Enhancing Resilience of Schools in the Netherlands: Generating Teacher Voice

Ben van der Hilst & Gerhard A.C. Smid

Ben van der Hilst MSc is a physicist and consultant in the field of school management and a PhD student at the Faculty of Management, Science and Technology of the Open University, Heerlen.

Gerhard Smid PhD is a social scientist and consultant. He is emeritus professor at the Faculty of Management, Science and Technology of the Open University, Heerlen.

1 This paper was submitted at the conference ‘Resilience in Organizations’, March 2017, Open University, Heerlen, The Netherlands.

2 Information: ben@hetlerenorganiseren.nl
Enhancing resilience of schools in the Netherlands

Abstract

Often schools in the Netherlands lack the resilience to meet the new challenges of society and improve learning outcomes of students. School leaders and policy makers try to change this with a focus on content (textbooks, curricula), procedures (schedules, testing) and/or the organizational learning. This learning as an organization hampers often. The dominant approach leaves underlying mechanisms, like the common organizational structure, unattached. These mechanisms (co)produce teachers who work in isolation and reduce professional agency. As a consequence most change efforts fail. This paper proposes an idea, based on practical experience and a social complex adaptive system approach: improve classroom performance by enhancing the likelihood of peer-to-peer encounters outside the classroom via certain team structures. This might stimulate professional learning and development and propensity to change.

Based on experience as a school leader and consultant, the first author designed an orientation base (Engeström 1994; Vermaak 2009) for such a team based organizational structure for school leaders: a set of building blocks. This orientation base has been strengthened by theory and practice. In a series of case studies the use of this orientation base by school leaders and the effects on the practices of teachers in different schools has been investigated. The paper reports some findings of this research and proposes some improvements and extensions of the orientation base.

Keywords: organizational structure; educational management; resilience; team learning; team structure; social complex adaptive system; learning organization; emergent innovation; network organization.
1. Introduction

The paper reports some findings of theoretical and empirical research on an orientation base for school leaders. It also proposes some improvements and extensions of the orientation base. The aim of this orientation base is to facilitate managerial action to create conditions to improve the interactions of school teachers outside the classroom. The idea is that certain team structures will enhance the likelihood of peer-to-peer encounters. This might stimulate professional learning and development and propensity to change as a precondition for better learning outcomes of students.

The program of this paper is: first we analyze the present context of schools, and some consequences for school management and school leadership. In an analysis - Para 2- of the new tasks for school management we note that one variable, i.e. structure, gets hardly any attention. We shortly describe a single case study of a successful intervention in school structures with a team concept. Para 3 shortly describes the outline of the design research project aimed to enrich the concept by theory and empirical data. It also describes the evidence based claim: school leaders who implement a TOS create an enhanced resilience. We then present - Para 4 – findings from the theoretical work that support the claim and next –in Para 5 – empirical findings that support the claim. Finally (6) we come to some conclusions on the usefulness of the suggested orientation base and recommendations for further research.

2. Context and aim of this study

2.1 Schools\(^3\) operate in an increasingly complex world

Management of schools faces a growing complexity in the environment of their organization. In the Netherlands we see four interdependent developments that contribute to this complexity:

1. A growing complexity of the society: Schools have to respond to a variety of demands from outside. Schools have to respond to all kinds of fast changing trends in their environment. There is more focus on quality and the schools are held more accountable for their results.

2. A decrease of predictability of the future: Schools are challenged to prepare their students for the future. This leaves schools with the complex task of developing curriculum and methods that comply with today’s standards and also comply with unknown future demands.

3. An increase in autonomy: Since the eighties of the past century, a process of increasing autonomy in schools has started. Budgets were transferred from the

\(^3\) The word ‘school’ is used for any educational institute for primary, secondary or higher education
national government to schools with a decreasing number of regulations for spending. The degrees of freedom in curriculum and methods increased. This gave way to new perspectives on school government and school leadership. These perspectives were partly influenced by the New Public Management (NPM) ideas (Bottery, 1996).

