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**Author(s):** Jäppinen, Aini-Kristiina

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# Analysis of leadership dynamics in educational settings during times of external and internal change

Aini-Kristiina Jäppinen

Department of Education, University of Jyväskylä, Jyväskylä, Finland

## ABSTRACT

**Background:** The article concerns the tensions that can arise during demanding external, and consequential internal changes and considers how educational leadership is able to respond to them. Leadership is here understood as a collaborative endeavour, producing shared sense-making in situations of tension.

**Purpose:** The main research question was: what kinds of leadership dynamics underlie situations of tension brought about by external and internal change? The sub-question was: what kind of micro-level sense-making processes, argued to be the true source of change, assist in revealing these dynamics?

**Programme:** Educational organisations increasingly face demanding external changes, such as the two mergers described in this article. Tensions can easily be brought about during such external changes and the consequential internal changes, such as two pedagogical innovation projects in this article.

**Sample:** The study was conducted with three leadership teams within two organisations. The first organisation was a vocational education organisation with around 4000–5000 students and 500 staff members. The leadership team that was studied was followed for almost two years. The other organisation was a business school which comprised of around 7000 students, 150–200 professors and 500 staff members. There, two leadership teams were investigated and followed for almost three years.

**Design and methods:** The data for the sense-making process was selected by way of qualitative content analysis and an experimented model called TenKeys®. This data were analysed using a grounded theory approach to uncover the underlying leadership dynamics.

**Results:** Ten micro-procedural leadership dynamics were identified. Actions related to the pedagogical projects were then interpreted by means of these dynamics.

**Conclusions:** The findings suggest that understanding underlying leadership dynamics might help educational organisations respond to possible tensions brought about by external and internal change and, consequently, support learners' learning processes, albeit indirectly.

## ARTICLE HISTORY

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## KEYWORDS

Leadership; change; tension; collaboration; sense-making; process

## Introduction

Educational organisations are increasingly faced with demanding societal, cultural, technological, economic and political *changes* (Beabout 2012; Chapman and Harris 2004; Fullan 2016; Hall and Hord 2001; Hallinger and Heck 2011). These external changes often result in inter-organisational changes (Buchanan and Dawson 2007; Landau, Drori, and Terjesen 2014; Lemke and Sabelli 2008), although these do not necessarily happen automatically. What takes place between external and consequential internal changes may then bring about organisational *tensions* (Putnam, Myers, and Gailliard 2014) that can affect, ultimately, the quality of learners' learning processes. Tension is defined here as a contingent phenomenon that challenges an adequate fit, match or congruence between the external and internal change (Zajac, Kraatz, and Bresser 2000).

Research has shown how *educational leadership* has an indirect but crucial impact on the quality of diverse students' learning processes, motivation, evaluation, qualifications and access to social and working life (Donmoyer, Yennie-Donmoyer, and Galloway 2012; Hallinger and Heck 2011; Lomos et al. 2011). Hence, in coping with the tensions, leadership plays a crucial role (Harris, Jones, and Adams 2016). Consequently, it is essential to gain insights into the *underlying leadership dynamics* that operate in change situations that bring about tensions (Bell, den Ouden, and Ziggers 2006; Dooley and Van de Ven 1999; Fjeldstad et al. 2012) and, in this way, better understand how the organisation is able to face the new situation.

However, there is limited knowledge about how the dynamics manifest themselves in educational settings. One reason for this lack may lie in the difficulty of demonstrating the nature of these dynamics in everyday educational life. Therefore, the aim of the study on which this article reports was to understand what kinds of educational leadership dynamics are evident when an educational organisation faces tensions that are brought about by complex external and consequential internal change. In order to detect and describe underlying leadership dynamics, this article draws on data from two large organisations in two occidental countries. Both organisations were educating students for future working life. One organisation represents a vocational upper secondary setting and the other represents management education. Both organisations had undergone a large external change as a result of a merger. As a consequence, both organisations began long-term innovation projects.

## Conceptual basis

In studying the underlying leadership dynamics, a significant challenge is how the nuanced and fine-grained change situations that cause tensions can be identified. To assist with this, the idea of *micro-procedural change* has been used. A micro-process is an established term in general organisational process studies (Balogun and Johnson 2005; Humphrey and Aime 2014; Tsoukas and Chia 2002; Van de Ven, Andrew, and Poole 2005). It refers to the apparently small and slow change process that, it is argued, represents the very source of true change. A micro-process, then, can be described as a hidden, long-term but powerful change that is often difficult to reveal because it is embedded in normal organisational endeavours and flows coherently through multi-fold *interactions* (Kramer and Crespy 2011).

