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Innovation in Upper Secondary Schools

An International Multiple-Case Study

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Doctoral thesis

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To my parents.

Abstract

This thesis reports on an international multiple-case study on innovation in upper secondary schools. A total of four secondary schools are studied: two in Norway and two in Germany. A mixed method with quantitative and qualitative parts is applied. The quantitative part consists of a survey of relevant teachers at the case schools. The qualitative part includes the study of school documents and secondary literature as well as visits to the schools and interviews with key personnel. All subjects and participants are anonymised.

The study aims to portray innovative practices in schools and to identify reasons why some initiatives for change are more successful than others. It turns out that innovation processes in schools are often complicated and lengthy; many things that can hinder the implementation and continuation of an innovation.

This work is valuable to anyone who is interested in school development, either people who want to develop schools or those affected by school development.

Short Contents

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Acknowledgements

before a long journey
January 1926.

Introduction

This thesis reports on an international multiple-case study on innovation in secondary schools. The study aims to identify the reasons why some initiatives for change in school produce a lasting innovation while others fade. The research is carried out in four upper secondary schools, two in Norway and two in Germany, and based on a survey amongst teachers and supplemented by various documents, observations and interviews. Each school (case) was considered individually and with other cases. This first chapter of the thesis presents the background of the study, specifies the problem of the study, outlines its significance and gives an overview of the theories and methodologies used.

1.1 Background

At the beginning of my doctoral study, I planned to write about the conditions and possibilities for the integration of ICT into open teaching in secondary schools. In various countries, considerable investments were being made to integrate ICT into teaching and learning. Among the expectations were increased learning desire, increased benefit from learning and a more active participation of the students in the learning process. However, relevant literature reflected at that time that those who tried to incorporate ICT into teaching without being thoroughly prepared were often met with disappointing results. Other technological inventions that were put in place to transform education, such as radio, film, video, etc., were struck down with a similar fate in the past (Cuban, 1986; Cuban, 2001). Is history repeating itself? This

depends mostly on whether or not there are possibilities to utilise ICT in a way that exceeds a mere technologification of the traditional teaching and learning methods.

It was, therefore, my plan to find and describe schools that successfully integrated ICT in an innovative manner so that successful practice could be disseminated to other schools. When I went to select project schools, I realised how difficult it is to find cases that have an extensive innovative use of ICT. I realised at this time that I had to give up the strong emphasis on ICT in favour or opening my thesis up to general innovations in school. My attention, therefore, turned to schools that were remarkable in terms of innovation but ordinary in every other sense (for the sake of comparability). I chose to base this process, among other things, on the evaluations by the Bertelsmann Foundation. The Bertelsmann Foundation had established the International Network of Innovating School Systems (INIS) between the schools from eight countries that were nominated for the "Carl Bertelsmann Prize (Bertelsmann Stiftung, 1996)" for "innovative school systems in international comparison".

This opening turned out to be really interesting, and there was not a shortage of research, books and reports on school improvements. On the contrary, there seemed to be wave after wave of exciting ideas and attempts to innovate school: to make schools better, to improve teaching and teachers and to increase the learning outcome of students. Many innovations have been carried out in school but not many last longer than the period in which there is a focus on doing things differently. An innovation is only truly successful/sustained when it has reached the stage that it becomes a routine — a part of every day school life. I had to ask myself if some of the schools still deserved the nomination five to 10 years after obtaining it. The school visits made me realise that some of the innovations, which were the reasons for being nominated, were no longer to be seen. This let me to the question, "What could be the reason that some innovations persist and some are abandoned?" From my teacher experience, I know that enormous efforts are made to implement new ideas in schools. These are in vain if they do not result in lasting changes.

One aspect that plays an important role is the fact that school has an intrinsic stability. One can temporarily do something different, but there is a high chance that the practices will revert to tradition. Tyack and Tobin (1994) use the term *grammar of schooling*. A grammar is a set of rules that is determined by a community, and one cannot change these rules without the support of the community. Everyone involved needs to agree and pull in the same direction.

To understand the intrinsic logic of innovation in schools, Helmut Fend's *Theorie der Schule* (1981) explains how the reality of schools should be organised and how the interface is to be understood to the outside. Goodlad (2004) goes in a similar direction, describing the inner dynamic of schools in

A Place Called School. Both Fend's and Goodlad's theories are not theories of change; they can be described as post-Parsons theories of the social functions of school that can be used to explain its stability. In another approach, Dalin (1998) gives an example of the Norwegian understanding of the school as an organisation. To understand change, one can refer to the theory of innovation. Fullan (2007) has applied this to educational change. In Chapter 2, these theories are presented in detail.

1.2 The Problem Statement

This study considers what selected schools have achieved and how innovations are understood and carried out in practice. My research question is, therefore:

> ***What affects successful scholastic innovation in practice?***

This is an important question to ask because an unsuccessful innovation — one that is not long lasting or does not produce an improvement — is, in fact, a waste of time, money and effort. In addition, it may cause serious frustration for individuals, groups or even the whole learning community. It can damage motivation, cooperation and the courage to make changes and strive for improvements. However, most importantly, a failed initiative can have serious implications for the development of students in a crucial stage of their lives. This sums up the importance of this study.

To increase the chance of finding elements that are significant in the adoption of innovations, I have decided to focus on two countries that have cultural differences and different work procedures. Having lived the first half of my life in Germany and the second in Norway, I am in the fortunate position to be able to do research in both countries in a consistent manner. I have worked in both school systems, speak both languages and understand the two cultures.

The method I have selected for this research is a multiple-case study with both quantitative and qualitative elements. This will provide a detailed description of innovation.

1.3 Outline

Now that the topic and target of this research have been presented, the remainder of the thesis is structured as follows. In Chapter 2, I deal with the theoretical approaches before I explain the methodological approaches in Chapter 3. These two chapters build the framework of this study and help guiding through it. Chapter 4 introduces the four upper secondary schools that have been studied in this research. A thick description illustrates the character and particularities of the individual schools. Chapter 5 presents the results

of the questionnaire, and Chapter 6 takes up the research question again and reviews the findings of earlier chapters.

CHAPTER 2

Theory

In support of the analysis and discussion in later chapters, various complementing elements of applicable theory are presented in this chapter.

There is a great variety of views on what theory applies to schools internationally, nationally and over time. In German speaking countries, the term "Theorie der Schule" has been practised since 1920s, but there is no clear consensus on its definition. In Norway, a theory that is specially tailored to schools has not been developed; over the last 30 years, the Norwegian literature and research has increasingly adopted the perspective of organisational learning in schools. Per Dalin has significantly contributed to schools being seen as organisations, and consequently, they are generally analysed using organisational theory. I will look into both theories and select elements to use consistently in the analysis of the four case schools, irrespective of their nationality. Finally, I will focus on innovation theory. In this way, the chapter forms the theoretical basis for my study and the important aspects of school life.

2.1 School Theory

In German literature and discussions in pedagogy, one finds the term "Theorie der Schule". There is no immediate correspondence in other languages for this term, but literally, it means "School Theory," which I will use for the course of this thesis. The School Theory is tailored to answer questions like

- "What are schools?"

- "What are the central factors of the reality of schools?"

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- "What is the meaning of schools for the society and students?"
- "How could/should schools be organised and improved pedagogically and didactically?"

Tillmann (1993) argues that the origin of School Theory can be traced back to Julius Gebhard's work "Vom Sinn der Schule" (Gebhard, 1923). The term was first used in the title of Georg Reichwein's essay "Grundlinien einer Theorie der Schule" (Reichwein, 1925) and reappeared on the cover of Philipp Hördt's book "Theorie der Schule" (Hördt, 1933). When Wolfgang Kramp published the book "Studien zur Theorie der Schule" in 1973, he could not find any sound theoretical foundations in the literature, merely "pseudo-theoretical self-justifying doctrines," "ideological glorifications" and "subjective statements by renowned scholars" (Kramp, 1973, p. 49). Although Kramp was arguably the first to give a thorough definition of School Theory, his view is not authoritative and various alternative views have been put forward. There is no real consensus to this date.

As an initial approach to the field of School Theory, it is sensible to start with a general description like the one by Wolfgang Klafki:

> Here, "School Theory" is the term for the interdependencies of statements claiming to form characteristics of the institution 'school' or the schooling system as one of the socio-cultural institutions ensuring constant and regulated teaching and learning (via lessons) and possibly further-reaching school education. These statements — having to be argumentally justified by their authors — can then be scrutinised and tested[1] (Klafki, 1993).

Apel (1995, p. 13) interprets this as School Theory being a quantity of statements or hypotheses about school as an organised institution, about student socialisation, teaching and school life that are logically connected, informative and contradiction-free. The statements of a theory must be unambiguous and verifiable.

Wiater (2002) lists, amongst other things, the following points about School Theory:

- it supports the analysis of schools in all kinds of perspectives,
- it provides an organisational relation for everything regarding school,
- it clarifies and structures the interrelation between teachers, students, parents, education authority, etc.,

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[1] *Unter "Schultheorie" [. . .] werden hier mehr oder minder umfassende Aussagenzusammenhänge verstanden, die beanspruchen, charakteristische Merkmale der Institution Schule bzw. des Schulsystems als einer gesellschaftlich-kulturellen Einrichtung zum Zweck geregelten und kontinuierlichen Lehrens und Lernens (des Unterrichts) und ggfls. darüber hinausgreifender "Schulerziehung" zu machen und zwar Aussagen, die von ihren Autoren als argumentativ begründet und damit prüfbar verstanden werden.*

- it has a critical function regarding education policy and how schools are put into practice, and

- it forms the basis for quantitative and qualitative school research.

Since theories can give clues to the cause of problems, school theories can be related to school improvement. The process of school development can be seen as a systematic description about what schools (should) achieve, accompanied by competing school theories.

Attempts at formulating a School Theory have been made based on various scientific foundations. Apart from the humanities, one can find contributions based on Marxism, functionalism and psychoanalysis. This has resulted in what has been described as a thicket of theories which Tillmann (1993) orders into the following categories:

1. humanistic pedagody *(schultheoretische Ansätze in der geisteswissenschaftlichen Pädagogik)*,

2. structural functionalism *(strukturelle-funktionale Schultheorien)*,

3. historical materialism *(historisch-materialistische Schultheorien)*,

4. psychoanalysis *(Psychoanalyse der Schule als Institution)*,

5. interactionalism *(interaktionalistische Beiträge zur Schultheorie)*,

6. radical critisism *(Radikale Schulkritik als Schultheorie)*.

Strictly speaking, humanistic pedagogy has not produced a complete "School Theory," but attempts have been made. Humanistic pedagogy focuses on pedagogical practice, and the history thereof, in a new perspective in which the young individual and its development are central. Its influential period lasted from the end of World War I until ca. 1960 (except during National Socialism) (Klafki, 1993).

Structural functionalism has its origin in social sciences. The theoretical perspectives of various other sciences were combined to form a system of categories suitable for studying the structure and functions of social phenomena. Regarding School Theory, structural functionalism is particularly interested in the functions of the school system for society as a whole and the relation between school and society. The primary role of the school is to ensure the reproduction of society, and for this, the following functions are considered central: qualification, selection, allocation, legitimation, integration and enculturation (Fingerle, 1993).

Historical materialism has not produced a unified School Theory. The contributions are rooted in Marxism and focus on the relationship between political economy and education on characteristics of class and on the ideological importance of school as an institution (Auernheimer, 1993).

Psychoanalysis has been applied to study the relationship between students and teachers and its effect on the learning process. Again, the effort

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has not resulted in a successful School Theory, but there are some insights regarding performance and solidarity, compulsion and personal development and ritual aspects of instruction (M. Muck and G. Muck, 1993). Certainly nowadays, psychoanalysis has lost its significance in school-theoretical questions (Vinnai, 2007).

The interactionalistic approach to School Theory takes on a micro-sociological perspective inside the school system and describes the mechanisms of learning and teaching. Actions and their reactions play a central role. This approach has produced a description of the "logic," by which the participants in the institution of school behave, how hereby personalities are evolved, enacted, defended and hurt. It shows how social relationships and institutional structures determine the communication process of the participants and how these relations and structures are worked with (Brumlik and Holtappels, 1993).

In the seventies radical school criticism emerged. Four main criticisms on public compulsory education can be identified. Firstly, scholastic instruction consists of heteronomous, socially controlled learning and living; the consequences are not high performance in learning but increase apathy and aggression. Secondly, the indispensable personal relationships between teachers and students are replaced by institutional responsibility — the industrialisation of schools. Thirdly, schools serve a privileged minority, funded by the majority. And lastly, schools are disconnected from the realistic problems of society. Their curriculum suffers increasingly from irrelevance, which is obfuscated by an increase in the value put on grades and certificates (Dauber, 1993). More recently, radical criticism is about a discussion of the fundamental right to freedom of education in the democracy (Klemm, 2009).

From these categories, I have selected structural functionalism as the most appropriate for my study.

2.1.1 Structural Functionalism

In sociology, structural functionalism is a framework for building theory that envisages society as a complex system whose parts work together to promote solidarity and stability (Macionis and Plummer, 2008). Viewed from the functionalist perspective, schools make a number of vital contributions to the survival and perpetuation of modern societies. Functionalists see schools as serving to complete socialisation, socially integrate a diverse population, screen and select individuals and develop new knowledge (Hughes, Kroehler and Zanden, 1999). Socialisation is the mechanism for transferring the accepted norms and values of society to the individuals within the system.

The basis of this view was laid when Parsons (1959) connected approaches from the action theory, system theory and socialisation theory to describe

the social functions of the school class and explain how schools operate internally in the USA (Blömeke et al., 2009). Parsons' ideas were illustrated, systematised and stated more precisely in the book *On What is Learned in School* by Dreeben (1968). Although Parsons and Dreeben develop interesting hypotheses, their analyses are not conclusive (Fingerle, 1993).

The ideas of Parsons and Dreeben were adapted to the Middle-European school system by Fend (1981) in his book *Theorie der Schule*. Fend is also more successful at constructing a theory that is supported by thorough empirical research, which has produced concrete evidence. In particular, Fend not only describes the universal aspects of school life but extends his analysis to include the divergent manifestations of school reality. In their guide on School Theory, Diederich and Tenorth (1997) mention that one finds a lot of works being titled as "Theorie der Schule" but that only Fend manages to show the earnings of his own empirical research and, at the same time, a representation under a systematic claim. In the remainder of this section, we will mainly focus on Fend's contributions.

> **Definition.** *School systems* are institutions for [2] socialisation that are controlled and organised by society (Fend, 1981, p. 2).

The above definition comprises three determining statements:

1. School systems are institutions,
2. School systems are intentional and controlled organisations,
3. School systems are for socialisation.

In the following paragraphs, we will see how this should be understood.

2.1.1.1 School Systems are Institutions

In sociological theory, there is a consensus that institutions are constructed by society to deal with its fundamental challenges. School systems address these challenges of reproduction and perpetuation of society by teaching new generations the skills that are required to maintain and advance the cultural and technological state of society. As society changes over time, the norms to which the institutions must adhere also change. School systems need to be adapted to new standards, a process that Fend calls "institution building" (Fend, 1981, p.3). This requires that individuals are released from their normal duties and trained to perform their tasks to the new standards. Also, the supporting techniques and utilities for learning must be developed.

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[2] *"Unter Schulsystemen sollen Institutionen der gesellschaftlich kontrollierten und veranstalteten Sozialiation verstanden werden."*

2.1.1.2 School Systems are Controlled and Organised

If one considers educational systems as normalisations and regulations of actual or rather organised educational processes, then this implicitly raises problems which should be looked at closer. From the social standardisation of educational processes in educational institutions, a ratio of organised and unorganised education is generated. One has to assume that not all of the learning processes and opportunities of students can be controlled and documented by social standardisations. Many skills that are learned in school are unintended by the formal curriculum — the so-called *hidden curriculum*. A holistic school theory should include the unintended learning processes that actually take place as a side effect of the normalised learning processes. (The ratio of organised educational processes and non-organised learning processes should be analysed systematically.) The problem of organised and not organised education should thereby not be shortened as a mere consideration of the ratio of curricular and extracurricular education. The dynamics that emanate from the interaction of the formal and hidden curriculum – what effects one curriculum has on the other – should be in the centre of a systematic analysis (Fend, 1981, p. 4f).

2.1.1.3 School Systems for Socialisation

Scholastic socialisation processes should be viewed in two perspectives: firstly, regarding the reproduction of society in which social norms are passed on to new generations; and secondly, regarding the formation of personality in adolescent individuals. An analysis of the socialisation process should, therefore, consist of both an analysis of society and an analysis of biographical information of the groups of individuals. An understanding of the socialisation process in these two aspects is crucial for specifying the contents of the hidden curriculum.

2.1.2 Review of Fend's Theorie der Schule

Fend presents the basic features of an educational school theory in four sections: (1) the social functions of institutionalised education, (2) the internal design of educational institutions, (3) the scholastic fields of experiences and (4) assessments. These will be covered in the following sections.

2.1.2.1 The Social Functions of Institutionalised Education

Fend states that it is common knowledge that education systems have important social functions to fulfil. To clarify the social embedding of school, Fend

illustrates the social functions of school and the forms of control and control mechanisms on educational systems. There are a number of attempts to capture the functions of school and structure them. In the German speaking countries of the 1960s, the initial scientific efforts to describe the relationship between the school and society mainly adopt Anglo-American studies (Parson's structural functionalism and Halsey's cross-cultural studies). While Parsons only speaks of two social functions (socialisation and selection) in his famous essay about the school class as a social system (Parsons, 1959), Fend differentiates himself from Parsons by handling three social functions of school: qualification, selection and legitimation.

The Qualification Function   The reproduction of cultural systems is institutionalised in the school system. Fend denotes these reproduction functions as the function of qualification. This covers the transfer of skills and knowledge necessary for participation in social life, ranging from the control of basic symbol systems, like language and script, to the acquisition of specific professional qualifications.

The Allocation and Selection Function   The reproduction of the social structure of a society is supported by the allocation and selection function of school systems. The social structure consists of a distribution of positions in a society. School systems are to select upcoming generations regarding these positions so that they will be allocated with personnel in the future and thereby perpetuate the social structure.

The Integration- and Legitimation Function   School systems are instruments of social integration that support the reproduction of norms, values and patterns of interpretation. These are important for the conservation of the ruling relations and, thereby, a central political function of the scholastic socialisation process.

Fend further shows that the social control of the school system (the school internal processes) is not a simple mechanism. There are different ways to influence or unbalance the social functions in the education system. The administration, decision level and teacher training levels are examples of where big decisions of are made.

When control mechanisms are understood, new forms of institutionalisation can be established. Education systems fulfil their social function not only through a thorough control mechanism but also through the construction of education systems that are structurally analogous to basic social structures in society.

2.1.2.2 The Internal Design of Educational Institutions

After having depicted the external perspectives of the educational system, it is important to have a closer look at the various internal processes and problems of educational institutions.

School systems as functional instruments are reconstructable since the core of intentional efforts in the construction of schools is grouped around the organisation of learning processes. In the overall perspective of socialisation in society, educational institutions appear as authorities of social influence that compete with or reinforce other sources.

Fend further points out that an education system only can be understood adequately if it is analysed with the knowledge of what is necessary for the organisation of learning processes. In Section 2.2, I will come back to the school as an organisation.

Schools have, like almost all other complex social subsystems of our society, the characteristics of a formal organisation. They are all based on a complex system of the statutory standardisation of social realities. Thus, the school system shares all of the problems that arise from the formalisation of social conditions — in particular, the problem of autonomy and control (the reduction in the freedom of individuals to schedule their tasks and time to personal preferences) and the problem of centralisation and decentralisation (every member and client in an organisation should receive the same "service").

School activities specifically encompass the professional organisation of learning processes.

Fend formulates the basic problem of an organisation whose purpose is the organisation of learning processes like this:

> *The school is the venue of the planned event of learning. It is the place where social subjects (adolescents) are to be changed in a desirable direction. In school systems, this process of the organisation of learning processes for the purpose of changing social subjects (students) is organised in great styles.*[3] (Fend, 1981, p. 64)

In this context, it is essential to understand the tasks pertaining to the systematic organisation of learning processes. Fend uses systems theory expressions when giving examples of organised learning processes; *school*, therefore, means:

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[3] Die Schule ist der Ort der geplanten Veranstaltung von Lernprozessen. Sie ist der Ort, an dem soziale Subjekte (Heranwachsende) in einer wünschenswerten Richtung verändert werden soll. In Schulsystemen ist dieser Prozess der Veranstaltung von Lernprozessen zum Zwecke der Änderung sozialer Subjekte (Schülern) in großem Stile organisiert.

- the systematisation of the conditions for learning (*Systematisierung der Lernbedingungen*),

- the formulation of learning objectives (*Formulierung von Lernzielen*),

- the assessment of learning prerequisites (*Erhebung der Lernvoraussetzungen*),

- the verification of learning achievements (*Kontrolle des Lernerfolgs*).

These tasks are typically carried out on two levels: the level of macro organisation (basic structure of school organisation) and the level of micro organisation (teaching planning).

Education is a *special form of social influence* and, thus, educational systems are *authorities of social influence*. In support of this statement, Fend (1981, p. 96ff) gives descriptive categories for educational systems as authorities of social influence and considers educational systems in a bigger network of other social influence authorities like family, peers, media et cetera.

2.1.2.3 The Scholastic Fields of Experience

Scholastic efforts of social influence manifest themselves in great diversity, and Fend (1981, p. 126ff) chooses to base a description on three fields of experience:

- the school as a cultural field of learning (*Schule als kulturelles Lernfeld*),

- the aspects of interaction and relationships (*Interaktions- und Beziehungsaspekte*),

- the institutional and ecological fields of experience (*Institutionelle und ökologische Erfahrungsfelder*).

The School as a Cultural Field of Learning   This is the most important field of learning and consists of institutionalised contents like curricula, reading books, text books and so on.

The Aspects of Interaction and Relationships   The student field of experience is dominated by the social interactions and relationships of school. There are two aspects that should be mentioned. Firstly, there is the social influence of the interaction between teacher and student. This includes not only the relationship and authoritarian role of the teacher but also the school climate and, in particular, the class as a human habitat and differences between the school and classroom climates. Secondly, there are processes of social influence within age groups.

The Institutional and Ecological Fields of Experience　In the institutional fields of experience, the school presents itself to students as a system of rules, as a control system, that encourages particular forms of behaviour and discourages others, both socially and with regards to intellectual performance. Although the norm is usually quite strict, it is not formally defined as part of the curriculum and, therefore, is often denoted as the *hidden curriculum*, which we have briefly touched upon in Section 2.1.1.2 on page 10.

The ecological fields of experience encompass the physical aspects of the school environment such as the architecture, facilities, spacial allocation, structural density and size of a school.

2.1.2.4   The Analysis of School Impact Assessments

As far as we know, there are two aspects one has to be aware of when investigating the impact of school systems on the biography of the upcoming generation. Firstly, the explicitly formulated and organised processes of acquisition of culture; and secondly, the unformulated implications of these objectives and the unintended side effects of the institutionalised forms of education. However, two other aspects are being added. Namely, the subject-specific effects within the meaning of specific knowledge and skills and the multidisciplinary effects in the sense of general world views, norm systems and competences.

An impact analysis of institutionally organised learning processes is only complete if school performance is seen as a result of the different forms of organisational learning processes. Therefore, Fend recommends that an analysis of school impact should be completed in two steps:

1. The analysis of the subject-specific effects of the school in terms of promoting concrete academic performance (with a focus on analysing the quantity and quality of learning).

2. The Analysis of the contents of social influence — the question concerning the "what" of social influence.

The relative importance of the school compared to other influential organisations — particularly, the family — must also be questioned. Only then one can question the importance of institutional actions such as the forms of differentiation relating to the importance of the personal factor — the teacher and his curricular efforts and the importance of different forms for the curricular preparation of teaching materials.

2.1.2.5 Summary and Further Developments

The purpose of a school theory is to reason about how school reality should be organised and to identify the intra- and extra-scholastic objectives of schools. To help formulate a theory, Fend (1981) poses three questions:

1. What is the desirable contribution of the education system to the reproduction and transformation of society?

2. How should the complex scholastic facilities be designed? What are the ideal forms of education and teaching in schools? What are the ideal standards for coexistence in every day school life?

3. What professional and educational effects should be strived for in school? How can their realisation be ensured?

This approach has led to an understanding of educational systems as being part of a bigger social context. This view forms the basis on which succeeding contributions build.

In *Qualität im Bildungswesen* ("Quality in Education"), Fend (1998) focuses on an analysis on three distinct levels: macro, meso and micro. The macro-level is about the educational system as a social institution and about the need of schools to evolve in concert with society; the meso-level is about schools as individual organisations and their culture, evolution and school life; the micro-level is about the class environment, learning conditions and direct interaction between teachers and students.

In *Neue Theorie der Schule* ("New School Theory"), Fend (2006) presents an expanded, more comprehensive perspective on the subject of school. While the main focus earlier was on the description and explanation of structures and their functions, the dynamics are now central — that is, the processes and actions that take place between actors on the macro, meso and micro level.

An example in American literature that comes close to the German school theory is John I. Goodlad's comparative case study, *A Place Called School* (Goodlad, 2004).

2.2 The School as an Organisation

As already mentioned in the beginning of this chapter, Per Dalin (1994) has made essential contributions, placing the understanding of schools as organisations as central when it comes to discussing school development in Norway as well as internationally. Amongst others, he published a trilogy about school development in the years 1994 and 1995. In the context of my study, it is important to mention Hans-Günther Rolff with whom Dalin published the book *Changing the school culture* (Dalin and Rolff, 1993). Before I go into

Dalin's understanding of the school as an organisation, I will briefly cover the basics of organisational theory.

2.2.1 Organisational Theory

The understanding and description of organisations have changed over time (Hatch and Cunliffe, 2013). Early in the 20th century, the central themes were about formal structure, division of labour, coordination, hierarchy, management and control. From the 1930s, this classical perspective on organisations was changed by an increased interest in the dynamics between the organisation and its surroundings, and managing an organisation became more about changing it to make it function well in current situations. Social constructive ideas in the 1980s influenced a new interest in how organisations are constructed, reconstructed and maintained by the values and traditions of their members. Throughout, there has been an understanding that an organisation is something more than just the sum of the individuals that are a part of it. The development of an organisation is concerned with the complex interactions of many factors. Most contributions on organisational theory focus on market organisations. However, public schools are non-profit institutionalised organisations; therefore, it is important to nuance these theories in application to schools.