4. An increase in the complexity of the organizational form of schools. Mainly due to the increase of the budget-responsibility, schools amalgamated into larger institutions. The management philosophy changed, also influenced by the NPM thinking. Management models from business are imported. A division in hierarchic levels in the organization (strategic, tactic and operational) has been applied, leading to the idea that the teachers (professional staff) are executing orders from ‘above’. Management of facility services has become a greater part of the job for school leaders. A consequence: a blurred distinction in management between this bureaucratic part and the professional part of the organization. This is often referred to as the distinction between management and leadership.

2.2 New tasks for School Management

These developments have produced more emphasis on school management. Building and leading an ambidextrous organization (Assen et al., 2008) that complies to quality standards of today and anticipates future challenges is a growing issue. The same applies for change within the school. In the past leading change was equal to the implementation of national curriculum reforms (Giles, 2008). Most of these reforms encountered strong reluctance of teachers. This hampered a successful implementation. The effect of the reforms on the quality of student learning was not very convincing. These reforms hardly affected the teacher actions in the classroom.

The present challenge for school management is to enhance the quality of student learning. There is strong evidence that the quality of teaching is the key factor for student outcomes (Chetty & Friedman, 2011). So, enhancing the quality of learning involves in the first place enhancing the quality of teaching. School leaders try to influence classroom behavior of teachers. These attempts are not very successful up to now. As Fullan (2007) concludes: “We still have not cracked the code of getting beyond the classroom door”.

The process of seeking an approach for change turned towards (teacher) learning. Widely collective learning with colleagues around the workplace is supposed to be an important and effective way of learning of professionals and change of professional practice (Brouwer, 2011; Diepstraten & Martens, 2010). In a similar vein the concept of ‘learning organizations’ has a growing popularity (Giles & Hargreaves, 2006). Becoming a learning organization is supposed to facilitate the continuous learning processes needed for enhancing the quality of teaching, and for the development of the capacity to

4 Handy attributes this to the widespread ‘Culture of Dyonisians’ (Handy, 1985).
deal with an ever-changing environment (Karsten et al., 2000). The idea how to create such an organization builds in general on agency: focal point is the school leader (Kurland, 2010). School leaders should facilitate and encourage the learning of individuals and teams and should facilitate distributed leadership in the school (Abrahamsen & Aas, 2015; Scribner et al., 2007; Tian et al., 2015). Unfortunately this direction seems not very fruitful. We see this reflected in practice: many schools in the Netherlands write year after year in their policy papers the same: ‘We are on our way towards a learning organization’ and/or ‘we are on our way towards a professional culture’.

### 2.3 In the shadow: organizational structure

In all the attempts to make schools more capable to change, to date the organizational dimension of the professional learning within schools is hardly ever seen as a variable in this process. It remains in the shadow. This is striking because organizational dimensions or structure influence interactions between agents within an organization (Martinez, 2011). Although every educational organization in the Netherlands has implemented some sort of a team structure at the level of the teachers during the last decades, the essence of the organizational structure stayed untouched. Most teachers still operate autonomous in their classrooms. When they work together it takes place in a noncommittal way in subject departments and teaching teams, preserving the ‘culture of the Dionysians’ (Handy, 1985). Also in the training of schoolteachers and the standards set for professionalization of school leaders there is no explicit focus on the organizational structure (Andersen & Kruger, 2012).

Having been a school leader for several years, the first author was part of a case study avant-la-lettre. He has the experience of transforming the layer of teachers in a secondary school (1800 students) into a team-based organization with about twenty teams of five teachers each, 23 years ago. Each team had the (collective) responsibility for the education of roughly 100 students and had wide powers for decision-making in the team. Besides these teaching teams there were already existing expert teams, formed around different subjects. The transformation (which included a dramatical

---

5 Dionysius or Existential Culture. In this view on organizations the organization exist for individuals to achieve their goals. Employees see themselves as independent professionals who have temporarily lent their services or skills to the organization. Management is considered an unnecessary counterweight and given the lowest status. Decision-making occurs by consent of the professionals. The Dionysus culture can lead to poisonous, ideological wars among its professionals. Universities and professional service firms reflect the dominant Dionysian culture. Source: https://www.provenmodels.com/8/gods-of-management/charles-b.-handy
change of the entire organizational chart) led to a much more innovative school than it was before (Hilst, 2010). Over the past 23 years this school has not changed this organizational concept, beside some minor adjustments every year. The school is still known as an innovative school with good student results and high job satisfaction.

