

# Policy makers' rhetoric of educational change: A critical analysis

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**Abstract** Reforms in education often fail due to insufficient time to implement them, too few charismatic leaders, the influence of the preceding culture, scarce resources or an incapacity to comprehend the complexity of the education system. Most studies dealing with the cognitive aspects of educational change investigate the meaning of change through the lens of the educators and principals and there is not as much research available on the perception and interpretation of change by policy makers and the language they use to communicate messages about policy that affect sensemaking–sensegiving during the process of learning about the changes. Guided by the premise that the language of a reform movement is shaped by its ideology, this article illustrates how press releases of the Ministry of Education in Canton Sarajevo in Bosnia–Herzegovina reflect an exploitation-oriented dominant reform logic. The results of frequency analysis, hierarchical clustering and multidimensional scaling imply that MoE is driven by a top-down perspective to educational change, with a focus on the procedural, organizational and collaborative aspects of reforms that primarily alter the structure of the education system but not its internal substance. We end this paper by suggesting that educational system as complex adaptive system cannot be controlled, but effectively managed through distribution of control and creation of few attractors, benefiting from self-organization in the technical core and making change in the official top-down rhetoric.

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**Keywords** Complex adaptive system · Dominant logic · Educational change · Postwar · Post-socialism · System leadership · Sensemaking–sensegiving

### Abbreviations

B&H	Bosnia and Herzegovina
CS	Canton Sarajevo
DPA	Dayton Peace Agreement
EU	European Union
FB&H	Federation of Bosnia and Herzegovina
MoE	Ministry of Education
OHR	Office of the High Representative
RS	Republika Srpska

### Introduction

Globalization forces and benchmark trends in education have shaped the landscape of education systems worldwide. As Sahlberg (2006) argues, reforms in education are based on similar assumptions, values and characteristics enabled through sharing best practices on an international level. However, experiences from all over the globe have proven that international benchmark policies and practices in education often fail when transplanted to different cultures, thereby confirming the thesis that educational change is a complex and context-dependent process. Context-dependent factors that influence the failure of educational reforms range from insufficient time to implement them, not enough charismatic leaders, the strong influence of the preceding culture, scarce resources or an incapacity to comprehend the complexity of the educational system and its agents (Fink 1999, cited in Hargreaves 2010).

### Many faces of transition

Loogma et al. (2013) argue that educational change is even more complex in the post-Soviet and post-socialist context since many transitional paths intersect and therefore influence social domains and social actors in these countries. This paper focuses on the case of Bosnia and Herzegovina (B&H), a former socialist Yugoslav republic, situated in the west part of the Balkans. Even though the post-Soviet and post-socialist countries of Europe share many similarities in terms of their transitional paths to democracy and accession to the European Union (EU), B&H is somewhat specific due to its history of armed conflict that lasted from April 1992 to November 1995. The end of 1995 was perceived as a new dawn for B&H when the Dayton Peace Agreement (DPA) was signed in Dayton, Ohio. The peace agreement created a complex administrative structure to the state, dividing the country into two separate entities: the Federation of Bosnia and Herzegovina (FB&H) and Republika Srpska (RS). FB&H is composed of ten cantons organized as decentralized

administrative units. In contrast to FB&H, which is highly decentralized, RS has a centralized administration. Magill (2010) argues that, even though DPA ended the war in 1995, it created “competing visions of the state—arguably, one of the causes of the war”. Perry (2003, p. 7) reflects on the complex nature of transition in B&H, arguing that there are three types of transition and not only one:

- a) the first transition is the post-Cold War transition from a one-party socialist system and a controlled economy to a multi-party, democratic system and a free market economy;
- b) the second type of transition experienced by B&H is the post-war transition after the dissolution of Yugoslavia, marked by ongoing political instability, followed by
- c) the third type of transition toward EU membership.

These intersecting transitional paths have influenced the political stability of the state and led to an absence of consensus on structural reforms in the public sector.

### **The complexity of educational system in transition**

Education in B&H is a hostage of postwar ethno-nationalist rhetoric, administrative complexities and a broad variety of transitional issues. In the years following the DPA, B&H had no international support or advocates for educational change. After helping to resolve an armed conflict, the international community was mainly concerned with issues of basic infrastructure development, reconciliation, military stabilization, refugee return, democratic elections and police force restructuring. Financial resources and international projects therefore targeted these areas, leaving educational reform aside. As Perry (2003) argues, until 2002 the debate and initiatives for educational reform in B&H were not a part of public discourse. It was in that year that the officials from the Office of the High Representative (OHR) acknowledged their failure and the failure of domestic politicians to address the issue of educational reform as a core issue for B&H’s postwar recovery. The main obstacle to change and progress in education is complex administration. The educational system is governed by 13 ministries: the Ministry of Civil Affairs on the state level, two entity-level ministries (Federal Ministry of Education and Science and Ministry of Education in RS) and ten cantonal ministries of education in FB&H. The Ministry of Civil Affairs and the Federal Ministry of Education and Science in FB&H have a symbolic role in the decision-making process, since ten ministries at the canton level have more legislative power in shaping educational policy for each decentralized unit. Such a structure results in unequal pedagogical standards, differing funding practices in each canton and diametrically different interpretation of the same historical facts in textbooks (Pasalic Kreso 2008).

### **The necessity of systemic educational change**

According to a report by the Initiative for Monitoring the European Integration of B&H (2012), the three national subject curricula (mother language, literature,

history and geography, which are considered the main subjects that shape national culture and identity) are influenced by jurisdictions within the educational system and conflicting interpretations of facts depending on ethnicity. Apart from the highly politicized national subject curricula, there are many other issues regarding the curriculum content. Fejzić et al. (2011) conducted an analysis of the Framework Curriculum for FB&H and concluded that: the curriculum is content-centered and includes the traditional elements of the 8-year primary school program; the curriculum is rather a set of syllabi; there are many overlaps within the same or more subjects throughout grades; and the concept of the curriculum is superficial and not in favor of the development of critical thinking. In 2008 the Council of Ministers adopted the Strategic Guidelines for the Development of Education in Bosnia and Herzegovina with an Implementation Plan for 2008–2015 at the state level. The Strategic Guidelines presented an institutional attempt to consolidate educational policy on a state level with education policy frameworks in the EU member states. Accordingly, the Strategic Guidelines outlined several key aspects of educational reform that needed to be addressed by the year 2015, such as: (a) changes in textbook policy, (b) curricular reform, (c) student-centered learning, (d) renewable license for teachers and adequate teacher education and training, (e) equality, (f) funding, (g) systems of external and internal evaluation, (h) school autonomy, etc. Regardless of the intent expressed in the Strategic Guidelines, the year 2015 was marked by the slow pace of reforms on the state level, vaguely defined policies and minor accomplishments on all administrative levels.

Considering the administrative complexity, jurisdictional overlaps in educational policy and vaguely defined reform initiatives that do not address priority areas for change on the state level, the authors of the study will investigate the specific context of Canton Sarajevo as an administrative unit within FB&H. We do not aim to generalize the study findings; instead, we are interested in initiating discussion about: (1) possible factors that may influence policy makers' perceptions of reform priorities and (2) the importance of the official rhetoric of educational change in diverse and complex contexts. We have defined the following research questions to guide our research: (1) what are the domains of educational reform in Canton Sarajevo? (2) what are the activities within these reform domains? and (3) how does a minister as a system leader perceive reform priorities and communicate the policy messages?

Rhetoric, as a domain of political discourse, is the art of persuasion by words, as defined by Aristotle. As Roan and White (2010) argue, “particular language choices shape or ideologically frame political issues in a manner that both enable and constrain ways of understanding and responding to an issue within a particular socio-political context” (p. 338). Accordingly, this research is aligned with the idea that the language of a reform movement cannot be separated from the ideology or the action of that movement (Ong 1982, cited in White and Lowenthal 2009). The reform movement in education that Sahlberg (2011) calls GERM (Global Educational Reform Movement) is rooted in the corporate philosophy, as argued by Diane Ravitch (2013). The rhetoric of corporate philosophy is that education is failing and must be fixed, usually through a best-practice approach focused on rationalization, competition, accountability measures, comparisons and assessments.

The language used by policy makers who adopt the best-practice mindset has the propensity to shape the meaning and the context of educational change.

Considering the above, this paper has a twofold purpose. By analyzing the specific language policy makers use to communicate educational change, we aim to gain some insight into the dominant logic of policy makers' that influences their perception and interpretation of reform priorities, the system and its agents. In addition, we recommend how to change the course of educational reform, including changes to official rhetoric that have the power to shape sensemaking–sensegiving in the process of learning about change.

This paper is organized as follows: we begin with the theories of two conflicting perspectives of education systems—rational and humanistic—including the perspectives of loose coupling and complex adaptive systems. We also present the dominant theories and logic of the leaders and the sensemaking–sensegiving at times of educational change. Afterward, we elaborate the context of this particular study, our scientific standpoint grounded in critical realism and describe the qualitative research methodology employed. We have chosen to analyze MoE press releases as means of communicating policy messages. The documents were analyzed using multiple analyses and the findings are discussed in relation to reform priorities as interpreted by the minister.

## Theoretical perspectives

### Public education as a complex, loosely coupled system of institutions

Two competing streams of theories on education, grounded in differing theoretical standpoints, have shaped educational policies worldwide: rational theories of education (top–bottom; managerialism) and humanistic theories of education (bottom-up; professionalism). The rational theories are based on the Weberian conception of the bureaucratized system characterized by rationality, hierarchy, centralization, tight control and accountability. In contrast, humanistic theories underline the importance of bounded rationality (March and Olsen 1975), the social complexity between system actors, decentralization and the participation of teachers and other school stakeholders in decision-making processes, and intractability of the school's technical core as an opportunity (Bimber 1993; Sander 1995; Ingersoll 1993, 2012; Elmore 2000; Goldspink 2007; Shen et al. 2017).