2.2.2 Dalin's Understanding of the School as an Organisation

Dalin (1998) confirms that it has become customary to present the organisational theory in terms of three distinct traditions: classical theory, humanistic theory and system theory, but he has doubts that these general theories are useful for understanding organisational renewal. Therefore, he reviews the four perspectives of organisations developed by Bolman and Deal (2013) which they find to be central in many different studies on organisations:

- the structural perspective,
- the humanistic perspective,
- the political perspective,
- the symbolic perspective.

The *structural perspective* regards organisations as "rational systems," concerned with realising set goals by means of the most effective structure and procedures. The *humanistic perspective* is concerned with the individual's contribution in organisations and with the interaction between all of the organisation's members. Human needs and the placating of those needs occupies a central place in this theory. The question as to what motivates employees is fundamental to this theory as well. The *political perspective* regards
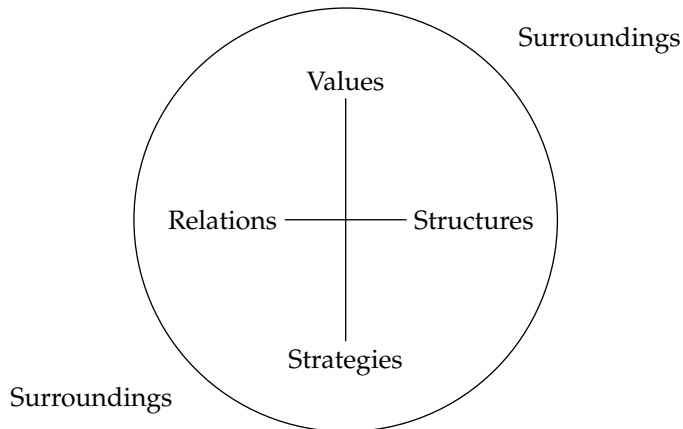
Figure 2.1: The school as an organisation (after Dalin, 1998).

organisations as scenes for battle and conflict of interest, illustrated through a fight for resources and exemplified and highlighted through the dissimilar values and interests of individuals and groups. The *symbolic perspective* engages the heart and head of the members and focuses on ritual, ceremony, story, play and culture; for this perspective, meaning matters more than results.

Dalin (1998) concludes that choosing any of these perspectives has its limitations because they are just tools that give a view on reality in one direction. Therefore, he proposes an alternative view, tailored at "schools as organisations," in which there are four main internal dimensions that loosely influence each other. The fifth main dimension is comprised of the school surroundings (Figure 2.1 on page 17).

On the one hand, changes in one dimension, like altered work structure, can result in changes within another dimension, like relationships. On the other hand, the organisation will, due to loose connections, protect itself from the consequences of a change in a subsystem. Similarly, the surroundings influence the organisation and vice versa. For example, a crisis in the local community can lead to changes in the schools, and conversely, new thinking within a school can lead to reactions from the surroundings such as the introduction of a new education system. The following description of these five dimensions will give an understanding of Dalin's model.

The surroundings in this context refer to both the local community and society at large. Schools are partly in a formal dependent relationship with certain institutions in their surroundings; a mutual interaction is partly expected. Up to a point, schools have an informal and non-binding relationship to

people and organisations. According to Dalin, schools have to take a position in relation to their surroundings on the following:

- How "transparent" should schools be?

- Will a great degree of openness lead to influential forces "taking over?"

- Should the boundaries to the surroundings be made so flexible that schools can "open and close" as they see fit?

- Is there danger that the schools will isolate themselves to such an extent that they fall "out of synch" with society?

- What can schools do to create a constructive relationship with their surroundings?

- What would the consequences be if parents and students had a free choice of schools?

A "learning school" has creative and mutual links to its surroundings. The above questions illustrate dilemmas that non-profit organisations have in relation to market organisations. For example, for market organisations, the greatest possible openness and "contact with customers" is crucial to the operation. The motto is "the customer is always right." For public institutions such as schools, which are meant to safeguard short-term and long-term learning needs, which have clients who are often more concerned with the former than the later and which have as their aim the maintenance of the *equality* of opportunities and *high quality* standards, the task is far more complex (Dalin, 1998).

School values refer to the basic values as they appear in ideologies, philosophies, ceremonies and symbols. This includes the formally expressed objectives and the informal values and norms of school management, teachers, students and others in the school community. It is normal that a broad range of values is represented in a school. Therefore, it is possible that conflicts occur between the formal objectives and values that are represented, between practice and the formal and spoken values. One can say that school life is driven by the real values of a school: the daily norms for behaviour, learning and upbringing. To clarify values, to appreciate differences in viewpoint and to include all groups in the development of common values and norms should be every school's goal. There should be a balance between different attitudes and norms in a school community in order for it to function well (Dalin, 1998).

The structures dimension refers to the decision-making structure, task structure and communication structure. In a school, good structures maintain routines and traditions in order to support the effective organisation of tasks; simultaneously, they need to be flexible enough to give leeway for change.

Dalin points out that there is no ideal way for a school to organise its operations since some structures are more useful than others under certain circumstances. Further, he emphasises that schools are faced with a number of questions and dilemmas related to structure (Dalin, 1998):

- How rigid and how flexible should the structure be?

- What degree of dependency is necessary between teachers for the execution of their primary task?

- To what extent does the structure allow for mutual learning and for the use of one another's resources?

- To what extend is it possible to work together and still leave room for autonomy?

- To what extent is the organisation built on norms of competition or cooperation, and how does this affect the structure?

Relations refer to human relations in the school system as they are expressed in the informal organisation. Interaction, influence, power, conflict, motivation, trust, satisfaction, support and collaboration can be mentioned as keywords in this context. The informal relations strongly affect the execution of tasks in an organisation. Since circumstances in the schools are often reflected in the quality of human relations, including the relationship between teachers and students, the quality of a school is dependent on the quality of interpersonal relationships. Every school should, therefore, strive toward productive human relations considering that learning takes place through interaction. Some of the problems and dilemmas that organisations must deal with regarding relations are (Dalin, 1998):

- Is the organisation marked by a constructive openness and communication, or is energy blocked because people can't talk to each other?

- Is it accepted that everybody can exercise influence? Are the members aware of how to do so, and are there acceptable and unacceptable ways of influencing events?

- To what extent can the organisation create a true sense of "membership," even when the individual's values, personality and norms deviate from the usual ones (which is often the case in school)?

- Have the schools established procedures for problem-solving and conflict-solving that are acceptable to everyone in the school community?

- To what extent have the schools worked actively with their own "culture," climate, job satisfaction and responsibility?

- To what extent is it accepted that "process questions" must have a place in the school's work just as much as "product questions" do?

Finally, the dimension of strategies refers to the way the school is run, to the mechanisms and methods for developing the schools and to strategies for solving problems, making decisions, giving rewards and setting boundaries. Some built-in problems and dilemmas of organisational life in this dimension are (Dalin, 1998):

- To what extent do the schools have the necessary expertise to carry out their tasks, to what extent is existing competence exploited, to what extend are skills appreciated and to what extent are the schools ensuring the development of expertise?

- To what extent are there sufficient resources for the school to be able to discharge its responsibilities? Do the funds match the objectives? Are the activities conducted where the funds are (and not vice versa)?

- Are the resources being used effectively?

- Have the schools established systems and procedures for school improvement that foster creativity, make room for changing practice, provide an opportunity for analysis and evaluation and reward creative behaviour? And do the schools have a "safety net" that can handle insecurity and conflict-ridden situations?

- Are the management functions being safeguarded (including the administrative, social and academic renewal functions)? Has the style of leadership been discussed, and is management promoting a positive view of cooperation and development?

According to Dalin, "it isn't until we see a *connection* between one dimension and the others that we will discover important ways of looking at the schools so that we can understand them as an organisation" (Dalin, 1998). Finding ways of creating a balance between the school's values, structures and human relations, as well as finding and developing suitable connections with the surroundings, is seen to be the task of school administrations.

2.3 Innovation Theory

The Oxford Handbook of Innovation (Fagerberg, Mowery and Nelson, 2005) opens with the statement that innovation is not a new phenomena and that it arguably is as old as mankind itself. Of course, without innovation, our world would look very different, and yes, there seems to be something inherently "human" about the tendency to think about new and better ways of doing things and trying them out in practice.

According to the Merriam-Webster Dictionary, innovation is "the act or process of introducing new ideas, devices, or methods". Normally, an important distinction is made between invention and innovation. Invention is

the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out into practice (Fagerberg, Mowery and Nelson, 2005).

Fullan's fourth edition of *The New Meaning of Educational Change* (Fullan, 2007) can, with no doubt, be seen as a comprehensive and up to date survey of innovation in education. Michael Fullan describes educational change with depth and understanding of the complexities within school systems. The book is repleted with many examples of good and bad practices leading to a formula for successful reform. Since 1982, when the first edition was published, Fullan has acquired an exceptional knowledge in the field of change and reform in education and has constantly extended his work with new insights. Some of his statements that are relevant to my thesis are:

- the problem of meaning is central to making sense of educational change (Fullan, 2007, p. 8),

- *change is a process, not an event* (Fullan, 2007, p. 68),

- schools are in the business of contending simultaneously with *multiple innovations* (Fullan, 2007, p. 68).

Since the outcome of an innovation will also depend on the reactions of many different people, Fullan's purpose is, among other things, to establish the importance and meaning of the subjective reality of change. He refers hereby to a number of researches that describe the daily subjective reality of teachers as a picture of a limited development of technical culture:

> *Teachers are uncertain about how to influence students, and even about whether they are having an influence; they experience students as individuals in specific circumstances who are being influenced by multiple and differing forces for which generalizations are not possible.* (Fullan, 2007, p. 23f)

Further, he shows that teaching decisions often are made on pragmatic trial-and-error, grounds mostly without reflection or thinking through the rationale. Teachers are under a lot of stress from what M. Huberman (1983) calls the "classroom press," which affects teachers in a number of different ways: It draws their focus to *day-to-day effects* or a short-term perspective; it *isolates them from other adults,* especially their meaningful interactions with colleagues; it *exhausts their energy;* and it *limits their opportunities for sustained reflection* (Fullan, 2007, p. 25). Furthermore, there is no reason for teachers to believe in the value of proposed changes, and few incentives (and large costs) to find out whether a given change will turn out to be worthwhile. House's observation from over 40 years ago still holds true:

> *The personal costs of trying new innovations are often high [...] and seldom is there an indication that innovations are worth the*

investment. Innovations are acts of faith. They require that one believe that they ultimately bear fruit and be worth the personal investment, often without the hope of immediate return. Costs are also high. The amount of energy and time required to learn the new skills or roles associated with the new innovation is a useful index to the magnitude of resistance (House, 1974, p. 73).

Fullan introduces the notion that change is multidimensional; he recognises three components or dimensions:

1. materials,
2. teaching approaches,
3. beliefs, in what people do and think.

All three aspects of change are necessary because, together, they represent the means of achieving a particular educational goal or set of goals. Fullan stresses that it is the change in actual practice along these three axes that is essential if the intended outcome is to be achieved. This has to be seen as a foundation for achieving a lasting reform. Further, it is important to note that it is essential to understand the dynamics of change processes. Fullan not only states that change cannot be accomplished overnight but also that it cannot be open-ended.

According to Fullan, (p. 65) there are two basic ways to look at educational reform. Firstly, the *innovation-focused* approach examines and traces specific innovations to see how they fare and to determine which factors are associated with success. Secondly, the *capacity-building focus* turns the question on its head and asks how we develop the innovative capacity of organisations and systems to engage in continuous improvement.

In most of the literature on change, there is repeated talk as to which conditions get teachers, principals, students, school boards, etc. motivated to change/improve their work. It is up to the leaders to motivate and obtain the individual and collective involvement of everyone in the organisation (school) to accomplish successful change. Leithwood (2006) has written an extensive report on *Teacher Working Conditions That Matter: Evidence for Change,* where he identifies the following eight factors that affect teachers' motivation and performance:

- An individual sense of professional efficacy,
- A collective sense of professional efficacy,
- Job satisfaction,
- Organisational commitment,
- Stress and burnout,
- Morale,

- Engagement or disengagement from the school or profession,

- Pedagogical content knowledge (p. 8).

Fullan describes the process of change as a lengthy one, and he divides the innovation process, like most researchers, into three phases: Phase I, the initiation, mobilisation or adoption phase, consists of the process that leads up to (and includes the decision to adopt or proceed with) a change. Phase II, the implementation or initial use phase, involves the first experiences of attempting to put an idea or reform into practice. Phase III, the continuation, incorporation, routinisation or institutionalisation phase, refers to whether the change gets built in as an ongoing part of the system or disappears.

Fullan states that most changes take at least two years to be implemented and that it takes this long before their success should be assessed. Innovations can sometimes be thought to have failed just because they were not given enough time to assume their final form. There is also a tendency to blame the way the innovation was implemented rather than to criticise the idea itself when an innovation fails. Both the scope of change and the question of who develops and initiates the change are important when it comes to the point of successful and sustainable innovation in schools. Since initiation is the process leading up to and including the decision to proceed with implementations, an emphasis on factors affecting initiation should be given. Fullan sums up eight sources affecting initiation whereby the order is not given an important role. These eight factors are 1) the existence and quality of innovations, 2) access to innovation, 3) advocacy from central administration, 4) teacher advocacy, 5) the external change agents, 6) community pressure/support/apathy, 7) new policy—funds (federal/state/local) and 8) the problem-solving and bureaucratic orientations. Given these factors, we see that change is initiated from a variety of different sources and combination of sources. Wall (1996) gives an illustrative summary of Fullan for what would-be innovators should ask themselves before putting an innovation forward:

- Where did the idea for change come from? From a teacher or a group of teachers? From an academic? From a politician?

- What was the motivation behind the idea? Was it to solve a problem which practitioners agreed needed solving, to test out a theory or to take advantage of opportune funding? What do these different motivations suggest about the long-term commitment of the initiator?

- What can be said about the 'quality' of the innovation? Has the idea been thought through? Is it clearly described? Is it specific enough without being too prescriptive?

- Do teachers have access to information that will help them to understand the idea or begin to implement it? Or is this information available

only to its originators (who are sometimes academics out of touch with the classroom)?

- Who in the establishment will support the idea? Will they have enough influence to get it adopted? Will teachers support the idea? What must the conditions be to convince them that it is practical and helpful?

- Are external change agents involved in any way? What role should they play?

Even more important than the initiator of the change is what the subsequent quality of the change process is. We know that top-down change doesn't work, but bottom-up initiatives can fail as well. An example of this would be when educators adopt reform models without thinking through how the model actually would suit their own school's goals, culture, teachers or students.

Until now, the focus has been on a single innovation perspective which is useful for the examination of individual innovations. But, as Fullan notes, the broader reality is that schools are in the business of contending with *multiple innovations* simultaneously— an innovation overload. For example, innovations can happen simultaneously:

- within a single classroom,

- among different subjects,

- school wide,

- among teachers,

- between the principal and teachers/students, and so forth.

Nevertheless, according to Fullan, "*this multiplicity perspective inevitably leads one to look for solutions at the level of individual roles and groups [. . .] because it is only at the individual and small-group level that the inevitable demands of overload can be prioritized and integrated*" (Fullan, 2007, p. 68).

2.4   Chapter Summary and Look Ahead
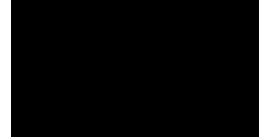
In this chapter, three theories have been presented that are relevant to this study: School Theory, Organisation Theory and Innovation Theory. I have illustrated that there are differences in how schools are viewed theoretically in Norway and Germany; it has been interesting to observe how these theories complement each other.

The next step is to select a method and design the research.

CHAPTER 3

Method

In this chapter, I will select a method for the research and describe the design of the study and the criteria for the selection of cases. The chapter concludes with a description of the process of data collection.

The research design is a reflexive process, which operates throughout every stage of the project (Maxwell, 2005). All of the activities going on, like data collection, work concerning a theoretical framework, refocusing the research question and identifying key information, are somehow connected and have to be seen as influencing each other. I am aware of this integration concept and the consequences it will bring throughout the study.

3.1   The Selection of Method: Quantitative and Qualitative

In social sciences, there is a distinction between quantitative and qualitative research. Quantitative research takes an objective approach and involves the analysis of measurable data and quantities. Whereas, qualitative research takes an interpretive and naturalistic approach in an attempt to understand and explain the meanings that people give to phenomena. It involves the collection and study of a variety of empirical materials.

Views on quantitative and qualitative research have changed over time. In the early half of the 20th century, the only methods that were generally considered to be of scientific rigour were the quantitative ones. However, in the 1920s and 1930s, there was an increasing awareness, starting in sociology and anthropology, of the importance of qualitative aspects. By the 1960s, social science had polarised quantitative and qualitative camps: "*Quantitative scholars relegated qualitative research to a subordinate status in the scientific*

arena. In response, qualitative researchers extolled the humanistic virtues of their subjective, interpretive approach to the study of human group life" (Denzin and Lincoln, 2005a, p. 2). As Denzin and Lincoln (2005b) describe in the preface of the 3rd edition of their Handbook of Qualitative Research:

> *Over the past quarter century, a quiet methodological revolution has been occurring in the social sciences, a blurring of disciplinary boundaries is taking place. The social and policy sciences and the humanities are drawing closer together in a mutual focus on an interpretive, qualitative approach to research and theory. These are not new trends, but the extent to which the "qualitative revolution" is taking over the social sciences and related professional fields is nothing short of amazing (p. ix).*

As Denzin and Lincoln (2005b) argue, it is becoming more and more common to combine aspects of both the quantitative and qualitative approaches in the same study to complement each other. This is a trend that this study will follow. I have found that a case study research, which will combine aspects of quantitative and qualitative research, is the preferred method for my study.

3.2   Case Study

Schwandt (2007, p. 27) states that "*a case is typically regarded as a specific and bounded (in time and place) instance of a phenomenon selected for study.*" Cases can be holistic descriptions of investigated phenomena in their natural surroundings. In a case study, the researcher strives for a complex understanding of a case. The conclusion of a case study is thought to be applicable to other cases with similar properties.

The case study research has a long, varying history in many disciplines; its popularity has increased a lot during the last few decades. One field where case studies have especially increased interest is in education, mainly in the educational evaluation.

Researchers of different disciplines use a case study research to confirm a theory, to dispute it or to widen it, to come up with new theory or to describe a situation.

Contrary to other research methods, where a large selection of samples are studied and in which (after strict examination protocols) a limited number of variables are looked into, the case study goes rather in depth and contains more long term investigation of a case. Case studies present a systematic way to examine a case, to collect data, to analyse information and to report outcomes. Therefore, data investigation in case studies is very extensive since different information sources are used. An essential feature of case studies is the sufficient collection of data so that the researcher can reveal the essen-

tial characteristics of a case, which can be used for the interpretation of the investigated process.

The case study description is usually qualitative, and to the contrary of reporting findings in numerical data, case studies make use of prose and literary techniques to describe, give images and analyse given situations (Merriam, 1998). Yin (2003, p. 8) expresses that "*the case study's unique strength is its ability to deal with a full variety of evidence — documents, artefacts, interviews, and observations — beyond what might be available in a conventional historical study.*"

3.3 Research Design

It is my intention to find criteria that determine whether a change is sustainable or unsustainable. For example: Are there signs that changes are bound to individuals? Or to what extend is the school culture involved in it? Furthermore, I will research in which ways problems and hindrances, on the way to renewal, can be generalised. The objective of this study is to chart a successful practice that leads to lasting innovations in secondary schools and list what its conditions are. In other words, the aim of my project is to have a closer look at the innovative renewals that have been carried out at secondary schools in a five to eight year period and to identify the conditions that are necessary for the integration of renewals into daily school life. This goal clearly needs an inductive approach, a focus on a specific situation/place and an emphasis on words rather than on numbers. These are all characteristics of qualitative research, and therefore, I will use the instruments of case study, interviews and the study of written texts to achieve these goals. However, I will also use some quantitative techniques to broaden the qualitative study and to aid the selection of subjects for interviews. Therefore, this will be a mixed method research, as described by Brannen (1992), Tashakkori and Teddlie (1998) and Schwandt (2007), and I will present the approach in more detail shortly.

Majorie Olson has developed a list of aspects of case studies (Hoaglin et al., 1982, pp. 138–139), some of which fit my research quite nicely:

- It can explain why an innovation worked or failed to work (Innovation and result).
- It can explain the reasons for a problem, the background of a situation, what happened and why (What and why).
- It can illustrate the complexities of a situation—the fact that not one but many factors contributed to it (Complexities).
- It can show the influence of personalities on the issue (Personalities).
- It can suggest to the reader what to do or not to do in a similar situation (Applicability).

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- It can evaluate, summarise and conclude, thus increasing its potential applicability (Evaluation).

Instead of focusing on just one case, which would involve a single secondary school, I will select a limited number of schools and perform a multiple-case study, quite literally in the way Yin (2003) describes:

> [A] study may contain more than a single case. When this occurs, the study has used a multiple-case design, and such designs have increased in frequency in recent years. A common example is a study of school innovations (such as the use of new curricula, re-arranged school schedules, or new educational technology), in which individual schools adopt some innovations. Each school is the subject of an individual case study, but the study as a whole covers several schools and in this way uses a multiple-case design.

The advantages of a multiple-case study to a single-case study are firstly that only a multiple-case study allows generalisations to be made after a cross-case analysis. One consequence of this is that such a study must be more constrained and focused so that similar processes within each case are viewed in a consistent way. Secondly, by increasing the number of cases, the variety across cases increases and, thereby, the chance of making interesting findings. Lastly, doing a multiple-case study increases the chances of doing a good case study. The evidence collected from multiple cases is often considered more compelling, and the overall study is, therefore, regarded as being more robust (Herriott and Firestone, 1983). Criticisms of case studies are often based on fears about the uniqueness or artifactual condition surrounding a case, and increasing the number of cases helps blunt such criticisms. Yin (2003) states that the analytic benefit of having more cases can be substantial, and Miles and A. Huberman (1994, p. 29) note in this context that:

> By looking at a range of similar and contrasting cases, we can understand a single-case finding, grounding it by specifying how and where and, if possible, why it carries on as it does. We can strengthen the precision, the validity, and the stability of the findings.

Maxwell (2005) says that "*multiple sources of data and methods give more credibility than being limited to one source or method.*" As a disadvantage of having multiple cases, it should be mentioned that a multiple-case study needs more time resources and there must be a stronger focus on the conceptual framework (research questions) to guarantee the comparability between cases. In other words, a meticulous front-end preparation is necessary compared to that of a single-case study.

After formulating my research question (see Section 1.2), it was clear that this research would benefit from the strength of qualitative research. By combining the work with a questionnaire (including mainly closed and some open questions at the end), it is possible to provide additional information in a larger scale with a minimum amount of time resources. That is why this study uses a mixed methodology with qualitative and quantitative approaches.

I have designed the practical undertaking within each case to comprise the following three stages of inquiry:

1. An analysis of existing written school documents,

2. A survey among all teachers,

3. Interviews with key persons.

Stage 1 is a qualitative analysis of a wide collection of pre-existing written texts such as curricula, year plans and secondary literature about the school, minutes of different conferences and meetings, and so forth. This stage is meant to help form an image of the case as a background for implementing the succeeding stages. Stage 2 is a quantitative step implemented as a written questionnaire that, apart from the obvious statistical content, will have themes about change, teacher attitude and various school aspects. This step will be designed to understand the school culture and group relations, picture school life from the teacher's perspective and identify innovations and their key individuals. Prior to executing the survey on the studied cases, the questionnaire will be piloted with a group of teachers at a number of secondary schools that are not otherwise involved in the study. Finally, stage 3 is a qualitative stage meant to give the survey and observations more "depth." In this stage, some key persons that were identified in the preceding stage will be interviewed in which I will be able to expand on observations made so far, and it will allow for the verification of preliminary conclusions.

Because of comparability across cases, the study will be conduced more or less simultaneously.

3.4 Case Selection

For several reasons, early in the design of the study, it was decided to select cases in multiple European countries. Firstly, there is a general interest in Europe to give access of the educational systems to other countries. This is reflected in the many international studies like PISA (Programme for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study), IGLU/PERLS (Progress in International Reading Literacy Study), INIS (Quality Development of Schools Based on International Quality Comparisons) and SITESm2 (Second Information Technology in Education Study module 2). Secondly, when looking for innovation, it makes

sense to look across borders because it increases the probability of finding examples of successful practice. Initially, Norway, the Netherlands and Germany were selected, mainly because I already had appropriate knowledge of their language, culture and school system. However, in order to keep the number of cases and amount of data within manageable limits, it was decided to take out Netherlands and focus on two school cases each in Norway and Germany — four schools in total.

In the selection of school cases, one important criterion was comparability. This study intends to find successful practices that are generally applicable and independent of some special condition. This criterion ruled out schools that are special in one or more aspects like single gender schools, private schools (because of either larger financial resources and/or deviating pedagogical methodologies), boarding schools and religious schools. In order to increase the chance of finding successful practice, it was decided to consider ordinary secondary schools that stand out in one respect only: they have been nominated or awarded a prize for being outstanding in the use of media or innovation of some kind in the past.

The selection of school cases was based on the following works: Bertelsmann Stiftung (1996), Mauthe and Rösner (2000), Vestby et al. (2000), Frølich and Vestby (2003) and Vorndran and Schnoor (2003). Additionally, meetings and correspondence with the following persons have been helpful: Dr. Detlev Schnoor, Dr. Oliver Vorndran, Carola Stern (Bertelsmann Foundation), Prof. Stefan Hopmann, Prof. Svein Østerud, Prof. Sten R. Ludvigsen, Prof. Sigmund Lieberg and colleagues at NTNU. I have to refrain from giving a more detailed description of the selection of cases in order to preserve the anonymity of cases. More detailed facts about the schools can be found in Chapter 4 where I present the case schools.

School systems in Norway and Germany are quite different. In Norway, vocational subjects are often taught at the same school as general secondary education; whereas, in Germany, vocational education and general studies are taught at distinct schools. For the sake of comparability, only teachers teaching general studies were included in my study at Norwegian schools. At the German schools, only teachers teaching at years 11–13 (*Oberstufe*) were included.

3.5 The Process of Data Collection

In the spring of 2004, I contacted four schools that I had selected as potential project schools for my study. All four schools said that they would like to be part of the study. The study was conducted between January 2004 and May 2010. Between May and June 2006, the questionnaire was used, and the last

interview was completed in February 2010.