2.4 The aim of this study

In this study, the above-mentioned team-based organizational structure (TOS) serves as a first prototype in a design-research. In an interactive process between theoretical underpinning and testing in practice the TOS is elaborated in Paragraphs 3 and 4. This leads to a set of 11 building blocks of the TOS, most of them with a rather technical nature. This set may be seen as an orientation base for school leaders to enhance the resilience of their school. This study tries to reinforce the claim that implementing the TOS with these 11 building blocks in a school organization will enhance the probability that resilience on the level of individuals, teams and the organization as a whole, will increase.

3. Method 3.1 Design research

Given the objective of this study we choose for Design Research as a method (Collins et al., 2009; Van de Ven, 2007). The TOS that was already developed in the practice of school leadership is a typical example of what is called a prototype in Design Research. We observed that this prototype was rather successful in a limited number of cases. Extension and more generalization of the claim that comes with this prototype (‘implementing a TOS leads to enhanced resilience’) need further theoretical support and testing in practice. These are not independent processes, because theoretical issues emerge while dealing with schools and school leaders and theoretical underpinning the TOS leads to new ideas about the building blocks that are used in practice. It is an iterative process (Otto, 2008) which lead both to a better theoretical framing of the TOS and to an improved orientation base for school leaders.

3.2 Support from theory

We will combine theoretical insights from resilience in organizations with concepts of individual, team and organizational learning in schools. As a framework to understand schools as an organization we utilize the Social Complex Adaptive System perspective. The organizational structure may then be seen as a way to lowering the number of the degrees of freedom of the system in such a way that interactions and flow of information are optimized. We present the elements of this structure as building blocks, which enable usage as an orientation basis for managers.

3.3 Support from practice

Data were collected from five practical settings:

a. A preliminary study to analyze the organizational structure of schools. b. Two case studies of schools that have implemented a TOS-like structure for years. c. Case studies in seven schools that recently changed their structure according to the TOS. d. A case
study about the implementation of a nationwide reform in 23 vocational schools that have a team structure. e. The consultancy practice in a great variety of schools in the area of transformation to learning organizations.

a. Preliminary study. In a preliminary study we analyzed the organizational structure in schools without changing the organizational structure. For this analysis we used a method what we will call ‘interactive organizational chart drawing’. Managers and teachers (often a combination of them) were invited to draw the organizational chart of their school with a few drawing rules. During the drawing process, questions were asked about the position of the agents and their relation to each other.

b. Two case studies. Case studies were carried out: one on a primary school and a second on a secondary school. Both have already a TOS-like organizational structure for several years. We determined which of the building blocks are present and which effects on professional behavior, ‘innovation smoothness’ (the ease to adopt innovations from inside and outside) and job satisfaction were attributed to the organizational structure by teachers and school leaders.

c. Participation in a program. Seven school leaders and their supervisors were involved in a program to acquire the theoretical and practical knowledge to transform their schools into a TOS. This program took 7 sessions of 2 hours each during 8 months after which they implemented the TOS in their schools. Panels of some teachers and their school leader in each school and the 2 supervisors were interviewed during this process about the effects before and after the implementation of the TOS (up to 1 year after).

d. Nation wide program. The project leaders of 23 vocational school that were involved in a nationwide program to improve their career counseling programs for students, were invited to analyze the implementation process in their schools because the national project management observed great hampering of the program, 3 years after the program had started (Hilst, 2015b). We analyzed which building blocks of the TOS are present in these schools and how the team structure relates to this innovation process.

e. Information from consulting. As a consultant the first author has been and still is involved in a great variety of transformation processes of schools that want to strengthen their organization learning processes. The focus in these transformations is on implementing a TOS-like organizational structure.

In two focus groups with educational experts we discussed the aspects of professional behavior of teachers to establish two sets of aspects, one connected to the work inside the classroom and one connected to the work outside the classroom, as a member of the school organization.