Traditional top-down theories cannot offer answers to complex dilemmas faced by today's leaders because these theories are at best overly simplistic (Osborn et al. 2002, cited in Lichtenstein et al. 2006). In his research paper “Rethinking Educational Reform”, Goldspink (2007) refers to loose coupling and complex adaptive systems theories as humanistic alternative theories of education. A broader discussion on loose coupling and complex adaptive systems is beyond the scope of this paper, however, we will briefly outline the main ideas behind these theories.

Weick (1976) observes educational institutions as epitomes of loosely coupled systems, in which decisions in one part of the system are not transmitted to other parts in a predictable manner. As Elmore (2000) argues in the light of loose

coupling theory, the purpose of the administrative structure of schools is “to buffer the instructional core from disruptions and improvements and because teaching is isolated work, instructional improvements occur most frequently as a consequence of purely voluntary acts among consenting adults” (p. 7). Ingersoll (1996) argued that teachers have little or no control over school policy and socialization functions, thereby implying the tight coupling in that domain. In contrast, he reported greater autonomy of teachers in the classroom environment where loose coupling takes place. A recent study by Shen et al. (2017) confirms Ingersoll’s and Elmore’s arguments on the intractability of the schools’ technical core, arguing that “the proposition of schools as loosely coupled organizations was still tenable” (p. 672).

The loose coupling perspective is strongly related to complexity theory (Goldspink 2007). Levy (2000) notes that “complexity theory is the study of complex, nonlinear, dynamic systems with feedback effects” (p. 68). Many prominent theoreticians and researchers in organizational sciences are advocates of complexity theory (Brown and Eisenhardt 1997; Boisot and Child 1999; Uhl-Bien et al. 2007; Uhl-Bien and Marion 2009; Lichtenstein et al. 2006; and others). Considering the importance and applicability of organizational theories in education, the application of complexity theory in educational research is gaining momentum (Fullan 1999; Newell 2008; Keshavarz et al. 2010; Davis and Sumara 2005; Davis 2008; Jörg et al. 2007). Complex adaptive systems (CAS) are defined as the “set of interdependent agents forming an integrated whole, where an agent may be a person or an organization” (Palmberg 2009). CAS operate on the “edge of chaos”, the state between order and disorder, between stability and chaos (Carroll and Burton 2000). Keshavarz et al. (2010) argue that the agents in CAS are “often numerous, dynamic, autonomous, highly interactive, learning and adaptive”. These authors observe schools as social complex adaptive systems. In keeping with arguments by Keshavarz et al. (2010) and Palmberg (2009) we argue that the secondary education system in Canton Sarajevo is a socially complex adaptive system, characterized by diversity and the dynamic nature of agents, a nested system structure, flow of information, feedback loops, distributed control, self-organization of interdependent agents, non-linearity and the unpredictability of interactions, change, co-evolution and emergence. In such a system, patterns of coupling can vary from tight to loose and are dependent on numerous factors such as the boundaries between macro (MoE) and micro (principal) leadership (Nahavandi 2008; Ganon-Shilon and Schechter 2017) and the span of control and authority (Aldrich 1978, cited in Ingersoll 1993, 1996) which also shape the nature of school stakeholder relations and communication that varies from intensive to sporadic.

Bidwell (1965) refers to this phenomenon as “structural looseness”, that is, influenced by contextual circumstances and looseness of the entire system. Similarly, the same logic can be applied to the classroom environment. Depending on CAS traits such as diverse and dynamic nature of agents (e.g., student demographics, prior knowledge of students, student motivation, family background, behavioral issues, etc.) and the intractability of the technical core in schools (Ingersoll 1996; Shen et al. 2017) the teaching style and behavior of a particular teacher can vary in different classrooms, making a teacher engaged in one classroom or disengaged in another.

## Educational change, the dominant logic and sensemaking–sensegiving

Reform is like ripe fruit. It does not usually travel well.

Andy Hargreaves (p. 107 in Hargreaves et al. 2010)

### *Educational reform as a strategic change in the system*

Educational reform can be observed as a set of changes that challenge existing policies, statuses, means and ends of education. Defined as such, educational reform can be considered a strategic change to the system that encompasses not just incremental changes in processes, procedures and goals but also deeper, second-order changes that alter the system in a fundamental way (Gioia et al. 1994). Fullan (2007) argues that, from a technical point of view, educational change is not complex but simple. However, it is socially complex, and this complexity is related to second-order changes that affect cognition, emotion and behavior.

If the change is anticipated, perceived as necessary and welcomed by educators, it can be uplifting and energizing. In contrast, unwelcome change can be disturbing and disorienting. Negative attitudes toward change are related to the disruption of defensive behaviors or social defense and the complex feelings resulting from loss of meaning as consequences of change (James 2010).

In structurally and socially complex environments such as educational systems, initiated top-down policies and means related to change are loosely coupled and often not aligned with practice/implementation and ultimate ends. Bromley and Powell (2012) analyze decoupling in loosely coupled systems, defining it as a gap that stands between policy and practice and means and ends. The authors reflect on decoupling between means and ends as a way of symbolic implementation of a policy, arguing that this type of gap is more common in organizations with a social goal, such as educational institutions.

Fullan and Miles (1992, p. 746) refer to the complexity of educational system, arguing that change in such complex setting often fails for the following reasons: reform strategy does not match the context of reform; education as a complex social system generates complex problems; preference toward symbols of reform over substance; impatience and superficial solutions; misunderstanding resistance; attrition of pockets of success; and misuse of knowledge about the change process. In more recent work, Fullan and Quinn (2016) discuss the change quality in education, which is determined by two dimensions: explicitness (the extent to which the strategy for improvement is on point, precise and clear) and change climate (the extent to which people in the system are open to collaboration and are getting along). If the educational system is characterized by low explicitness and a high change climate, the change will be superficial. The activity is present, “but at very superficial levels” (p. 25). On the other hand, if both explicitness and change climate are low, inertia is the word that best explains attitude toward educational change. Teachers in such systems are isolated, receiving little or no feedback on their ideas and initiatives, so they simply continue with their usual classroom routines. In educational systems where change is presented in an explicit and precise

manner with clear vision and strategy to guide it, but where teachers are uninvolved and left behind in the process, change will be marked by skepticism, scrutiny and resistance. Lastly, optimal environments for educational change are characterized by high explicitness, high trust and collaboration among people in the system. Fullan and Quinn (2016) add that optimal balancing between two dimensions of explicitness and change climate requires strong leadership and guidance at all levels in order to make educational change sustainable.

The “cognitive revolution” in organizational sciences, especially in strategy and leadership, draws attention to the importance of the emotion, cognition and behavior of stakeholders thereby offering new perspectives on change in complex settings. Possible explanations for the reasons reforms fail (Fullan and Miles 1992), what affects the quality of change (Fullan and Quinn 2016) especially in its social domain or why policy makers choose wrong reform drivers (Fullan 2011), can be found in the organizational literature that applies principles of cognitive psychology such as research to the dominant logic of leaders (Pralhad and Bettis 1986; Bettis and Prahalad 1995; Prahalad 2004; Bettis et al. 2011) and sensemaking–sensegiving (Weick 1995; Gioia and Chittipeddi 1991; Weick et al. 2005; Maitlis 2005; Foldy et al. 2008; Maitlis and Sonenshein 2010; Maitlis and Christianson 2014). The theory of sensemaking–sensegiving is echoed in Fullan’s earlier work on the meaning of educational change, where he addresses issues around the meaning of change from the perspectives of teachers, principals, administrators, government and others (Fullan 1982, 2007).

### *The perils of the leader’s dominant logic in times of change*

Institutionalized thinking—or what C.K. Prahalad first called the dominant logic—creates traps that can sabotage (leader’s) efforts to capture the full set of opportunities.

Govindarajan (2013).

Organizational theory that investigates macro or systemic organizational domains is known as the upper echelons theory and the premise that lies behind it is that organizations reflect their leaders, specifically their demographic and personality traits (Hambrick and Mason 1984). Nahavandi (2008) defines upper echelon leaders as persons or groups (dominant coalition) who have jurisdiction over the entire organization or system. Although organizational theory is inconclusive regarding the influence of the individual traits of system leaders, Nahavandi and Malekzadeh (1993) argue that there are two major themes present in the research on it, and they are challenge seeking behavior and the need for control. In relation to organizational learning, especially in turbulent environments, the challenge seeking behavior relates to either the exploration of new alternatives or to the exploitation of existing ones (March 1991).

The question is, how do the individual traits of upper echelon leaders become so instilled in a system? The possible answer to this question lies in the literature on the dominant logic of leaders, a theoretical construct that emerged from a cognitive revolution in organizational sciences. Bettis et al. (2011) define dominant logic as



“the shared cognitive map and strategic mindset of the top management team or the dominant coalition, and is closely related to the process and tools used by top management” (p. 370). The processes influenced by dominant logic include resource allocation (Prahalad and Bettis 1986), information filtering (Bettis and Prahalad 1995), formulating strategies and setting and monitoring performance targets (Grant 1988, cited in Obloj et al. 2010). The dominant logic acts as a filter or a funnel for “relevant” data in the decision-making process and after being filtered, the data is “incorporated into the strategy, systems, values, expectations and reinforced behaviour” (Bettis and Prahalad 1995, p. 7). This process is known as “the condensation of dominant logic”, where leaders’ dominant logic becomes an integral part of the visible features of the system (Bettis et al. 2011). As March (1991) argues, it is in this way that organizational knowledge is diffused to the individual level through instruction, indoctrination and exemplification. The dominant logic, which Bettis and Prahalad (1995) consider to be the fundamental aspect of organizational intelligence, can have either an empowering or detrimental effect on the process of learning about change. Prahalad (2004) argues that in stable environments the exploitation-oriented dominant logic serves to maintain the systems’ status quo. As the environment changes and becomes more ambiguous, such dominant logic may act in a similar way to a blinder on a horse, resulting in a narrow focus of change, thereby prohibiting the organization or system from identifying potential threats or opportunities from the contextual periphery. Instead of becoming the leader’s powerful leadership tool for navigating through the continuously changing landscape, the dominant logic becomes an obstacle. In such conditions, “organizational learning becomes focused on current competencies because the dominant logic biases knowledge, know-how, and skill accumulation into path dependent pathways ‘preferred’ by the dominant logic” (Bettis et al. 2011). In relation to Fullan and Quinn’s work (2016) on the dynamics and quality of change, we argue that these blinders of exploitation-oriented dominant logic create space for the emergence of inadequate leadership styles, hierarchical communication patterns, resistance, inertia and superficiality. Additionally, the dominant logic of system leaders can also serve as a filter for the sensemaking and sensegiving process at times of change (Gioia and Chittipeddi 1991).