Existing written school documents of all four schools, like curricula, year plans, secondary literature about the school and minutes of different conferences and meetings, were collected and analysed before designing a questionnaire. The questionnaire was planned as an inductive approach towards critical success factors. For this reason, there was no definition of "innovation" given in the questionnaire. The teachers were asked to define and identify innovations by themselves. Both the analysis of the existing written school documents and the analysis of the questionnaire were used to prepare the interview questions with the key persons at each school. The interviews will give more depth to the research being carried out so far.

The research complies with the ethical guidelines described by the Norwegian National Committee for Research Ethics in the Social Sciences and the Humanities (NESH).

3.5.1 Thick Descriptions

Descriptive research can utilise elements of both qualitative and quantitative research methodologies. Knupfer and McLellan (1996) state that descriptive statistics play an important role in educational research and that these descriptive studies are primarily concerned with finding out "what is." Further, they mention that these studies might describe the current state of multimedia usage in school, which fits perfectly to this study.

Thick descriptions are rich in detail based on, for example, case studies and/or interviews, with the objective to obtain a deeper understanding and gather knowledge that otherwise might be overlooked. Three notable examples that apply thick descriptions in educational research are: *The Good Highschool* by Lawrence-Lightfoot (1985), *Teachers and Machines: The Classroom Use of Technology Since 1920* by Cuban (1986) and *A Place Called School* by Goodlad (2004).

Ponterotto (2006) gives a good overview of the concept of thick descriptions, including its origins, evolution and definition. According to him, the term "thick description" has become one of the most important concepts in the lexicon of qualitative researchers. The term was introduced to qualitative research by Geertz (1973) in his ethnographical work and spread to a wider audience by Denzin (1989).

Description is the fundamental form of all qualitative reporting. Good description takes the reader into the setting being described (Patton, 2002, p. 437). It is important to keep in mind that causality cannot be identified from "thick descriptions." In order to give the research meaning, the description needs an interpretation. The understanding of the reported social actions is

brought alive through the thick interpretive work of researchers. Description and interpretation have to be carefully separated, as an interpretation involves an explanation of the findings, including answering "why" questions, bringing significance to results and establishing an analytic framework (Ponterotto, 2006; Patton, 2002, p. 438).

Thus, thick description refers to the researcher's task of both describing and interpreting the observed social action (or behaviour) within its particular context; this context can take place within a smaller unit (such as a work environment) or within a larger unit (such as a community). Further, it accurately describes observed social actions and assigns purpose and intentionality to these actions by way of the researcher's understanding and clear description of the context under which the social action took place. Through this, the thoughts and feelings of participants, as well as the often complex web of relationships among them, are captured. Thick description promotes thick interpretation, which in turn leads to thick meaning of the research findings for the researchers and participants themselves and for the report's intended readership (Ponterotto, 2006).

3.5.2   Questionnaire

In developing my questionnaire, I had access to other questionnaires that were being used in various significant research studies about successful school leadership, school climate and international comparative school studies. This allowed for comparing my data with other important research studies to see if the schools follow common "trends." An interesting one was undertaken by Jorunn Møller at the University of Oslo (*Institutt for lærerutdanning og skole-utvikling*) where she had an inquiry about school leaders' working conditions, opinions about leadership and the use of evaluation as a tool for information and learning (Møller, Eggen et al., 2005).

The research questionnaire uses closed and open questions. This gives the opportunity for the questionnaires to be used for both quantitative and qualitative purposes. The questionnaire starts with closed questions — to give the respondent a sense of progress — and ends with seven open questions with comment boxes.

The questionnaire is rather long with nine pages ($7\frac{1}{2}$ with closed and $1\frac{1}{2}$ with open questions) covering eight main topics.

In order to get a high response rate (see Table 3.1 on the next page), I applied several strategies. The most important to me was to make the survey as "comfortable" as possible for the responding teacher because research has shown that there is a relation between positive attitude and high response rate. For this purpose, although I write this dissertation in English, I decided to use the native language for the questionnaires in Norway and Germany (i.e. two

versions). An English translation of the questions is given in the analysis of the questionnaires in Chapter 5. In addition, I drove to all of the schools to deliver the questionnaires in person. At both Norwegian schools, I delivered the surveys in an envelope with a pen (ready to write) and a chocolate treat to their personal mailbox.

Table 3.1: Questionnaire response rate and count.

case	response rate	response count
N♡	75%	21
N♧	59%	23
D◇	76%	29
D♤	85%	35

At one German school, my visit was scheduled under a teacher conference where all the school teachers were present. This gave me the opportunity to say something about this study, to distribute the survey and be present while they answered the survey. At the other German school, I had to give the survey to a person from the administration, and they were distributed at a teacher school conference without me because the planned meeting was postponed. Both the principal and I attached a personal note to the survey. At all four schools, prizes were drawn for among the teachers who delivered back a filled out questionnaire.

A pilot study was conducted where five teachers from each country filled out and gave feedback to the questionnaire.

Of the 146 teachers that were asked to participate in the study by filling out the questionnaire, 108 teachers carried out the survey (74%). Teachers that had been teaching for fewer than one year at their respective school were not part of the survey.

Different types of questions were used both to gather broad information and bring variation in the questionnaire.

The questionnaire consists of eight different topics:

1. personal information (questions 1–6 in the questionnaire),

2. school (questions 7–15, containing 74 variables of different types),

3. students and parents (question 16, containing 9 variables),

4. the work of the teacher (questions 17–19, containing 16 variables),

5. accountability and curriculum (questions 20–21, containing 12 variables),

6. innovation overview (questions 22–24, containing 26 variables and additional optional fields),

7. the most important innovation at school (three open questions),

8. comments (three open questions).

3.6 Chapter Summary and Look Ahead

In this chapter, I have designed the research using a mixed approach with quantitative and qualitative elements. The process of case selections was described as well as the process of data collection.

Prior to the analysis of quantitative data, a qualitative assessment of the cases is presented in the following chapter.

Sometimes we all forget we were once children.

Case Descriptions

In this chapter, I will describe the four schools of my study. Firstly, I will give a short introduction about the Norwegian and German school system and provide some general information before I describe each school separately.

4.1 School Systems in Norway and Germany

In Norway, the school year runs from August until June the following year; whereas, in Germany, the school year runs from August until July. In both countries, the students are obliged to attend school for at least ten years. The Norwegian school system is divided into three stages: primary school (years 1–7), middle school/lower secondary school (years 8–10) and high school/ upper secondary school (years 11–13). High school is differentiated into various general and vocational study programs. Both of my Norwegian cases are schools of the same county, meaning that they both act within the same financial and political conditions.

Germany consists of 16 federal states that have individual school systems. Although some systems are identical, others can vary considerably. Both of my German cases are schools in the same federal state. After four years of primary school, students change to a secondary school based on their performance. Parents receive a recommendation from the teacher for a secondary school for their child. Possible secondary school types are: *Hauptschule* (years 5–10), *Realschule* (years 5–10), *Gesamtschule* (years 5–13) and *Gymnasium* (years 5–13). General University Entrance Qualification can only be obtained through *Gymnasium* or *Gesamtschule*.

Considering my cases, both Norwegian schools offer vocational, as well as general lines of study, within secondary education from years 11–13. Both German schools, being gymnasia, combine lower and upper secondary school, years 5–10 and years 11–13, respectively. In all cases, this bond is strong, with teachers teaching in both parts of the school.

4.2 The Case N♡

N♡ is an upper secondary school with approximately 750 students, 90 teachers and 25 other staff including caretakers. It was formed half way through the seventies, when a gymnasium and a vocational school were joined; however, its history goes back to over a hundred years ago. The school is located in Akershus county in an agricultural and forestry community with a city population of 20.000. There are also some industrial settlements, but lack of businesses causes unemployment in the area. The school is offering a total of eight different educational programmes in a complex of seven buildings. This study only focuses on the non-vocational study programmes.

In 1994, an upper secondary school reform called Reform 94 took place in Norway. It brought new curricula and entitled all young people between 16 and 19 years of age to a three years school education, leading to university admission. Both the general and the subject specific curricula were changed. Together with ongoing work at N♡ on school evaluation, teachers had a need for competence enhancement, especially in the field of educational development work. In 1999, a new principal was employed who was convinced that pedagogical qualities of teachers are far more important than academic competence. A focus on pedagogical qualities would create a good learning environment and be the foundation of a good school. A cooperation agreement with the county university collage was made, and during a period of six years, around 70 teachers received further pedagogical training. This led to innovative thinking towards increased student-teacher interaction, learning in the organisation and a holistic competence/skill development in students.

In Norway, the "what" of the school programme is determined at the national level (13 basic courses and 450 advanced courses are defined), and the "where" is decided at the regional level (which school offers which courses). The management at each school then decides about the "how" (implementation and working methods). The implementation is carried out locally at each school in the form of a individual school programme under the participation of the school management, teaching staff and students.

4.2.1 The School Programme

In Norway, it is common that one or several schools will carry out development projects that, when successful, will be transferred to other schools — either within the county or nationwide. The cooperation between N♡ and (at first one and then three) university colleges led to a number of different development projects at this school, mainly in the field of action research. Action research aims to create a simple, practical and repeatable process that iterates through a cycle of learning, evaluation and improvement, leading to increasingly better results.

The basis of the school programme is formed by an educational platform that was prepared by the school community, including teachers, students and parents. Three core key points can be identified, which will be covered in more detail below:

- Adapted education,

- Student involvement,

- Evaluation.

4.2.1.1 Adapted Education

N♡ aims to educate their students to be knowledgeable, secure, conscientious and reflective. The school wants to create an inspiring learning environment characterised by trust, confidence, well-being and affiliation (*tillit, trygghet, trivsel, tilhørighet*) and develop a working place for both students and teachers to be proud of.

Adapted education supports the learning of individual students. Action research is a good fit in this setting, as it is conducted within an organisation and typically focuses on solving specific problems or answering specific questions. Another measure to support students' individual learning can be found in the school's approach to confluent pedagogy. Confluent pedagogy is a process-oriented learning and development pedagogy that views learning as a discovery, meaning that learning is a subjective process that involves the whole individual. Consequently, learning should be based on the things that are meaningful to the student, are activating, varied and allow a high grade of individualisation. The learning activities at N♡ are characterised by:

- Using the basic ideas of confluent pedagogy,

- The use of mastering tasks,

- Creating work schedules with students,

- The use of interdisciplinary teaching to strengthen the holistic training,

- The use of cooperative learning,

- The use of ICT and web based programs,
- The use of work sessions rather than school hours.

The teacher density is really high compared to the other schools. The aim is to have one contact teacher for a group of 8–9 students. Some elementary courses prepare individual study plans for their students. These are developed in cooperation with the student, teacher and parents.

One development project at N♡ was about alternative examination methods, where the school was responsible to design the exams themselves. A practical approach to examination was designed. Assessment forms were designed, and a portfolio assessment was introduced. This examination project was phased out with the latest curriculum reform, *kunnskapsløftet* (LK06), in 2006.

4.2.1.2 Student Involvement

The school's education goals are supported by the idea that every individual is seen as a resourceful person that should be given the opportunity to release its resources by participating in the community. The core values of the community are openness and respect. This requires that everyone has a real influence on the conducted activities. Students are asked to be active, to search for information and to be conscientious to their learning. Hence, the characteristics of the student's role at N♡ can be described as:

- The student's development is ensured by a supportive network around each student,
- Student-teacher conversations are central in the monitoring of individual learners,
- Students should learn to use their time for the best of their own and the community's benefit,
- Students are met with trust and are taken seriously and experience clear and predictable consequences.

4.2.1.3 Evaluation

There are two evaluations at N♡ each year. Firstly, the school reports to the county with an evaluation that is based on various data, like minutes of working groups, student-teacher conversations, conversations with student representatives, competency conversations with teachers, evaluation of the subject groups' action plans, parents' feedback and the county's quality investigation.

Secondly, students and teachers answer a questionnaire through the school's learning management system and have conversations with their teacher or leader. The school has a special focus on including students and

parents in the school's learning community. Both students and parents appreciate being taken seriously.

4.2.2 The Organisation, School Administration and School Climate

At N♡, the school management team consists of six persons: the principal, assistant principal, three inspectors and one development inspector. The team meets twice a week for discussions. In these meetings, work is assigned ranging from schedules, projects and long term strategies up to daily management. The school's pedagogy demands that leaders should apply the following principles into their function and role:

- Everyone shall be given opportunities for development in an environment characterised by engagement, participation and co-responsibility,
- The learning shall facilitate active research and development to enable us to meet the tasks and challenges ahead of the processes of change in the society,
- Leaders must be clear and accessible,
- Dissemination of knowledge about good practice.

The continued education of the whole teaching staff regarding pedagogical training has resulted in a stable and happy teaching staff. The teachers are given confidence and enjoy the support of development talks with their leaders, having a school handbook to guide them through various difficult situations and a management team that supports and evaluates the department's action plans.

The chosen focus on trust, confidence, well-being, affiliation and fellowship seems to be a good strategy for creating a good school climate. The cooperation between school and home is work well due to the involvement of parents.

4.2.3 Nominations

In 1996 N♡, was nominated for the Carl Bertelsmann Prize regarding *Innovative school systems in international comparison*. The school was described as working as a learning organisation under excellent leadership and as a role model when it comes to being confident with a culture of change.

4.3 The Case N♣

N♣ is an upper secondary school with approximately 650 students and 80 teachers. The school opened in 1980 due to population growth and the ex-

pected increase in education demand in Akershus county. The school is located on an peninsula in a district with a population of 17.000 in Akershus. Five different educational programmes are offered, whereby this study only takes the non-vocational studies in account. The school is located in a large, connected building complex.

N♣ had already used the pedagogical principles *problem based learning* and *collaborative learning* for some time when the Norwegian education policy made a firm commitment towards reforming teaching methods in combination with bold investments in ICT in the late nineties (Elstad, 2006). The school saw itself confirmed by this initiative, which inspired an increased focus and, at the beginning of the ICT wave, led to several pilot projects. What started off as equipping with equipping a selection of five classes with portable personal computers in 1999 ended up with all of the school's students having a portable, personal computer in 2003. Akershus county selected N♣ to be the primary pilot school, and therefore, N♣ received most of the funding for the implementation of ICT instead of it being spread over several schools. One of the main reasons that the school was selected as a pilot school was that it is an ordinary school, so the outcomes are easily transferred to other schools. N♣ was also affiliated with the Research and Competence Network for IT in Education (ITU), which is a national research and development unit in the field of ICT and education. Among the main focus areas of the ITU is to initiate and stimulate innovation in the academic and pedagogical use of ICT in learning and education, both in basic education and teacher training.

After the Conservative Party came to power in 2002, the Norwegian national assembly adopted a new educational policy with an emphasis on result control in 2004.

4.3.1 The School Programme

The school is in the process of undergoing an extensive change. The school owner, county, and principal have ambitious plans to follow up the Norwegian education policy and create *the school of the future*. The main focus/basis of the school programme can be seen on their attempt of the extensive implementation of ICT in teaching. Besides the heavy commitment in the use of personal portable computers, there are educational objectives to refer to. Some of the educational objectives are closely linked together with the use of ICT, while others are seen separately. The two identified core key points are covered in more detail below:

- Media education,

- Educational objectives.

4.3.1.1 Media Education

The school has had three main research projects with ITU: 1) on innovative learning environments, 2) educational practice using ICT and 3) a project linking teacher education with partner schools associated with technological-educational change.

With the introduction of personal computers in 1999, students got wireless Internet access in the classroom and elsewhere in the school. Soon, everybody was connected. The use of computers in education at N♣ was to increase student motivation and improve learning strategies. One of the main goals was to change the school's teaching practices to have more project work and increase the use of independent, problem-solving approaches. From day one, teachers were confronted with the challenge of maintaining control over the students and their activities during lessons. Students were easily distracted when given independent, problem-solving work. Some crude measures to interrupt Internet access were quickly installed, but more advanced technical measures for control were not implemented until Spring 2004. Access to certain types of material had to be blocked, like the downloading of music, web sites with inappropriate content and chat programmes and channels — Some over a period of time, others for good. Students found ways to bypass the blocking in several cases. Various articles about N♣ mention the insistent attitude of the management (in general) and the principal (in particular), who refused to interfere with the students' freedom of the non-academic use of the personal computers during the first four years.

In the beginning, many teachers had to work hard to keep up with their students, and the school was offering additional training where needed. Each teacher was given a CD-ROM for self learning. One should not underestimate the need for technical support throughout such a significant change. On the way, the school had to increase from a half position in ICT support to four positions (whereof, two were apprentice). The integration was far more complex than it was assumed in the beginning. Eventually, the school concluded that it needed an internal learning management system (LMS) to improve communication.

The school became a member of the European Network of Innovative Schools.

4.3.1.2 Educational Objectives

Evaluations at N♣ showed that students were satisfied with their teacher in regards to the preparation, working methods and variations given. On the other hand, there were two aspects in which the school had great potential for improvement.

Firstly, too many students were struggling with completing school. Students were missing lessons and failed to show up at exams. By not being present for a certain number of school lessons and school days, the students were not giving grounds for a grade. A missing grade does not qualify the completion of a school year.

Secondly, student participation was at a low level. The school complained about students showing little initiative to involve themselves, and the students complained about the school giving few opportunities to get involved and about a perceived low influence on the form and content of their education.

The school has taken action to *stop students from dropping out of school*. It is believed that a stronger connection to a teacher and personalised supervision can help prevent students from dropping out. Therefore, changes were made concerning the main teachers and contact teachers. Additionally, interdisciplinary teaching was tried out to make teaching more interesting and interlinked. The *Portfolio assessment* was introduced in order to help students collect their work efforts. Students collected their learning results and projects in a portfolio throughout the course or teaching unit and can then decided what they wanted to get graded. A third measure to better include students in school life was a higher degree of *individual differentiation*. The use of ICT was a special enabler in this regard.

4.3.2 The Organisation, School Administration and School Climate

At N♣, the school management team consists of six persons: the principal, assistant principal, HR manager, study leader, educational manager and administrative coordinator. The teachers have backgrounds in a great variety of disciplines and span an age range of over thirty years. The school serves five different study programmes and, hence, a diverse population of students. The school programme impresses a great variety of subjects upon students, and there are general courses that are shared amongst programmes. In some educational programmes, all students have all courses together; in others, students make individual selections.

The school has a social worker and a Student Work Environment Committee that deals with preventive measures against violence, bullying and drugs. In addition, together with the student council and other student groups, they are working on social and cultural initiatives for students and watching students' rights. These efforts encourage a good attitude and maintain a healthy community climate. Students are obliged to follow the school rules and ICT regulations.

The ICT integration was initiated by the school management. Not everyone on the teaching staff was enthusiastic about the project. At times, it was

difficult for teachers to identify themselves as responsible for the changes. Some struggled with the change in the teacher's role of giving control to the students and acting more as a consultant and less as a lecturer. Some found it difficult to use the ICT to the level and extent that was asked from them by the management. Also, not all teachers were naturally computer literate. Apart from disrupting teaching practice, technical difficulties regarding equipment and support posed additional challenges and caused small crises. This jeopardised the morale in the school community. Nevertheless, the principal remains unaffected from all the resulting difficulties and says *there is no way back*.

4.3.3 Awards

The school was awarded several distinctions by equipment suppliers, the national educational authorities and the Organisation for Economic Co-operation and Development (OECD) (Elstad, 2006). Because of its work on ICT, the school was awarded bonus funding in 2002–2003.

4.4 The Case D◇

D◇ is a gymnasium with approximately 1200 students and 75 teachers. The school is older than 130 years and serves a heterogenous representation of the city population of 225.000 in the federal state of North Rhine-Westphalia. Until 1972, it was a girl's school. However, presently, it is a mixed gymnasium with students coming from different social backgrounds. About 10–12 percent of the school's students have an immigration background or are foreign students. The school has classes from year five to year 13; this study only focuses on the last three years, which is called *Oberstufe*. The *Oberstufe* (year 11–13) has approximately 250 students.

There was a time in which the school was in a crisis with a demotivated and disoriented staff, a declining number of students and the prospect of being closed down. The employment of a new principal in 1986 brought change, and in the following fifteen years, the number of students increased by 50 percent. A new orientation and improved self-image was achieved mainly by the focus on two projects: Firstly, a new concept developed by the federal state was implemented, called "*Gestaltung des Schullebens und Öffnung von Schule*" (*GÖS*, see below). Secondly, the concept of practical learning was introduced based on the multiplicity of teaching methods.

4.4.1 The School Programme

In short, the objective of *GÖS* was to open up the school to its urban setting. New learning environments were defined within the school as well as in its neighbourhood, structural changes to the school building were executed, human resources were rearranged and various other initiatives were taken. A new mentality was cultivated within the school community so that teachers, students and parents could work together to form a learning system. One not only participates in teaching lessons but also stays at school after regular classes to join different project groups and workshops. *GÖS* also opened up the possibility for schools to define a specific identity by designing a school internal curriculum (adapting the core state curriculum to the geographical setting of the school). Hence, in 1994, a commission was established among members of the school community to develop their own school programme, which was subsequently adopted in 1997. A revised edition was published in the year 2001 and is valid until this day. This school programme (Vorndran and Schnoor, 2003; Mauthe and Rösner, 2000) refers to the following four key points:

- Media education (*Medienerziehung*),
- Ecology and health (*Ökologie und Gesundheit*),
- Cultural life and learning culture (*Kulturelles Leben und Lernkultur*) and
- Global learning/intercultural learning (*Globales Lernen/Interkulturelles Lernen*).

The school programme serves as a framework and the teachers work with ideas. There is no lack of creativity.

4.4.1.1 Media Education

In the mid-nineties, the wave of new media entered German schools. A few years prior to this, D◊ had already started using self-learning materials on independent information-search, information-processing and information-design, relating to a variety of media types from books to the Internet. Foto cameras were used as well as wall-newspapers, CD-ROMs and e-mails. All this established a good foundation for media literacy. The discussion about media competence and media literacy helped the school consider the practical consequences for its teaching with new media. The school's media education contributed to building the basic knowledge that would be important when new media became available. The integrated film work at D◊ in subjects, as well as in project groups and workshops, is also worth mentioning. The media analysis criticism were integral parts of teaching. From this activity, a separate subject in media was developed in 1995.

Even though there were many media activities going on at school, it is worth mentioning that, from the early nineties until 2001, the computer-aided work at D◇ was not more advanced than average. The technical equipment was not better than at other schools as the school did not have sufficient computers and used an additional room at the nearby Internet cafe. The school's strength in media was primarily in the very detailed understanding of media work. Later, the use of computers was progressively integrated into the existing media-based working structures. The school cooperated with external parties, such as the public library, various bookshops, an adult education centre, a media office and a radio studio in the town, the nearby Internet café, a senior citizen organisation where students were teaching on how to use computers, various local and national newspapers, the Bertelsmann Foundation and partner schools in the "*Netzwerk Medienschulen*" (media school network).

Since ICT is an important theme in my study, this key point is somewhat more detailed than the next three key points.

4.4.1.2 Ecology and Health

As a school being placed in a densely populated city centre, ecological thinking and acting became important. All members of the school community were challenged to establish a sustainable and liveable school. In this field, the school cooperated with the town's power supply department, gardening department, various public institutions, the local UN-backed Agenda 21-Group, the nearby health food store, farms and the regional forest commission as well as sports clubs.

4.4.1.3 The Cultural Life and Learning Culture

The term *cultural life and learning culture* embodies more than just cultural life, including theatre, art and music; the term also includes social as well as political activity. Therefore, the school cooperated with various museums and artists of the region, town theatre, youth music school, churches, social institutions, university, police and various partner schools.

4.4.1.4 Global Learning/Intercultural Learning

The student's reality at this school is characterised by both cultural and language variety. The school aims to promote intercultural living and foreign language learning and connect the two. Cooperation partners are the municipal integration centre, foreign partner schools, companies in England and national newspapers.

4.4.2 The Organisation, School Administration and School Climate

One of the core problems that was identified initially was poor communication. This problem was to be addressed by fostering a spirit of transparency and democracy. Responsibilities were transferred from individuals to working groups and committees consisting of staff, students and parents. Thus, the involvement of parents was not limited to baking cakes but included an active involvement in the students' learning process, taking part in making decisions and contributing with their individual resources. The committees communicated their progress to the rest of the community with the support of information boards, leaflets, school paper, showcases, etc.

At D◇, an evaluation procedure took shape — at first by chance and then systematically. Over the years, the concept of evaluation became an integral part of the school's development.

With this approach to the organisation of school life, the principal, who can be characterised as charismatic, authoritative yet inclusive, professional and knowledgeable, managed to engage and empower the members of the school community. The principal was strong in the planning, supervision and implementation of school development projects. An efficient organisation always serves a good school climate. In support of the extra obligations of the school staff, where everyone has an additional task outside of the classroom teaching, timetables were planned carefully to allocate time for secondary duties and team meetings.

4.4.3 Awards

In 1999, D◇ was awarded a prize (by the Bertelsmann Foundation) as being one of the twelve leading media schools in Germany. In 2000, D◇ was awarded the first prize in a competition regarding "Qualität schulischer Arbeit" (Quality of school work). Due to competitions, it is implied that D◇ is a school where one can find:

- general openness for innovation and school development,

- openness for parents and students requests and their cooperation,

- openness of the staff and being cooperative and

- its outcome of verities of teaching methods, not only focused on teachers methods, in which they strive to achieve self-responsibility of up-growing students to stimulate their individual early learning processes *D◇ (anonymized) school brochure* (2002, p. 8).

4.5 The Case D♤

D♤ is a gymnasium with approximately 800 students and 49 teachers. The more than 400-year-old school is located in a city with a population of around 33.000 in the federal state of North Rhine-Westphalia. The students reside in the city as well as in the surrounding country side. Most of them commute by bicycle, as illustrated by an impressive number of parked bicycles around the school. The school has classes from year five to year 13. The *Oberstufe* (year 11–13), the focus of this study, has approximately 200 students.

In the mid-nineties, the situation for the school was rather difficult. Closing down one of the two gymnasia was discussed in the region. D♤ did not have a clear educational profile to the outside, and within the school, various opinions existed on the course the school should take. With the appointment of a new principal and the construction of a new school building, two important prerequisites for a change came together. The new principal brought optimism and commitment to the team. The utilisation plan for the new building led to discussions about the possibilities of adopting new teaching concepts, which would also lead to a new educational focus.