All the data that are collected about aspects of the TOS and effects of the TOS on professional behavior, job satisfaction and adaptivity are reported observations of teachers and school leaders during semi-structured interviews. We use written descriptions of the variables to enable panel members to discuss to what extent these were present in their school.
The research that was carried out in this study in any of the above-mentioned practical settings has been done in close cooperation with teachers and school leaders. In every case the intention was to contribute to solving problems of the schools. So schools had a say in the composition of the school panels and the methods of data collection.

3.4 Data analysis

Transcriptions were made of the interview recordings. Statements were categorized along the variables: team structure, professional behavior, job satisfaction, innovation smoothness (the way innovations from outside and inside were adapted) and the informal interactions between teachers. Furthermore statements were identified that indicate connections or attributions between the variables. Summarized conclusions for each school were shared with the panels.

3.5 Product from the research: an orientation base

This study leads to a number of recommendations for the school leader for establishing an organizational structure that facilitates organization resilience. These building blocks of a team-centered organizational structure may be seen as an orientation base for school leaders (Engeström, 1994): it is a conceptual framework on which school leaders may act. Engeström distinguishes five types of orientation bases from a base that covers the essence of the concept to an orientation base that provides a detailed description of the recipe that elaborates the concept into practice. In the hierarchy of orientation bases of Engeström the 11 building blocks in this study may be seen as an advanced organiser. It provides a set of elements for the organizational structure. However, by including the skills and knowledge of the school leader in one of the building blocks, we emphasize the need of conceptual knowledge for successfully implementing the structure. This study aims to provide this knowledge.

4. Findings from theory: elaborating the TOS by theoretical underpinning

4.1 School as complex adaptive systems

In this study we use the concept of Social Complex Adaptive Systems (SCAS) as a conceptual framework to describe the school as an organization (Keshavarz et al., 2010). A SCAS consists of many agents that interact with each other in formal and informal settings. Agents act in ways based on knowledge, experience, feedback from the environment, values, formal rules, etc. The boundaries of the system are fuzzy, there are numerous interactions with agents from outside, again in formal and informal settings. It’s important to mention that in this study the agents in the school are individuals (teachers, students, school leaders, supporting staff, etc.) but may also be teams of teachers or a management team. These agents are often nodes in a complex network (Lima, 2008), which may change over time (Schneider & Somers, 2006). The bonds between agents in the formal structure are often weak in the sense that there is little or sometimes even no interaction between agents and little or no mutual influence. In this sense some schools may be characterized as social chaotic systems instead of social adaptive systems. Such schools lack resilience because they are not able to adapt adequately to changes from within or in the environment. We regard resilience as a high level of adaptivity. Resilience cannot only
be seen as a characteristic of the organization as a whole, but consists of resilience on the level of teams and individuals (Lichtenstein et al., 2006).

The way teams are organized in schools may vary. Sometimes the use of the word ‘team’ is mere lip service, covering up that the team operates as weak agent in the school with little mutual influence among the members within teams and little or no interaction between the teams. Such schools operate as individual based organizations where teachers act independently from each other. Schools may vary with respect to the density of interaction within and between teams and the degree whether they are adaptive or merely chaotic. In the case of chaos the entropy of the complex system is too high to be adaptive (Schneider & Somers, 2006). A possibility to lower the entropy is to create an organization-structure that enables tighter bonds between agents (within and between teams). Whereas a far too low value of the entropy of the system leads to a ‘frozen’ state of the organization, which like a chaotic system cannot behave adaptive, the art of school leadership is to find the optimum entropy where resilience of the system is at its highest.

4.2 Resilience in schools at the level of teams and individuals.

As stated before, the performance of schools is highly dependent of the performance of individual teachers. Their performance is based on pedagogical, didactical and content expertise (Wayne & Youngs, 2003). This expertise is not static but requires maintenance due to a rapidly changing world. Teachers have to adopt new teaching methods, to be able to deal with new types of students and have to adjust to new content in their subject. The degree to which they are successful in adjustment and expansion of their expertise in the classroom, depends on behavior outside the classroom. In this study we distinguish this professional behavior outside the classroom (type 2) from the professional behavior inside the classroom (type 1). We suggest 5 modalities of this type 2 behavior that enhances successful adjustment and expansion of expertise, based on literature on professional behavior in general (Beijaard et al, 2004) and outcomes of focus groups with experts from schools:

Outside the classroom a teacher

a. always seeks to improve his performance by reflection, feedback, learning from colleagues, professionalization and research.

b. collaborates with pleasure and skills with other teachers, wants to share knowledge.

c. knows to connect his work with the organization as a whole, e.g. complies with the overall goals and vision that are set.

d. wants to contribute to the flourishing of the school organization, wants to contribute to the school’s policy.

e. performs innovatively, shows initiative and independency.