### *Sensemaking–sensegiving and change actors in education as CAS*

Sense may be in the eye of the beholder, but beholders vote and the majority rules

(Weick 1995, p. 6)

Maitlis and Christianson (2014) define sensemaking as “the process through which people work to understand issues or events that are novel, ambiguous, confusing or in some other way violate expectations”. Important aspects of sensemaking are the shared meanings (collective commitment, shared identity and shared expectations) and emotions (positive, negative, self-conscious) (Maitlis and Sonenshein 2010). From the perspective of policy makers as system leaders, sensemaking encompasses activities such as environmental scanning, information filtering and reform

interpretation. These activities can have a strong impact on strategic decisions and change (Maitlis 2005). For other stakeholders in the system, sensemaking can affect identity construction, preservation of organizational image and response to crisis (Pratt 2000; Dutton and Dukerich 1991; Gephart 1993; all cited in Maitlis 2005). In relation to the quality of change, system leaders have a critical role in the sensemaking process since they are the ones responsible for delivering explicit, on-point and clear language about the changes (Fullan and Quinn 2016).

Gioia and Chittipeddi (1991) note that a critically important leader behavior at times of change is sensegiving, defined as “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (p. 442). As Gioia and Chittipeddi illustrate, at first, leaders try to comprehend the change themselves by giving meaning to relevant events, actors, actions or opportunities (sensemaking), and afterward, they disseminate a vision of change that influences the way other stakeholders make sense of that change (sensegiving). These authors argue that sensemaking and sensegiving sequentially exchange places in the process involved in the initiation of strategic change (p. 444).

In such a process, sensemaking is “about the interplay of action and interpretation, rather than the influence and evaluation” (Weick et al. 2005, p. 409). In contrast, sensegiving relates to the concrete actions of system actors. Since change is a multi-vocal process, different actors included in the process of change initiation assign different meanings to change (Maitlis and Sonenshein 2010). In the context of educational change, sensemaking from the teacher’s perspective was addressed by many authors including Fullan (2007), Schmidt and Datnow (2005), Coburn (2005), März and Kelchtermans (2013). More recently, Ganon-Shilon and Schechter (2017) address this issue from the perspective of school leadership, arguing that school leaders create the meaning of reform based on their pre-existing understanding, personal values, previous practice and overlapping internal and external contexts (e.g., policymakers, teachers, parents, students, etc.). These factors influence the decisions of school leaders about which policy messages they want to adopt and which to disregard. While explicitness as an antecedent to the quality of change relates to the leader’s role in the sensemaking of school stakeholders, the leaders’ openness to collaboration which affects the change climate relates to the degree of participation in sensegiving by various school stakeholders (Fullan and Quinn 2016). Maitlis (2005) argues that in cases where there is too much hierarchical sensegiving from system leaders (policy makers) and too little participation in sensegiving from other school stakeholders, the sensemaking–sensegiving process can have detrimental effects.

In this paper, we argue that policy makers often prioritize the wrong reforms, such as punitive accountability, individualistic strategies, technology and ad hoc policies due to the exploitation-oriented dominant logic that ultimately affects sensemaking–sensegiving in the process of learning about change. The process of utilizing the wrong mechanisms for change (e.g., utilizing paradigms such as benchmarking) consequently widens the gap between means and ends in a complex system characterized by different patterns of coupling. Reforms driven by an

inadequate leadership style and consequently the wrong means ultimately lead to superficial change, resistance or inertia.

## The study, sample and analysis

Critical realism (Bhaskar 1978) is the scientific perspective compatible with exploring the complex systems that enable researchers to analyze the deeper meaning of the complex context and its dependency on external social forces. Critical realists understand that outcomes are results of interactions between social structures, mechanisms and human agency. Such causal mechanisms have a potential to influence other social phenomena. However, this potential impact is dependent on the context in which such mechanisms exist. These causal processes are thoroughly elaborated through the morphogenetic approach in critical realism (Archer 1979, 1988, 1995; Porpora 2013). The morphogenetic approach explicitly acknowledges the causal relations between personal factors (such as motivation and experiences) and contextual or structural factors (such as rules, policies, leadership, organizational culture, etc.) and their influence on desired outcomes. Accordingly, we argue that MoE is engaging in a partial morphogenesis by transforming the educational landscape through condensation of its dominant logic in language and actions as structural factors. Thereby policy makers as leaders act as sensemakers and sensegivers (Foldy et al. 2008), influencing change in the school stakeholders and environment. The volition of school stakeholders to change will depend on their own sensemaking, a role they have been given in sensegiving, intrinsic and/or extrinsic motivation and from past experience (Ganon-Shilon and Schechter 2017). However, their morphogenesis or transformation will not be linear because the educational system as CAS is characterized by a variety of coupling patterns that affect the non-linearity of interactions (Keshavarz et al. 2010).

## The context of the study

The education sector in Canton Sarajevo has been experiencing a deep crisis marked by chronic discontent of teachers, students and parents, low morale of teachers and eroding public confidence in the educational institutions. Since educational policy is not treated as a priority on the political agenda in Bosnia and Herzegovina, similar logic of educational change is transmitted to cantons as decentralized units. Issues that affect the quality of secondary education in Canton Sarajevo are related to resource allocation in support of teaching and learning, the growing number of MoE demands on teachers and the politicized nature of the revised curriculum especially in national subjects.

## Problematic nature of resource allocation

Secondary schools are primarily funded by governments at the canton level. Even though schools are permitted to independently generate additional financial assets through sponsorships by external stakeholders, school projects with NGO and

international agencies, commercial educational programs in vocational training and student projects (e.g., school fairs), a recent report on the organization and activities of secondary schools published by MoE for the school year 2015/2016 implies that schools have a limited capacity for financial independence. Independently generated financial assets range from 1% to 9% of the total annual school budget, making secondary schools dependent on government funding.

The financial dependence of schools on government funding combined with low and irregular teacher wages in Canton Sarajevo have been considered the main reason for the deepening crisis in recent years. In May 2013, the situation in the education sector in Canton Sarajevo escalated when the teacher unions, gathering nearly 4000 teachers from pre-school, primary and secondary education, organized mass protests on the streets of Sarajevo. The teachers demanded that: (a) the government should stop the practice of breaching the collective agreement; (b) they should receive regular monthly wages and (c) their wages should be equal to wages of other public servants funded from the government budget (teacher wages were 10% lower than wages of other public servants). The teachers also called for the resignations of the Minister of Finance and the Prime Minister of Canton Sarajevo, holding them accountable for the crisis in the education sector. Faced with pressure from the teacher unions and also political pressure from government officials, the Minister of Education, who was at that time engaged in negotiations with the teacher unions, resigned irrevocably leaving many issues unresolved. The period from May 2013 to November 2015 was marked by a lack of consensus in the government for electing the new Minister and MoE staff. During that period, the crisis in the education sector in Canton Sarajevo deepened, leaving principals and teachers struggling with financial difficulties in their schools, low teacher morale, disciplinary issues and eroding public confidence in the educational institutions.

### **The symptoms of *initiativitis***

Following the election in Bosnia and Herzegovina, new Ministry of Education staff was appointed in November 2015. The new Ministry staff inherited complex issues in education, mainly since policy makers from previous mandates failed to acknowledge the burning issues and the vision for educational change, resource allocation and general strategy for educational change. The new MoE staff's answer to the crisis in education was related to the introduction of IT innovations and changes in curricula at all levels (pre-school, primary, secondary and higher education). The newly introduced changes manifest themselves in the form of rationalization practices, cost-cutting and benchmarking policies. These routines have become the only accepted way of thinking by MoE, illustrating its dominant logic (Bettis et al. 2011).

Regardless of the new policy makers' intent to consolidate educational policy with EU policy by facilitating benchmark practices, the lack of both a strategic vision and a systemic approach to change was evident.

As a result of previous inconsistencies and slow progress in educational policy at state level, current initiatives for change in the educational system in Canton Sarajevo are presented in a rather unsystemic manner, often disconnecting

important stakeholders and experts from the field from the dialogue. Many unconnected “strategic” goals and initiatives have been introduced without an empowering vision that acts as a glue to hold them together. Fullan (2008) refers to this phenomenon as “initiativitis”, whereby teachers are being overloaded with “an endless stream of disconnected innovations that no one could possibly manage” (p. 1) which is hard on teachers in Canton Sarajevo. The growing MoE demands on teachers can be particularly difficult in the process of making sense of reforms and coping with emotions as a by-product of the sensemaking–sensegiving process. The meanings are a product of social interaction “leading to unforeseen and often unpredicted emotions that can frustrate or enhance policy implementation” (Schmidt and Datnow 2005, p. 950). On the collective level, sensemaking is related to the organizational culture of schools (März and Kelchtermans 2013). Individually, teacher sensemaking, as argued by Coburn (2005) is influenced by the teacher’s connections to policy messages, as well as by their personal knowledge and beliefs that serve as a “cognitive and affective lens” through which they assign meaning and act on it (Kelchtermans 2009, cited in März and Kelchtermans 2013).