Coincidentally, the federal state offered a two year course of continued education on the development of school programmes. An elected group of five teachers, in addition to the principal, took part in this programme in preparation of the development of a new school programme, which was started in 1999. In response to the unanimous request of colleagues, great emphasis was given to the empowerment of students, the use of more student-centred methods for teaching and learning and increased interdisciplinary teaching. Great potential was seen in new media.

4.5.1 The School Programme

The school programme of D♤ is based on both tradition and progress to develop a learning culture. It is meant to develop a learning culture that promotes cooperation and participation. Two core areas are seen as particularly important:

- The capability of students for independent learning and working (*EVA. Eigenverantwortliches Lernen und Arbeiten*) and

- Working with media (*Medienarbeit*).

Next to these two main focus areas, another notable identity trait is a focus on ecology throughout all aspects of the school. The development of the school programme was completed and implemented by the end of 2000.

4.5.1.1 Independent Learning and Working

The school has three objectives for teaching students to learn and work independently. The first objective is to meet the needs of all types of learners, the second objective is to train students in project-oriented learning and working methods and the third objective is to give the students personal and social competence and prepare them for life in the modern society. For this, the school chose to apply the educational methodology of Klippert (2008). There are different learning units for the different year levels — starting with *learning to learn* units in lower grades and complementing with units in *method training* and *team and communication* in higher grades. Klippert named his concept *the new house of learning*.

4.5.1.2 Working with Media

The media work was initiated from a small group of particularly motivated mediaenthusiasts together with the principal, and later, the control was given to a media-coordinator responsible for the overall organisation of working with media. The media-coordinator was supported by a teacher from the language department and a teacher from the natural sciences.

The focus is on imparting media literacy combined with teaching a critical and responsible media education. In practice, the emphasis of media work is in the subject of language teaching by means of various e-mail-projects and the extended use of language learning programmes. Further, impulses for interdisciplinary teaching and project based teaching also have their origin in language subjects.

Until the mid-nineties, there were only a few computers of older design in the school, placed in the computer science room. These were only used by teachers of computer science, mathematics and geography. Due to the planning of the new school building, more space for the work for the use of media was possible. Two new computer rooms were established, whereof, one room was dedicated to the social sciences. Right from the beginning, it was an important goal of the responsible media team to have a didactical and educational concept, integrating the use of media into the teaching. In 1996, the school started a cooperation with the nearby university regarding the use of hypertext in teaching. In different projects over a long term period, the target was to find out which influence the students' independent construction of hypertexts on the learning processes of students had. Later, participating students of the hypertext project started a very active after-school working club. In support of the school's trend of independent learning, the language laboratory room was changed into a third media room in 1997. After the school participated in an initiative about the role of new media in the local eco-

nomy in 1997, the goal for their participation in 1998 was to connect all 36 classrooms and 29 subject rooms by a cable network, and in 1999, an intranet was established, followed by joining the Netzwerk Medienschulen by the Bertelsmann Foundation at the end of 1999.

It was observed that the students' media competences were quite unevenly developed and concluded that this was due to a weakly systemised strategy regarding the offered courses. Two main actions were taken to improve the students' media competency. Firstly, better media qualified teachers were to take over the introduction courses to build a strong knowledge base and evoke positive expectations among students. Secondly, a much higher emphasis was given on the use of the school's intranet.

4.5.2 The Organisation, School Administration and School Climate

As mentioned before, there is a strong connection at D♄ between the lower and upper part of the secondary school. About every month (up to every two months), all the staff meets for a three hour conference to discuss technical issues, a focus theme and miscellaneous things regarding school life. Meetings within the subject committees takes place bi-annually.

The *Oberstufe*, my main focus area, has its own coordinator, and there are two student advisors in each grade level (*Jahrgangsstufe*). A monthly meeting between the coordinator, advisors and principal is held to discuss current affairs. Due to a number of longer sick leave periods in the school management during the last two years prior to my research, the school had trouble maintaining control of the organisation. Working tasks had to be reorganised and, in some cases, even be postponed. After the media-coordinator left school in favour of another job at the nearby university in the year 2000, the initiated focus on media diminished.

Every two weeks, a school flyer provides the parents and students with the latest news. There are parents' representatives in different school committees. Another way to include parents in school life is by holding information evenings at the school. There have also been parent pub meetings (*Stammtisch*) discussing the theme "New technology in our school."

The teaching staff can be divided into two main groups: One group of teachers has been employed for approximately 19–30 years at this school and the other group for approximately 3–6 years. Another five teachers with 20–29 years of experience had been working at this school for 3–7 years. Tensions between these groups can have had both positive and negative results. Positive influences of the younger group were new impulses, ideas and products. One negative observation I had at a staff meeting was that younger teachers could not take extra responsibilities. Some of the excuses, such as a busy family life

and a lack of time, knowledge or experience, were not well received with the elder teachers. Another observation I made was that there were many different projects going on at the school and few people had a full overview.

Collaboration between teachers is not encouraged due to insufficient working conditions. There is only one computer accessible to teachers in the teachers' library next to the staff room. Teachers have no personal desk to prepare for their teaching. Many teachers go straight home after their school lessons. Some groups of teachers gather for a chat or discussion in the staff kitchen in the morning and during their breaks at school.

4.5.3 Awards

In 1999, D�űvészet was awarded a prize (by the Bertelsmann Foundation) as being one of the twelve leading media schools in Germany.

4.6 Chapter Summary and Look Ahead

In this chapter, I have touched upon general differences between the Norwegian and German school systems, followed by a detailed description of each studied school. I have highlighted the school particularities, programmes and adaptions to change.

The next chapter contains the statistical analysis of the teachers' response to the questionnaire, followed by a brief summary of conducted interviews.

With the hope that this will be a stepping-stone to greater things.

CHAPTER 5
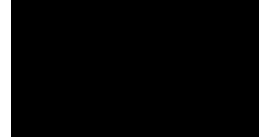
Data Analysis

In this chapter, I will present the findings of my research. As explained in Section 3.3 on research design (page 29), in the method chapter, the inquiry is designed in three stages: the analysis of written texts, the questionnaire and interviews. Each of these stages will be presented in its own section below.

5.1 The Written Texts

The basis for the analysis of the four schools in my project included a great variety of written material. In order to maintain anonymity of schools and subjects, I cannot report on these in detail. It has been very interesting and valuable to collect and study the curricula, year plans, secondary literature about the schools both in and outside the scientific realm, school brochures, school handbooks, minutes of various conferences and meetings, strategy reports, annual reports and school evaluations (done both internally and by the county).

5.2 The Questionnaires

The following sections cover the individual topics of the questionnaire, as laid out earlier in the Method Chapter on page 33.

5.2.1 Personal Information

To give a smooth entry into the questionnaire, the teachers were asked some personal data (questions one to six), as is usual in most questionnaires. In

addition to their gender and year of birth, the teachers were asked to give information about their employment ratio, how many years they worked as a teacher (both in general and at this specific school), as well as what subjects they teach. This to enable cross correlation with other data.

5.2.2 School

5.2.2.1 The Work Climate at School

Table 5.1 on the next page (question seven) gives an impression of how teachers rate their work climate at school. Respondents were given seven statements which they were requested to mark either as "correct," "partly correct" or "incorrect." The table shows the frequency of answers for each school case individually (N♡, N♧, D◇ and D♤) followed by the combination of all teachers at all four schools (All). The percentages to the right of each bar show the rate of valid answers against the missing values; a value of 100% means that the question was answered by all respondents. To get the total response rate for a particular question, the validity value can be multiplied with the corresponding response rate from Table 3.1 on page 33.

The first observation you can make from Table 5.1 is that there is a large variation among schools on the perception of work climate at school. There is one Norwegian and one German school each that display a more positive evaluation than the other two schools. The correlation between questions is clear across all schools and all countries. Schools respond in the same spirit to all questions.

The Norwegian school N♡ stands out in six out of seven aspects in this comparison. A remarkable 81% of teachers are proud to work at this school and are satisfied with elementary working conditions, and the remaining 19% are somewhat proud and partly satisfied. No one feels that they have insufficient influence on decisions or that there are too many restricting rules and regulations. Teachers seem to be very content with their principal; no one feels that the principal is uninspiring or lacks a good overview. The greater majority of teachers feel that their contributions are taken seriously.

Likewise, the German school D◇ shows very good results, although there is a small amount of teachers that answer opposite to the trend; there is a bit more variation. The satisfaction with the principal shows to be the highest among all the evaluated schools.

To the contrary, the principal of the Norwegian school N♧ scores the lowest marks regarding overview and giving inspiration. It is interesting to see that there is an echo in that teachers feel restricted by rules and regulations and their limited ability to influence decisions: a staggering 91% is not (or not completely) satisfied in this regard.

Lastly, the German school D♤ confirms our findings of N♣ — namely, the low marks regarding the principal in relation to the limitations of influence and rules and regulations.

Table 5.1: The Work climate at school.

Cases	correct	partly correct	incorrect	Valid

1. "I am proud to work at this school."

N♡	81%	19%	100%
N♣	36%	46%	18%	96%
D◇	56%	26%	19%	93%
D♤	32%	53%	15%	97%
All	**49%**	**38%**	**14%**	96%

2. "I can sufficiently influence decisions that affect me as a teacher."

N♡	62%	38%	100%
N♣	9%	61%	30%	100%
D◇	39%	50%	11%	97%
D♤	20%	54%	26%	100%
All	**31%**	**51%**	**18%**	99%

3. "There are too many rules and regulations at this school that restrict teachers."

N♡	29%	71%	100%
N♣	30%	52%	17%	100%
D◇	4%	29%	68%	97%
D♤	17%	49%	34%	100%
All	**13%**	**41%**	**47%**	99%

(continued on next page)

The Work climate at school (continued)

4. "I am satisfied with working conditions (tools and utilities, equipment, working space, surroundings, noise etc.)."

N♡	81%	19%	100%
N♧	44%	52%	4% 100%
D◇	29%	54%	18% 97%
D♧	20%	46%	34% 100%
All	**40%**	**44%**	**17%** 99%

5. "At meetings the school principal gives the impression of taking all contributions to discussions seriously."

N♡	67%	29%	5% 100%
N♧	39%	39%	22% 100%
D◇	68%	29%	4% 97%
D♧	14%	57%	29% 100%
All	**44%**	**40%**	**16%** 99%

6. "The school principal always has a good overview of what is going on at school."

N♡	52%	48%	100%
N♧	22%	57%	22% 100%
D◇	59%	30%	11% 93%
D♧	37%	34%	29% 100%
All	**43%**	**41%**	**17%** 98%

7. "The school principal knows how to inspire the teachers."

N♡	38.1%	61.9%	100%
N♧	13%	44%	44% 100%
D◇	37%	59%	4% 93%
D♧	17%	49%	34% 100%
All	**26%**	**53%**	**22%** 98%

5.2.2.2 Challenges

Table 5.2 (question eight) consits six different challenges that could make work as a teacher difficult at their school. Respondents were given six statements which they were requested to mark either as "correct," "partly correct" or "incorrect". The table shows the frequency of answers for each school case individually (N♡, N♣, D♢ and D♤), followed by the combinations of all teachers at all four schools (All). The value of 100% to the right of each bar shows that all six questions were answered by all respondents.

One can see that teachers from N♡ do not find it difficult at all to work at their school. They experience stable working conditions, little monitoring by their supervisors, leeway in the preparation and implementation of their teaching and think that there is no major change in students becoming more difficult during the last years, along with feeling well prepared to perform their tasks. This corresponds with my findings from Table 5.1, where this school stood out in its evaluation of working climate. Regarding the imposed work by authorities, N♡ also stands out as being less negative than the other three schools.

The fact that both N♡ and D♢ feel a little monitored meets my findings of these schools. My observations were that the principals of these schools find the right balance in leading and organising their school and there is a mutual trust between teachers and principal.

The fact that the teachers at N♣ are most positive about their students could possibly be due to students having been equipped with personal laptop computers, which can have a positive effect on their motivation.

Table 5.2: "Work as a teacher at this school is difficult because…"

Cases	correct	partly correct	incorrect	Valid

1. "… the working conditions for us teachers are in constant flux."

	correct	partly correct	incorrect	
N♡	24%	43%	33%	100%
N♣	43%	52%	4%	100%
D♢	34%	48%	17%	100%
D♤	46%	43%	11%	100%
All	**38%**	**46%**	**16%**	100%

(continued on next page)

Work as a teacher is difficult (continued)

2. "… more and more work is imposed on us by the authorities."

N♡	43%	57%	100%
N♧	87%	13%	100%
D♢	86%	10% 3%	100%
D♤	71%	29%	100%
All	**73%**	**26%** 1%	100%

3. "… supervisors monitor our work too much."

N♡	5%	19%	76%	100%
N♧	30%	22%	48%	100%
D♢	7%	10%	83%	100%
D♤	3%	43%	54%	100%
All	**10%**	**25%**	**65%**	100%

4. "… we have too little leeway in preparing and implementing our teaching."

N♡	5%	33%	62%	100%
N♧	17%	48%	35%	100%
D♢	7%	28%	66%	100%
D♤	14%	37%	49%	100%
All	**11%**	**36%**	**53%**	100%

5. "… pupils have become more «difficult» in recent years."

N♡	24%	62%	14%	100%
N♧	17%	26%	57%	100%
D♢	24%	52%	24%	100%
D♤	26%	57%	17%	100%
All	**23%**	**50%**	**27%**	100%

(continued on next page)

Work as a teacher is difficult (continued)

6. "... we must perform tasks for which we are not trained or for which we have insufficient experience."

N♡	5%	52%	43%	100%
N♣	13%	52%	35%	100%
D◇	31%	55%	14%	100%
D♤	14%	66%	20%	100%
All	**17%**	**57%**	**26%**	100%

5.2.2.3 The Importance and Performance Level Regarding Students

Table 5.3 on page 58 (question nine) shows, firstly, how teachers indicate eight statements about students and their behaviour on an importance scale from 1 (not important) to 5 (very important) and, secondly, how the teachers grade the same eight statements in terms of the performance levels at their school from 1 (low) to 5 (high). These questions have been asked earlier in a survey amongst principals about successful school leadership by Møller, Sivesind et al. (2006).

The teachers graded the following statements: The students ... *are competent in reading, writing and maths, ... score high in theoretical subjects, ... score high in practical subjects, ... are competent communicators verbally as well as in writing, ... are independent, ... are reflective, ... take responsibility for making the school a better place for learning, ... perceive the learning environment to be good (physically and mentally).*

The statements that come out as most important to teachers are that students *are competent in reading, writing and maths* and that students *perceive the learning environment to be good*, followed by *the facts that students are competent communicators verbally as well as in writing, students are independent* and *reflective*.

Most striking is that the performance level is graded considerably lower than the importance level in all eight statements consistently. This can be an indication that the teachers do not see their school as functioning optimally or that they are not satisfied with how their students perform. Since the statement that reached the highest performance level is that *students perceive the learning environment to be good,* their dissatisfaction is probably more with the students than with the school. Interestingly, the same observation can be made from the survey by Møller, Sivesind et al. (2006).

Both the importance and the performance levels regarding *students score high in practical subjects* is higher at the Norwegian schools than at the German schools. This can be explained by the international differences in school culture and the tasks that are assigned to the educational system — namely, that Norway puts a higher emphasis on both practical and social skills than Germany, see Section 4.1.

Scanning for numbers that stand out, one can mention statement seven, where teachers grade *students taking responsibility for making the school a better place for learning.* Overall, teachers at N♡ are rather pleased with the performance level; while some German teachers are more explicit in their appreciation, these are compensated by colleagues giving the lowest grade at the same school. Also, regarding the other statements, there is a slight tendency that German teachers answer more in extremes and with a higher variance than Norwegian teachers.

Table 5.3: The importance and performance level of statements regarding students

	Not important				Very important		Low level				High level	
Cases	1	2	3	4	5	Valid	1	2	3	4	5	Valid

1. "Students are competent in reading, writing and maths."

	Importance		My school's performance level	
N♡	9% 24% 67%	100%	5% 71% 24%	100%
N♧	21% 79%	92%	52% 44% 4%	88%
D◇	3% 9% 19% 69%	97%	7% 61% 32%	94%
D♧	3% 3% 18% 76%	97%	6% 61% 24% 9%	94%

2. "Students score high in theoretical subjects."

	Importance		My school's performance level	
N♡	10% 57% 33%	100%	62% 38%	100%
N♧	9% 52% 39%	88%	52% 48%	88%
D◇	3% 3% 13% 52% 29%	94%	3% 68% 29%	94%
D♧	3% 3% 58% 36%	94%	6% 46% 39% 9%	94%

(continued on next page)

The importance and performance level of statements regarding students (continued)

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3. "Students score high in practical subjects."

	Importance	My school's performance level
N♡	5% 5% 52% 38%	100%	67% 33%	100%
N♣	9% 65% 26%	88%	43% 57%	88%
D◇	3% 23% 45% 29%	94%	6% 7% 55% 32%	94%
D♠	6% 27% 49% 18%	94%	6% 12% 36% 43% 3%	94%

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4. "Students are competent communicators verbally as well as in writing."

	Importance	My school's performance level
N♡	10% 19% 71%	100%	55% 44%	95%
N♣	8% 28% 64%	96%	54% 38% 8%	92%
D◇	3% 13% 84%	94%	6% 42% 45% 7%	94%
D♠	3% 36% 61%	94%	3% 6% 43% 36% 12%	94%

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5. "Students are independent."

	Importance	My school's performance level
N♡	5% 24% 71%	100%	5% 47% 43% 5%	100%
N♣	4% 56% 40%	96%	8% 38% 46% 8%	92%
D◇	3% 10% 87%	94%	6% 19% 68% 7%	94%
D♠	33% 67%	94%	9% 40% 33% 18%	94%

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6. "Students are reflective."

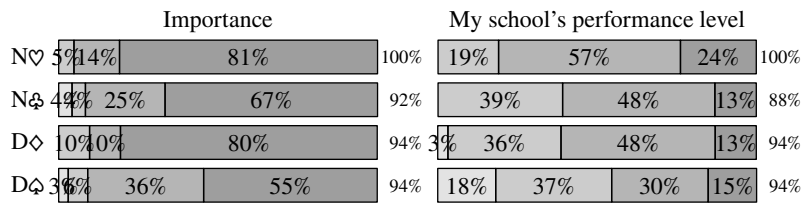|	Importance	My school's performance level
N♡	5% 24% 71%	100%	19% 38% 38% 5%	100%
N♣	4% 40% 56%	96%	4% 63% 29% 4%	92%
D◇	13% 19% 68%	94%	14% 53% 30% 3%	91%
D♠	3% 9% 33% 55%	94%	12% 57% 21% 9%	94%

(continued on next page)

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The importance and performance level of statements regarding students (continued)

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7. "Students take responsibility for making the school a better place for learning."

	Importance				My school's performance level			
N♡	10%	38%	52%	100%	67%	28%	5%	100%
N♣	24%	36%	40%	96%	33%	42%	25%	92%
D◇	7%	26%	67%	91%	3% 19%	39%	36%	3% 94%
D♤	6% 9%	33%	52%	94%	6% 24%	40%	21%	9% 94%

8. "Students perceive the learning environment to be good (physically and mentally)."

	Importance				My school's performance level			
N♡	5% 14%	81%		100%	19%	57%	24%	100%
N♣	4% 4% 25%	67%		92%	39%	48%	13%	88%
D◇	10% 10%	80%		94%	3% 36%	48%	13%	94%
D♤	3% 6% 36%	55%		94%	18%	37%	30%	15% 94%

5.2.2.4 Collaboration Amongst Teachers

Table 5.4 on the next page (questions ten and eleven) shows how teachers collaborate at school to coordinate the teaching content regarding subject curricula, evaluation criteria, tests, teaching material and teaching methods both within and across subjects.

The main picture shows that there is a much higher coordination within subjects than across subjects. Within subjects, the highest collaboration rate occurs in the coordination of subject curricula and the lowest in the coordination of teaching methods. Across subjects, however, collaboration regarding teaching methods scores highest. The Norwegian schools report much more coordination than the German schools within subjects, except regarding subject curricula, where all four schools show similar answers (63% say there is collaboration, 23% say partly).

Regarding coordination across subjects, the German teachers report slightly higher collaboration than the Norwegian teachers. Another observation we can make is that the answers from N♣ show little variation in the different kinds of coordination compared to the answers from the other schools.

Table 5.4: Do teachers collaborate at school to coordinate the teaching content regarding. . .

Cases	yes	partly	no	Valid

1. ". . . subject curricula."

	within subjects				across subjects			
N♡	62%	24%	14%	100%	5%	47%	47%	90%
N♣	61%	35%	4%	100%		39%	61%	100%
D◇	61%	39%		97%	4%	82%	15%	93%
D♤	68%	29%	3%	97%	11%	60%	29%	100%
All	**63%**	**32%**	**5%**	98%	**6%**	**59%**	**36%**	96%

2. ". . . evaluation criteria."

	within subjects				across subjects			
N♡	91%		10%	100%	20%	25%	55%	95%
N♣	57%	35%	9%	100%	9%	39%	52%	100%
D◇	14%	82%	4%	97%		56%	44%	93%
D♤	38%	47%	15%	97%		63%	37%	100%
All	**46%**	**46%**	**8%**	98%	**6%**	**49%**	**46%**	97%

3. ". . . tests."

	within subjects				across subjects			
N♡	71%		29%	100%	10%	57%	33%	100%
N♣	57%	39%	4%	100%	17%	39%	44%	100%
D◇	25%	64%	11%	97%		44%	56%	93%
D♤	38%	53%	9%	97%	6%	37%	57%	100%
All	**45%**	**48%**	**7%**	98%	**8%**	**43%**	**49%**	98%

(continued on next page)

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Do teachers collaborate (continued)

4. "… teaching material."

	within subjects				across subjects			
N♡	43%	57%		100%	40%	60%		95%
N♣	65%	30%	4%	100%	4% 39%	57%		100%
D◇	25%	71%	4%	97%	7%	78%	15%	93%
D♧	41%	56%	3%	97%	11%	57%	31%	100%
All	**43%**	**55%**	**3%**	98%	**7%**	**55%**	**38%**	97%

5. "… teaching methods."

	within subjects				across subjects			
N♡	38%	62%		100%	10%	60%	30%	95%
N♣	52%	44%	4%	100%	4%	44%	52%	100%
D◇	11%	75%	14%	97%	11%	74%	15%	93%
D♧	30%	56%	15%	97%	40%	49%	11%	100%
All	**31%**	**59%**	**9%**	98%	**19%**	**56%**	**25%**	97%

5.2.2.5 Collaboration Amongst Colleagues

In Table 5.5 on the facing page (question twelve), eleven statements were given to be marked as either "correct" or "incorrect." The first four are about factual personal collaboration, the next five are about the rate of collaboration at school (in general) and the final two are about the readiness for change.

The vast majority of teachers report to have often exchanged teaching plans or teaching material with colleagues during the last three months. In this period, around half of the Norwegian teachers and close to a third of the German teachers had actually taught at least once together with a colleague. During the last six months, 75% of the Norwegian teachers and 50% of the German teachers at least once prepared a lesson together with a colleague. Although 14 out of the 108 teachers state to have often observed a colleague teaching during the last six months, it is not common to observe colleagues.

When looking at the results of the general collaboration rate in schools, N♡ is once more outstanding in showing good collaboration, a common understanding of the school's tasks and very little conflicts among teachers. Further, N♡ unanimously says that their school has a clear pedagogical platform, and 85% of the teachers stand united behind it. N♣ and D♧ show the lowest

rates when it comes to their school having a clear pedagogical platform (44% and 56%).

There is a rather high readiness for change. Altogether, 91% of the teachers state that the staff is prepared for change (the Norwegian schools slightly more than the German schools), and 88% are of the opinion that new ideas are quickly taken up at their school (the German schools slightly more than the Norwegian schools).
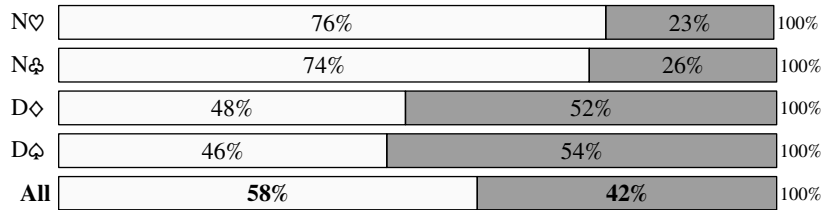
Table 5.5: Collaboration amongst colleagues

Cases	correct	incorrect	Valid

1. "During the last 3 months, I have taught at least once together with a colleague."

	correct	incorrect	Valid
N♡	52%	48%	100%
N♣	44%	57%	100%
D♢	28%	72%	100%
D♤	26%	74%	100%
All	**35%**	**65%**	100%

2. "During the last 3 months, I have often exchanged teaching plans or teaching material with colleagues."

	correct	incorrect	Valid
N♡	76%	24%	100%
N♣	96%	5%	96%
D♢	69%	31%	100%
D♤	80%	20%	100%
All	**79%**	**21%**	99%

3. "During the last 6 months, I have often observed a colleague's teaching."

	correct	incorrect	Valid
N♡	29%	71%	100%
N♣	13%	87%	100%
D♢	14%	86%	100%
D♤	3%	97%	100%
All	**13%**	**87%**	100%

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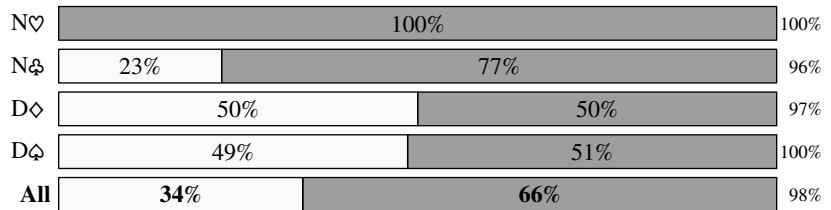
Collaboration amongst colleagues (continued)

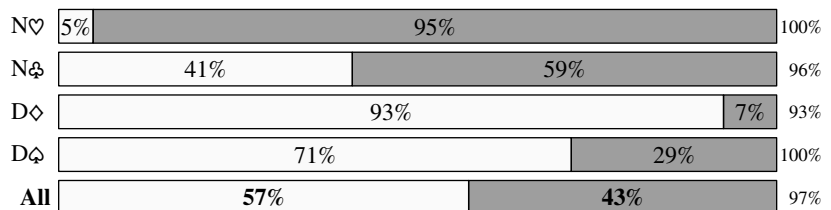4. "During the last 6 months, I have at least once prepared a lesson together with a colleague."