We assume that both classroom performance and resilience on the individual level are
strongly connected to this kind of behavior outside the classroom.

Resilience on the level of teams demands some characteristics of teams that resemble those as shown in research on highly effective teams. Rich interactions within the teams are the result of a common goal, shared vision, interdependency between the members, collective responsibility for reaching the goals and enough power for decision-making (Truijen et al., 2013). These are aspects connected with the organizational structure of schools. In this organizational structure the responsibilities, the decision-making power, etc. are defined. But besides these more systemic aspects, the individual professional behavior of the individual team members is also important. The above-mentioned aspects of type 2 professional behavior contribute to resilience on the level of teams. And conversely, resilient teams challenge type 2 professional behavior. A point of action to enhance resilience on the level of both individual and team level is thus the implementation of the above systemic aspects. In other words: enhancing the resilience of schools may be achieved by constructing an organizational structure with strong teams: the Team-based Organizational Structure.

4.3 Characteristics of the TOS

In this paragraph we define 11 building blocks of the TOS. These are based on the above-mentioned characteristics of effective teams and the nature of the work as a teacher. And some blocks are based on additional experiences from practice.

a. The basic elements: executive or teaching teams and expert teams.

Teaching teams are formed around specified groups of students, e.g. Year 1-3 primary school or master students Financial Management. These groups of students are defined on the basis of pedagogical and educational (curriculum) reasons. Maybe with the exception in primary education, these teaching teams are multi disciplinary teams. Expert teams are formed around defined expertise like a subject (e.g. Physics) or a theme (e.g. 21st Century Skills). The members of a teaching team educate students. The members of this team work together to maximize student success and doing so, they learn about their profession (Voogt et al., 2011). Their focus is on ‘flesh and blood’. In expert teams teachers cooperate to enhance their knowledge and skills in, for instance, teaching Physics. Due to the differences of focus, learning processes in both types of teams differ (Kwakman, 2003). We didn’t find many examples of teaching teams. Some schools reported to have them, but a closer look leads to the conclusion that there was a program team or curriculum team. Their focus is the development and execution of a program, not what happen with the students. This turned out to be an important distinction in analyzing the team structure with teachers and school leaders. Most schools have expert teams, but with little or no connection between teams and management and a rather noncommittal way of operating.

b. Collective responsibility

The members of a teaching team are collective responsible for student success. That
means that every member is individually responsible for all the results of any student. This forms an important but difficult building block of the TOS. It leads to interdependency that evokes effective team learning: collective learning around the workplace which is considered the strongest learning setting for teachers (Veen et al., 2010). Collective responsibility is hardly found in school teams, sometimes in management teams.

c. ‘Infinite’ decision-making power

Teaching teams have great responsibilities for the training and well-being of their students. Alignment of responsibilities and decision-making power enables these teams of professionals to do everything that is possible to attain the best results (Scribner et al., 2007). Non-alignment of responsibility and power leads to frustration and ‘leaning back’ behavior in the teams. A lot of managers are reluctant to transfer much power to the teams. They fear divergence in policy between the teams, which might endanger the well-cherished standardization of processes in the school. Yet it is precisely this lack of decision-making power that prevents teams from deep-learning processes, leaving them with a wait and see attitude. High effective teams are characterized by their openness to the environment, preventing them from undesirable fragmentation and isolation.