In the following passage, we illustrate an example of a poorly defined initiative by MoE and its possible detrimental effect on teacher sensemaking regarding what reform is. In June 2016, MoE announced an increase in the number of class hours in sports and computer science for students attending the first grade of primary school. The number of subjects in the first grade of primary school was also increased from seven to nine subjects, adding computer science and English language in the school year 2016/2017. This change also increased the number of weekly hours for teachers. In a short period of time (from the end of June to the end of August 2016), first-grade teachers were attending training related to the newly introduced subjects. Regardless of the teacher training program, the main issue that remained unresolved was that many primary and secondary schools in Canton Sarajevo already struggled with the financial resources and necessary infrastructure for adequate class management. The introduction of additional subjects and class hours only made the situation worse. Therefore, initiatives of this kind that do not address issues of necessary infrastructure and resources in support of teaching and learning represent a serious obstacle to the proper class management of additional subjects and ultimately damage the already fragile teacher authority, increase their weekly workload and result in more job-related stress.

### **Politicized nature of curriculum revision**

Politicized nature of MoE decision-making is visible from the curriculum revision in the subject of mother language in 2016. For the first time, MoE included nearly 200 primary and secondary school mother language teachers in the curriculum revision. The teachers formed an expert commission for curriculum revision, proposing the redesign of the current curriculum in accordance with current methodological trends in grammar and world and national literature. It was also proposed that teachers should have a mandate to shape 25% of “white space” curriculum, as Hargreaves calls it (2010, cited in Hargreaves et al. 2010). The main idea behind this proposition was that, in this way, teachers can bring out their

creativity by introducing students to themes that truly engage them and lead to effective knowledge acquisition. However, since mother language is considered to be a subject that shapes the national identity of ethnicities in B&H, the entire curriculum revision process was highly politicized from the very beginning and was consequently halted by MoE due to the absence of political consensus in government bodies. The teachers were left disappointed and discouraged by such actions from the Ministry.

The centralization of decision-making by MoE is an example of operant conditioning (Skinner 1963). Current MoE staff are appointed by and reinforced/motivated by the dominant conservative political coalition that calls for the practice of centralization and rationalization at all educational levels, because these practices are the focal point of the current political agenda of reforms in the public sector. Accordingly, rationalization and centralization in the education system as behaviors which are politically reinforced tend to be repeated (e.g., strengthened) in times of educational change, regardless of the effects. Additionally, MoE's reliance on utilizing the paradigms in the form of international benchmark practices can result in cognitive bias and an ineffective pattern-recognition process that influence the decision-making (Weller 1996; Magd and Curry 2003), and for example, the solution that applies elsewhere is not necessarily applicable in Canton Sarajevo (Pralhad and Bettis 1986).

The example of banning teachers from curriculum revision is an illustration of limiting teachers' sensegiving in the process of learning about the changes that directly affect the change climate. Such practices by MoE, marked by too much hierarchical sensegiving that consequently limits teachers' sensegiving and creativity, are inconsistent and contradictory to the official MoE statements that communicate policy messages, thereby acting as lip-service.

Under the new Ministry of Education staff appointed by conservative political party, the objectives of educational reform in Canton Sarajevo appear to be ad hoc, addressing many *flavor-of-the-day* initiatives and procedures that change the statuses and *modus operandi* of stakeholders in the educational system. Changes in every area of reform are treated with a priority tag and observed through a rationalization lens without focusing on the quality of relationships and the ultimate substance of reform.

Such goal overload can potentially lead to the silo problem (Fullan and Quinn 2016), followed by uncertainty and disorientation among teachers and principals. Additionally, rationalization practices and "*witch-hunting*" in the form of punitive accountability are constraining the extrinsic and intrinsic motivation of teachers. In such setting, fragmented initiatives are accompanied by scepticism and resistance by educators. In accordance with the decoupling theory (Bromley and Powell 2012), resistance to implement changes at the school level can be regarded as a serious threat to the desired outcomes of educational reform on a larger scale.

### **Analysis of MoE documents**

Weick (1995) emphasized the relevance of language in communicating meaning and encouraged researchers in the organizational studies to pay attention to narrative

methodologies that analyze language (Kezar 2013). The qualitative content analysis is one of the methods used to analyze textual data, which can be presented in various types of documents.

The documents used in systemic evaluation can take various forms, such as agendas, attendance registers and minutes of meetings, manuals, background papers, books and brochures, diaries and journals, event programs, letters and memoranda, maps and charts, newspapers, press releases, program proposals and other various public records (Bowen 2009). Document analysis begins with theoretical sampling, which includes the process of collecting the data in relation to the data relevance, theoretical positioning, analytical framework and future theory (Glaser and Strauss 1967). Apart from theoretical sampling, Boeije (2002) argues that constant comparative analysis (Glaser and Strauss 1967) represents an additional key concept in grounded theory. Constant comparative analysis includes forming categories from the data, establishing the boundaries of the categories, summarizing the content of each category, finding negative evidence, etc. For the purpose of this research, we focused on the means of MoE's communication of policy messages, selecting MoE press releases as relevant documents for analysis. The documents were coded and analyzed using CAQDAS (Computer-Assisted Qualitative Data Analysis Software) QDA Miner v.4.

The analysis of MoE's language in communicating policy messages is in keeping with second-order explanations of the sensemaking–sensegiving process (Gioia and Chittipeddi 1991) which tries to discern a deeper comprehension of the sensemaking–sensegiving process. This is achieved by looking at the patterns of system leaders' narratives and the discourse directed to system stakeholders (e.g., in our case, narratives from press releases directed at the broader public). The language of MoE in press releases acts as a window into MoE's dominant logic and interpretation of the system, reform activities, priorities, system actors and system relationships. To explore and analyze such an interpretation of educational change, we use causal mapping, “a sub-class of cognitive maps that focuses on the representation of causal beliefs—a network of causal relations embedded in an individual's (or group's) statements” (Armstrong 2004). Originally, cognitive psychologists revealed the schematic nature of how humans store knowledge of the world in the form of cognitive structures, as for example in Thorndyke (1977). Armstrong (2004) argues that causal maps represent a set of techniques used “to explicate and assess the structure and content of mental models, that allow researchers to capture the cognitive structure of an individual by representing how domain knowledge is linked in his/her mind. These maps provide a frame of reference for understanding both what the participant knows and exhibits and the reasoning behind his/her actions”. The development of the concept/causal map in this research is aligned with Pressley and McCormick's (1995) methodology and encompasses multiple techniques: (1) key words and phrases are identified from the reading of documents (unitization, categorization and coding); (2) key concepts are ordered from the most general to the most specific (frequency analysis); (3) the concepts are clustered according to criteria (hierarchical clustering); (4) related concepts are then linked with lines, specifying the relationships between concepts (multidimensional scaling).

In the initial phase of data sourcing, the authors were guided by Glaser's principle "all is data", focusing on all electronically available MoE press releases on educational reform since the introduction of new ministry staff from November 2015 to April 2016. The data sourcing in this phase resulted in a total of 36 documents. By employing constant comparative analysis and logic of theoretical sampling, we concluded that seven press releases were related to pre-school and higher education policies, which were not the focus of this paper. Therefore, press releases related to pre-school and higher education policies were omitted from further analyses, leaving 29 press releases to be coded. However, press releases related to primary education policies were retained, since these policies and resulting practices were planned to be transferred to secondary schools in accordance with the same model (e.g., the model of standardized external evaluation of students in primary schools is planned to be transferred to secondary school level).

Theoretical saturation (Glaser and Strauss 1967) was achieved at the 22nd document, when new categories stopped emerging from the data. However, we continued with the coding of all 29 documents that resulted in higher frequency of identified categories.

After the unitization and categorization of the text, we conducted an open, axial and selective coding. The coding process resulted in 44 open codes, 13 main categories created by axial coding of open codes and four super categories of reform domains. By utilizing constant comparative analysis as an iterative process, we have identified current issues in the educational system as identified by MoE and ongoing reform activities or initiatives as a MoE response to these issues. Table 1 illustrates the reform domains in Canton Sarajevo and a short description of the reform initiatives. After the process of identification of super categories from the data, the next step in the analysis was to determine key super category/super categories. According to Glaser and Holton (2004, cited in Jedud 2007), the primary function of a key super category is the integration of theory.

The key super category is specific since it has the highest coding frequency and is more closely related to other categories. In our research, the identification of the key super category or super categories is concerned with the identification of the minister's reform priorities in Canton Sarajevo. While conducting constant comparative analysis in the process of identifying key super categories, we have detected an accountability language which is also prevalent in OECD policy documents. Table 2 illustrates the comparison between OECD policies and themes identified in MoE press releases.

### **Findings from frequency analysis**

We performed frequency analysis with the aim of identifying the most frequently emphasized reform themes by MoE in communicating policy messages. Table 3 illustrates the results of the coding frequency analysis. The cut-off point was a code appearing at least five times. A closer look at Table 3 reveals that certain reform themes are more frequent than others. The frequency analysis shows that the themes within the pedagogy domain are more frequently cited, with a code frequency of 85.