This article suggests that the interactional elements within slow, micro-procedural change and in everyday organisational life could provide a productive channel through which to

monitor the underlying leadership dynamics in situations of tension. For example, Tsoukas and Chia (2002) emphasise how change is related tightly to human interaction. Therefore, it should be approached from within. In order to detect this inherent interaction, knowledge of *sense-making* is applied (Ancona 2012; Balogun and Johnson 2004, 2005; Gioia and Chittipeddi 1991; Gioia et al. 1994; Maitlis 2005; Weick, Sutcliffe, and Obstfeld 2005). Weick (1995, xi) defines sense-making briefly as ‘developing a set of ideas with explanatory possibilities’ within human interaction. Ancona (2012) further explains how sense-making enables a better understanding of what is going on, i.e. making sense of changing circumstances. Sense-making was chosen as the micro-procedural lens through which the underlying leadership dynamics in change situations were viewed.

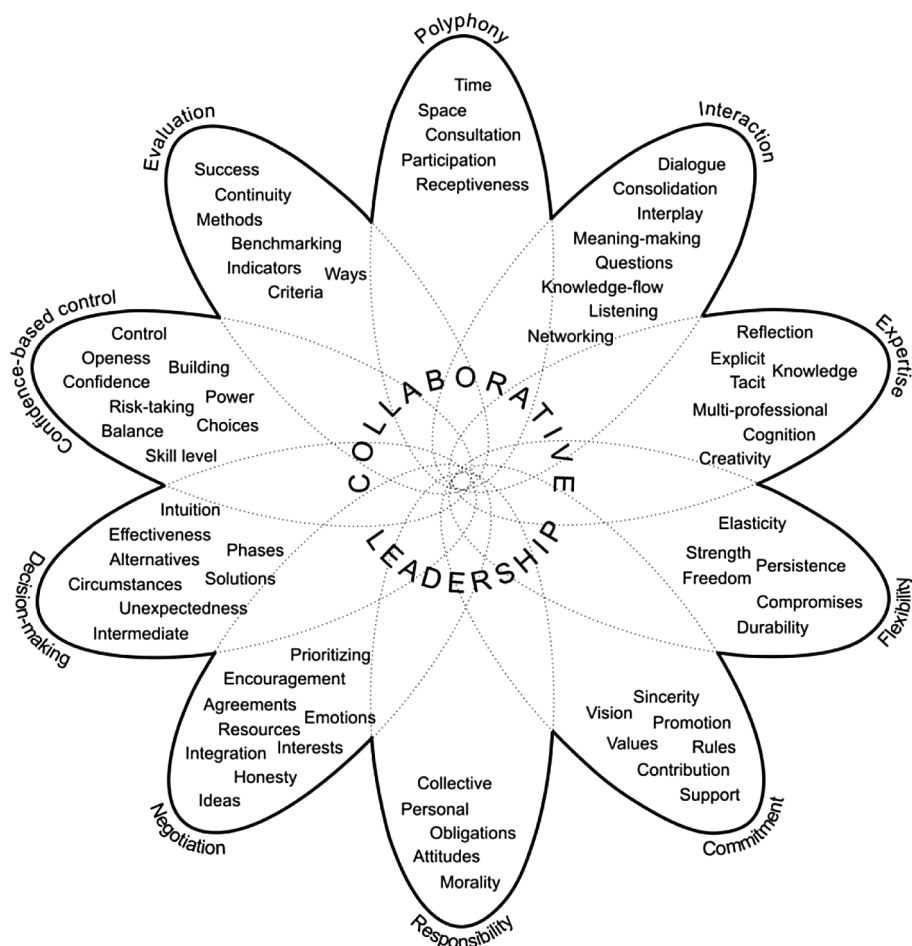
Sense-making can be further defined as ‘the process of social construction that occurs when discrepant cues interrupt individuals’ ongoing activity’ (Maitlis and Sonenshein 2010, 551), such as in situations of tension. Ancona (2012), along with many other scholars (e.g. Balogun and Johnson 2004; Gioia and Chittipeddi 1991; Gioia et al. 1994; Maitlis 2005), emphasises the crucial role of sense-making in unknown and surprising situations. Although sense-making is naturally bound to the participating individuals, it is the community that actually brings about the common understanding, through its interaction (Bruns 2013; Gronn 2015; Stigliani and Ravasi 2010). That is to say, sense-making enables *shared* explanations of complex and ambiguous organisational experiences to be arrived at (Balogun and Johnson 2005; Weick 1995; Weick, Sutcliffe, and Obstfeld 2005).

Shared sense-making is related to the aggregated use of all the participants’ knowledge, understanding, abilities, and skills (Fjeldstad et al. 2012; Fullan 2016; Howard et al. 2015). This kind of shared process has proved particularly capable of inducing *collaborative actions* (e.g. Maitlis and Sonenshein 2010; Stigliani and Ravasi 2010; Weber and Glynn 2006). Research has also shown that the collaborative actions are essential if there is a desire to improve organisational efficiency, quality and creativity (Dooley and Van de Ven 1999). Accordingly, it is argued here that shared sense-making promotes the ability to confront, together, the many and varied challenges that tensions may bring about. In this way, new and innovative ways of thinking and acting can be created (Bell, den Ouden, and Ziggers 2006; Fjeldstad et al. 2012; Howard et al. 2015).