d. Small number of members: 3 to 7

The optimal number of members of a team is highly dependent of the task of the team. Often one find in literature about the ideal team, size numbers between 12 and 15. But these numbers are not underpinned with arguments that are related to the tasks or the responsibilities of the team. In an individual oriented organization with low expectations of collaboration and collaborative learning, 12 to 15 members might be the right size for a team. But collective responsibility is very hard to attain with numbers beyond 7. Also deep learning demands high interaction within the team. A higher number of permutations (which is related to n!, with n the number of team members) means more decentralized interactions in the team. So, there’s an immense difference between the possible interaction patterns within a team of 15 compared with a team with 7 members. Even with 7 members, collective responsibility is hard to achieve. The size of most management teams in schools in the Netherlands doesn’t exceed the number of 7. When schools amalgamate or grow and the management team tends to exceed the number of 7, often a new level of middle management is created to reduce the span of control. But in the same schools, teams of teachers may operate with a team size of 20 or more. We found an average team size in secondary, vocational and higher education of about 16-18 members. This is one of the toughest barriers in having teams more self-organizing. Tough also in the sense, that schools are quite reluctant towards splitting teams in smaller ones by fear of fragmentation (see above).

e. A set of 60% rules

We propose a set of rather technical rules to optimize the working of the TOS. For continuity reasons we suggest that every year at least 60% of the team should remain intact. For reasons of team power the members of a teaching team should cover at least
60% of the lessons of their students. So, there might be a margin in the curriculum in which other teachers are involved. For reasons of commitment, we advice teachers to spent at least 60% of their job within the team activities.

These rules are based on observations we made in schools, mostly by trying to analyze why teams didn’t work the way they were expected to do. The number of 60% is a rough estimation and may vary depending on context.

f. Process coaching

Most teams in secondary education have a hierarchical team leader. In vocational education one may find a lot of teams that ought to be self-organizing. In both cases however, teams lack a coach who is able to help the team optimizing their learning process and their way of cooperation (Meirink et al., 2010). Though the organizational setting of the teams in the TOS is prerequisite for reaching higher stages of team maturity, team coaching is needed to reach the highest level of team functioning (Hackman & Wageman, 2005). Although you might expect coaching competences are parts of teacher’s profession, we learn from practice that this is not the case. At least one member of a team should be trained as a team coach, without acquiring a hierarchical position in the team. g. Congruency on all levels of the organization

In many schools teams are formed in an otherwise strongly hierarchical, vertical and centralized organization. Quite often this leads to ambiguity in power sharing and thus to frustration about decision-making in teams. h. Transparent and consequent organizational chart

If teams are meant to play their important role in the core business of schools, this should be reflected by a prominent place in the organizational chart. We suggest the use of the common line and staff model of the organizational chart because it’s simplicity and transparency. In placing the teaching teams in the line and the expert teams in the staff of the organizational chart, it’s clear that their responsibilities differ and that in the end the teaching teams are in the lead.

i. Supporting HRM

That schools have mostly an individual-centered organizational structure is reflected by HRM policy of the schools. There are for instance task assignment systems and performance appraisals on the individual level whereas there’s nothing comparable on the level of teams, even if management says that teams are central in their organization. Schools have to rewrite their HRM policy when they transform to a TOS.

j. Congruency between vision on education and vision on labour organization.

Schools develop a vision on how they want to educate their students. More and more one find key words in these visions like ‘autonomy’, ‘independent learning’, ‘creativity’, etc. It’s helpful for reasons of consistency to have a vision on the work of teachers that is based on the same concept. A strong, shared vision on both education and the labour organization that articulates the same principles for both, has more chance to resonate in daily practice than two different ones (or, what is much more found: the lack of a vision on the labour organization).
k. School leaders who are able to design, support and maintain the TOS and act according to the underlying principles.

It may be clear from above that a school leader should be able to carefully design and implement the above building blocks. Moreover he should be continuously alert to facilitate and maintain the processes within the constructed organizational structure. And, being a part, an agent within the adaptive system, should behave in compliance with the values and principles underlying the TOS (Schneider & Somers, 2006). These skills and attitude of the school leader constitute the key factor in transforming schools into a TOS.