**Table 1** Identified super categories of reform domains

Super categories of secondary school reform domains in Canton Sarajevo	Description of identified issues and reform activities or initiatives by MoE within specific domain
Policy-procedural domain	<p><i>Issues identified by the MoE</i> Misuse of principal's authority and position; limited funding and scarce resources in schools; unsystemic employment practices by principals; inconsistencies in teacher retirement procedures; misuse of sick leave policy and teacher absenteeism; vague policy of new staff recruitment</p> <p><i>Ongoing reform activities</i> Initiatives for setting limits to principal's authority; changes in legislative framework, procedures and statuses of school stakeholders and relevant educational agencies; initiatives for financial consolidation and rationalization; increased centralization and control by MoE</p>
Pedagogy domain	<p><i>Issues identified by the MoE</i> Overlaps in curriculum; inadequate teacher education at universities; large class size; passiveness of teachers in relation to continuous learning and methodological and technological innovations</p> <p><i>Ongoing reform activities</i> Revision of curriculum; introduction of standardized external evaluation of students in 2016; initiatives for overcoming passiveness of teachers in relation to methodological and technological innovations</p>
Organizational domain	<p><i>Issues identified by the MoE</i> Limited participation of school stakeholders in reforms and decision making; schools as organizations isolated from the external environment; no legislative requirements for principals to obtain an academic degree or its equivalent in management and organization for effective school leadership</p> <p><i>Ongoing reform activities</i> Addressing the necessity for more active engagement of teachers and parents; initiatives for redesigning the roles and activities of teachers and principals—principals should act as managers, more competitive and cooperative with external school stakeholders; initiatives for professionalization and licensure of principals</p>
Collaboration domain	<p><i>Issues identified by the MoE</i> Missing links between all levels of education and labor market; unsystemic planning of student quotas in tertiary education; obsolete IT equipment in schools</p> <p><i>Ongoing reform activities</i> Initiatives for collaboration with other government institutions and teacher unions with an aim to change legislative framework and status of teachers;</p> <p>Initiatives for collaboration with University of Sarajevo in the domain of teacher education, external student evaluations and IT innovations in schools</p>

**Table 2** Examples of filtering or “cherry-picking” of “relevant OECD policies” and its ineffective implementation in Canton Sarajevo. *Source:* Adapted by author from OECD (2015)

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE’s DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE’s DL)
STUDENTS: raising outcomes	Preparing students for the future (2/7)	Policies to help prepare students for further education or the labor market	VET (Vocational education and training)	Matching skills offered by VET programs with labor market needs; adequate career guidance; quality of teachers; providing workplace training; tools for stakeholder engagement	Support to vocational schools
			Transitions across education pathways and links to the labor market	Collaboration with schools International best-practice approaches	Support to vocational schools is superficial and unsystemic, characterized by individualistic appraisal of better performing schools. Suburban vocational schools that struggle with financial difficulties, large student and teacher populations and student behavioral issues are often left out from the dialogue and initiatives
			Transitions	Collaboration with university; Collaboration with other institutions and unions	New legislative framework does not address transitions from secondary school to university or labor market. The secondary education is not aligned with tertiary education and labor market needs. Even though MoE is accentuating collaboration with the university, there are no MoE incentives for the academic community to actively engage in public hearings and discussions regarding educational policy

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
<p>INSTITUTIONS: enhancing quality</p> <p>School improvement (5/8)</p>	<p>Policies to strengthen delivery of education in schools that can influence student achievement</p>	<p>Learning environments</p>	<p>Class size; curriculum; instruction time; learning strategies; interactions in schools</p>	<p>Curriculum revision; class size; improvement of the instruction and teaching through IT</p>	<p>Promotion of IT without resolving issues of infrastructure for proper class management remains an issue. There is ad hoc involvement of teachers in curriculum revision. Curriculum revision in national subjects is highly politicized. The goals, objectives and purpose of secondary education remain unclear. Toxic cultures are prevalent in secondary schools. The controversial MoE decision to merge schools that have less than 18 classes to cut administrative costs opens a new discussion on optimal class size and the quality of learning environments in merged schools. Rationalization is used as an argument for such decisions without referring to other possible reasons such as insufficient enrollment or demographic factors (e.g., fall in birth rates)</p>

**Table 2** continued

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		High quality teachers	Recruitment, selection and induction; salary and working conditions; initial training; professional development opportunities and career paths	Violation of employment practices; Issues with teacher authority; sick leave and absenteeism; retirement; unsystemic employment strategies; education and continuous learning of teachers; The role of teachers in standardized external evaluations	MoE is raising the bar for qualifying teachers (university degree—bachelor 3 + master 2) but not aligning university programs with international best-practice and rigorous selection procedures of student candidates (e.g., no university entrance exam). Selection procedures for teacher candidates are unclear, while teacher training remains unsystemic and ad hoc. There is an absence of support for teachers in inclusive education. The introduction of new subjects leads to increases in the weekly workload of teachers. The Pedagogic Institute should be in charge of lifelong learning and the professional development of teachers. Instead, in 2016 the MoE redesigned the role of the Pedagogic Institute to act as an evaluator on behalf of MoE. MoE announced performance-based pay for teachers without offering sound arguments for doing so (e.g., reference to education systems where it made sense to introduce performance-based pay) or how to do it

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
School leaders		Attracting, developing and retaining school principals in the profession; support and networks	Principals as managers; principal licensure; limiting principals' mandates; schools more open to external environment	New legislative framework does not address school autonomy, principal managerial qualifications, licensure or professional standards and development in school administration and leadership. The focus of the new legislation framework is setting limits to principals' mandates and not on their professional development and improvement of organizational context of schools supportive to learning	

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
School evaluation		School evaluation	Internal school evaluation; external school evaluations; school leadership	MoE monitoring; Principal licensure; External evaluation of students in primary schools; External evaluation of students in secondary schools	There is no support or guidance for the implementation of internal evaluation in schools. External evaluations are not aligned with the goals and purpose of secondary education and learning outcomes. The University in Sarajevo, parents and students oppose external evaluation in its current form since external evaluation is not introduced in other cantons. This makes student transitions from other cantons to Canton Sarajevo extremely difficult and discriminatory. Additionally, the Minister announced pilot external evaluations in the 9th grade of primary schools and in the 1st grade of secondary schools without providing arguments for such a decision. Even though external evaluation in primary schools is implemented for four consecutive years, there are no qualitative or quantitative analyses of results nor recommendations for school improvement. Organization of external evaluation is poor and the number of subjects tested varies, including short timescales for the preparation of important procedures, staff and infrastructure

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
		Evaluation and assessment frameworks	Co-ordinated arrangements; governance, configuration/ architecture; competencies and skills; use of results; implementation strategies and factors	Collaboration with university; collaboration with other institutions and unions; external evaluation of students in secondary schools; Transformation of the Pedagogic Institute	The Pedagogic Institute was transformed to serve as a school and staff evaluator on behalf of MoE. However, the process of evaluation is not standardized nor transparent. There is no feedback for schools regarding the use of evaluation results

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
SYSTEMS: governing effectively Governance (3/3)	Ensuring effective planning, implementation and delivery of policies	Formal structures	Type of government; organization of education system; locus of decision making	Changes in legislative framework	The overarching vision for the education system is not present in the newly introduced legislative framework. A public hearing regarding new legislation was formally implemented. Timescales for public hearing and law-making procedures were short, leaving no space for comprehensive discussions on issues in primary and secondary education in Canton Sarajevo. Numerous issues are related to new legislation such as non-transparency, vagueness, poor arguments for modification of legislative framework. School autonomy was not addressed; vague definitions of school networks and their legal status; centralization of decision-making by MoE; politically imposed content in certain school subjects that cover topics of war and genocide in the period 1992–1995, etc.



**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
Setting objectives	Definitions of education goals and priorities			Improvement of the instruction through IT; principal licensure; promotion of IT innovations in schools; external evaluation of students in primary schools; external evaluation of students in secondary schools	There is no overarching vision for the education system in Canton Sarajevo. Many fragmented initiatives and priorities are addressed, but such initiatives are mainly related to structural changes in the system (curriculum revision, external evaluation, roles and responsibilities, ad hoc policies, etc.). MoE perceives IT as a driver and not facilitator of reforms
Stakeholder process	Relevant institutions and engagement with stakeholders		Collaboration with schools; collaboration with university; Collaboration with other institutions and unions; Schools oriented toward external stakeholders (parents; community); Collaboration with other cantons	Intensified collaboration with institutions and unions is related to structural changes in the system and newly assigned roles in the legislative framework. Although MoE is responding to demands imposed by stakeholders (e.g., teacher unions, education experts or parents), the response is usually not effective thereby not resulting in changes teachers, experts or parents want to see. E.g., although new legislative framework addresses the importance of inclusive education, it remains superficial in its definition by making no distinction between student behavioral issues and neurological disorders such as ADHD and sensory processing issues	

**Table 2** continued

(1) Policy levers (number of policy options addressed by MoE in documents/total number of OECD policies)	(2) Definition	(3) OECD policy options addressed by MoE in communication with public	(4) Policies	(5) Themes identified in MoE press releases in relation to OECD policy options (What is being filtered by MoE's DL)	(6) Examples of ineffective implementation of OECD policies (how effectively/ineffectively has been filtered by MoE's DL)
Funding (2/2)	Policies to ensure effective and efficient investment in education systems	Economic resources in the education system	Public expenditure; GDP and share by education level	Rationalization and financial consolidation	There are no official programs for funding reforms. Reform activities are funded through rationalization and financial consolidation, usually at the expense of schools, especially suburban schools characterized by large student and teacher population. MoE is putting pressure on principals to be more externally oriented, pressured to network with various stakeholders and generate financial assets/donations from local communities and local businesses
		Use of resources	Time resources; human resources; material resources	Rationalization and financial consolidation; poor employment strategy; support to vocational schools; schools oriented toward external environment; resources and infrastructure; promotion of IT innovations in schools	Another controversial issue is that MoE observes rationalization policy as a means for improvement of education. Rationalization measures are implemented at the expense of school learning environments. Often, teachers themselves buy necessary equipment for class because school budgets are not sufficient. Part-time teachers are affected by rationalization the most

**Table 3** Results of coding frequency analysis

Themes	Reform domain	Frequency of codes	Word count	Total number of frequencies within domain
Collaboration with other government institutions and teacher unions	Collaboration	30	747	54
Visits to primary and secondary schools by MoE officials		10	169	
Collaboration with university		9	232	
Collaboration with schools		5	95	
Promotion of IT innovations in schools	Pedagogy	24	582	85
Improvement of instruction and teaching through IT		23	511	
Curriculum revision		8	125	
Standardized external evaluation of students in primary and secondary schools		14	313	
Return to 8-year model of primary education		6	207	
Class size		5	148	
Issues with teacher authority in schools		5	122	
Changes in legislative framework and procedures	Policy	19	543	67
Control and centralization by MoE		9	203	
Quality control in education		8	129	
Bad employment practices in schools		6	190	
Accountability for student and school performances		5	140	
Policy of rationalization and financial consolidation		5	87	
Necessary resources and infrastructure		5	80	
Sick leave and absenteeism		5	80	
Unsystemic employment strategies		5	239	
Education and continuous learning of teachers	Organizational/HR	10	185	27
Principal licensing and professionalization		7	158	
Schools oriented toward external stakeholders (parents, community)		5	311	
The role of teachers in standardized external evaluations of students		5	91	

Within this domain, MoE places a strong emphasis on the promotion and implementation of IT in primary and secondary schools ( $f = 24$ ) and the improvement of instruction and teaching through IT ( $f = 23$ ).