Although shared sense-making and collaborative actions have been seen to be powerful in coping with unknown situations (Ancona 2012), it is also the case that they can have unintended outcomes (Balogun and Johnson 2004, 2005). For example, tensions might produce surprising consequences if shared sense-making does not succeed. However, it can also bring about something that would not have been possible without the original tension – and that may act as a positive catalyst for success.

### The TenKeys® model used in this study

In a co-creation process, such as the two innovation projects in this study, the whole appears greater than the sum of its parts (Hutchins 1996; Larsson and Finkelstein 1999; Surowiecki 2004). That is, a group of people working together can achieve more than the actors could have produced individually. This combined interactional whole involves collective properties (Slappendel 1996) that serve as building blocks for the shared sense-making process. To identify these collective properties in the data for a grounded theory (GT) analysis, the experimental and pre-existing TenKeys® model of collaborative leadership (Figure 1) was utilised



**Figure 1.** The TenKeys® model of collaborative leadership, indicating how the 10 attributes have an impact on each other and the entity they form. Source and permissions: Jäppinen (2014); the author has copyright of the Figure.

(Jäppinen 2012, 2014, 2016; Jäppinen and Ciusi 2016; Jäppinen, Leclerc, and Tubin 2016). The model involves 10 *attributes*, defined as collective properties for building up shared sense-making and enabling collaborative actions. The 10 attributes are: interaction, expertise, flexibility, commitment, responsibility, negotiation, decision-making, confidence-based control, evaluation and polyphony.

Any conceptual model is, of course, an ideal that cannot necessarily be realised. However, it represents a framework that may be applied in a range of educational settings where the combined endeavour of a group of people has been investigated (Jäppinen 2012, 2014; Jäppinen and Ciusi 2016; Jäppinen, Leclerc, and Tubin 2016). Figure 1 indicates how the 10 attributes (which are visualised as the ‘petals’ of the ‘flower’) have an impact both on each other and on the complex entity that they form. In other words, the model refers to a *dynamic and emerging micro-process* that comprises building blocks for shared sense-making. Into the ‘petals’, several nuanced qualities of the attributes have been set out, in order to provide an idea of the kinds of issues that these attributes involve. For example, the attribute called

‘expertise’ involves several qualities, including ‘reflection’ and ‘creativity’ (see Figure 1 for details).

To explain in detail how the model was originally created goes beyond the scope of this article (for further information, see Jäppinen 2012, 2016; Jäppinen and Maunonen-Eskelinen 2012). In this paper, only the larger framework of the model is introduced. The attributes of the existing TenKeys® model were developed from two sources. First, they evolved from utilising an extensive bibliography and studies that employ synergetic and dynamic terms, such as sharing, relating, interconnecting, distributing, integrating, cooperating, collaborating or dispersing (e.g. Grint 2005; Gronn 2008; Hallinger and Heck 2011; Hargreaves and Fink 2006; Harris 2009; MacBeath 2005; Mehra et al. 2006; Spillane 2006). The second source comprised of the results of two large-scale (country) vocational organisation studies (Jäppinen 2012; Jäppinen and Maunonen-Eskelinen 2012). The attributes were categorised into 10 main groups by means of qualitative content analysis (Denzin and Lincoln 2011). In two subsequent nation-wide studies, the model was statistically tested.

## Research questions

The main research question is: What kinds of leadership dynamics underlie situations of tension brought about by external and internal educational change?

In order to answer this main question, a sub-question had to be initially posed: What kind of micro-level sense-making process assists in revealing the dynamics?

## Method

### *Methodological approaches*

The methodological approach that was used to identify the kinds of educational leadership dynamics that drive micro-procedural change was based on a grounded theory (GT) approach involving a conceptual and categorical analysis of empirical data (Glaser and Strauss 1967; Strauss and Corbin 1998). Although some GT interpretations exclude the use of previous theoretical understandings, other applications concede that while the analysis should be inductive and data-based, the researcher always has some leading thoughts (Borgatti 2012). A parallel analysis process was undertaken to extract from the extensive database shared sense-making process to be examined through GT. In all, the analytical process consisted of two interconnected phases: (1) identifying expressions of shared sense-making in the cumulative data and (2) analysing these expressions inductively in order to describe the underlying leadership dynamics.

### *Research design: data collection*

As mentioned earlier, two long-term change processes were studied in two educational organisations in two occidental countries. Access to the micro-processes requires trust in terms of sensitivity and privacy, as well as time and other resources. The two organisations were specifically chosen because they presented an opportunity for this kind of close-range examination. When the author detected that a demanding organisational change was to happen in both of them and the possibility of tension may arise, permission to study the



change was requested from the deans of the two organisations, along with recommendations from the key personnel that supported the request. Access to the organisations was facilitated by the author's close connection with the organisations' key personnel for the innovation projects.