N♡	76%	23%	100%
N♧	74%	26%	100%
D◇	48%	52%	100%
D♤	46%	54%	100%
All	**58%**	**42%**	100%

5. "There is little collaboration amongst teachers at school."

N♡	100%		100%
N♧	23%	77%	96%
D◇	50%	50%	97%
D♤	49%	51%	100%
All	**34%**	**66%**	98%

6. "The teachers share a common understanding of this school's tasks."

N♡	85%	15%	95%
N♧	57%	44%	100%
D◇	67%	33%	90%
D♤	44%	56%	97%
All	**61%**	**39%**	96%

7. "There are some conflicts among teachers at this school."

N♡	5%	95%	100%
N♧	41%	59%	96%
D◇	93%	7%	93%
D♤	71%	29%	100%
All	**57%**	**43%**	97%

Collaboration amongst colleagues (continued)

8. "The school has a clear pedagogical platform."

N♡	100%	100%
N♧	44% / 57%	100%
D♢	93% / 7%	97%
D♤	56% / 44%	97%
All	**72%** / **28%**	98%
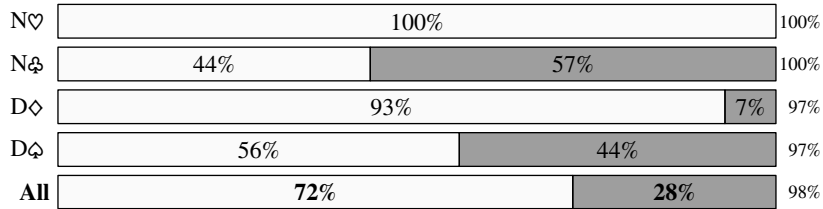
9. "The teachers of this school stand united behind the school's pedagogical platform."

N♡	85% / 15%	95%
N♧	30% / 70%	100%
D♢	44% / 56%	93%
D♤	21% / 79%	94%
All	**42%** / **58%**	95%
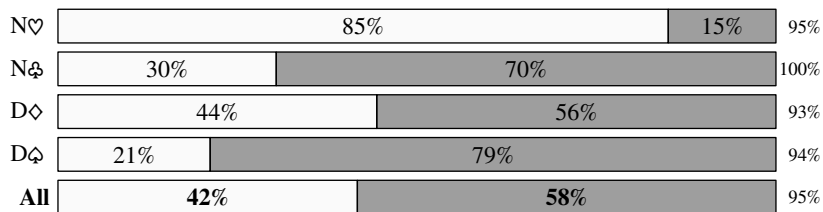
10. "The teachers at this school are little prepared for change."

N♡	5% / 95%	95%
N♧	4% / 96%	100%
D♢	11% / 89%	97%
D♤	12% / 88%	94%
All	**9%** / **91%**	96%
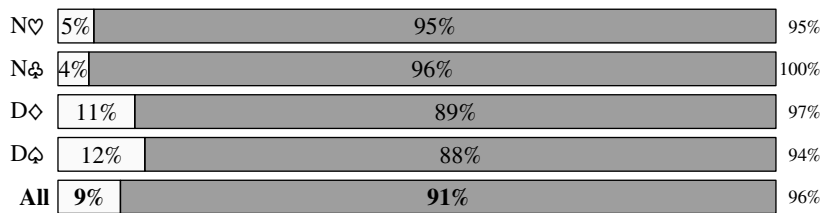
11. "New ideas are quickly taken up at this school."

N♡	85% / 15%	95%
N♧	78% / 22%	100%
D♢	90% / 10%	100%
D♤	94% / 6%	97%
All	**88%** / **12%**	98%
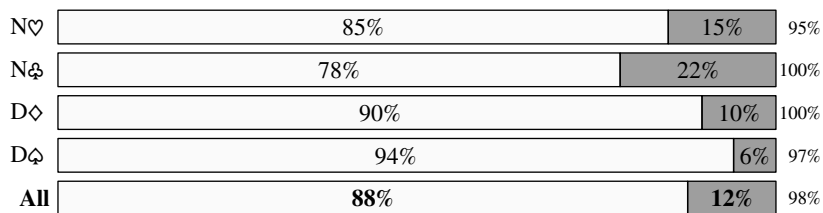
5.2.2.6 Learning Culture

Both Berg (1999) and Fend (1988) point out that school culture forms an important foundation for the quality of individual schools and that school culture is seen as one of the key factors regarding school development. Action-theoretical perspectives suggest that there may be educational goals that can only be achieved through cooperation within and a common orientation of the teaching team. The factors that are important in school culture have been presented in the discussion of *relations* in the school as an organisation on page 19 after Dalin (1998).

During my school visits, I was able to form a first impression of the school culture and interpersonal relations within the teaching staff by attending teacher conferences and having conversations with teachers and principals. To get a better impression about each school's learning culture, in question thirteen, the teachers were asked to grade the applicability of fifteen statements listed in Table 5.6 on page 67. These questions have also previously been used in the research by Møller, Sivesind et al. (2006). The responses to question thirteen confirm both my personal encounters and impressions as well as the policy of principals that I met at at the individual schools. Overall, one can see a tendency of positive attitudes regarding the school culture. Subquestion four shows that teachers report rather high expectations of their work effort. This can either be a sign of pride of being a part of the school or an indication that the experienced working pressure may be too high. This result is even more explicit at German schools than at Norwegian schools. In subquestions eleven and twelve, teachers indicate that their school obtains good results and enjoys a good reputation amongst students and parents, so even though the workload is high, they seem to achieve their goals.

At a closer perusal of the responses to subquestions eight and nine of the questionnaire, I noticed that mostly older teachers with more than twenty years of experience indicate that appropriate training opportunities are not given. At the same time, these teachers do not think that continued education is relevant in the relation to the needs of their school. It could be that these teachers see no need for changes in the last years of their working life or that they want to stay in their usual routine. The use of advanced technology is possibly viewed more as a burden than a benefit. Note that the results are lowest for the school N♣, which is the only one where students were given a personal laptop.

Table 5.6: Question 13: The grade of applicability of statements about the school's learning culture.

Cases	Low grade				High grade	Valid
	1	2	3	4	5	

1. "The school is characterised by relations of trust."

	1	2	3	4	5	Valid
N♡		29%	52%		19%	100%
N♣	8%	25%	33%	21%	13%	92%
D♢	10%	6%	28%	50%		6%	97%
D♤	3%	23%	57%	14%	3%	100%

2. "The school has a good climate for professional collaboration."

	1	2	3	4	5	Valid
N♡		19%	52%		29%	100%
N♣	4%	40%	36%	20%		96%
D♢	3%	3%	25%	56%	13%	97%
D♤	11%	32%	46%	11%		100%

3. "We agree on the direction for school development."

	1	2	3	4	5	Valid
N♡		14%	67%		19%	100%
N♣	4%	21%	50%	21%	4%	96%
D♢	9%	6%	35%	44%	6%	97%
D♤	3%	28%	40%	26%	3%	100%

4. "There are high expectations of the work effort of the staff."

	1	2	3	4	5	Valid
N♡	5%		57%	38%		100%
N♣	4%	8%	48%	40%		100%
D♢	3%	25%	71%			94%
D♤	8%	29%	63%			100%

(continued on next page)

The grade of applicability of statements about the school's learning culture (continued).

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5. "We have a school culture that leaves room for trial and error."

N♡	19%	38%	43%	100%
N♣	4%	12%	28%	32%	24%	100%
D◇	3% 3%	23%	34%	37%	91%
D♠	18%	35%	38%	9%	97%

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6. "We have a culture that supports new initiatives."

N♡	15%	40%	45%	95%
N♣	12%	36%	36%	16%	96%
D◇	3% 3%	32%	62%	94%
D♠	3% 5%	20%	46%	26%	100%

---

7. "There are many teachers that exercise leadership/take leading initiatives at our school."

N♡	24%	57%	19%	100%
N♣	4%	16%	52%	28%	96%
D◇	3%	32%	52%	13%	94%
D♠	3%	11%	40%	40%	6%	100%

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8. "The staff has good opportunities for continued education."

N♡	5%	19%	33%	19%	24%	100%
N♣	17%	42%	25%	16%	92%
D◇	7%	19%	29%	19%	26%	94%
D♠	11%	14%	29%	37%	9%	100%

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9. "Continued education is relevant in relation to the needs of the school."

N♡	9%	38%	29%	24%	100%
N♣	13%	22%	22%	26%	17%	89%
D◇	10%	13%	47%	30%	91%
D♠	6%	17%	26%	31%	20%	100%

(continued on next page)

The grade of applicability of statements about the school's learning culture (continued).

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10. "The school actively shares information with parents and the local community."

N♡	10% · 33% · 43% · 14%	100%
N♣	28% · 44% · 16% · 12%	96%
D♢	3% · 10% · 32% · 55%	91%
D♠	6% · 26% · 48% · 20%	100%

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11. "We achieve good results in light of to the school's operational conditions."

N♡	9% · 62% · 29%	100%
N♣	12% · 28% · 52% · 8%	96%
D♢	10% · 29% · 39% · 22%	94%
D♠	3% · 42% · 46% · 9%	95%

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12. "The school has a good reputation among students and parents."

N♡	5% · 57% · 38%	100%
N♣	21% · 67% · 12%	92%
D♢	3% · 7% · 61% · 29%	94%
D♠	3% · 3% · 40% · 40% · 14%	100%

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13. "At school, we often reflect critically on ideas, problems and school politics and evaluate these."

N♡	5% · 10% · 45% · 35% · 5%	95%
N♣	30% · 39% · 22% · 9%	88%
D♢	7% · 3% · 19% · 42% · 29%	94%
D♠	6% · 31% · 40% · 23%	100%

(continued on next page)

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The grade of applicability of statements about the school's learning culture (continued).

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14. "The school is in good dialogue with representatives of the local labour market."

N♡	5% / 45% / 45% / 5%	95%
N♧	22% / 31% / 39% / 4% / 4%	88%
D◇	3% / 10% / 35% / 31% / 21%	88%
D♧	6% / 33% / 29% / 29% / 3%	97%

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15. "The school actively collaborates with local volunteer organisations."

N♡	5% / 24% / 57% / 14%	100%
N♧	27% / 55% / 9% / 9%	85%
D◇	3% / 20% / 50% / 27%	91%
D♧	6% / 28% / 46% / 20%	100%

5.2.2.7 Does the Following Exist at Your School?

In Table 5.7 on the facing page (question fourteen), the participants were asked to indicate whether there is a practice of documenting knowledge and experience by marking seven statements as either "does exist" or "does not exist." If existing, two additional questions were asked (question fifteen) about the use of this documentation; see Table 5.8 on page 73.

Half of the teachers say that there is a practice that colleagues who have taken supplementary courses communicate their experience to colleagues at their school. When it comes to the existence of a year plan for supplementary education and whether an overview of colleagues and their supplementary education exists, the answers are not unanimous, which shows that, if it exists, it is not known to all (except N♧ regarding the year plan where all report non-existence). In German schools, it is a common school practice to have working groups that deal with specific issues at school, while only half of the Norwegian respondents state that these exist at their school. The explanation for this is that, in Norwegian schools, many decisions are made by the school's management. Positions like inspectors (persons who are part of the school management and support teaching and learning) are not common at German schools. An interesting fact is that all German teachers and almost all Norwegian teachers report that meetings are protocolled with minutes. How-

ever, when I actually asked to see meeting minutes at the schools, it was not easy, if at all possible, to find them. A documentation in the form of writing project reports is said to be more usual in the German schools; not even half of the Norwegians state its existence.

In summary, one can say about the practice of the documentation shown in Table 5.7 that even if there is documentation in various fields, only 59% of the colleagues share the information and only 40% of the teachers find it easy to retrieve documentation.

Table 5.7: Question 14: Does the following exist at your school?

Cases	does exist	does not exist	Valid

1. "A year plan for supplementary education of teachers."

	does exist	does not exist	Valid
N♡	42%	58%	90%
N♣		100%	96%
D◇	19%	82%	93%
D♠	21%	79%	97%
All	**20%**	**80%**	94%

2. "An overview of which colleagues have had which supplementary education."

	does exist	does not exist	Valid
N♡	42%	58%	90%
N♣	9%	91%	97%
D◇	64%	35%	90%
D♠	6%	94%	97%
All	**29%**	**71%**	94%

3. "The practice that teachers who have taken supplementary courses communicate their experiences to colleagues."

	does exist	does not exist	Valid
N♡	65%	35%	95%
N♣	41%	59%	96%
D◇	52%	48%	93%
D♠	41%	59%	97%
All	**49%**	**52%**	95%

Does the following exist (continued)

4. "Working groups dealing with specific issues at school."

N♡	50% / 50%	95%
N♧	59% / 41%	96%
D◇	100%	93%
D♤	94% / 6%	97%
All	**80% / 20%**	95%

5. "The keeping of minutes of meetings."

N♡	76% / 24%	100%
N♧	96% / 5%	96%
D◇	100%	93%
D♤	100%	100%
All	**94% / 6%**	97%

6. "The writing of project reports."

N♡	58% / 42%	90%
N♧	38% / 62%	91%
D◇	76% / 24%	86%
D♤	83% / 17%	100%
All	**67% / 33%**	93%
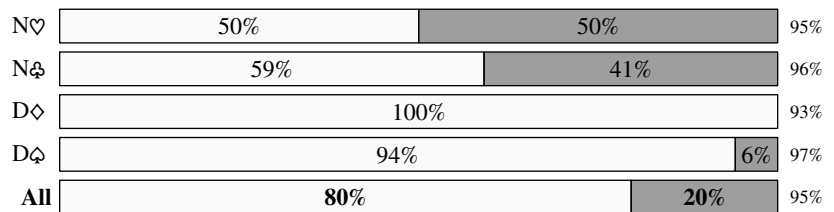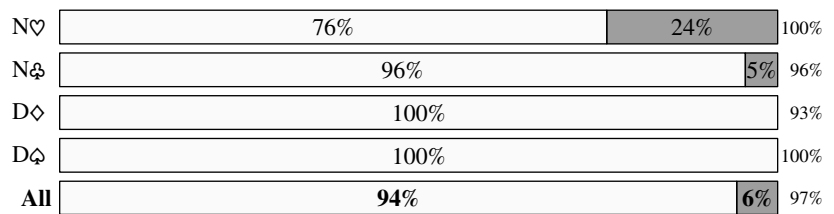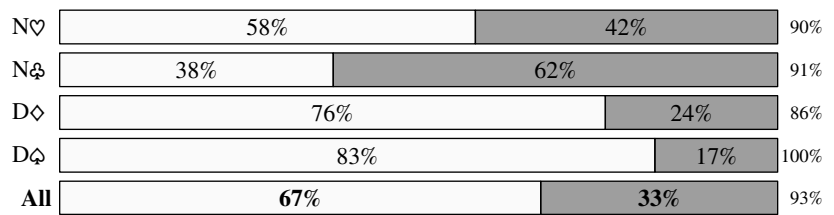
7. "Logging of events (parent-teacher conferences, student-teacher conferences)."

N♡	91% / 10%	100%
N♧	77% / 23%	97%
D◇	92% / 8%	90%
D♤	77% / 24%	97%
All	**84% / 17%**	95%
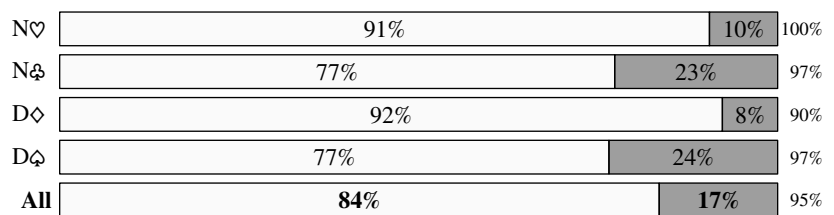
Table 5.8: Question 15: If procedures exist for the documentation of knowledge and experiences

Cases	yes	no	Valid

1. "Do colleagues share this documentation?"

	yes	no	Valid
N♡	70%	30%	95%
N♧	53%	47%	83%
D♢	57%	44%	79%
D♤	59%	41%	83%
All	**59%**	**41%**	84%

2. "Is it easy to retrieve this documentation?"

	yes	no	Valid
N♡	32%	68%	90%
N♧	32%	68%	83%
D♢	44%	57%	79%
D♤	48%	52%	83%
All	**40%**	**60%**	83%

5.2.3 Students and Parents

Question sixteen consists of nine statements listed in Table 5.9 on page 74, where teachers were asked to indicate whether they agree fully, agree partly, disagree partly or disagree fully. Seven statements are about teacher-students relations, and two are about parent-school relations.

The first statement shows that the student-teacher relationship is considerably more friendly in the two Norwegian schools than in the two German schools. Still, from the answers to statement two, the Norwegian teachers seem to be less interested in the opinion of their students than the German teachers. Also, the friendly tone at Norwegian schools does not mean that teachers also try to get to know their students personally more than at German schools; see statement seven.

Regarding parents participating in school life and assisting in extracurricular activities, there is a distinct difference between the Norwegian and German schools: The German schools report a much higher involvement of parents than the Norwegian schools. We should note that this finding could be somewhat distorted because the German teachers teach at gymnasia and the

Norwegian at secondary schools. Gymnasia have students between years five and 13 and the secondary schools between 10 and 12. The German teachers may subconsciously have included the involvement of parents in lower classes, but this could also mean that the parents stay more active throughout their children's progress in the same school.

Table 5.9: Question 16: What do you think about the following statements about the relation between students, teachers and parents?

Cases	Agree fully	Agree partly	Disagree partly	Disagree fully	Valid

1. "Generally speaking, teachers and students have a friendly relationship with each other."

N♡	91%	9%	100%
N♧	92%	8%	96%
D◇	63%	34%	3%	97%
D♤	57%	43%	100%

2. "Most teachers are not interested in the opinions of students."

N♡	5%	14%	81%	100%
N♧	12%	28%	60%	96%
D◇	6%	39%	29%	26%	94%
D♤	6%	33%	21%	40%	94%

3. "My colleagues encourage the students often to express their own ideas and not be afraid to say something wrong."

N♡	43%	48%	9%	100%
N♧	40%	56%	4%	96%
D◇	54%	33%	10%	3%	91%
D♤	46%	54%	100%

(continued on next page)

What do you think about the following statements about the relation between students, teachers and parents? (continued)

4. "The teachers strive to treat all students equally."

N♡	65%	25%	5% 5%	95%
N♣	56%	40%	4%	96%
D◇	58%	39%	3%	94%
D♠	56%	44%		97%

5. "Problems of individual students are taken very seriously at our school."

N♡	76%	24%		100%
N♣	64%	28%	8%	96%
D◇	68%	29%	3%	94%
D♠	57%	40%	3%	100%

6. "Most teachers make an effort to enable even the weakest students to follow the lessons."

N♡	57%	43%		100%
N♣	62%	38%		100%
D◇	39%	55%	6%	94%
D♠	43%	51%	6%	100%

7. "Many of our teachers try to get to know the students personally."

N♡	19%	43%	38%	100%
N♣	15%	50%	27%	8%	100%
D◇	26%	45%	29%	94%
D♠	21%	56%	23%	97%

(continued on next page)

What do you think about the following statements about the relation between students, teachers and parents? (continued)

8. "Parents actively participate in school life."

N♡	19% · 43% · 38%	100%
N♣	8% · 48% · 44%	96%
D◇	36% · 48% · 13% · 3%	94%
D♤	32% · 57% · 11%	100%

9. "Parents assist in extracurricular activities."

N♡	9% · 48% · 43%	100%
N♣	42% · 58%	92%
D◇	39% · 51% · 10%	94%
D♤	31% · 57% · 6% · 6%	100%

5.2.4 The Work of the Teacher

5.2.4.1 The Usage of Time

In question 17 of the questionnaire, respondents were asked to estimate the number of hours they spend each week on various tasks. The resulting data was converted into relative values in order to eliminate the difference between full-time and part-time jobs and to reduce the effect of estimation errors. In this conversion, missing values were interpreted as 0. The resulting numbers are represented graphically in the histograms of Figure 5.1 on page 78, which visualise the frequency distribution per country. Question 17 was answered by all Norwegian respondents and all but four German respondents, giving validity rates of 100% and 94%, respectively. The blank replies have been removed from the data set prior to the generation of the histograms so that the frequency differences between the two countries can be better compared. I have chosen to combine the responses of schools according to nationality in order to get larger populations and a higher statistical significance, while still to be able to detect international differences.

The histograms are read as follows: From Figure 5.1a on page 78, we read that most Norwegian respondents (just over 18% of them) estimate to use between 40% and 42% of their time on lecturing. There is, however, a large spread: the smallest estimate is at least 14%, and the largest Norwegian

estimate is at most 62%. In comparison, the histogram representing the German response appears to be slightly offset to the right: Its top is between 42% and 44% (also representing about 18% of the cases), and its extreme estimates are at least 22% and at most 74%. This observation is confirmed by the statistical mean value, represented by μ in the legend, by which we can conclude that — in general — German teachers estimate to use about 6% more of their time on lecturing than do their Norwegian colleagues. The value σ represents the standard deviation, which is a measure of the spread in the response. The histograms shows that Norwegian teachers use an average of 36% of their time for lecturing, while German teachers use an average of 42%. The standard deviation is, with 9% (Norwegian) and 10% (German), the highest in all tasks.

Questions two and three look at preparation and follow-up time at school and at home, respectively. Adding the means for these values reveals that both countries use an almost equal amount of time for these duties: 40% (Norwegian) and 39% (German). We note that Norwegians use slightly more time for preparation than lecturing, while for German teachers, it is the other way around.

Another important observation is that Norwegian teachers prepare about as much at school as they do at home. The German teachers, on the contrary, work considerably more at home than at school. Most German teachers use less than 10% of their time for preparation at school and the rest is done at home with a mean of 31%. There are two main reasons for this difference. Firstly, the school culture in Norway is that the teachers are obliged to be at their workplace for a certain number of working hours, while in Germany, it is common to have a private office at home (tax reduction is possible for this). Secondly, and consequently, working facilities at schools differ a lot between these countries. In Norwegian schools, every teacher has his or her own little workspace, usually together with other teachers from the same grade level. In German schools, there are hardly any suitable working spaces to be found, apart from the teacher desk in the classroom.

Teachers were asked to estimate time usage in seven additional categories, but the amounts of time used for these are so small and the differences are so little that one should be careful to draw any significant conclusions from these. The categories were: student supervision, facilitation of student activities, contact with parents, supplementary training, meetings and planning at school level, collaboration with other teachers and collaboration with companies and external organisations.

(a) Lecturing.

(b) Contact with parents.

(c) Preparation and follow-up work at school.

(d) Supplementary training

(e) Preparation and follow-up work at home.

(f) Meetings and planning at school level.

(g) Student supervision.

(h) Collaboration with other teachers.

(i) Facilitation of student activities.

(j) Collaboration with companies and external organisations.
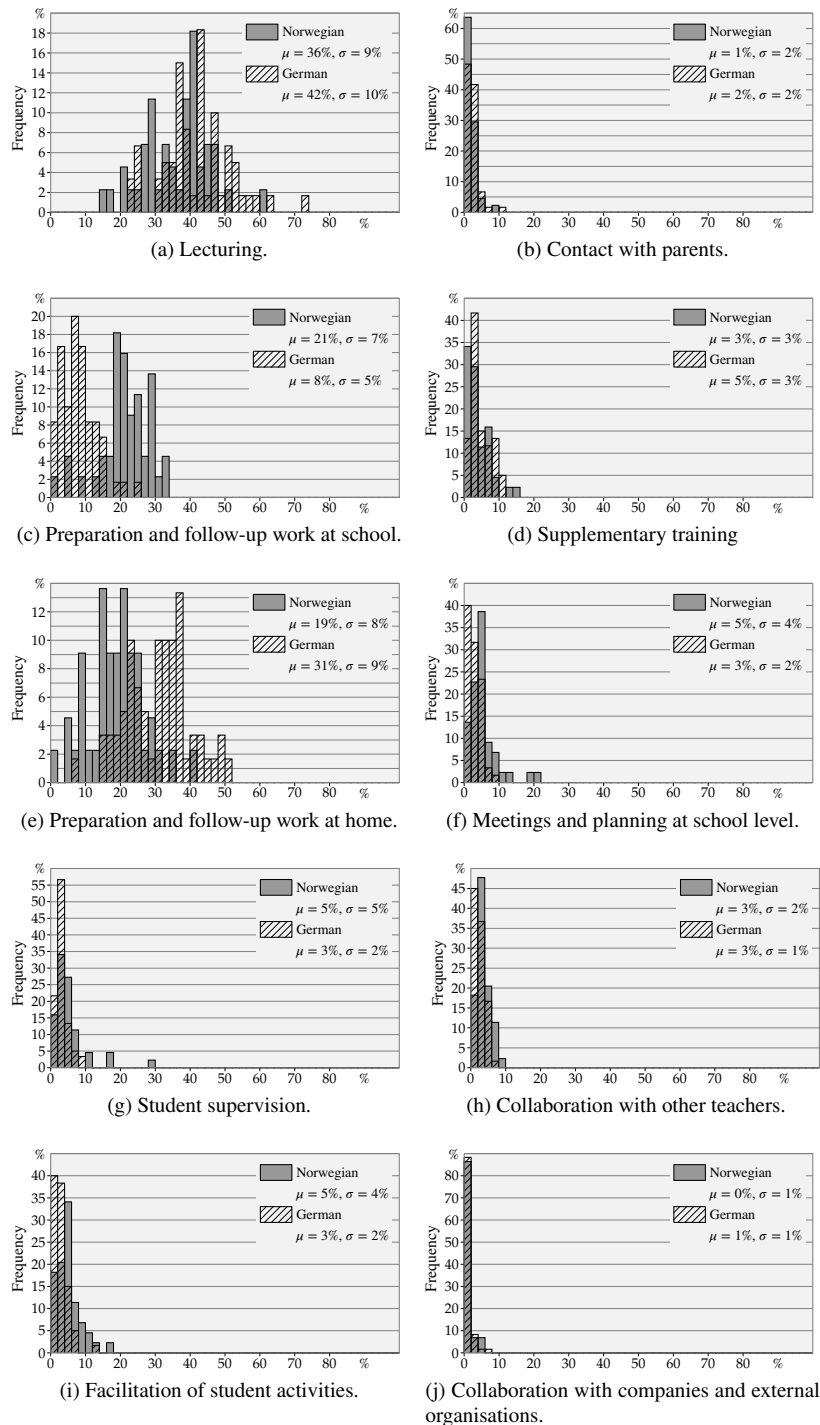
Figure 5.1: How teachers allocate time for various tasks, organised by nationality. The mean value is denoted by μ and the standard deviation by σ.