The second domain frequently cited in official documents is related to policy aspects of educational reform, with a total code frequency of 67 within this domain.

The frequently cited theme is concerned with changes in the legislative framework, statutes and procedures in the educational system.

The most frequently cited individual themes are the collaboration with other government institutions and teacher unions in relation to changes in legislation and teacher status ( $f = 30$ ), followed by promotion of IT innovations in schools (24) and the improvement of instruction and teaching through IT ( $f = 23$ ).

It would be wrong to assume that the activities within the pedagogy domain represent the reform priorities as perceived by MoE, even though the themes in this domain are frequently cited. To draw conclusions on reform priorities from the perspective of MoE, it is necessary to analyze the inter-relatedness of the reform themes. Therefore, after coding frequency analysis and identification of frequently cited reform themes, we conducted coding co-occurrence analysis, aiming to reveal interaction patterns between reform themes by creating the concept/causal map.

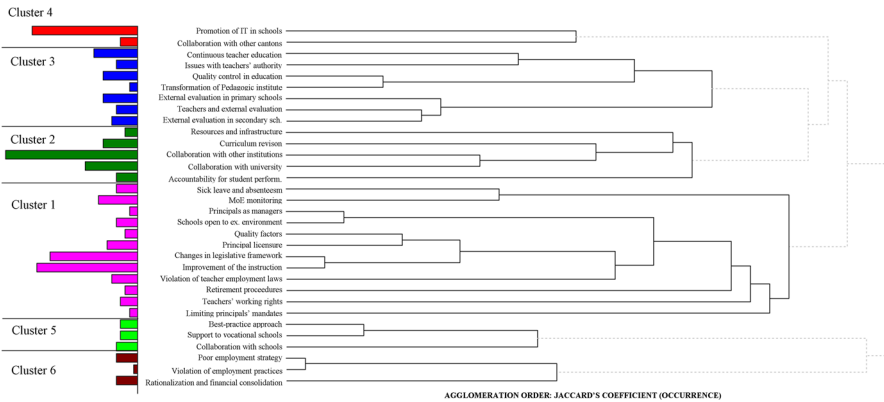
### Findings from coding co-occurrence analysis

In this article, coding co-occurrence analysis includes hierarchical cluster analysis (HCA) and multidimensional scaling (MDS). Both analyses are gaining momentum in education research (Subkoviak 1975; Sireci and Robin 1999; Smith et al. 2002; Bowers 2010; de la Torre et al. 2016, in Harrison and Rouse 2016). Both analyses in this research are employed as a frame of reference for discovering how exactly minister perceives and interprets reform priorities and how these priorities are interrelated from minister's perspective.

Jaccard's coefficient was used as a similarity measure between reform themes. This coefficient is broadly used in co-citation analysis and scientometrics (Small and Sweeney 1985; Leydesdorff 2008; Schildt et al. 2006). The analysis resulted in hierarchical clusters of reform themes on the basis of their co-occurrences in the text. Subcategories of reform activities that co-occur frequently tend to cluster together, in contrast to subcategories that co-occur less frequently. Co-occurrence of themes implies there is a semantic similarity between them. In that manner, clusters of themes are observed as higher order themes. Figure 1 illustrates the dendrogram of clusters of reform themes and the strength of similarity between them.

The dendrogram, based on Jaccard's similarity coefficient for the pairs of 32 reform themes with more than two occurrences, implies that there is the strongest association between: (a) unsystemic employment strategies and bad employment practices; (b) changes in legislative framework, statutes and procedures, and improvement of the instruction; (c) principals as managers and external orientation of schools; (d) quality control in education and transformation of the pedagogic institute as a relevant MoE agency and (e) professionalization of principal position and high-quality education, etc.

Each thematic cluster is marked with a number. Cluster 1 consists of 12 reform themes, with improvement of the instruction through IT and changes in legislature, statutes and procedures being the most frequently cited themes in the analyzed documents. Cluster 2 consists of five reform themes. In this cluster, the most frequently cited theme is collaboration with other government institutions and teacher unions, followed by its strongly related pair of collaboration with the

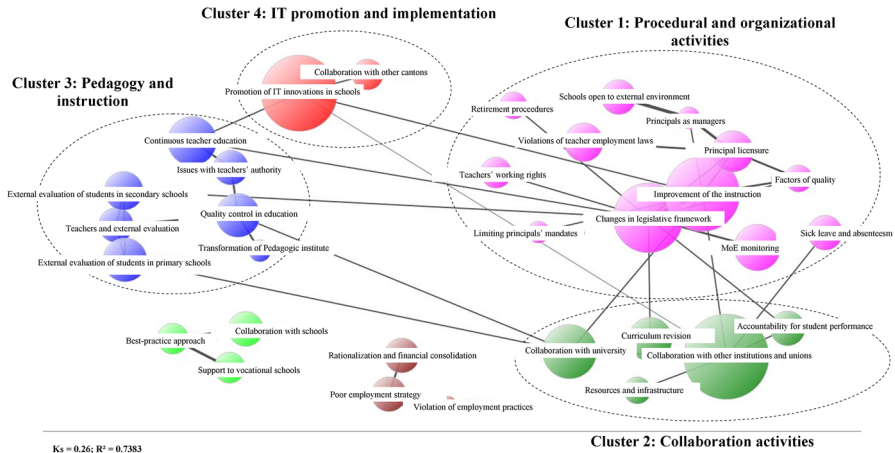


**Fig. 1** Dendrogram of reform themes

university. Cluster 3 consists of seven reform themes, in which continuous education of teachers represents the most frequently cited theme, followed by quality control in education.

Although the dendrogram offers a new perspective on the thematic groupings and higher order themes that emerged from the data, it does not answer how these clusters of reform themes are related to one another. From this point, we proceeded with multidimensional scaling as a second component of co-occurrence analysis. The variables included in the analysis were 32 identified reform themes previously analyzed in the cluster analysis.

Multidimensional scaling encompasses a variety of multivariate techniques that enable researchers to identify key dimensions from observed data by placing these key dimensions into multidimensional space. This technique is widely used for measuring mental models (Armstrong 2004). Although this process is very helpful for researchers aiming to identify key concepts in the data, it is also possible to encounter problems with distortion of the original data when placed in a multidimensional graphic projection. Therefore, researchers are advised to report two important indicators of potential data distortion: Kruskal's stress ( $K_s$ ) and measure of explained variance ( $R^2$ ). Hair et al. (2010) argue that "stress measure is minimized when the themes are placed in a configuration so that the distances between themes best match the original distances". These authors also note that the measure of explained variance is the same measure of variance used in other multivariate techniques. If the values of  $R^2$  are above 0.60, the better the fit of the model. Accordingly, minimal values of Kruskal's stress and high values of explained variance indicate the presence of goodness-of-fit of the graphic projection. Dalirsefat et al. (2009) report that goodness-of-fit is perfect to regular if the values of stress vary from 0 to 20%, while McCain (1990) argues that goodness-of-fit can be established if the model has at least an acceptable value of stress ( $K_s$ ) and a high value of explained variance ( $R^2$ ). Figure 2 illustrates the 2D map based on co-occurrences. The analysis was an iterative process, through which



**Fig. 2** 2D concept/causal map of reform themes as perceived by MoE based on their co-occurrences in the press releases

we aimed to minimize the stress measure, while maximizing the explained variance. Although the stress level is slightly above acceptable level ( $K_s = 0.26$ ), the high values of explained variance ( $R^2 = 0.7383$ ) indicate that there is a goodness-of-fit present within the model.

Themes that co-occur frequently are clustered together. In contrast, themes that co-occur less frequently are placed in separate clusters. The size of the circles within clusters indicates the frequencies of the themes. The larger circles symbolize themes that are frequently cited, in contrast to themes marked with smaller circles. The proximity of circles within one cluster implies that the themes are semantically similar and therefore closely related. For example, analysis of themes in Cluster 1 reveals that MoE officials in official press releases report that improvement of the instruction can be accomplished by changing the existing legislative framework, procedures and statuses of school stakeholders. Consequently, on the school level, changes in the status and role of principals as school leaders are related to their newly perceived managerial roles, accountability for school performance and orientation of schools toward the external environment. Out of six clusters in total, four clusters are inter-related. We then analyzed the themes within each cluster and the relations among them. The themes in Cluster 1 address policy and procedural aspects of educational reform, with special emphasis on organization of schools (e.g., role of principals, HR policies in schools). Accordingly, we titled this cluster “procedural and organizational reform activities”. A closer look at Cluster 2 reveals the dominance of collaborative activities by MoE with other government institutions and teacher unions, followed by collaboration with universities. These collaborative efforts are closely grouped with reform activities of curriculum revision, accountability for the quality of education and activities of providing financial support to schools. We titled this cluster “collaborative reform activities”.

Cluster 2 is related to other thematic clusters, with strongest relations with Cluster 1 (five links). This finding implies that collaboration in and out of the

educational system is predominantly tied to procedural and organizational aspects of educational reform and to a lesser extent with other reform activities.