Before the study began, the two deans gave signed consent for the author and, if necessary, the research team members to conduct the study according to the planned design. Some of the author's research team members participated in the data collection in the first organisation. In the second organisation, the author conducted the data collection alone. The majority of analyses were also carried out solely by the author.

The permissions obtained included a clause of free access to observe leadership and other team work in the organisations' daily life. The author (and the participating team members in the first organisation) signed a non-disclosure commitment, modified together with the lawyers of the university, which promised to uphold the anonymity of the organisations and their workers during all phases of the study. The collected data are owned by the university of the author and saved in its protected database. For these ethical reasons, the countries and organisations will remain anonymous.

Altogether, three leadership teams were chosen for the study, as they were the initiators of the internal change, i.e. the innovation projects. The underlying leadership dynamics were studied through the intensive follow-up that focused on these team activities: one in the vocational education organisation and two in the management education organisation (Barnett and McCormick 2012; Mehra et al. 2006). The two organisations and the three leadership teams were followed for about two and three years in order to identify the micro-processes and focus on shared sense-making in the organisations' everyday life.

In a longitudinal process study, such as this one, the number of temporal observations must be substantial for the credibility of the study, although the number of cases may be smaller (Van de Ven, Andrew, and Poole 2005). Because shared sense-making moves back and forth between the complex and simple interpretations of the common experiences (Landau, Drori, and Terjesen 2014), it should be approached by free-flowing discussions and informal communication. In both organisations, a substantial quantity of data of this type were gathered over a period of almost two years in the first organisation, and approximately three years in the other. The data were divided into main and additional parts. Only the main data were analysed by the TenKeys® model. However, the additional data were gathered, for example, from some teacher teams or other individual members, as well as from written documents, and they helped in forming a richer picture of the shared sense-making micro-process.

## *The two organisational settings*

### *Organisation 1*

The first organisation represented vocational upper secondary education. It was the recent outcome of a merger of separate schools from urban and rural areas into a larger organisation with between 4000 and 5000 students and 500 staff members. The reason for the merger as the external change was to reduce organisational costs and reorganise the education provided according to the new challenges and changes in modern working life. These challenges related to many complex issues, including digitalisation, rapid technological



development, the disappearance of traditional occupations and emergence of new ones, as well as global economic insecurity. At the same time, a new dean was appointed who created a matrix organisation with five units. The new units had a more independent position than was the case earlier within the organisational entity, and had clearly defined, larger curriculum and study areas.

In parallel, a pedagogical innovation project, i.e. the internal change, was started within one of the new units. The innovation project was initiated, by the unit leader and a leadership team, when they realised that a tension was arising between the old organisational and pedagogical habits and the external change. Consequently, the leader and team aimed at establishing, for example, more student-centred and individual learning paths and learning practices, as well as collaborative teaching and learning modes and up-to-date teaching models, applying modern technology. In this way, they searched for creative insights that would enable them to interact successfully in the new setting. The team was comprised of both men and women who ranged in age from 35 to 60, and the follow-up spanned almost two years in total.

### *Organisation 2*

The second organisation represented management education in an urban area. The new business school of around 7000 students, 150–200 professors and 500 staff members was the outcome of a merger, i.e. the external change, of two century-old schools that also consisted of several international campuses. The main reason for the merger as the external change was the same one as for Organisation 1: to reduce organisational costs and reorganise the education provided according to new challenges in working life. As in Organisation 1, these challenges included digitalisation and technological development and so on – but, in addition, also included the growing competition of the students between respected business schools. The internal change involved an innovation project of pedagogical reform. Hence, the internal change related to curriculum and study issues in the same way as Organisation 1. The new organisation, which had a new dean, stated that its goal was to become one of the best business schools according to global rankings.

There were two teams to be studied. The first leadership team who were responsible for constructing the reform were to co-create a new curriculum in order to respond to the tension, i.e. an increasing demand for excellence. The members of the team were both men and women, and their ages ranged from 40 to 60. The second team of around 45 members, which followed the first team when their task did not succeed, had to develop course-free studies (i.e. studies that were interdisciplinary and phenomenon-based and did not follow the old course plan). Some members participated in both teams. The second team was established when it became clear that the implementation of the innovative curriculum was not possible due to financial, pedagogical and timing constraints. In other words, it could be said that the tension seemed to make it too difficult. This process, too, was interrupted for financial reasons and owing to a shortage of certain key personnel. Finally, a few members from the second team carried out a single innovative course.

One campus of this organisation was visited for nearly two and half years and activities were followed closely. Modern technology (for example, video-conferencing) allowed the author to monitor, to some extent, the change process in some other campuses as well.

## Data collection

This section describes how the data were collected in each organisation, during phases 1–3 of the innovation projects.