5.2.4.2 The Criteria for Teaching Preparation

In question 18 (see Table 5.10 on page 79), the teachers were asked to rank which of the following criteria are most important to them in preparing their teaching: *subject curriculum*, *assessment criteria*, *exams/tests*, *teaching materials* and *teaching methods*.

Table 5.10: The criteria ranking for teaching preparation.

Cases	Most important		Ranking		Least important	Valid
	1	2	3	4	5	

1. "Subject curriculum."

N♡	48%	9%	24%	19%	100%
N♣	42%	12%	19%	4%	23%	100%
D◇	65%	29%	3% 3%	94%
D♤	64%	10%	23%	3%	89%
All	**56%**	**16%**	**12%**	**7%**	**9%**	95%

2. "Assessment criteria."

N♡	5%	33%	19%	29%	14%	100%
N♣	4%	23%	31%	23%	19%	100%
D◇	10%	6%	36%	48%	94%
D♤	3% 7%	19%	45%	26%	89%
All	**3%**	**17%**	**18%**	**34%**	**28%**	95%

3. "Exams/tests."

N♡	14%	19%	24%	19%	24%	100%
N♣	8%	19%	15%	31%	27%	100%
D◇	10%	13%	10%	35%	32%	94%
D♤	3%	19%	16%	23%	39%	89%
All	**8%**	**17%**	**16%**	**28%**	**31%**	95%

The criteria ranking for teaching preparation. (continued)

4. "Teaching materials."

N♡	9%	9%	24%	29%	29%	100%
N♣	4%	23%	19%	31%	23%	100%
D♢	23%	29%	39%	6%	3%	94%
D♤	26%	32%	26%	10%	6%	89%
All	**16%**	**25%**	**27%**	**17%**	**14%**	95%

5. "Teaching methods."

N♡	9%	19%	29%	19%	24%	100%
N♣	31%	15%	19%	16%	19%	100%
D♢	3%	26%	45%	19%	7%	94%
D♤	13%	35%	23%	16%	13%	89%
All	**14%**	**25%**	**29%**	**17%**	**15%**	95%

The criterium that was ranked highest most often is subject curriculum, namely for 64,5% of teachers of both German schools and respectively 47,6% (N♡) and 42,3% (N♣) of the Norwegian teachers. The assessment criterium is seen as least important. Teaching material is slightly more important than teaching methods in both countries, but there is not much that differentiates the criteria of exams/tests, teaching materials and teaching methods.

There are two things that stand out when looking for differences between nationalities: For the preparation of teaching, the *subject curriculum* and *teaching materials* receive considerably higher ranking in Germany than in Norway; in Norway, the answers are more balanced among the five criteria.

5.2.4.3 Who Should Determine How the Students are Educated in School in the Future?

In question 19, the teachers were asked who, in their opinion, should primarily determine how students are educated in school in the future: *family*, *school* or *authorities/society*. The teachers had to decide on one single answer. The most important observation (see Table 5.11 on page 81), is probably that there is no clear trend among schools or nations. All three alternatives scored highest in at least one school. There were teachers in every school that thought that *family* should decide; in one German school, this was the opinion of most

Table 5.11: Question 19: Who primarily should (in your opinion) decide how students are educated in the future?

Cases	Family	School	Authorities/Society	Valid
N♡	22%	33%	45%	86%
N♧	12%	67%	21%	92%
D◇	14%	55%	41%	88%
D♤	38%	34%	28%	91%

teachers (37,5%). *School* scored highest at one Norwegian school (66,7%) and one German school (55,2%) and also in the combined ratio of all teachers (47,6%). A considerable number of teachers in every school selected *authorities/society* as the answer, and it won by a small margin in one Norwegian school.

5.2.5 Accountability and Curriculum

5.2.5.1 What are You Held Accountable for in Your Teaching Position?

Table 5.12 on page 82 shows how teachers grade their accountability in eight categories using five grades ranging from 1 (agree fully) to 5 (disagree fully). First of all, there are no great differences between schools or nationalities. There is a rather high variety in answers: In most questions, some teachers agree fully and others disagree fully. There is higher agreement on the first five questions, which concern responsibilities towards students, than on the last three questions, which concern responsibilities towards their superiors and the school itself.

Where a weak national difference can be observed is in statement two, *my teaching is of the academic standards required by the profession,* where about three quarters of the Norwegian teachers agree fully compared to less than half of the German teachers. The practice that students are taught democratic values (statement four) appears to be slightly more important in the German schools.

Table 5.12: Question 20: What are you held accountable for in your teaching position?

Cases	Agree fully 1	2	3	4	Disagree fully 5	Valid

1. "That my teaching is in accordance with the core values of the school."

	1	2	3	4	5	Valid
N♡	57%	28%	5%	5%	5%	100%
N♧	46%	46%		4%	4%	100%
D◇	39%	35%	23%		3%	94%
D♤	35%	44%	15%	3%	3%	97%

2. "That my teaching is of the academic standards required by the profession."

	1	2	3	4	5	Valid
N♡	71%	24%			5%	100%
N♧	73%	12%	11%		4%	100%
D◇	45%	32%	20%		3%	94%
D♤	47%	18%	23%	6%	6%	97%

3. "That each individual student is offered tailored education."

	1	2	3	4	5	Valid
N♡	50%	30%	15%		5%	95%
N♧	31%	31%	27%	7%	4%	100%
D◇	39%	35%	26%			94%
D♤	41%	18%	26%	15%		97%

4. "That students are educated to be good citizens conforming to democratic values."

	1	2	3	4	5	Valid
N♡	48%	33%	14%		5%	100%
N♧	40%	40%	20%			96%
D◇	58%	29%	13%			94%
D♤	64%	15%	15%	6%		97%

(continued on next page)

What are you held accountable for in your teaching position? (continued)

5. "That students perform to the best of their abilities."

N♡	57% / 29% / 9% / 5%	100%
N♣	50% / 39% / 11%	100%
D♢	58% / 26% / 13% / 3%	94%
D♠	37% / 36% / 27%	94%

6. "To help the school achieve the best possible results in official rankings."

N♡	9% / 10% / 38% / 29% / 14%	100%
N♣	12% / 31% / 27% / 11% / 19%	100%
D♢	6% / 16% / 55% / 10% / 13%	100%
D♠	15% / 12% / 44% / 17% / 12%	97%

7. "To execute all school-political decisions made by my superiors."

N♡	14% / 33% / 29% / 19% / 5%	100%
N♣	15% / 31% / 35% / 15% / 4%	100%
D♢	6% / 26% / 36% / 26% / 6%	94%
D♠	6% / 32% / 41% / 15% / 6%	97%

8. "To document my students' performance to my superiors."

N♡	14% / 33% / 33% / 10% / 10%	100%
N♣	19% / 19% / 31% / 31%	100%
D♢	10% / 23% / 48% / 3% / 16%	94%
D♠	18% / 47% / 23% / 12%	97%

5.2.5.2 The Applicability of Statements About the Curriculum

In question 21, the teachers were to indicate the percentage of which four different statements applied to their teaching and the curriculum (see Figure 5.2 on page 85). This question has previously been asked in Bachmann (2005). I have included it in my survey to get an idea of the opinion of the teachers. The Norwegian teachers feel much more than the German teachers that their teaching is determined by the curriculum: About 50% of the Norwegian

teachers have indicated with a percentage between 90 and 100%; whereas, the German teachers have answered less uniformly. The mean of the Norwegian answers is nearly 20% higher than the German answers.

There is great variation in the answers about to what extent a new curriculum is determined by the existing teaching practice: Answers are nearly uniformly distributed; consequently, the mean is close to 50%, and no clear conclusions can be drawn.

In general, teaching materials are written to comply with the curriculum. In Germany, different states have different curricula and different books. Even teacher educations are not compatible across different states. Therefore, one would expect almost all teachers to answer the question as to what extent the development of teaching materials is determined by the curriculum. Although most teachers answer between 80 and 100%, there is a surprisingly high portion of the teachers that answer considerably lower. Variations between schools of the same nationality are hard to explain since the schools of both Norway and Germany are settled in their respective counties and have the same base curriculum. In both nations, schools can choose between different books, but the books are based on the same county curriculum.

Answers to the question as to how much freedom the curriculum should offer the teachers to define the contents of their teaching are quite spread out with a tendency towards 50%. However, one would think that freedom in the curriculum is a prerequisite for innovations. With this in mind, we can look for a correlation between the mean and the number of innovative initiatives at the schools. In my assessment, the schools that implemented more technology based innovations (see questions discussed in the next sub-section) require more freedom in the curriculum when compared nationally.

5.2.6 Innovation Overview

It is my intention to take an inductive approach to the term innovation, meaning that the teachers themselves would define the term. In question 24, teachers are able to report anything they see as innovative. In order to prepare the respondents to this question with an open mindset, I have presented a great variety of possible innovations in the preceding questions 22 and 23.

5.2.6.1 Innovations at Your School

Firstly, in question 22, the teachers were asked about thirteen specific innovations at their school: whether they exist, no longer exist or never existed. Secondly, in question 23, these innovations were marked as important or unimportant for one's teaching. The answers to both questions are visualised in Table 5.13 on page 86. The validity of responses are on the right hand

(a) To what extent is (in your opinion) your teaching determined by the curriculum?

(b) "To what extent is (in your view) a new curriculum determined by existing teaching practice?"

(c) "To what extent is (in your opinion) the development of teaching materials (books etc.) determined by the curriculum?"

(d) "How much freedom should (in your opinion) the curriculum offer teachers to define the contents of their teaching?"
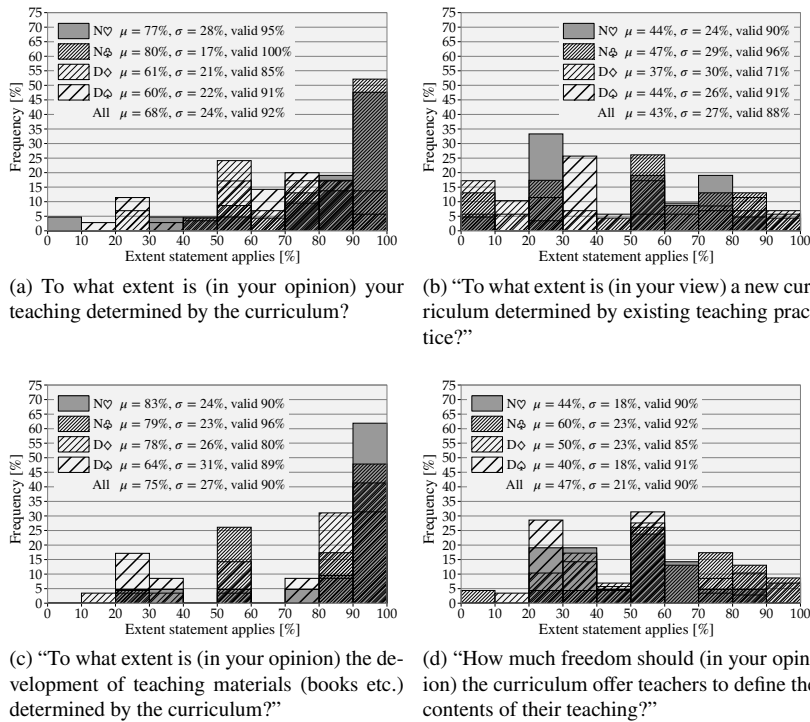
Figure 5.2: Applicability of statements about the curriculum. The mean value is denoted by μ and the standard deviation by σ.

side of the bars, as usual. The investigated innovations are: *Interdisciplinary teaching*, *project based teaching*, *team teaching*, *keeping a virtual diary*, *use of subject-specific software*, *use of ICT-based communication*, *easily accessible computers for students*, *use of a learning management system*, *collaboration with other schools*, *international collaboration*, *keeping a learning diary*, *portfolio assessment* and *working with new educational directions*.

One interesting aspect of this kind of questioning is when half of the population reports that an innovation exists and the other half that it never existed. This can be a sign of poor communication among colleagues as well as a sign that innovative initiatives are individual and not coordinated, or that an initiative is so fresh that it hasn't reached everybody's awareness yet. Strangely, all schools seem to have this problem regarding *keeping a virtual diary* (question four). This innovation also scored the lowest importance score at all schools.

N♣ appears to have the highest discrepancy amongst answers, notably in

interdisciplinary teaching, team teaching, international collaboration, keeping a learning diary, in addition to *keeping a virtual diary.* Remarkably, all teachers at this school report the existence of *portfolio assessment,* but almost half of them see this as an unimportant innovation.

N♡ shows the highest level of agreement through all of the questions, apart from *keeping a virtual diary.*

There are four innovations that are generally in existence and seen as important: *easily accessible computers for students, project based teaching* followed by *working with new educational directions* and *use of subject-specific software.* This is not surprising due to the criteria on which I have selected the schools.

Interestingly, in many questions, there is a different school that steps out of line (see innovations 1, 9, 10, 11 and 12).

Table 5.13: Whether specific innovations exist at school and whether they are important for one's teaching.

Cases	exists	exists no longer	never existed	Valid	important	not important	Valid

1. "Interdisciplinary teaching."

	existence				importance		
N♡	95%		5%	100%	84%	16%	90%
N♣	65%	22%	13%	100%	74%	26%	100%
D♢	100%			93%	93%	7%	93%
D♧	91%		6 3	97%	88%	12%	97%
All	**88%**		**8% 4**	97%	85%	15%	95%

2. "Project based teaching."

	existence				importance		
N♡	100%			100%	74%	26%	90%
N♣	100%			100%	87%	13%	100%
D♢	100%			93%	96%	4%	93%
D♧	91%		9%	97%	91%	9%	97%
All	**97%**		**3%**	97%	88%	12%	94%

Innovations at school (continued).

3. "Team teaching."

	existence				importance		
N♡	86%	10	5	100%	68%	32%	90%
N♣	57%	19%	24%	91%	87%	13%	100%
D◇	42%	23%	35%	90%	73%	27%	90%
D♧	68%	24%	9%	97%	70%	30%	94%
All	**62%**	**20%**	**18%**	94%	74%	26%	94%

4. "Keeping a virtual diary (e.g. weblogs, blog)."

	existence				importance		
N♡	35%	10%	55%	95%	28%	72%	86%
N♣	48%	14%	38%	91%	39%	61%	100%
D◇	16%	12%	72%	86%	30%	70%	93%
D♧	26%	10%	65%	89%	21%	79%	94%
All	**30%**	**11%**	**59%**	90%	29%	71%	94%

5. "Use of subject-specific software."

	existence				importance		
N♡	95%	5%		100%	84%	16%	90%
N♣	96%	4%		100%	100%		96%
D◇	100%			90%	93%	7%	93%
D♧	91%	6	3	94%	85%	15%	94%
All	**95%**	**4**		95%	90%	10%	94%

6. "Use of ICT-based communication (e.g. e-mail, chat or SMS)."

	existence				importance		
N♡	95%	5%		95%	79%	21%	90%
N♣	96%	4%		100%	96%	4%	100%
D◇	96%	4%		90%	59%	41%	93%
D♧	85%	6%	9%	94%	61%	39%	89%
All	**92%**	**3**	**5**	94%	72%	28%	93%

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Innovations at school (continued).

7. "Easily accessible computers for students."

	existence		importance	
N♡	100%	100%	95% 5%	95%
N♣	100%	100%	100%	100%
D♢	100%	90%	96% 4%	93%
D♧	94% 6%	97%	100%	97%
All	**98%** **2%**	96%	98% 2%	96%

8. "Use of a learning management system (LMS)."

	existence		importance	
N♡	100%	100%	84% 16%	90%
N♣	100%	100%	96% 4%	100%
D♢	32% 4% 64%	86%	52% 48%	86%
D♧	70% 7% 23%	86%	70% 30%	86%
All	**74%** **3% 23%**	92%	74% 26%	90%

9. "Collaboration with other schools."

	existence		importance	
N♡	85% 10% 5	95%	72% 28%	86%
N♣	73% 14% 14%	96%	70% 30%	100%
D♢	96% 4%	93%	96% 4%	90%
D♧	47% 27% 27%	97%	79% 21%	97%
All	**73%** **14% 14%**	95%	80% 20%	94%

10. "International collaboration."

	existence		importance	
N♡	91% 10	100%	68% 32%	90%
N♣	32% 55% 14%	96%	52% 48%	100%
D♢	96% 4%	93%	77% 23%	90%
D♧	88% 6 6	94%	79% 21%	94%
All	**79%** **16% 6%**	95%	70% 30%	94%

(continued on the next page)

Innovations at school (continued).

11. "Keeping a learning diary."

	existence		importance	
N♡	91% / 10%	100%	78% / 22%	86%
N♣	64% / 18% / 18%	96%	39% / 61%	100%
D♦	100%	93%	81% / 19%	90%
D♠	81.8% / 6% / 12%	94%	70% / 30%	94%
All	**85% / 8% / 8%**	95%	67% / 33%	93%

12. "Portfolio assessment."

	existence		importance	
N♡	100%	100%	89% / 11%	86%
N♣	100%	96%	57% / 44%	100%
D♦	96% / 4%	90%	77% / 23%	90%
D♠	39% / 13% / 48%	89%	55% / 46%	94%
All	**80% / 5% / 15%**	93%	67% / 33%	93%

13. "Working with new educational directions."

	existence		importance	
N♡	95% / 5%	90%	88% / 12%	81%
N♣	91% / 5 / 5	96%	86% / 14%	95%
D♦	96% / 4%	93%	100%	90%
D♠	88% / 13%	91%	94% / 6%	97%
All	**92% / 7**	93%	93% / 7%	92%

The remaining five questions in the questionnaire are open questions. To complete the overview over innovations at the schools, teachers were asked whether they know any other innovations that have been tried at their school over the last five years, as well as to indicate whether it still exists or does no longer exist (question 24). This is in support of the inductive approach to the definition of innovations in this survey. Not surprisingly, this resulted in a list with a great variety of innovations. Notably, however, is that most innovations were just mentioned once. Further, in question 25, everyone was asked about what they think is the most important innovation at their school during the last

five years, who initiated this innovation and which aids were used. Under the heading *comments*, teachers were asked which innovation they would like to see at their school (question 26), whether their school is planning any other innovation (question 27) and if they have general comments regarding this questionnaire (question 28).

5.2.6.2 Do You Know Other Innovations that Have Been Tried at Your School?

The analysis of question 24 showed that many teachers did not answer exactly what was asked. Therefore, many answers had to be deleted. The problem was that teachers repeated innovations from questions 22 and 23 (*portfolio assessment*, *use of a learning management system*, *international collaboration*, *use of subject-specific software* and *easily accessible computers for students*). In addition, one innovation (at D◇) only concerned exclusively the lower secondary school and, therefore, had be deleted as well. At N♡, three answers were deleted because they concerned vocational studies, which are outside the scope of this research.

In end-effect, at N♡, eight answers came in (validity 38%) with a total of seven additional innovations. Each innovation was mentioned once except for one which was mentioned four times (*bridging between lower and upper secondary school*). This is an innovation that could not apply to the two German schools which teach their students from year five up to year 13. The other innovations mentioned were: *assessment year plan*, *local given exams*, *alternative way of ending school*, *cooperative learning*, *confluent pedagogy* and *majoring in class studies*; the latter *no longer exist.*

At N♣, only four answers could be counted (validity 17%). Three of the disregarded innovations were marked as *exists no longer,* even though I know they still exist. Five innovations came up: *reading project*, *cooperative learning*, *thought-out worked student work for oral examination*, *subject team* and *periodic subject teaching;* the latter two *does no longer exist.*

At D◇, thirteen respondents (validity 45%) reported a total of sixteen different innovations: *Healthy breakfast* (mentioned four times), *steering committee* (mentioned three times), *hot meal at lunch time* (mentioned three times), *gifted education* (mentioned three times), *internships*, *acquaintance workweek*, *businesses and school*, *school and university*, *individual learning*, *parent seminars*, *Club of Rome school*, *term-paper*, *centre for independent learning*, *literature*, *intranet* and *education profile SEK II;* the latter *does no longer exist.*

At D♣, fourteen answers (validity 40%) resulted in eleven different innovations: *Learning to learn* (*Klippert method*, mentioned twelve times), *Comenius project* (mentioned five times), *moving school* (mentioned three

times, once as *existing no longer*), *working with new media* (mentioned three times), *centre for independent learning* (mentioned three times), *students' cafe*, *drug prevention*, *US exchange*, *extracurricular activities*, *participations in competitions* and *structuring the school morning*.

5.2.7 The Most Important Innovation at School

Question 25 is about the single most important innovation during the last five years. In hindsight, I may not have formulated this question well enough in the German language, where I asked "… *at your school*." This may be the reason why many teachers have reported innovations that do not apply to the upper secondary part of the school; therefore, I had to detect these and delete them. Some teachers did not feel that the questions applied to them because they were not employed for the full five years at their school, which has drawn down the validity somewhat. At all four schools, there were teachers that apparently had not read the question properly and replied with more than one innovation. I have chosen not to filter these out. Although one would expect the list of innovations to be completed in questions 22 to 24, some innovations turned up here that were not mentioned earlier.

At N♡, 16 valid answers were given (76% validity) containing thirteen different innovations: *student democracy*, *tutor scheme*, *bridging between lower and upper secondary school*, *project-based teaching*, *interdisciplinary teaching, continuing education opportunities*, *research on their own practice*, *new working spaces for teachers at school, extensive use of ICT, the use of a learning management system*, *special period at the end of the school year* and *new examination schemes.* Regarding key persons for these innovations, five different answers came in: *developing director*, *management*, *department manager, county and teachers*.

The length and variety of this list is an indication that the school is involved in different innovations on different levels of school life simultaneously. This confirms the point made in the theory chapter on page 24.

At N♣, 20 valid answers were given, which is (with 87%) the highest validity of this question. All answers refer to integral digitalisation as the most important innovation during the last five years, including *easily accessible computers, use of ICT-based communication, use of learning management system, ICT-based teaching and examination.* Two individuals answered *portfolio assessment* and *general student supervision*, aided by personal computers. Initiators for these innovations were: *county, principal* and *management.* This school answered the question highly unanimously, and everybody seems to agree on focus and success.

At D◇, 13 valid answers were given (45% validity) containing the following innovations as the most important one: *new young colleagues, self-*

evaluation, easily accessible computers, hot meal at lunch time, healthy breakfast, moving school, Club of Rome school, term-paper, gifted education and *individual learning.* Key persons were listed: *management, teaching staff, students, ICT-coordinator, parents* and *the health insurance company AOK.*

At D♤, 18 valid answers were given (51% validity) mainly concerning *independent school, learning to learn method, new media* and *a Comenius project.* Key persons for these innovations were listed: *county, management,* and *teaching staff.*

The analysis of the answers to question 25 shows that, in both countries, there is one school listing a variety of most important innovations, and the other school is almost unanimous in their answers.

5.2.8 Comments

5.2.8.1 What Would Be a Desirable Innovation at Your School for You?

Question 26 *(What would be a desirable innovation at your school for you?)* was well received by many teachers, who came up with a variety of suggestions. Two general observations can be made. Firstly, some desired innovations that existed in the school already. This again supports the hypothesis that there are many different things going on in a school simultaneously and that not everyone is necessarily always informed. Secondly, some Norwegian suggestions covered both vocational as well as general studies, and some of the suggestions at the German schools covered both the lower and upper secondary schools. This is a good example of how the different parts of the individual schools are linked and that innovations are seen in a bigger context. In the following paragraphs, the suggestions are listed. To summarise, most of these are related to working conditions.

At N♡, thirteen answers (validity 62%) suggested twelve desirable innovations: *digital exam, improved timetable and subject days, remove boundaries between specialisation studies, better access to computers and projectors, something to get students to concentrate on school issues, weekly subject days, more emphasis on alternative exams, laptops for all students* (answered twice)*, more flexible timetable/lectures and seminar groups, higher degree of interdisciplinary teaching across specialisations, a scheme for increased accountability of students, international activity and student exchange* and *improved possibilities for vocational students to work.*

At N♧, ten answers (validity 43%) suggested eleven desirable innovations: *that one gets further education before one starts with a new innovation no matter what innovation it concerns, use of ICT and interactive as-*

signments for students, a simple database of produced/ shared teaching materials, smaller classrooms and fewer students, healthier food, more student companies, more desktop computers instead of laptops, multi-teacher system, project-based subjects, stronger emphasis on academic aspects, subject-specialisation and *a different form of organisation with reduced distance to management that does not fragment staff as it does now.*

At D◇, twenty-nine answers (validity 69%) suggested twenty desirable innovations: *elimination of unnecessary meetings, smaller learning groups, relieve teaching staff of non-curricular activities, expand the teaching staff/ decrease class size, a conservative reflection on what makes up a high-school graduate, more individualisation in class, abolition of 45 minutes lessons, fitness room for difficult students, frequent continued training for interested colleagues, bilingual teaching, consistent methods of internal differentiation, more emphasis on continuous teaching instead of constantly introducing renewals, dedicated subject rooms related to individual teachers instead of classrooms* (answered twice), *open offers: coaching instead of teaching, extension of media equipment* and *"silentium".*

Finally, at D♤, eleven answers (validity 32%) suggested fifteen innovations: *continued training in of psychological assessment to detect cognitive disorders, team teaching, cooperation with other schools, improvement of the upper secondary school plan, abolition of 45 minutes time grid, intensifying the reform work, more space in the rooms, continuation and deepening of the existing approaches, smaller classes, more space, mathematics subject room, one day free for foreign language classes to have the possibility for outings without missing any lessons, democratisation, transparency* and *continue portfolio for method evaluation.*

5.2.8.2 Is Your School Planning an Innovation?

Here the answers to question 27 (*Is your school planning an innovation?*):

N♡ gave the most answers to this comment. Four persons answered either *possibly* or *I do not know*. Six others answered concretely: *separate program for students who do not adapt, new plan!, more interdisciplinary teaching and adapted teaching, weekly subject days, full digital examination, how to introduce "kunnskapsløftet"* (knowledge promotion consisting of principle of education and general part of the curriculum) *the best possible way, special program for students who do not take responsibility* and *more practical work instead of emphasis on theory.*

At N♣, eight answers are *no* or *don't know*. One person answered that *the activity on the network will be monitored in the near future.*

Teachers at D◇ name three planned innovations: *initiative regarding being a Club of Rome school, school in motion, extension of offered foreign*

languages. Three answers are *no,* two say *yes* and one is *for sure but it is not sure that the teachers get to know it first.*

At D�16, only two answers were given in total. Each states a new innovation: *evaluation of methods* and *development and evaluation of already started innovations.*

5.2.8.3 General Comments or Comments to the Questionnaire

In total, 31 comments were given in question 28: Three general comments and 25 comments on the questionnaire. I was especially motivated by eight comments complimenting the questionnaire and the study.

