-driven approach to a multi-level, demand-driven approach involving state and non-state VET stakeholders at the regional and local levels. ETF uses a step-by-step approach with the forming of a National VET Governance task force as a milestone. Remarkable lessons learned are that trust building among state and non-state actors is a key challenge and that the demarcation of decentralised entities in a multi-level system (e.g. regions) is critical since it must fit for purpose, taking the particular context into account.

In the final article, **Alain Michel** takes an historical perspective. Referring to his earlier publications about governing complex systems (*pilotage d'un système complexe*) in the 1990s, he explores how the concepts of 'system', 'complexity' and 'steering change' have evolved into the current discourse about (multi-level) governance of complex systems. He delves deeper into the problem of information circulation as an important aspect of systems theory and relates this to policy and change in monitoring instruments and to the phenomenon of evidence-based policy. Based on analyses of education reforms over 20 years, he emphasises the importance of building on insights about strategies of change acquired over the years and reaffirms that a systemic approach still offers a very fruitfull perspective to study governance dynamics in complex decentralised education systems.

The first article in Part II by **Lukas Baschung** critically assesses the principal changes in doctoral education practices introduced through Doctoral Schools on the basis of eight case studies carried out in Swiss and Norwegian higher education institutions. The analysis results in the identification of six types of changes which concern recruitment, curricular component, supervision, scientific exchange, tracking and careers. These changes lead to four kind of trends – which vary according to the case study – consisting of a structuring, standardisation and opening of doctoral education, whereas its academic character is maintained. If greater competitiveness, better scientific quality and higher graduating rates may be achieved, problems in terms of 'brain drain', workload, supervision, innovation and careers may be reinforced or at least not completely solved.

The second article by **Cecilia Albert, María A. Davia & Nuria Legazpe** aims to widen the empirical evidence about the determinants of Spanish academics' publication productivity across fields of study. Productivity is measured as the total number of publications in a three-year period. It shows how personal and academic variables explain differences in productivity within universities and fields of studies and across fields of research. Female workers report lower productivity than their male counterparts, but family responsibilities do not explain this gender gap. The type of contract and tenure or rank do not seem to have any influence on productivity. Researchers seeking professional promotion rather than altruism or personal satisfaction are more productive and young scholars publish more than their older counterparts. Additionally, a certain research-teaching trade-off and some nuances in the predictors of publication productivity across birth cohorts and fields of study are found. Finally, international cooperation is one of the most relevant determinants of the number of publications, regardless of the birth cohort. The institutional context in the Spanish research system as regards requirements for promotion and the assessment of research outcomes may contribute to the understanding and interpretation of the results.

The aim of the third article by Keiko Yokoyama is to define the field of higher education and clarify its identity. It examines three analytical dimensions which shape the field: knowledge, approach and community. It argues that contextual knowledge around the issue of higher education has defined the field, but has not determined techniques specific to it. The core elements of these three dimensions—the contextual knowledge, the diversity in approaches and the multi-disciplinary and loosely coupled community—suggest diversity in the field and in its identity rather than coherence and consolidation. The two dimensions of approach and community relate partially to the development of the field as a product of efforts to solve financial and management problems caused by the expansion of higher education after World War II in the US case, and in terms of experience in Europe, where expansion was much later, increasing public interest in higher education.

The fourth article by Janine Jonbloed focuses on the macro-micro interaction between institutional arrangements and individual life outcomes and investigates how welfare régime types impact the association between education and well-being, as measured by satisfaction with life. Theorising with Esping-Andersen's ideal-typical welfare régime typology, it suggests that decommodified institutional arrangements reduce the association between education and well-being through compensatory social protections for at-risk individuals, while stratifying forces strengthen this association. These results are only partly supported. Conservative Welfare States show the most robust association, whilst Liberal and Social-Democratic Welfare States reveal weaker relationships. Thus, stratification appears to play a more important role than decommodification in moderating this association. It also examines potential mediating factors and how they differ between welfare régime types, finding that health and income mediate the effects of education on well-being to varying degrees. [Correction added on 27 October 2016 following online publication: Discussions on the third article by Keiko Yokoyama and the fourth by Janine Jonbloed, published in Part 2 of this issue, have been added to this Editorial.]

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