### Organisation 1

*The first phase* of the innovation project included the preparations for the project. The main data consisted of a transcribed recording of a two-hour discussion with the unit leader. When the innovation project started, the leadership team spent one day in a quiet place, away from their normal work setting. The data gathered from this event comprised four hours of transcribed recordings of free-flowing discussions and field notes. As additional data, a two-hour preliminary meeting was observed. In addition, a two-hour discussion with the dean and informal discussions with the team were recorded and transcribed. Recordings of three two-hour discussions with three other unit leaders were transcribed as well.

*The second phase* of the innovation project implementation included the same kind of one-day event as the first phase. This yielded four hours of transcribed recorded discussions and field notes. Additional data were gathered, in the form of three informal discussions with the unit leader and three transcribed discussion recordings (eight hours in total). These were from similar one-day events for three teacher teams, during which they worked on the practical implementation of the project. One two-hour discussion was also recorded with the fourth unit leader.

*The third phase*, finalising the innovation, consisted of a one-day event similar to the two previous ones, yielding four hours of transcribed discussion recordings. Additional data were gathered in the form of field notes from a one-hour session, in which the results of the study were presented to the team.

### Organisation 2

*The first phase* of the innovation project spanned the year during which the first team co-created the curriculum. This phase was not observed at the time, but the 120-page curriculum narrative that made up the main data were studied afterwards. The additional data were comprised of a one-hour informal discussion with the project manager and various organisational documents.

*In the second phase*, in which the course-free studies were planned, the main data consisted of: a transcribed one-hour discussion with the project manager; four recorded and transcribed discussions (four hours in total length), with members representing both teams; field notes from two two-hour meetings in which the curriculum reform was presented to the staff members; and field notes from one discussion with the project manager. The additional data were comprised of field notes of over 20 discussions with the project manager and over ten observations of discussions between the team members.

*The third phase* consisted of: a transcribed recording of a one-hour discussion with one team member; field notes from three two-hour meetings and video-conferences, in which the innovation was presented to staff members; and field notes from two discussions with the project manager. Additional data were gathered in the form of observations from over 10 discussions with the project manager, observations of about five discussions between the project manager and staff members, and two transcribed recordings of discussions with the two professors carrying out the single course.

From both organisations, the field-notes included quotations and copies of drawings presented by the participants and, by the author, descriptions of how the participants reacted and responded.

*Data analysis*

As mentioned earlier, the main research question concerned detecting and describing the educational leadership dynamics that underlie situations of tension that can occur during external and internal change. It was anticipated that the sub-question would help to answer the first question, as it focused on the organisational sense-making process at the micro-level in these situations of tension. For the analyses, the data obtained from the three teams were joined together and the two data-sets were treated, in the follow-up, as a single whole, due to the major similarities in the two organisations’ change situations.

In the two following sections, the data analysis procedures for the two analysis phases will be presented. However, it should be borne in mind that although the analysis phases are presented in the following in a linear order, during the analytical process, they were overlapping.

*Data analysis for answering the sub-question: what kind of micro-level sense-making process assists in revealing the leadership dynamics?*

In order to answer to the sub-question about the shared sense-making micro-process and, consequently, select the particular data for the grounded theory (GT) analysis, a qualitative content analysis (Denzin and Lincoln 2011) was performed. Specifically, those parts of the extensive main data were selected where collaborative leadership attributes, taken from the TenKeys® model (Figure 1), were detected. These were presumed to be signs of the shared sense-making micro-process and served as the data for GT analysis.

To do this, all the utterances that related to the 10 attributes were regrouped and coded into the 10 attribute groups (A1–A10) according to the three phases of the change process. A ‘meaningful utterance’, ranging from one sentence up to several sentences, served as the unit of analysis. The utterances that had been coded were then analysed in line with the GT approach, in order to answer to the main research question. All data were scanned through several times and many parts of this analytic phase were triangulated by research colleagues (i.e. a second researcher coded an interview together with the author. Differing opinions were discussed in order to find a consensus. Around 80–90% of the triangulated data required further discussions. The results of these discussions were taken account of when scanning the data and coding similar places). Altogether, 1575 shared sense-making codes were identified: 640 from the first organisation and 935 from the second one (Table 1).

**Table 1.** Shared sense-making codes identified through the analysis.

	Shared sense-making codes			Total
	Phase 1	Phase 2	Phase 3	
	N codes	N codes	N codes	
Organisation 1	233	213	194	640
Organisation 2	189	583	163	935
			Total codes	1575

### *Data analysis for answering the main research question: What kinds of leadership dynamics underlie situations of tension brought about by external and internal educational change?*

Table 2 shows the structure of the analysis. Key elements of the table will be further described and explained below.

#### **Step 1: Open coding**

This represents the first step in the GT analysis in starting to *conceptualise the data*. The observed phenomenon, in this study the underlying leadership dynamics in the tension situations, is tentatively *identified and categorised*. When something important was detected in the data, it was given a conceptual term. Similar issues that arose from the data later on were coded into the same category. These four emerging basic categories were labelled *Direction, Nature, Meaning and Aim*.