5. Findings from practice

In this paragraph we report findings from the five practical settings (see 3.3) where data were collected.

a. Analyzing the organizational chart

In this study the organizational charts of schools were analyzed with school leaders and teachers and nearly in every case it turned out that there was great confusion about the responsibilities and power of the teams. In none of the cases teaching teams were well-defined agents in the organizational chart. These findings reflect the often-reported frustration of teachers (and also of school leaders) about the functioning of teams. When drawing the organizational chart in a panel of teachers and their school leader there was always a discussion about the chart. These doubts concern whether or not teams were agents and the responsibilities and decision-making power of the teams. The team structure of schools often turned out to be a weak construct within a further individually based organizational structure (Dionysian). The size of the teams varies between 12 and 20. There was often ambiguity about the position of the team leader. In most cases he is seen more as the ‘boss’ of the individual teachers than the leader of a team.

b. Two schools that have experience with a TOS for many years

One of the schools (the primary school, 8 years of experience) complies with nearly all the building blocks of the TOS. The secondary school (23 year of experience) lack some of the building blocks (e.g. weak coupling with the expert teams and little attention to team coaching) or show some ‘regression’ with regard to some of the blocks (e.g. combining teams or teams with too many students).

The primary school shows intensive cooperation of teachers in both teaching teams and expert teams. Both schools are known for their educational innovations and good student results. In both schools the increase in job satisfaction and professional behavior were attributed to the organizational structure. Some new teachers in the secondary school reported not exactly knowing the vision behind the structure, whereas in the primary school new teachers are intensively introduced to working in teams. This school emphasizes explicitly the alignment between learning of teachers and the learning of
students.

c. Seven schools that implement a TOS

The main intervention in this practical setting was the training of school leaders of seven primary schools in understanding the principles of the TOS and all the building blocks that are involved. It turned out that all school leaders who participated in the program have difficulties to oversee all the consequences of implementing a TOS in their school. For several of them it looks like a real paradigm shift in their thinking about leadership. It took much time for them to fully understand the TOS. And some of them did not reach this point at all. School leaders report fear of losing control and uneasiness with a less defined role amidst autonomous acting teams.

The school leaders designed an appropriate team structure for their schools and implemented these in their schools. They took some months for informing and training their teachers. They encounter little or no reluctance in their teaching staff. After implementation, the seven schools reported significant changes in the professional behavior of teachers and in functioning of teams. The number of teams varies according with the size of the schools (from 65 to 350 students) from 1 to 4. In some schools atmosphere in school dramatically changed after the start of the TOS. The changes that were reported in all schools were: increased cooperation in the teams, more pleasure, greater involvement and commitment of teachers, more innovations, more focus on students and more willingness to contribute to overall policy of the school. Also more informal encounters between teachers are reported and furthermore increased job satisfaction. These effects were rather rapidly shown, as one school leader reported: “it seems that they were waiting for their chance to show their professionalism”. School leaders also reported that the concepts of collective responsibility, ‘infinite decision-making power’ and process steering in the teams remain difficult for most teachers (and some of the school leaders as well). The supervising directors of the schools are very enthusiastic about the results. They even perceive (after 6 months) already increased student outcomes although the accurate assessment of this result needs more time. They report dramatic changes in the professional culture of some schools that before were characterised as political-bureaucratic organizations for many years.

d. Twenty-three vocational schools with a team structure, responding to a reform program (external innovation impuls)

These schools were involved in the research program of this study when they reported to have difficulties implementing a nation-wide initiated reform program to enhance the quality of career counseling for students. In analyzing the team structure of these 23 vocational schools, we found that in most schools none of the building blocks were present. These schools report all to have a team structure; some of them even with the slogan that ‘teams are in the lead’. Nearly all project leaders in these schools that were in charge to implement improvements in the career counseling programs for students, report that the teams were to weak to be an agent in this process, although in the end they were held responsible for the program. So, many of the project leaders ignored the
teams and focused on volunteers that were brought together in new structures in between the teaching teams. The implementation was furthermore hampered by team leader’s lack of attention for the reform, as reported by the project leaders.

e. Findings from consultancy practice

None of the schools we encountered so far, do explicitly make the distinction between type 1 and type 2 professional behavior, although they include some of the type 2 aspects in their professional profile for the teaching staff. But school leaders are enthusiastic about making the distinction between type 1 and type 2 and agree on the five aspects as being the most important ones. Nevertheless they are often sceptical about the presence of the five aspects in their teaching staff. Especially in secondary and higher education, teachers and school leaders have difficulties to recognize the difference between teams that are formed around programs and those that are formed around students. Responsibility for carrying out a program is different from (collective) responsibility for the learning and well-being of a group students. School leaders have difficulties to deal with the concept of small size teams. Although they agree on the importance of agility of the teams and recognize the differences between being a member of a large size team and a small size one, they hesitate having so many teams in their school. They fear fragmentation in policy and loss of control.