Analysis of themes within Cluster 3 shows themes concerned with instruction and pedagogy are most dominant, such as continuous teacher education, issues with teachers' authority, quality control in education, the role of teachers in standardized testing and external evaluation. We labeled Cluster 4 "IT promotion and implementation". This cluster consists of only two reform themes: active implementation of IT in schools and collaboration on IT reform projects with schools from other cantons. As presented in the conceptual map, two clusters appear autonomous in comparison with the other four clusters. Cluster 5 consists of themes related to collaboration with schools, implementation of best practices and support to vocational schools. Cluster 6 includes themes related to the MoE rationalization policy, the poorly defined employment strategy and the violation of employment practices by principals.

## Discussion

Only when it is recognized that education is in crisis, and when the causes of this crisis are recognized, will we be able to deal with the problems this crisis brings

(Jörg et al. 2007, p. 150).

Based on a conceptual framework of loose coupling and complex adaptive systems (Goldspink 2007; Weick 1976; Bromley and Powell 2012; Schneider and Somers 2006; Palmberg 2009; Keshavarz et al. 2010), educational change (Fullan and Quinn 2016; Fullan and Miles 1992; Fullan 2011), dominant logic of leaders (Pralhad and Bettis 1986; Bettis and Prahalad 1995; Prahalad 2004; Bettis et al. 2011) and sensemaking/sensegiving (Gioia and Chittipeddi 1991; Weick 1995; Weick et al. 2005; Maitlis 2005; Maitlis and Christianson 2014), we conducted a qualitative analysis of MoE press releases communicating their policy messages. The documents used as an information source for analysis were obtained using theoretical sampling and constant comparative analysis (Glaser and Strauss 1967). The qualitative analysis helped us to make sense of the minister's reform priorities and his interpretation of the education system and system agents. The findings from this study contribute to the body of knowledge on cognitive aspects of educational change, particularly in the domain of policy makers' dominant logic that extends to system leadership practices and the coupling mechanisms system leaders use (top-down approach of tightening the system through centralization and rationalization).

### Problem #1: Leadership style of tightening the looseness

The analysis of MoE's language in communicating policy messages helped us to gain insight into the exploitation-oriented dominant logic that is reflected in the education system through the systemic leadership practices of centralization, rationalization and initiative overload. In alignment with upper echelon theory, such

practices relate to a hierarchical leadership style known as status-quo guardian (SQG) and are characterized by risk aversion and controlling behavior (Nahavandi and Malekzadeh 1993; Nahavandi 2008). Although it appears that the minister introduces changes in the system through many reform initiatives, these changes are not a result of innovative approaches to change and experimentation within the local setting but rather a result of exploitation of prescribed policies, IT, international benchmark practices, existing resources and knowledge. This type of reactive and controlling top-down leadership observes looseness in the system as a threat and thereby imposes top-down mechanisms (Goldspink 2007). MoE often relies on quick fixes and attempts to control the loosely coupled technical core “by publishing curriculum standards, developing accountability tests and providing rewards and sanctions based on the results of the tests (Fusarelli 2002; Smith and O’Day 1990, cited in Shen et al. 2017).

The main question here is why policy makers choose such top-down solutions in the first place that lead to means/ends decoupling and reform failure? Put simply, since policy makers have limited mandates and often limited knowledge on the matter they select the easier path and tend to allocate resources on the exploitation side of the equation, because exploration of new and locally tailored alternatives requires changes in the dominant logic, longer time horizons, results in less certain returns and more diffuse effects and requires significant efforts in financing educational change (Fullan and Quinn 2016; March 1991).

As previously noted, the dominant logic as a filter closely relates to the tools that policy makers advocate and use (punitive accountability, external evaluation, ad hoc policies) to change only the structural aspects of the system. Top down reform does not bring changes to the instructional core—the setting in which teachers work (Elmore 2004). As a response, teachers usually continue with their established practice behind the classroom door regardless of the reform rhetoric, because the technical core of schooling remains unaffected and loosely coupled (Shen et al. 2017). In such a way, the exploitation-oriented dominant logic behind top down reforms acts as a blinder (Pralhad 2004), allowing policy makers to focus on the road ahead by following international benchmark practices, efficiency, forcing too much hierarchical sensegiving and allowing too little sensegiving by system stakeholders (Maitlis 2005). However, such approach to reform seriously limits the peripheral view regarding the loosely coupled instructional core and contextual contingencies. Unless MoE changes its focus from the structural aspects of reform to the ultimate substance of reform (the quality of culture, human relations and pedagogy), the reform efforts and strategy are doomed to fail at the implementation stage in the technical core.

## **Problem #2: “Initiativitis” and absence of directional vision**

We found no evidence in the documents of an overarching vision or general strategy for educational change that glues many initiatives together. Therefore, selection of a small number of priorities that enable whole-system reform (Fullan 2010) is not the case in Canton Sarajevo. As policy makers in Canton Sarajevo are primarily focused on tightening the looseness in the system through utilizing paradigms, centralization



and rationalization, they are little concerned with the adequacy of leadership and the definition of the overarching vision of educational change which should be in alignment with the context of reforms.

In the analysis, we have located the language MoE uses in official policy communications and aligned it with OECD policy levers as benchmarks in educational policy. Policies that MoE decided to implement proved to be ineffective when applied to the specific context of Canton Sarajevo, as illustrated in Table 2. In keeping with arguments made by Prahalad and Bettis (1986), the possible explanation for this particular case is that MoE's decision to selectively implement OECD policies was probably influenced by the reinforcement of rationalization practices by the dominant political coalition, cognitive bias (heuristic principles that simplify the decision process), ineffective pattern recognition (e.g., solutions based on past experiences) and/or utilizing paradigms (the dominant paradigm of international benchmarks) as sources of exploitation-oriented dominant logic. Accordingly, it is reasonable to argue that this finding implies how the absence of an overarching vision can be a consequence of the incapacity for complex problem solving behavior and a politically reinforced SQG leadership that cultivates aversion toward profound, second-order changes and innovative behavior. Instead, SQG leaders focus on prescribed, formal, symbolic aspects of change, cost-cutting and hierarchical control.

### **Problem #3: Preference of symbols over substance and superficiality**

Qualitative document analysis showed that MoE places accent on symbolic manifestations of educational reform, being mainly preoccupied with normative aspects of first-order changes such as curriculum, instruction, school organization, teacher training and external evaluation (Fullan and Miles 1992), which alter the systems' structure through increased centralization, rationalization and setting limits to principals' authority, bounded school autonomy and focus on legislative and procedural changes in the system. The analysis of MoE's language revealed the exploitation-oriented dominant logic that shapes decisions about resource allocation on symbolic, short-term teacher and principal development programs and training (e.g., teacher training for newly introduced subjects in the first grade or introducing additional class hours for sports although schools do not have the necessary infrastructure for adequate class management).

Findings from this particular study confirm that such practices of wasting resources are not unusual and have been present in other educational systems where a top-down approach to reform was implemented (Grubb 2009, cited in Fullan 2010). Educational policy focused on altering the structure of the education system is closely tied to superficiality of reforms (Fullan and Miles 1992).

All these findings indicate that MoE pursues a top-down approach to educational reform in Canton Sarajevo, while relying on the wrong means of reforms such as ad hoc policies, individualistic appraisal and IT innovations. The themes least frequently cited are related to the substance of reforms, such as collaboration with schools, class size, issues with teachers' authority and disruptive student behavior, sick leave and absenteeism and poorly defined employment strategy. The disregard

of issues with teacher authority, teacher isolation and dissatisfaction with working conditions ultimately creates a toxic culture, low group cohesion and low morale in schools. Such conditions pose a threat to coherence (Fullan and Quinn 2016), collective capacity building at school and canton level (Fullan 2010) and deeper, second-order changes that are more daunting (Fullan and Miles 1992), such as changing the culture of schools and the culture of an entire educational system. We closely examined the narratives from analyzed documents and the results of frequency and co-occurrence analyses to find that collaboration with schools, where cited, is mainly concerned with selective support to exceptional vocational schools (e.g., hospitality management, electrical installation and computer science, etc.) that MoE cites as an example of successful collaboration with external stakeholders, mostly from the private sector. This finding implies that MoE tends to favor individualistic appraisal by stimulating schools with better performances and more competitive attitudes.

#### **Problem #4: Limited peripheral view**

In the introductory part of the paper, we argued that the administrative complexity of the state, absence of political consensus and intersecting transitional paths represent serious obstacles to effective educational change at canton, entity and state level. Accordingly, Fullan (2008) argues that policy makers in big and complex systems tend to rely on pre-made, quick solutions without local adaptation, thereby creating *one-size-fits-all* initiatives for reforming education.

One possible explanation for the slow progress of educational change on the state level is that structural reforms in the public sector in B&H are generally implemented at a slow pace due to its complexity. Additionally, the politicized nature of national subjects in B&H prevents effective curriculum revision in accordance with learning outcomes, regardless of administrative level. When such political pressures appeared in Canton Sarajevo during the process of revising the mother language curriculum in 2016, MoE had no adequate answers or alternative solutions but to subjugate to such pressures by relying on a quick fix to the situation, halting the curriculum revision and excluding teachers from the revision process, and directly interfering in teachers' role in sensegiving. These actions could inhibit teachers from actively participating in future curriculum revisions and other reform initiatives.

Such actions by MoE in a context abundant with initiatives without directional vision and low explicitness can ultimately lead to inertia toward educational change. There are no international benchmark practices that will be useful if transferred to a non-responding context, overburdened with *sui generis* complexities. Cherry-picking for imported, fragmented, unconnected and instant policy remedies may result in superficial solutions, inertia, dispersion and waste of valuable financial, material and human resources. For example, in the official press release from March 2016 it was announced that MoE, in collaboration with University of Sarajevo, presented an initiative of introducing the university education model for future teachers for a duration of 5 years (Bachelor 3 years + Masters 2 years). The motive behind this initiative was to raise the bar for qualifying teacher candidates in order

to improve the quality of the instruction in schools. However, such borrowed practices (e.g., from Finland) have already been unsuccessfully tried out in other educational systems, but they produced superficial results. As Hargreaves (2010) elaborates, “you cannot change one thing without changing the rest” (p. 108). The aforementioned factors that lead to reform failure are contextually dependent. If the initiatives and policies are not aligned with the context but borrowed from another system, superficial solutions are to be expected.