5.2.9 Correlations

The analysis does not include correlation between variables. Although it would have been interesting to investigate whether correlations could be found, the population is too small to be representative, and such an analysis would jeopardise the anonymity of respondents.

5.3 Interviews

I have visited the schools on several occasions and used the opportunity for casual talks with members of the teaching staff. An in-depth interview was conducted with at least two persons from each school. I cannot give detailed descriptions about individuals, and I will not distinguish between schools to protect the interview partner. Interviews were recorded.

The interviewees were well prepared. As a preparation to the interview, I asked the subject to bring in written material about their school that they thought would be interesting to my study. The additional documentation was a good extension to my collection. This approach led to a smooth start of the interviews as people could show off with interesting facts about their school, teaching and work.

The interview itself was structured according to an interview guide containing the following subjects: the organisation/structure of school life, conditions of school and teaching, communication matrix, continued education, questionnaire, innovations and any other business. This structure helped when comparing the interviews afterwards.

The interviews have given me additional in-depth information about the individual settings of each school. In particular, I now have an understanding of which routines are valued most at each school and what their main focus area is.

5.4   Chapter Summary and Look Ahead

The main purpose of this chapter has been the visualisation and analysis of the responses of the teachers to the questionnaire.

The next chapter will present a discussion based on this analysis and the case descriptions from the previous chapter.

CHAPTER **6** ███
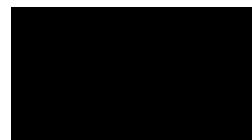
Summary and Discussion

This study shows some examples on how several scholastic innovations are carried out at different schools. Questions ten and eleven from Table 5.5 on page 63 show that there is a high readiness for change at all schools that were a part of this study. Yet, not all schools have been equally successful in implementing lasting innovations, and not all innovations improve on the status quo.

Let us first have a short review of all schools to see how they differ and then see whether I can identify the reasons.

N♡ has shown to be a well functioning school with an excellent school climate. An efficient and trusted leadership combined with a high sense of affiliation formed a confident environment for a culture of change.

N♣ has had the opportunity to set an example of the innovative use of ICT in their educational practice. However, many teachers are not satisfied with the work climate, caused to a large extent by the dominance of the school management, particularly the principal. At this school, we can study how a top-down initiated innovation develops.

D♢ has shown how a crisis with demotivated and disoriented staff, in addition to a declining number of students, can be turned around by a competent and dedicated principal. The process of opening up the school to its neighbourhood and finding competent partners was central to the development.

D♧ has shown a good start in working with media in teaching; unfortunately, the main initiator and coordinator left the school before this innovation could be permanently established into the every day life of the school community.

6.1 Findings

I will start with having a closer look at the answers given to questions 22–25 of the questionnaire about innovations. It is immediately apparent that all schools are in the business of contending with multiple innovations simultaneously. This corresponds to Fullan's (2007) statement that the broader reality of schools is the actual dealing with multiple innovations (see Section 2.3). Some innovations happen school-wide, and others seem to happen in specific subjects only or within a selected group of teachers. Herein, another explanation can be found for the fact that not all teachers know about all innovations. As mentioned in the analysis, poor communication or poor coordination within the individual schools can be a reason for the contradicting answers in question 22. Even though schools may be affected by an innovation overload, many teachers come up with additional desirable innovations for their school in question 26. The teachers at N♡ were best informed about the innovations their school is planning and about what is going to happen. This was also the only school where no teacher complained about insufficient information from the management about renewals at their school. Some teachers from the other schools commented, that even if new innovations were being planned, they definitely would not be the first ones to know about it, or that most likely, an innovation was planned top-down without their integration in the planning process.

N♡ shows a good internal design and has well organised learning processes. The school management works closely together, both internally and with the teaching staff. Everyone knows his or her task(s). Over time, the school has built up an excellent work environment, especially for the teaching staff, illustrated by a low teacher turnover. Important elements in this regard are continued educational training, high quality work places, mutual trust and the focus on adapted education. I see N♡ as a good example of how Fend (1981) describes schooling, presented in Section 2.1.2.2. The school is well prepared to meet the dilemmas of organisational life in Dalin's (1998) strategy dimension, summarised on page 20. At N♡, the frequent self-evaluation has contributed to school improvement and encourages an effective organisation.

Compared to the other three schools, N♣ teachers answered to a higher degree that there are too many rules and regulations at their school that restrict teachers. A total of 44% answered that the school principal does not know how to inspire the teachers, and only 22% stated that their principal always has a good overview of what is going on at school. Teachers at N♣ feel that supervisors monitor their work too much. These statements underline the fact that the school's management policy — the extensive use of ICT in the teaching of all subjects, was not primarily a teacher-based decision. Fullan (2007) stresses the importance of meaning when making sense

of educational change in Section 2.3. Meaning gives motivation, and it is very important to stay motivated when changes take place. When teachers can identify themselves with the innovation — when they see the benefit that the change brings — it is easier for them to give the change a chance. This becomes especially important when unforeseen hindrances and challenges appear along the way, as listed in the case description. Dalins (1998) Figure 2.1 on page 17 illustrates how important it is for every school to strive toward good human relations to avoid possible problems and dilemmas. We can see that, at N�, the management may have made wrong decisions, and by failing to integrate the teachers in the process of change, it caused boundaries to arise between them. Elstad (2008), who also studied this school, charts that 10% of the teachers at N♫ signalled their reluctance about the reform, while 30–35% of the teachers were enthusiastic. The others — the majority of the teachers — adopted a wait-and-see attitude. According to Fullan (2007) and others, these numbers do not represent sufficient support for educational change in a school. The extensive use of ICT in all subjects changed the role of the teachers. Complaints about working conditions and the demand for common rules were belittled and neglected by the principal. Four years after the change was initiated, an evaluative study could not measure improved performance in the objectives, namely increased cooperative learning, project work and interdisciplinary work. Although, as Fullan (2007) describes in Section 2.3, the process of change takes time; therefore, one might argue that the change has yet to mature to success, I think that, in this case, the poor teacher working conditions are an important reason why the initiative has not shown better results. Confer, in this regard, to Leithwood's (2006) eight factors that affect teachers' motivation and performance, listed on page 22. Of particular importance are job satisfaction, organisational commitment, engagement or disengagement from the school and pedagogical content knowledge.

Before I continue looking closer at the two German schools, I will line out some differences compared to the Norwegian schools. In Norway, each teacher has its own working space at school. These are organised so that teachers who teach the same grade or same subject area are located close to each other. In addition to this, Norwegian teachers spend more time at school. This is also due to the fact that Norwegian teachers, contrary to their German colleagues, are required, as part of their work agreement, to perform their tasks for a given number of hours at their workplace. This difference is clearly visible in Figure 5.1 on page 78. Both German schools in this study have one hour in the school's timetable, called *the white spot*, that is reserved for meetings. But the possibilities for building team spirit are much higher when working conditions are as good as in the Norwegian schools. The striking difference is clearly shown in subquestion seven of Table 5.5 on page 63 that shows conflicts among teachers.

When I observed an all-school teacher meeting at DⳊ, I personally experienced a confrontation between teachers regarding work distribution. The data from Table 5.5 shows that such confrontations are not uncommon. More than 70% say there are some conflicts among teachers at this school, 50% of the teachers of DⳊ, say there is little collaboration amongst teachers at school and less than 50% say that the teachers share a common understanding of the school's task. Again, I would like to refer to page 19, to Dalin's (1998) argument how important good human relations in the school systems are. The quality of a school depends on the quality of interpersonal relationships. So it is vital to strive toward productive human relations.

Furthermore, just over 50% of the teachers say the school has a clear pedagogical platform with only twenty per cent of the teachers standing united behind it. DⳊ has the lowest rate in having taught with a colleague the last three months, and only one teacher has often observed a colleague's teaching during the last six months. Just one fifth of the teachers said they are satisfied with working conditions (see Table 5.1). DⳊ scored, with 14%, lowest of all schools regarding the principal giving the impression of taking all contributions to discussions at meetings seriously. Altogether, it can be said that the school has high potential for improvement when it comes to constructive openness and communication within the teaching staff.

Since the school was awarded as one of the twelve leading media schools in Germany, I would like to take a closer look at how the school uses media. The case description in Chapter 4 has given an overview of the development of working with media at DⳊ. The innovation was the idea of a small group of media enthusiasts, supported by the principal, thereafter placed in the hands of a skilled media-coordinator. With small steps, something impressive was to be built up. The only problem was that the innovation never spread out to the whole school community. It was always small groups that used the first computer room. The homepage was run by enthusiasts of the established computer club that was an after school club. When the third media room was taken into use in 1997, the use of media increased and was expanded to several subjects. Various software was used for subjects, ICT-based communication increased and computers were easily accessible to students. A school intranet was established in 1999. Although I know the school has not implemented a Learning Management System (LMS), 70% of the teachers report its existence (see 5.13); possibly, they have mistaken their intranet for an LMS. As mentioned before, Fullan (2007) described the process of change as a lengthy one (2.3) and divides the innovation process into three phases. At DⳊ, the third phase, the routinisation phase, where the change is usually implemented, is an ongoing part of the school system seems to not have happened at this school. This shows that only a group of teachers are aware of its uses, e.g. the intranet. Some computer enthusiasts form a kind of basic

group that is always used to demonstrate their abilities when needed. When the media-coordinator, after being the head of media projects for a couple of years, left the school in 2000, everything reverted back to "normal," and ICT projects faded out. I can identify one teacher that is using ICT as an innovative tool across the two subjects she is teaching (Geography and French). There is some e-mail exchange with other schools and international partner schools. There are also presentations in several subjects using ICT, and the Internet is used for information search. But this is not the innovative use of ICT one would expect from a school that was awarded for being a leading media school a few years earlier. Looking at the answers of D♧, to what is the most important innovation at school, *new media* came only on third place surpassed by *independent school* and *learning to learn method.*

Due to a long period of sickness of the principal, the school management was often put into a stand-by mode where it was not possible to develop and maintain a better working climate for the teaching staff. From my continued observations, I know that more than four other main focus projects were initiated in the Oberstufe since 2006. The overall picture from D♧ is that in different periods, different groups claim a kind of leadership and that the school's focus is, therefore, more unstable.

The teachers at D♦ show, like the teachers from N♥, a good relation to their principal. However, I see much room for improvement concerning collaboration between teachers at D♦. When it comes to coordinating the teaching content within subjects, D♦ presents in all five subquestions the lowest percentage rates of all four schools. Also, the teachers at D♦ show mostly lower collaboration rates than teachers at the other schools. An explanation for this can be that there are conflicts between teachers: More than 90% of the teachers state that conflicts between teachers exist and that there is not enough room given for cooperation. Yet, D♦ scores high when it comes to having a clear pedagogical platform, sharing a common understanding of their school's tasks and reflecting critically on ideas, problems and school politics and evaluating those.

The school has implemented excellent tools and procedures for creating a united school environment: It obtains full score for the existence of working groups dealing with specific issues and the keeping of minutes of meetings. D♦ is good in the writing of project reports and logging of events. Teachers also have a good overview of which colleagues have had which supplementary education, and the mediation of this new knowledge is high. This is mostly due to the initiatives of the principal. As stated in the innovation theory (Section 2.3), literature of change show that it is up to the leader to motivate and obtain the individual and collective involvement of everyone in the school to accomplish successful change. The principal of D♦ is a person who has knowledge about school improvement and has, over time, started

different approaches to build up an environment to aim for good human relations within the school community. As one can see from the analysis, the principal has already become successful in some areas and is busy expanding the good cooperation in other areas.

Even though 50% of the teachers at D◇ think a learning management system is important, the school does not have one. Nevertheless, one third reports the existence of such a system, which may be an indiction that they do not know what an LMS is. The non-existence of an LMS at D◇ and D⌂ may also be the reason for lower cooperation between the teachers. Having a united system to organise projects, plans, teaching material, documents for evaluation or tests would be a great benefit, especially since German teachers do not have their own permanent workspace at school.

Both German schools communicate with parents through a fortnightly newsletter to spread information about the school's activities. This strengthens the cooperation between the parents and school in comparison to the Norwegian schools, where they mainly meet with parents at parent teacher conferences, discussing the student's work, and on the biannual parent evenings. In Germany, the Parent Committee's work can be seen as more active compared to the Norwegian in secondary schools. It is common practice to establish a parent organisation affiliated to the school, organise activities to raise money and donate to various school projects.

Based on the collected data, one can see that the teaching staff of the Norwegian schools cooperate more with each other regarding the year's issues and subjects being taught, while the German teaching staffs cooperate less on these two fields and more in working groups dealing with specific issues at a school-wide level.

It can be seen that a skilled, committed and open eared school leader leads to a good school environment and also that a principal can compensate for weakness in certain areas. A dominant leader can weaken a whole learning community.

6.2 Methodology

This was my first greater research conducted as a mixed method. I was aware that a mixed method requires more time and that the combination with multiple-cases requires even more time. However, it took even longer than expected. Additionally, one should not underestimate the time required for maintaining the contact to four project schools.

As it can be seen from the study, the reality of schools is that multiple innovations are ongoing in normal school life, and the attention that my research required from the schools had to be planned around their busy schedules. It

was important to me to conduct each step of the study as simultaneous as possible at all schools for the best possible comparison conditions. For this reason, I had to postpone data collection twice.

The geographical distance between the project schools and my office made it necessary to plan each visit well ahead and to have the equipment I needed ready. Even though the research process was demanding, and the required time and travel resources considerable, I would definitely say it was worth it. As Yin (2003) expressed, the unique strength of conducting a case study is the ability to deal with a full variety of different evidence approaches. I can only agree to this. Furthermore, I can confirm that Olson's (1982) list of aspects of case studies on page 27 also applies to mine because I have been able to form a fairly complete picture of the innovation process at the case schools. It has shown to be effective in capturing the complexities and identifying why innovations were successful or not.

In my opinion, the applied methodology has been appropriate. The qualitative and quantitative parts have mutually complemented each other in that I have been able to design the questionnaire based on an initial study of available documentation on the case schools, and the visits to the schools and interviews have provided a context that has helped interpret the response of the questionnaire. By looking across national borders, I have shown that there are variations in how the teaching profession is organised with implications for innovation in school. Just by looking at how things are done elsewhere can, in itself, spark creative ideas and promote innovation.

6.2.1 Reliability and Validity

In social sciences, reliability pertains to the consistency and trustworthiness of research findings. Validity pertains to the issue of whether a method investigates what it purports to investigate (Kvale, 2007). I have mentioned decisions concerning reliability and validity in relevant places elsewhere in this thesis and will summarise them here. I believe that the selection of four schools in total, is the minimum for a study that seeks to draw general conclusions and make generally applicable recommendations. At the same time, four schools is the maximum, as far as I am concerned, for research that is to be conducted within the limitations of a single PhD study. I have taken care to select case schools without special properties that would make them unfit for generalisation. The questionnaire was blessed with a high response rate and includes parts of earlier surveys. The study is not exhaustive, in that if other cases had been selected, different or additional observations could have been made. Although this is a limitation of this study, it is not a shortcoming, because the objective is not to find a universal truth but to portray innovative

practices in schools and to identify reasons why some initiatives for change are more successful than others.

6.3 Recommendations for Action

From a personal perspective, the first recommendation I would like to give is to always keep the students in mind. Whatever the change, the most important is the well-being of the students, their motivation and their joy in learning.

Secondly, as a school is a complex institution with many activities and developments going on simultaneously, a change needs rigorous planning in all three phases of initiation, implementation and continuation. Everyone in the learning community should have a clear understanding of the current situation, where the community wants to go and how they will get there. The schools that have been successful in completing an innovation had the following in common: good leadership, good communication and a good working environment. These aspects are all intertwined.

Good leadership is especially important, and it doesn't mean strong leadership. We have seen evidence that too much authority and top-down initiation can be contra-productive. Good leadership means finding the right balance between control, leaving room for creativity and giving people a sense of influence. When people feel ownership of a project, they will give it their genuine support. An important goal of leadership should be to obtain the individual and collective involvement of everyone. This requires that participants understand the advantages that the change will bring to themselves and to the community.

The analysis of the data shows that a shared workspace clearly has a positive effect on how well-informed teachers are about various developments, and it also fosters collaboration and thereby helps in providing a cohesive and well thought-out learning programme. Nevertheless, we have also seen that good routines and structured information sharing can provide well functioning communication. When a shared work place is not available, the advantages of modern communication and documentation tools can be especially prominent, like a learning management system, an intranet or even an intern wiki.

There are many aspects that comprise good working conditions. There are physical aspects, like space, light, air, acoustics and furniture, as well as available utilities, tools, and equipment. Closely related is access to technical support but also the proper staffing to avoid overload. Next is the offering of continued education, which, besides bringing teaching practices *à jour*, provides inspiration, gives teachers a feeling of competence and makes them feel secure. It is also important that acquired knowledge is passed on to col-

leagues. Strong pedagogical knowledge avoids stress because teachers are well prepared for their teaching and for meeting their students. A good working environment is important for the motivation of the teachers, which is to the benefit of the students.

As a final recommendation, the following is important for continuity. When an innovation is primarily driven by the enthusiasm of a single individual, there is a high risk that the investments made will go to waste when circumstances have it so that this individual leaves the community. It is much better when an innovation is driven by a team or a committee, which helps continuity and also provides a broader base of ownership.

6.4 Conclusion

This thesis has portrayed innovative practice in schools and has identified why some initiatives for change are more successful than others. The process of innovation in schools is complicated and lengthy, and there are many things that can hinder the implementation and continuation of a lasting change. From this research, several recommendations could be made with an emphasis on school leadership, communication and work environment.

This is the best book
that I've ever read.

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Hoffentlich auf Wiedersehen!
16. April 27

APPENDIX **A**

Documents

On the following pages some of the official letters are reproduced that were used in the communication with the schools.

NTNU Trondheim
Norgwegian University of Science
and Technology

Programme for Teacher Education

Nicole Veelo

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Application for permission to carry out a research study in connection with my doctoral-paper entitled "A comparative study on innovations in school" (written in the English language).

Thank you for the pleasant conversation and for the interest you have shown in my work which I will begin this spring. I am happy that you are prepared to take part in this international study and am sure that it will be of benefit to both of us.

Although I have received the oral permission to conduct this study at your school, I would also like to formalise this arrangement with the school.

The aim of my study is to look into which innovations your school has had in the past and what is necessary for innovations in schools to "survive". I am looking for criterion to describe the achieved or not achieved innovations a bit closer.

I will use different school documents to work out a description (case study) of your school. Also, I would like to invite all teachers at your school, to answer a questionnaire in my data collection process. It will also be necessary, as a part of the data collection process, for me to have interviews with the head of the school and with some teachers who are representing key positions in the field of my interest.

The comparative research study will be based on four secondary schools, two in Germany and two in Norway.

Torlaug Løkensgård Hoel, professor at the Programme of Teacher Education at the NTNU, and Stefan Hopmann, professor at the Agder University College, are the mentors for my project. They supervise me during the whole project and all the topics. The method and data collection process has been discussed with and supported by them.
The project is carried out in accordance to the ethnical research guidelines for social sciences, law and the humanities.

I am looking forward to an interesting experience and hope to find valuable information for my project at your school.

Yours sincerely,

Nicole Veelo

Trondheim, 18.02.2004

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NO-7491 Trondheim	NTNU Dragvoll, Pavilion B,	Telefax +47 73 59 10 12	Nicole.Veelo@plu.ntnu.no
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NTNU
Norges teknisk-naturvitenskapelige
universitet

Fakultet for samfunnsvitenskap
og teknologiledelse
Program for lærerutdanning

Telefon: 73 93 07 57
E-post: Nicole.Veelo@ntnu.no

Til deg som informant ved ███ videregående skole

Med dette brevet følger et spørreskjema til utfylling. Undersøkelsen er en del av mitt doktorgradsprosjekt om „Innovasjon i videregående skole".
Jeg har valgt ut fire videregående skoler (henholdsvis to i Norge og to i Tyskland) som er med i prosjektet. Det blir en internasjonal komparativ studie om innovasjon og endringer i den videregående skolen.

Siden det er bare fire skoler som er med i undersøkelsen, er det viktig med en god svarprosent. Jeg er klar over at din skole har allerede vært med i en del undersøkelser, men håper likevel at du kan sette av tid til utfyllingen.

Vær så vennlig å returnere spørreskjemaet i vedlagte konvolutten til skolens administrasjon så snart som mulig.

Dersom du har spørsmål om undersøkelsen, vennligst ta kontakt med meg.

Takk for din medvirkning!

Vennlig hilsen

Nicole Veelo

Nicole Veelo

Trondheim, 29.04.2006

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Norwegian University of
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Trondheim, 29.04.2006

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Sehr geehrte Damen und Herren,

Im Rahmen meiner Doktorarbeit führe ich derzeit eine Befragung von Lehrerinnen und Lehrern der Obertstufe durch.
Es handelt sich um eine international komparative Studie (mit jeweils zwei deutschen und norwegischen Schulen) über Innovation und Veränderungen in der Oberstufe.

Da ich jedoch nur dann aussagekräftige Ergebnisse erhalte, wenn alle ausgewählten Personen den Fragebogen beantworten, bitte ich Sie herzlichst um Ihre Unterstützung.

Vielen Dank, dass Sie an der Untersuchung teilnehmen.

Mit freundlichem Gruß,

Nicole Veelo

Nicole Veelo

Questionnaires

On the following pages you will find the questionnaire that was given to the teachers of the four schools in Norwegian and German.

INNOVASJON I VIDEREGÅENDE SKOLE
EN KOMPARATIV STUDIE

Dette spørreskjemaet er en del av mitt doktorgradsstudium i pedagogikk om «Innovasjon i videregående skole» som er en internasjonal sammenlignende studie mellom fire skoler i Norge og Tyskland. Arbeidet startet i 2003, og siden har jeg vurdert innovasjoner i skolen i en rekke land. Din skole er valgt ut til å delta, basert på skolebesøk og en analyse av innsamlet skoledokumentasjon. På bakgrunn av denne informasjonen har jeg utviklet et spørreskjema som jeg ber deg å besvare. Spørreundersøkelsen er et ledd i datainnsamlingen til min forskning og den har som mål å gi meg mulighet til å forberede intervjuer med nøkkelpersoner, som blir det siste leddet.

Det er frivillig å delta i undersøkelsen, og svarene vil bli behandlet konfidensielt. Undersøkelsen er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS (NSD).

Takk for at du er villig til å delta!

Nicole Veelo
stipendiat
Program for lærerutdanning

NTNU
Det skapende universitet

LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Følg derfor disse reglene: • *Bruk svart eller blå kulepenn. Ikke bruk tusj eller svak blyant.* • *Skriv så tydelig du kan. Ikke skriv utenfor feltene. Kryss av slik:* ☒ • *Krysser du feil, fyller du <u>hele</u> feltet med farge, slik:* ■ *Sett så kryss i rett felt.* • *Ikke lever kopi av skjemaet – bruk bare originalen.* • *Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.*

PERSONLIGE OPPLYSNINGER

1. Kjønn:　Kvinne .. ☐₁　Mann .... ☐₂　　2. Fødselsår: **19** ☐

3. Stillingsandel: *Avrund til nærmeste antall hele prosent. Bruk ikke desimaler.* ⇨　☐ %

4. Hvor mange år har du arbeidet som lærer til sammen?
Avrund til nærmeste antall hele år. Mindre enn ett år = 1. ⇨　☐ år

5. Hvor mange år har du arbeidet som lærer ved denne skolen?
Avrund til nærmeste antall hele år. Mindre enn ett år = 1. ⇨　☐ år

N	N	1

Før du fortsetter: Kontroller at du har svart på alle spørsmålene på denne sida!

6. Hvilke fag underviser du i ved denne skolen?
   Her kan du sette flere kryss.

7. Samfunnslære ..... ☐	13. Biologi .... ☐	20. Bedriftsøkonomi.... ☐
1. Norsk .... ☐	8. Samfunns-	14. Naturfag .... ☐	21. Markedsføring....... ☐
2. Engelsk.................. ☐	kunnskap .... ☐	15. Geografi .... ☐	22. Brukersystemer..... ☐
3. Tysk .... ☐	9. Rettslære .... ☐	16. Kroppsøving .... ☐	23. Data- og informa-
4. Fransk.................... ☐	10. Matematikk .... ☐	17. Religion/etikk........ ☐	sjonskunnskap ...... ☐
5. Nyere historie .... ☐	11. Fysikk .... ☐	18. Media .... ☐	24. Politisk idehistorie . ☐
6. Eldre historie.......... ☐	12. Kjemi.................... ☐	19. Økonomi og IT...... ☐	25. Annet (*forklar⇩*) ... ☐

   Annet fag: *Bruk* STORE BOKSTAVER*, og bare ett tegn i hvert felt*.

SKOLEN

7. Arbeidsklimaet ved skolen:

	Stemmer [1]	Stemmer noe [2]	Stemmer ikke [3]
1. Jeg er stolt av at jeg arbeider ved denne skolen	☐	☐	☐
2. Jeg kan påvirke avgjørelser som angår meg som lærer i tilstrekkelig grad	☐	☐	☐
3. Det er for mange forskrifter og regler ved denne skolen, som begrenser lærerne for mye	☐	☐	☐
4. Jeg er tilfreds med arbeidsforholdene ved denne skolen (tenk på hjelpemidler, utstyr, arbeidsrom, omgivelse, støy etc.)	☐	☐	☐
5. På møter o.l. på skolen gir rektor inntrykk av å ta alle innspill på alvor...	☐	☐	☐
6. Rektor har alltid god oversikt over hva som foregår på skolen	☐	☐	☐
7. Rektor inspirerer lærerne...	☐	☐	☐

8. Arbeidet som lærer ved skolen er vanskelig fordi …

	Stemmer [1]	Stemmer noe [2]	Stemmer ikke [3]
1. … arbeidsforholdene for oss lærere er i stadig forandring..........................	☐	☐	☐
2. … vi lærere blir pålagt mer og mer arbeid av myndighetene	☐	☐	☐
3. … overordnede kontrollerer arbeidet vårt for mye	☐	☐	☐
4. … vi har ikke stort nok spillerom i planlegging av undervisningen	☐	☐	☐
5. … elevene har blitt «vanskeligere» i de siste årene	☐	☐	☐
6. … vi må utføre arbeidsoppgaver vi ikke er utdannet for/øvet i	☐	☐	☐

9. Oppfatningene om hva som kjennetegner gode skoler varierer.
   Jeg ønsker å kartlegge
   A: Hvordan du oppfatter graden av viktighet på noen områder ved din skole, og
   B: Hvordan prestasjonene ved din skole er på disse områdene.