The open coding conceptualisation was based on the fact that these four categories presented different aspects of a dynamic and collaborative micro-procedural endeavour. Specifically, *Direction* shows the course of the endeavour and *Nature* describes its bigger framework and essence. *Meaning* relates to connotation of the endeavour and *Aim* to its goals. In this endeavour, the leadership team members in both organisations tried to understand the situation of tension in terms of what was really going on and how to respond to the challenging situation in the most productive way.

#### **Step 2: Dimensional positioning**

Here, the concepts belonging to the same main category were placed into the same dimensions. Table 2 illustrates the wide array of these dimensions in the four columns. For example, the category of Direction comprised different directions of shared sense-making, including 'From up to down'; 'Between'; 'Straightforward'; and 'Ahead'. As shown on Table 2, the other three main categories (i.e. Nature, Meaning and Aim) each had their own array of dimensions.

#### **Step 3: Axial coding**

At this stage, the connections between the concepts of the previous phases were distinguished and outlined. The kinds of dimensions were connected together that seemed to point to the same kind of underlying leadership dynamic (see Table 2). For example, the first dynamic was created from the concepts of 'From up to down'; 'Between'; 'Cyclical integration'; 'Hierarchical and Heterarchical endeavours'; 'Ownership'; 'Agency'; 'Equal rights'; 'Me plus You equals We'; 'Belonging'; and 'Strong roots'. When making these connections, the entire data provided understanding of how to combine the categories together, as some selected quotations from the data in Table 2. These combinations were identified as featuring different underlying leadership dynamics and were labelled as 'Brimming', 'Continuum', 'Bouncing', 'Crossing', 'Polarity', 'Partnering', 'Reversal', 'Collision', 'Unification', and 'Passing'. However, it should be noted that the labels originated from this specific GT analysis and do not necessarily correspond to parallel concepts or definitions in related studies.

#### **Step 4: Selective coding**

In this the final step, the core-category, i.e. the entity of underlying leadership dynamics, was identified, related to the other categories and labelled as *Micro-Procedural Leadership Dynamics*. At this stage, categories that still seemed to be unassigned were accounted for.

As a result, a data-set compromising the codes D1–D10 was available, i.e. the 10 micro-procedural leadership dynamics (brimming, continuum, bouncing, crossing, polarity, partnering, reversal, collision, unification and passing). Table 2 includes some selected examples from the data to illustrate the dynamics.

**Table 2.** Analysis in response to the main research question: What kinds of leadership dynamics underlie situations of tension brought about by exterior and interior educational change?


## Micro-procedural dynamics

**Open coding**

Direction			
Nature			
Meaning			
Aim			
Dimensional Positioning			
<b>Axial coding</b> → <b>BRIMMING</b> (D1)			
From up to down Between	Cyclical integration Hierarchical Heterarchical	Ownership Agency Equal rights	Me + You = We Belonging to Strong roots
<i>Illustrative data quotation: 'Students are co-constructors of their own competences with other students and teachers'</i>			
<b>Axial coding</b> → <b>CONTINUUM</b> (D2)			
Straightforward	Consolidation of the past, present and future	Rhythm	Continuity
Ahead	Now plus then	Reason Overview	Survival Coherence
<i>Illustrative data quotation: 'So, I think ... this year it's infusing in some way, next year in another'</i>			
<b>Axial coding</b> → <b>BOUNCING</b> (D3)			
Turbulent Bouncing	Active, elastic Everyday life pressures Organisational culture, skills and architecture	Tolerance Endurance Determination	Resistance Adaptation Support
<i>Illustrative data quotation: 'These [difficult] issues need to be discussed, and we need to make sure that we have enough understanding of the matter'</i>			
<b>Axial coding</b> → <b>CROSSING</b> (D4)			
Across	Boundary crossing	Wings to fly	Transcending borders of authority, tasks, policy and identity
Diagonal Over	Exceeding the comfort zone	Exploiting the five senses	A wider perception
<i>Illustrative data quotation: 'Because [if] you had an idea [and] you talked about it to the whole group ... people would chip in, and all would discuss it. And the barriers [would go] down'</i>			
<b>Axial coding</b> → <b>POLARITY</b> (D5)			
Polar	From a common starting point towards diverse directions	Excitement	More choices, ideas, and intentions
Disjunctive		Enthusiasm	
<i>Illustrative data quotation: 'Then, I'll get [the teachers] around the table to discuss it. What authority does the team have to take the matter further?'</i>			
<b>Axial coding</b> → <b>PARTNERING</b> (D6)			
Side by side	From different starting points to the same direction	Same pace	Engagement Sensitiveness to others
Concurrently		Parallel actions	
<i>Illustrative data quotation: 'There was [discussion] about what innovation really is ... what we can do and what we can't ... to make sure we were really going in the same direction'</i>			
<b>Axial coding</b> → <b>REVERSAL</b> (D7)			
Turn around	Changing the direction	Reform	Finding a new or alternative direction or way to act
	Creating a new reality	Regeneration	
<i>Illustrative data quotation: 'You are conscious of what you have done, and you change your own practice. It [has] already [happened] with ten teachers'</i>			

(Continued)

Table 2. (Continued).