## Concluding remarks

The following research questions guided this research: (1) what are the domains of educational reform in Canton Sarajevo; (2) what are the activities within these reform domains? and (3) how does a minister as a system leader perceive reform priorities and a communicate the policy messages? We have shown that MoE focuses on four reform domains in Canton Sarajevo: policy, pedagogy, organization and collaboration. Within these domains there are many fragmented initiatives or activities all bearing a priority tag, confirming our speculations about *initiativitis*. The research results have also shown that policy makers are driven by an exploitation-oriented mindset which influences their interpretation of educational reform as a hierarchical, top-down process characterized by practicing excessive control and hierarchical sensegiving in the process of learning about the change. Ad hoc policies, external evaluations and alteration of procedures are used as mechanisms for introducing change in the system. The main issue is that the aforementioned policies and initiatives are not driven by a directional vision (Fullan and Quinn 2016) and strategy that clearly indicate the true moral purpose (Sahlberg 2012) of secondary education and educational change. The results from our research clearly indicate that the behavior of policy makers in Canton Sarajevo aligns with the ineffective policy strategies in the literature.

This study makes important contributions to scientific discussions about educational change, particularly in politically and administratively challenging contexts. First, the study explores educational change through the lens of policy makers, thereby giving more insight into their cognitive frame of reference for understanding the education system and changes within it. Second, this study draws attention to the relevance of the language that policy makers use in communicating policies as a way of enabling or constraining ways to understand and respond to educational change by school stakeholders. Third, we initiate the discussion on the dominant logic of system leaders and argue that it represents an important cognitive factor that has the potential to influence policy makers’ interpretation of the system, system actors and how they shape the meaning of change.

Although this study contributes to the body of knowledge on the ineffective top-down approach to reform, particularly in the cognitive domain, the findings of the study cannot be generalized, taking into consideration our focus on one administrative unit such as canton and the short time-span of observation. Also, this research only investigates the policy makers’ interpretation of educational change and the system actors based on official communication of policy messages. It would

be useful to explore other school stakeholders' interpretations of educational change with the aim of expanding the findings of this study and possibly gaining more insight into the cognitive processes that influence the creation of meaning in times of educational change. Despite these limitations, the study has important implications.

## Implications

Throughout our paper, we have argued that exploitation-oriented dominant logic, related to excessive hierarchical control and top-down sensegiving, can be detrimental in the process of learning about change in a complex system. What we want to suggest with this argument is that instead of controlling the system, policy makers can effectively manage the education system as CAS through the distribution of hierarchical control. In such a process, policy makers should act not as system controllers but as system holders (Palmberg 2009). To practice the role of system holders does not mean that policy makers must give up on control entirely or withdraw from public life, it is about balancing the challenge seeking behavior with the need for control, between the practice of exploitation of current resources and the exploration of new alternatives. The experience of Singapore, and Alberta in Canada show that it is possible to work with this paradigm and achieve great results (Hargreaves and Shirley 2012). It is the centralized, isolated control followed by commanding language that has a detrimental effect on people and their sensemaking—sensegiving in times of change. In contrast, distributed control and a more inviting reform rhetoric, as in the case of Singapore, “is achieved by knowing, watching and being with your people, as they make and follow their own choices, but not in isolation. As in a large traditional family, the process may sometimes be a bit paternalistic but it is also highly participative and intensely engaging” (Hargreaves and Shirley 2012). Palmberg (2009) argues that policy makers as system holders “cannot enforce a CAS of agents to move in a certain direction, but one can build attraction” (p. 495). What attraction basically means is that policy makers must not be susceptible to inativitis but to a selection of and effective communication of a few attractive initiatives or reform priorities that appeal to educators, who would then be intrinsically motivated to participate. In such a way, policy makers can effectively manage the complex system and make sense of its complexity at the point of its emergence—in schools and among educators and principals as implementers. This would also help policy makers in expanding the peripheral view, thereby seeing the big picture. To achieve a participative type of control and exploit its benefits, policy makers as system holders (Palmberg 2009) must seek feedback through the development of platforms for dialogue (e.g., in school networks, professional learning communities). This means letting educators actively take part in the sense giving process and being explicit about it in the official communication of policy messages. Evidently, these actions challenge the upper echelon SQG leadership, its dominant logic and official rhetoric that policy makers use as a powerful tool for influencing school stakeholders. Instead, policy makers as system holders and leaders should evolve to become participative

innovators (Nahavandi 2008) who willingly delegate control over the system with a cause and have a more appealing rhetoric that underlines the importance of culture, current and future collective capacity.

Second, in our study we have aligned our arguments with findings by Weick (1976), Ingersoll (1996) and Shen et al. (2017) who argue that the technical core in schools is loosely coupled. Our research showed that MoE perceives the improvement of the instruction mainly through the means of changing the legislative framework, procedures and formal status of teachers and principals. In alignment with a top-down, managerial approach to reform, the loose coupling in the technical core is perceived by MoE as a threat to educational reform, which is the reason they are trying to tighten it up. However, such attempts to tighten the technical core may be counterproductive in CAS, as in parallel with arguments by Schneider and Somers (2006) and Palmberg (2009), who say that although policy makers act as formal leaders to promote the reform movement and educational change by communicating policy messages, in CAS “much of it takes place at a grassroots or local level” (Schneider and Somers 2006, p. 359). In that manner, policy makers must not overlook the resilience of a loosely coupled technical core, and the importance of educators as policy implementers and their local leadership that may act as buffers in communicating policies. The top-down, exploitation-oriented dominant logic and accompanying rhetoric, as in this case, have an expiration date in education systems such as CAS due to the self-organization principle at local/school level where loose coupling takes place. To capitalize on self-organization and its benefits, policy makers must learn that self-organization takes place on “the edge of chaos” (Palmberg 2009), the transitional state between order and disorder. In such conditions, educational change is not only dependent on policy makers’ cognition, leadership capacities and willingness to implement change but is also dependent on the ability of system agents to self-organize by advocating “more unity and cooperation among all like-minded educators, from teachers, to principals, to administrators, to teacher educators, to local and state-level policy makers. The power to have a strong voice in the debates on educational reform requires such unity of purpose and voice”, as White and Lowenthal (2009) argue.

The Alberta Initiative for School Improvement (AISI) is a good example of the way system agents can self-organize to experiment and introduce remarkable projects that challenge the existing paradigms. This cognitive shift among educators in Alberta happened on “the edge of chaos”, when performance-based pay was introduced by policy makers as a policy mechanism for stimulating teacher performance (Hargreaves and Shirley 2012). Not only did the educators refuse the initiative but they won the political debate by strongly opposing such proposals and arguing that such practices can be a disincentive to teachers working in challenging settings (Hargreaves and Shirley 2012).

Third, in alignment with Prahalad’s view (2004), we argued that in complex and turbulent environments the exploitation-dominant logic can act as a blinder, limiting the system leader’s peripheral view. Such dominant logic can prevent system leaders from comprehending that changes at the local level can lead to changes on a larger scale. As in the case of Alberta in Canada, where the development of diverse,

site-based initiatives through AISI allow bold experimentation in the smallest units from which the entire system can benefit. For this to happen, both the dominant logic and language of policy makers must shift from being exploitation and rationalization oriented to more exploration-based, thereby expanding the peripheral view. As White and Lowenthal (2009) argue, the change of rhetoric is crucially important for change but it is not an easy task and official conservative rhetoric has the power to dictate the purpose of educational change, often through accountability and punitive means. However, even ministers coming from conservative political backgrounds, such as Alberta's Dave Hancock, who understand and are willing to learn about the dynamics of innovation and unpredictability of change can become advocates of bold experimentation as a means of achieving success in education. By publicly and financially supporting AISI as an emergent platform for dialogue and experimentation, Hancock has sent a clear and resonating message to all educators—they are in the forefront of educational change. Hence, policy makers must continuously learn about the complexity of the system not from the comfort of their offices but at the systems' grassroots by engaging in reciprocal communication with system agents.

Let's try to imagine a situation in Canton Sarajevo where policy makers responsible for secondary education suddenly make a cognitive shift from exploitation-dominant logic to exploration-dominant logic. What would be different in comparison to the current situation marked by problematic resource allocation in support of teaching and learning, chronic discontent of teachers due to initiatives and the politicized nature of curriculum in national subjects? In accordance with complexity and chaos theory and a sensitive dependence on initial conditions known as the butterfly effect, a small change in input would go a long way. The issues faced by educators today in Canton Sarajevo would gradually perish under the system leader guided by an exploration-oriented dominant logic. In line with Nahvandi's view (2008) of upper echelon leaders, this type of leader is known as a participative innovator, characterized by efforts to distribute control and is diligent in seeking challenges. By diligently learning about the contextual realities in educational systems such as CAS, allowing the self-organization of system agents, emergence and reciprocity in sensegiving in the process of learning about the change, system leaders can expand their peripheral view, positively influence the sustainability of educational change on a larger scale, effectively allocate resources, and accomplish the synchronicity of system agents and an improvement in their collective capacities. By introducing a few attractive reform initiatives and promoting platforms for dialogue where everyone has a voice, policy makers as leaders would boost educators' morale and contribute to cohesion and a multiplication of current and future collective capacities. By distributing control and empowering educators to practice their roles as sensegivers in the process of learning about change, system leaders can give teachers and principals a sense of responsibility for what they say and do. Such change in the dominant logic that extends to system leadership practices would create space for fundamental changes in the system that could alter both the substance and the structure of the system.

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