6. Conclusions and discussion

Although schools often report to have some sort of a team structure there is much doubt about the effectiveness with respect to teacher learning and to teachers contribution to change. With respect to influencing teacher’s behavior in the classroom, most schools show a combination of powerless vertical (hierarchical) direction and a noncommittal horizontal one (influencing by team learning) (Hilst, 2015a). This description reflects the lack of resilience in many schools (Hofman et al., 2007). It was found earlier that more innovative schools have a stronger team structure than less innovative ones (Waslander, 2007). So, enhancing resilience means strengthening the team structure in order to inescapably intensify interaction within the teams. Therefore we started with the prototype of the TOS that constituted of only a few construction rules. In an iterative process of theoretical underpinning and confrontation with practice the construction rules of the TOS were elaborated and refined to a set of 11 building blocks. This set of building blocks provides a relatively simple infrastructure to deal with the complexity of the organization and the complexity of task of this organization (Pina E Cunha & Rego, 2010). The set proves to be useful as an orientation base for school leaders to change the organizational structure of their schools in order to enhance the adaptivity of their organizations.

The empirical findings support the claim that implementing the TOS enhances the probability of increased resilience of schools. The rather quick pace of success after implementing the TOS suggests that type 2 professional behavior of teachers is already present in schools, and is challenged by the TOS: team structures outside the classroom generate teacher voice. It seems useful to use the concept of professional behavior type 2 for describing resilience on the individual level, which was easily recognized by most
school leaders (and teachers). Using this concept may avoid the abstract discussion whether teachers should be regarded as professional or not (Burbules & Densmore, 1990).

Implementing a TOS demands high skills of a school leader. The orientation base should be supported not only by knowledge of the constituting building blocks but also by a deep understanding of the underlying principles.

Limitations

There are several limitations to this paper. Although the concept of Social Complex Adaptive System was chosen as a framework, this paper narrows down on very specific characteristics of the system (organizational structure) and tries to relate these with a multidimensional output variable (resilience). Therefore we speak of ‘increased probability’, because causal effects are hard to establish in a SCAS. Another limitation is connected to the methodology of Design Research. The iterative process of theoretical underpinning, theory building and confrontation with practice is a complex process itself with possible biased choices for reduction. Data were collected by interviews. So the data consist of perceived phenomena by teachers and school leaders, which may include some bias. The panels of teachers were not randomly composed, but chosen by the school leader. This may lead to further bias. In all five practical settings in this study, an important goal of the intervention or the data collection was to contribute to solving problems that the schools encounter. In this way we may speak of ‘engaged scholarship’ (Barge & Shockley-Zalabak, 2008; Van de Ven, 2007) which limits the use of standardized methods and therefore reduces generalization of the results.

Recommendations

Research on school leader’s behavior on student outcomes leads to disappointing and ambiguous results (Krüger et al., 2007; Robinson et al., 2008). Up to now organizational structure of the work and interaction processes of teachers has not been seen as an intermediate variable in these studies. It might be interesting to include this element of organizational structure as an intermediate variable in the leadership studies. This might provide less ambiguous results. We recommend more research on the attitude and skills of the school leader that are needed to implement a TOS. Furthermore there should be more focus on this element of organizational structure in the training of school leaders. Further research is recommended to assess the relative importance of the suggested building blocks and the interdependency between them.

References


Een instrument voor het verbeteren van het implementatieproces. Woerden: MBO Diensten


Robinson, V. M. J., Lloyd, C. a., & Rowe, K. J. (2008). The Impact of Leadership on