Micro-procedural dynamics			
<b>Axial coding</b> → <b>COLLISION</b> (D8)			
Against	Collision of different opinions or actions	Gap	Trying, testing or defining something of importance
Diametrical	Anticipations vs reality		
<i>Illustrative data quotation: 'In some respect, we had freedom enough. But at the same time, I had the feeling of being in two different worlds ... some discrepancy between the world of the project and the real world'</i>			
<b>Axial coding</b> → <b>UNIFICATION</b> (D9)			
To	From opposite directions towards united points	Harmony building in diversity	Meeting each other at certain critical points
Towards			Taking from others and giving the m
Together			
<i>Illustrative data quotation: 'It's important to have all that on the table and [say] ... we are able to discuss, to exchange, to share, and to build something together'</i>			
<b>Axial coding</b> → <b>PASSING</b> (D10)			
By, Past	Observing as a looker-on	Bystander	Avoiding something or pursuing own interests
Above	Missing an opportunity	Evader	Evasion
Away	Coming on board of a moving train	Free-rider	
<i>Illustrative data quotation: 'Some are worried about giving more energy and vision [than would be reasonable]'</i>			
<b>Selective coding</b>			
			

At the end of the process, the whole data were rechecked, and revisions were made by reconsidering the attribute that an utterance had been assigned to or choosing a more appropriate dynamic. Whenever a differing interpretation emerged, it was compared with the same dynamic or attribute.

Examples of micro-procedural leadership dynamics in situations of tension

In this section, narrative illustrations are presented which describe situations, identified and captured by the analysis, where tension arose.

Example 1

In Organisation 1, the first development day was full of expectancy and excitement. The leadership team was motivated but not entirely aware of where to start the project. Nevertheless, they had considerable confidence in it. At the same time, several teacher teams had been gathered together to start their own similar pedagogical projects. Before the second one-day event, the leadership team received concerning news: some teacher teams had expressed strong resistance towards the project. In this situation, it could be said that 'Brimming' seemed to be the functional dynamic. This was evident in the shared sense-making micro-process, when the team focused both on themselves – 'One should sometimes see the small things in one's own management work' – and on the teachers – 'In order to ponder [about] new meeting practices, what are the real and practical matters that teachers

actually decide?’ In so doing, they enabled the teachers to feel that they were real participants in the new unit.

Between the second and the third one-day events, the team members voluntarily participated in the teachers’ sessions and personally responded to their strong criticism. Although the leadership team realised the resistance, they kept on ‘Brimming’, as these quotations suggest: ‘Somehow, I got the feeling [that we have achieved quite many things] ... strength in our unit ... we’ll go on with the teachers ... start with a positive attitude and see what happens’. Respect for teacher independence was also seen: ‘One could unlearn [the tendency] to express one’s opinion too easily. If [the teachers] come and ask, [we should] throw the ball back’. Phase 3 of the project still indicated successful manifestations of ‘Brimming’, although the crisis seemed to be over: ‘[The teachers] ... came up with excellent ideas’.

In Organisation 1, the other micro-procedural dynamic that particularly affected in the tension situation was ‘Continuum’, i.e. the dynamic to consolidate ‘now’ and ‘then’ in an understandable way. As already mentioned, the third development day differed from the two previous ones. The most resistant teacher teams began to show positive signs of involvement. At this point, the leadership team could begin to fit pieces from the past, present, and future into a coherent framework, as these quotations indicate: ‘Pedagogical development is important ... [as it is] pondering [about] it collectively’. ‘In the future, we need to consider the new teachers who come into this organisation with their own ideas, to take care of them ... [so] that they have the chance to grow and also increase the professional competence of the organisation’.

### *Example 2*

In Organisation 2, the shared sense-making micro-process was quite different. Tsoukas and Chia (2002) explain how change programmes ‘work’ insofar as they are fine-tuned within particular contexts. This proved true for Organisation 2, when the innovation partially failed with fine-tuning. Phase 1 concerned designing the new curriculum. When the curriculum was ready, the team realised that it could not be implemented. Nevertheless, the team did not abandon their vision. Rather, in Phase 2, it made a new attempt at planning course-free study contents with a broader group. That idea was also rejected. Then, in Phase 3, a third attempt was made, with the aim of designing a single innovative course. This was eventually put into practice as a small-scale endeavour and in a different way compared with the original idea.

In Organisation 2, ‘Reversal’ seemed to be one essential micro-procedural dynamic in the situation of tension, i.e. aiming at making a linear and conscious organisational turn. However, although Phase 2 included a large volume of shared sense-making utterances, the discrepancy between initiatives and actual realisation of the innovation project revealed that a real change was not successfully brought about. Another dynamic worth mentioning here was ‘Unification’, i.e. converging different ideas to form new syntheses and combinations. From the data in Phase 1, it was clearly observable that a real change was somehow in progress: ‘It was just a collection of suggestions and ideas, comments and feedback ... [They] made a synthesis of these comments’. Then, the economic and expertise constraints became too large and the possibility of implementing the second innovation attempt seemed to dramatically decrease and ‘Unification’ disappeared.



### Example 3

In both organisations, occurrence of the micro-procedural dynamic of ‘Polarity’, i.e. different functions leading in diverse directions from the same starting point, was noteworthy. In Organisation 1, the start was especially challenging and in Phase 2 a real crisis appeared. Then, something unintended happened and the most resistant teacher teams’ attitudes changed: ‘We had this [leadership] group of ours where the objective was to reflect on [the role of the foreman and the teacher] and to engage in dialogue’. When this incident was discussed with the team, they were unable to give any explanation. The team only referred to an unexpected change in these teachers’ conduct. However, the data revealed that the members of the leadership team confronted the crisis together with the teachers, in aiming for actual and intentional shared sense-making.

In contrast, in Organisation 2, only a few and very general Polarity-related shared sense-making utterances were found: ‘Wider choices of ideas ... global vision ... of an extremely innovative, complex, and uncertain current world’. ‘Polarity’ was absent when the team members realised that it was impossible to carry out, throughout the organisation, a real change in the way that the team wished.

‘Collision’, i.e. a dynamic used when some things, opinions, or actions are opposed, showed a declining trend in both organisations. In Organisation 1, it resulted in the implementation of the innovation project. Instead, in Organisation 2, no comprehensive change was finally realised, as encapsulated by this comment: ‘It’s easier to make a project with a lot of good ideas, but then, with economic constraint ...’ ‘I’m deeply concerned about [that] because without a good programme, a good business school, you cannot have a good career’.

### Limitations and concluding discussion

This paper has described how several underlying dynamics within two educational organisations in situations of change were identified by analysis. In both organisations, the external change was a merger and the internal change was a pedagogical reform innovation project carried out as part of responding to the merger. The underlying dynamics were localised when the team members, together, made sense of their common experiences in a situation of tension and outlined what was happening through so-called micro-processes. These processes, although held to be the source of real change, are very difficult to investigate because they are normally hidden and embedded in organisational interaction and endeavours. Here, these micro-processes were identified by long-term and nuanced follow-up of the three teams in real-life change situations.

The notion of the importance of shared sense-making in changing situations is in line with many organisational studies. For instance, Gioia and Chittipeddi (1991) emphasised, over two decades ago, that sense-making is crucial in change. Balogun and Johnson (2004, 2005) have studied middle-managers’ sense-making and how their intentions turned out to have unintended outcomes. Ancona (2012) has shown how sense-making is connected to other leadership capabilities and Maitlis (2005) describes how sense-making is particularly critical in dynamic and turbulent contexts. However, although the idea of shared sense-making in leadership has been well identified in general organisational contexts, studies in education are limited. This study offers a contribution to the better understanding of the

significance of shared sense-making micro-processes in leadership dynamics in education, and how the processes can be identified and described through analysis.

### Limitations

As a result of the GT analysis, the underlying educational leadership dynamics were labelled 'Brimming', 'Continuum', 'Bouncing', 'Crossing', 'Polarity', 'Partnering', 'Reversal', 'Collision', 'Unification', and 'Passing' and were given the umbrella term of micro-procedural leadership dynamics. Introducing the interwoven and intangible dynamics separately inevitably creates bias: the extent to which the present analysis captured the micro-procedural organisational reality cannot, of course, be determined definitively. In addition, studying only two organisations limits the generalisability of the findings. Nevertheless, the extent and depth of the data collection and analysis has allowed for fine-tuned analysis of nuanced situations, which, it is hoped, may offer valuable insights.

Given the increasing cultural, societal, political, technological and economic complexity that educational organisations and their leadership experience today, a crucial question is whether many common large-scale external changes have a real impact without taking account of tensions that may arise between the external and the consequential internal change. It is possible that utilising knowledge of the underlying dynamics might help an education organisation to better face any such tensions. For example, this kind of understanding could perhaps have helped the management education organisation to try to use smaller steps rather than trying to capture the benefit of the external change all together.

In sum, it is suggested here, that it may be helpful for educational organisations and their leadership to be more aware of their micro-procedural dynamics. This may then engender the desired change in situations of tension and support learners' learning processes, albeit indirectly. It is also suggested that conscious and progressive use of micro-procedural dynamics might help education better prepare for an unpredictable future.

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