   NB: Sett to kryss på hver linje.

	A: Viktighet					B: Din skoles prestasjonsnivå				
Elevene …	*Ikke viktig*				*Svært viktig*	*Lavt*				*Høyt*
	1	2	3	4	5	1	2	3	4	5
1. … er kompetente i lesing, skriving og matematikk	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. … oppnår gode resultater i teoretiske fag	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. … oppnår gode resultater i praktiske fag	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. … er kompetente mht. skriftlig og muntlig kommunikasjon	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. … er selvstendige	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. … er reflekterte	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. … tar ansvar for å gjøre skolen til et bedre sted å lære	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. … opplever at læringsmiljøet er godt (fysisk og psykisk)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

10. Samarbeider du med lærere i <u>samme</u> fag for å samordne undervisningen på disse områdene?

    Ett kryss på hver linje.

	Ja 1	Delvis 2	Nei 3
1. Læreplaner i fag	☐	☐	☐
2. Vurderingskriterier	☐	☐	☐
3. Prøver	☐	☐	☐
4. Undervisningsmateriell	☐	☐	☐
5. Undervisningsmetoder	☐	☐	☐

11. Samarbeider du med lærere i <u>andre</u> fag for å samordne undervisningen på disse områdene?

    Ett kryss på hver linje.

	Ja 1	Delvis 2	Nei 3
1. Læreplaner i fag	☐	☐	☐
2. Vurderingskriterier	☐	☐	☐
3. Prøver	☐	☐	☐
4. Undervisningsmateriell	☐	☐	☐
5. Undervisningsmetoder	☐	☐	☐

12. Samarbeid om undervisning innen kollegiet:

	Stemmer 1	Stemmer ikke 2
1. I løpet av de siste 3 måneder har jeg minst en gang undervist sammen med en kollega	☐	☐
2. I de siste 3 måneder har jeg ofte utvekslet undervisningsplaner eller undervisningsmateriell med kolleger	☐	☐
3. I de siste 6 måneder har jeg ofte observert en kollega i hans/hennes undervisning	☐	☐
4. I de siste 6 måneder har jeg minst en gang forberedt en undervisningstime sammen med en kollega	☐	☐
5. Det er lite lærersamarbeid ved skolen	☐	☐
6. Lærerne ved denne skolen har felles forståelse av skolens oppgave	☐	☐
7. Det er en del konflikter blant kollegene ved denne skolen	☐	☐
8. Skolen har en tydelig pedagogisk plattform	☐	☐
9. Lærerne ved denne skolen står samlet bak skolens pedagogiske plattform	☐	☐
10. Lærerne ved denne skolen er lite innstilt på endringer	☐	☐
11. Nye ideer blir rask gjennomført ved denne skolen	☐	☐

13. Skolens læringskultur: I hvilken grad stemmer dette for din skole?

	Lav 1	2	3	4	Høy 5
1. Skolen er preget av tillitsrelasjoner	☐	☐	☐	☐	☐
2. Skolen har et faglig godt samarbeidsklima	☐	☐	☐	☐	☐
3. Vi er enige om retningen for utviklingsarbeidet	☐	☐	☐	☐	☐
4. Det er høye forventninger til personalets arbeidsinnsats	☐	☐	☐	☐	☐
5. Vi har en skolekultur som gir rom for prøving og feiling	☐	☐	☐	☐	☐
6. Vi har en kultur som gir støtte til nye initiativ	☐	☐	☐	☐	☐
7. Det er mange som utøver ledelse/tar ledelsesinitiativ i vår skole	☐	☐	☐	☐	☐
8. Personalet har gode muligheter til etterutdanning	☐	☐	☐	☐	☐
9. Etterutdanningen er relevant ut fra skolens behov	☐	☐	☐	☐	☐
10. Skolen deler på en aktiv måte informasjon med foreldre/nærmiljø	☐	☐	☐	☐	☐
11. Vi når gode resultater ut fra skolens forutsetninger	☐	☐	☐	☐	☐
12. Skolen har et godt rykte blant elever og foreldre	☐	☐	☐	☐	☐
13. På skolen bruker vi ofte kritisk refleksjon for å evaluere ideer, problemer og skolens policy	☐	☐	☐	☐	☐
14. Skolen har en god dialog med representanter for det lokale arbeidsliv	☐	☐	☐	☐	☐
15. Skolen samarbeider aktivt med frivillige organisasjoner i lokalmiljøet	☐	☐	☐	☐	☐

14. Finnes følgende ved din skole?

	Finnes 1	Finnes ikke 2
1. En årsplan for etter- og videreutdanningstilbud for lærere	☐	☐
2. En oversikt over hvilke kolleger som har tatt hvilke etter- og videreutdanninger	☐	☐
3. En praksis for at lærere som har vært på etter- og videreutdanning, rapporterer om det til kolleger	☐	☐
4. Arbeidsgrupper som behandler spesifikke temaer ved skolen	☐	☐
5. Protokollføring av møter	☐	☐
6. Rapportskriving om prosjekter	☐	☐
7. Loggføring av hendelser (foreldresamtaler, elevsamtaler)	☐	☐

15. Hvis det finnes rutiner for å ta vare på kunnskap og erfaringer:

	Ja 1	Nei 2
1. Deles denne dokumentasjonen med kolleger?	☐	☐
2. Er det lett å finne tilbake til denne dokumentasjonen?	☐	☐

ELEVER OG FORELDRE

16. Hva synes du om følgende utsagn om forholdet mellom elever, lærere og foreldre?

	Helt enig 1	Delvis enig 2	Delvis uenig 3	Helt uenig 4
1. Generelt sett har lærere og elever et vennlig forhold til hverandre	☐	☐	☐	☐
2. De fleste lærere er ikke interessert i hva elever måtte mene	☐	☐	☐	☐
3. Mine kolleger oppfordrer ofte elevene til å uttrykke sine egne tanker, og ikke være redd for å si noe galt	☐	☐	☐	☐
4. Lærerne streber etter å gi alle elever lik behandling	☐	☐	☐	☐
5. Enkeltelevers problemer blir tatt svært seriøst ved vår skole	☐	☐	☐	☐

	Helt enig 1	Noe enig 2	Noe uenig 3	Helt uenig 4
6. De fleste lærerne arbeider for at også de svake elevene skal klare å følge undervisningen	☐	☐	☐	☐
7. Mange lærere her prøver å bli personlig kjent med elevene	☐	☐	☐	☐
8. Foreldrene tar aktiv del i skolelivet	☐	☐	☐	☐
9. Foreldrene bistår i aktiviteter utenom skolen	☐	☐	☐	☐

LÆRERENS ARBEID

17. Hvor mange timer bruker du gjennomsnittlig pr. uke på: *Avrund til nærmeste antall hele timer.*

1. Undervising .... ☐ timer
2. For- og etterarbeid på skolen .... ☐ timer
3. For- og etterarbeid hjemme .... ☐ timer
4. Veiledning av elever .... ☐ timer
5. Tilrettelegging av elevenes arbeid .... ☐ timer

6. Foreldrekontakt .... ☐ timer
7. Kompetanseutvikling og faglig ajourføring .... ☐ timer
8. Møter og planlegging på skolenivå ...... ☐ timer
9. Fagsamarbeid .... ☐ timer
10. Samarbeid med bedrifter og organisasjoner utenfor skolen .... ☐ timer

18. Hvilke kriterier er viktigst for deg når du planlegger undervisningen?
Ranger kriteriene fra 1 til 5.
1 er det viktigste kriteriet, og
5 er det minst viktige kriteriet.

Skriv tallene fra 1 til 5 i feltene til høyre.
Skriv hvert tall bare en gang.

1. Læreplaner i fag .... ☐
2. Vurderingskriterier .... ☐
3. Prøver .... ☐
4. Undervisningsmateriell .... ☐
5. Undervisningsmetoder .... ☐

19. Hvem skal etter din mening i fremtiden primært bestemme hvordan elever skal oppdras i skolen?
Bare ett kryss!

Familien .... ☐ 1
Skolen .... ☐ 2
Staten/samfunnet .... ☐ 3

ANSVARSFØLELSE/LÆREPLAN

20. Hva ansvarliggjøres du for i jobben som lærer?

I min jobb som lærer ansvarlig-gjøres jeg for …

	Helt enig 1	Delvis enig 2	Både /og 3	Delvis uenig 4	Helt uenig 5
1. … at undervisningen er i tråd med skolens verdigrunnlag	☐	☐	☐	☐	☐
2. … at undervisningen er i tråd med profesjonens krav til faglig standard	☐	☐	☐	☐	☐

	Helt enig 1	Delvis enig 2	Både /og 3	Delvis uenig 4	Helt uenig 5
3. … at den enkelte elev får tilpasset opplæringstilbud	☐	☐	☐	☐	☐
4. … at elevene oppdras til gode samfunnsborgere i tråd med demokratiske verdier	☐	☐	☐	☐	☐
5. … at elevene presterer best mulig sett i forhold til nivå og forutsetninger	☐	☐	☐	☐	☐
6. … at skolen oppnår best mulig resultater på offentlige rankinger	☐	☐	☐	☐	☐
7. … å iverksette alle skolepolitiske vedtak fastsatt av mine overordnede	☐	☐	☐	☐	☐
8. … å dokumentere elevenes læringsresultater overfor mine overordnede	☐	☐	☐	☐	☐

21. Vennligst besvar disse spørsmålene om lære-planen i prosenter:

Bruk bare hele prosenter uten desimaler.

1. I hvor stor utstrekning mener du at din undervisning blir fastlagt gjenom læreplanen? .... ☐☐ %

2. I hvilken grad blir etter din vurdering en ny læreplan bestemt ut fra eksisterende undervisingspraksis? .... ☐☐ %

3. I hvilken utstrekning blir etter din mening utviklingen av læremidler (lærebøker etc.) bestemt av læreplanen? .... ☐☐ %

4. Hvor stort spillerom bør etter din mening læreplanen gi lærere til å utforme innholdet i undervisningen? .... ☐☐ %

GENERELT OM INNOVASJONER

22. Hva vet du om følgende innovasjoner ved din skole?

	Finnes 1	Finnes ikke lenger 2	Aldri brukt 3
1. Tverrfaglig undervisning	☐	☐	☐
2. Prosjektbasert undervisning	☐	☐	☐
3. Teamteaching (undervisning blir forberedt, gjennomført og evaluert i samarbeid mellom to eller flere lærere)	☐	☐	☐
4. Bruk av virtuell dagbok (f.eks. elevblog, klasseblog eller lærerblog)	☐	☐	☐
5. Bruk av fagspesifikk programvare	☐	☐	☐
6. Bruk av IKT-basert kommunikasjon (f.eks. e-post, chat eller SMS)	☐	☐	☐
7. Lett tilgjengelige datamaskiner for elevene	☐	☐	☐
8. Bruk av Learning Management System (LMS, f.eks. «It's learning» eller «Fronter»)	☐	☐	☐
9. Samarbeid med andre skoler	☐	☐	☐
10. Internasjonalt samarbeid	☐	☐	☐
11. Loggskriving	☐	☐	☐
12. Mappevurdering	☐	☐	☐
13. Arbeid med nye pedagogiske retninger	☐	☐	☐

23. Synes du dette er viktige eller uviktige innovasjoner i forhold til din undervisning?

	Viktig 1	Uviktig 2
1. Tverrfaglig undervisning	☐	☐
2. Prosjektbasert undervisning	☐	☐
3. Teamteaching (undervisning blir forberedt, gjennomført og evaluert i samarbeid mellom to eller flere lærere)	☐	☐

		Viktig 1	Uviktig 2
4.	Bruk av virtuell dagbok (f.eks. elevblog, klasseblog eller lærerblog)	☐	☐
5.	Bruk av fagspesifikk programvare	☐	☐
6.	Bruk av IKT-basert kommunikasjon (f.eks. e-post, chat eller SMS)	☐	☐
7.	Lett tilgjengelige datamaskiner for elevene	☐	☐
8.	Bruk av Learning Management System (LMS, f.eks. «It's learning» eller «Fronter»)	☐	☐
9.	Samarbeid med andre skoler	☐	☐
10.	Internasjonalt samarbeid	☐	☐
11.	Loggskriving	☐	☐
12.	Mappevurdering	☐	☐
13.	Arbeid med nye pedagogiske retninger	☐	☐

24. Kjenner du til flere innovasjoner som er forsøkt gjennomført ved din skole i løpet av de fem siste årene? *Skriv stikkord, og kryss av for om innovasjonen fremdeles finnes eller ikke. Bruk* STORE BOKSTAVER*, og bare ett tegn pr. felt.*

	Finnes fremdeles 1	Finnes ikke lenger 2
1.	☐	☐
2.	☐	☐
3.	☐	☐
4.	☐	☐
5.	☐	☐

DEN VIKTIGSTE INNOVASJONEN VED DIN SKOLE

25a. Hva er etter din mening den viktigste innovasjonen som er innført eller forsøkt ved din skole de siste 5 årene? Vær så snill å gi en beskrivelse.
Her kan du bruke vanlig håndskrift. Vennligst skriv tydelig!

N N   7

25b. Hvem tok initiativet til denne innovasjonen? Hvem var nøkkelpersonene? Hvem var ellers involvert?

25c. Hva slags hjelpemidler, metoder og teknologi brukes/har blitt brukt ved denne innovasjonen?

KOMMENTARER

26. Hva slags innovasjoner kunne du tenke deg på din skole?

27. Planlegger din skole å innføre noe nytt?

28. Har du genelle kommentarer, eller kommentarer til dette spørreskjemaet?

N	N		8

*Takk for at du ville svare
på spørsmålene!*

INNOVATION IN WEITERFÜHRENDEN SCHULEN
EINE KOMPARATIVE STUDIE

Dieser Fragebogen ist ein Teil meines Doktorandenstudiums in Pädagogik über «Innovation in weiterführenden Schulen». Es ist eine Internationale Vergleichstudie zwischen vier Schulen in Norwegen und Deutschland. Seit 2003 habe ich eine Reihe von Innovationen in Schule in verschiedenen Ländern verfolgt. Anhand von Schulbesuchen und der Analyse von Schuldokumenten habe ich Ihre Schule zur Teilnahme am Projekt ausgewählt.

Unter Berücksichtigung dieser Informationen habe ich einen Fragebogen entwickelt, den ich Sie bitte auszufüllen. Der Fragebogen ist ein Bereich meiner Forschung und soll mir unter anderem eine Hilfe sein Interviews mit Schlüsselpersonen vorzubereiten.

Die Teilnahme ist freiwillig. Selbstverständlich werden alle Daten konfidentiell behandelt.

Vielen Dank, dass Sie mich bei der Untersuchung unterstützen.

Nicole Veelo
Doktorandin
Programm für Lehrerausbildung
Norwegische Universität für Wissenschaft und Technologie

NTNU
Innovation und Kreativität

	Dieser Fragebogen ist maschinenlesbar. Bitte folgen Sie diesen Anweisungen:
BITTE ZUERST LESEN!	• *Benutzen Sie einen schwarzen oder blauen Kugelschreiber. Bitte keine Tinte oder Bleistifte verwenden.* • *Bitte deutlich, und nicht außerhalb der Felder schreiben. So ankreuzen:* ☒ • *Wenn Sie einen Fehler machen, schwärzen Sie das ganze Feld, so:* ■ *Danach das richtige Feld ankreuzen.* • *Benutzen Sie nur den originalen Fragebogen - bitte keine Kopien.* • *Wenn keine anderen Anweisungen gegeben werden, bitte nur ein Feld pro Frage ankreuzen.*

PERSÖNLICHE ANGABEN

1. Geschlecht: Frau ...... ☐₁   2. Geburtsjahr: **19** ☐
                Mann .... ☐₂

3. Stellungsanteil in der Oberstufe: *Bitte keine Dezimalzahl.* ⇨   ☐☐ %

4. Wie lange arbeiten Sie bereits als Lehrerin/Lehrer?
Bitte auf eine volle Jahreszahl runden. Weniger als ein Jahr = 1. ⇨   ☐ Jahren

5. Wie lange arbeiten Sie bereits als Lehrerin/Lehrer an dieser Schule?
Bitte auf eine volle Jahreszahl runden. Weniger als ein Jahr = 1. ⇨   ☐ Jahren

6. Welche Fächer unterrichten Sie in der Oberstufe?
    Hier können Sie mehrere Kreuze machen.

1. Deutsch ☐	7. Italienisch ☐	13. Biologie ☐	18. Pädagogik ☐
2. Englisch ☐	8. Ev. Religion ☐	14. Informatik ☐	19. Sport ☐
3. Latein ☐	9. Kath. Religion ☐	15. Erdkunde ☐	20. Kunst ☐
4. Französisch ☐	10. Mathematik ☐	16. Geschichte ☐	21. Musik ☐
5. Niederländisch ☐	11. Physik ☐	17. Sozialwissen-	22. Philosophie ☐
6. Spanisch ☐	12. Chemie ☐	schaften ☐	23. Andere (*welche?*⇩) ☐

Andere Fächer: *Bitte* GROßBUCHSTABEN *verwenden, ein Buchstabe pro Feld.*

SCHULE

7. Arbeitsklima an der Schule:

	Stimmt genau 1	Stimmt etwas 2	Stimmt nicht 3
1. Ich bin stolz, dass ich an dieser Schule arbeite	☐	☐	☐
2. Ich kann Entscheidungen, die mich als Lehrer/in betreffen, in ausreichendem Maße mit beeinflussen	☐	☐	☐
3. Es gibt an dieser Schule zu viele schulinterne Vorschriften und Regelungen, die die Lehrerinnen und Lehrer zu sehr einschränken	☐	☐	☐
4. Ich bin zufrieden mit den Arbeitsbedingungen. (Gemeint sind die Bedingungen, unter denen Sie arbeiten, z.B. Hilfsmittel, Apparate, Arbeitsraum, Umgebung, Lärm usw.)	☐	☐	☐
5. Der Schulleiter vermittelt in Sitzungen und Konferenzen das Gefühl, alle Diskussionsbeiträge ernst zunehmen	☐	☐	☐
6. Der Schulleiter besitzt immer einen genauen Überblick darüber, was an der Schule vorgeht	☐	☐	☐
7. Der Schulleiter versteht es, die Lehrer für ihre Arbeit an dieser Schule zu begeistern	☐	☐	☐

8. Die Arbeit als Lehrer an dieser Schule ist schwierig, weil ...

	Stimmt genau 1	Stimmt etwas 2	Stimmt nicht 3
1. ... sich die Arbeitsbedingungen für uns Lehrer ständig verändern	☐	☐	☐
2. ... es wird uns mehr und mehr Arbeit von den Behörden auferlegt	☐	☐	☐
3. ... Vorgesetzte kontrollieren unsere Arbeit zu sehr	☐	☐	☐
4. ... wir haben einen zu kleinen Spielraum was die Vorbereitung und Durchführung des Unterrichts betrifft	☐	☐	☐
5. ... die Schüler in den letzten Jahren zunehmend «schwieriger» geworden sind	☐	☐	☐
6. ... Wir müssen Arbeitsaufgaben ausführen, für die wir nicht ausgebildet sind/erfahren genug sind	☐	☐	☐

D	A		2

9. Die Auffassungen, was eine gute Schule ausmacht, variieren.
   Wie fassen Sie folgendes auf?
   A: Den Grad der Wichtigkeit in manchen Bereichen der Schule
   B: Das Leistungsniveau der Schule im selben Bereich

   Bitte machen Sie pro Aussage (Linie) zwei Kreuze:

Die Schüler …	A: Wichtigkeitsgrad					B: Schulniveau im Hinblick auf die Leistung				
	Nicht wichtig 1	2	3	4	Sehr wichtig 5	Niedrig 1	2	3	4	Hoch 5
1. … sind kompetent im Lesen, Schreiben und Mathematik	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. … erreichen gute Resultate in theoretischen Fächern	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. … erreichen gute Resultate in praktischen Fächern	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. … sind in schriftlicher und mündlicher Kommunikation entsprechend kompetent	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. … sind selbständig	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. … sind reflektiert	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. … fühlen sich verantwortlich die Schule zu einem besseren Lernort zu gestalten	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. … erleben ein gutes Lernmilieu (physisch und psychisch)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

10. Gibt es auf schulischer Ebene Zusammenarbeit zwischen Lehrern __derselben__ Fächer, um den Unterrichtsinhalt zu koordinieren?

    Bitte ein Kreuz pro Linie.

	Ja 1	Teilweise 2	Nein 3
1. Lehrpläne im Fach	☐	☐	☐
2. Beurteilungskriterien	☐	☐	☐
3. Prüfungen/Tests	☐	☐	☐
4. Unterrichtsmaterial	☐	☐	☐
5. Unterrichtsmethoden	☐	☐	☐

11. Gibt es auf schulischer Ebene Zusammenarbeit zwischen Lehrern __unterschiedlicher__ Fächer, um den Unterrichtsinhalt zu koordinieren?

    Bitte ein Kreuz pro Linie.

	Ja 1	Teilweise 2	Nein 3
1. Lehrpläne im Fach	☐	☐	☐
2. Beurteilungskriterien	☐	☐	☐
3. Prüfungen/Tests	☐	☐	☐
4. Unterrichtsmaterial	☐	☐	☐
5. Unterrichtsmethoden	☐	☐	☐

12. Arbeit im Kollegium:

	Stimmt 1	Stimmt nicht 2
1. In den letzten 3 Monaten habe ich mindestens einmal mit einem Kollegen gemeinsam Unterricht durchgeführt	☐	☐
2. In den letzten 3 Monaten habe ich mehrfach mit Kollegen Unterrichtsentwürfe und Materialien ausgetauscht	☐	☐
3. In den letzten 6 Monaten habe ich mehrmals einen Kollegen im Unterricht besucht	☐	☐
4. In den letzten 6 Monaten habe ich in mindestens einmal eine Unterrichtsstunde zusammen mit einem Kollegen vorbereitet	☐	☐
5. Zu einer echten Lehrerkooperation ist es im Grunde an dieser Schule noch nicht gekommen	☐	☐
6. Die Lehrer an dieser Schule haben ein gemeinsames Verständnis von den Aufgaben der Schule	☐	☐
7. Es gibt einen Teil Konflikte zwischen den Lehrern an der Schule	☐	☐
8. Die Schule hat eine klare pädagogische Grundausrichtung	☐	☐
9. Die Lehrer dieser Schule stehen vereint hinter der pädagogischen Grundausrichtung der Schule	☐	☐
10. Die Lehrer an dieser Schule sind wenig auf Veränderung eingestellt	☐	☐
11. Neue Ideen werden an dieser Schule schnell aufgegriffen	☐	☐

13. Zur Schulkultur, bitte kreuzen Sie an in welchem
    Grad dies für Ihre Schule zustimmt:

	Niedrig 1	2	3	4	Hoch 5
1. Die Schule ist von Vertrauensbeziehungen geprägt	☐	☐	☐	☐	☐
2. An der Schule herrscht ein fachlich gutes Zusammenarbeitsklima	☐	☐	☐	☐	☐
3. Bezüglich der Richtung in der Schulentwicklungsarbeit sind wir uns einig	☐	☐	☐	☐	☐
4. Es werden hohe Erwartungen an den Arbeitseinsatz des Personals gestellt	☐	☐	☐	☐	☐
5. Wir haben eine Schulkultur, die Raum für das Ausprobieren und Fehlen lässt	☐	☐	☐	☐	☐
6. Wir haben eine Kultur, die neue Initiativen unterstützt	☐	☐	☐	☐	☐
7. Es gibt viele, die an unserer Schule Führung bzw. Führungsinitiative übernehmen	☐	☐	☐	☐	☐
8. Das Personal hat gute Möglichkeiten zur Weiterbildung	☐	☐	☐	☐	☐
9. Weiterbildung ist relevant im Bezug auf den Bedarf der Schule	☐	☐	☐	☐	☐
10. Die Schule teilt auf eine aktive Weise Informationen mit Eltern und dem Schulumfeld	☐	☐	☐	☐	☐
11. Von den Schulvoraussetzungen gesehen erreichen wir gute Ergebnisse	☐	☐	☐	☐	☐
12. Die Schule hat unter den Schülern und Eltern einen guten Ruf	☐	☐	☐	☐	☐
13. An der Schule reflektieren wir häufig Ideen, Probleme und Schulpolitik und evaluieren diese	☐	☐	☐	☐	☐
14. Die Schule steht im guten Dialog mit Repräsentanten des lokalen Arbeitslebens	☐	☐	☐	☐	☐
15. Die Schule arbeitet aktiv mit freiwilligen Organisationen im Umfeld der Schule zusammen	☐	☐	☐	☐	☐

14. Gibt es die folgenden Dinge an Ihrer Schule?

	Ja 1	Nein 2
1. Einen Jahresfahrplan für den Besuch von Lehrerfortbildungsveranstaltungen fürs Kollegium	☐	☐
2. Einen Überblick darüber welche Kollegen welche Lehrerfortbildungen besucht haben	☐	☐
3. Eine schulinterne Berichterstattungspraxis der Lehrer, die auf Fortbildungsveranstaltungen waren	☐	☐
4. Schulinterne Arbeitsgruppen zu spezifischen Themen an der Schule	☐	☐
5. Protokollführung von Konferenzen	☐	☐
6. Schreiben von Projektberichten	☐	☐
7. Mitschriften und Protokolle von Eltern- und Schülergesprächen	☐	☐

15. Wenn es Routinen gibt Erfahrungen und Wissen zu dokumentieren:

	Ja 1	Nein 2
1. Wird diese Dokumentation mit Kollegen geteilt?	☐	☐
2. Sind die Dokumentationen leicht wieder zu finden?	☐	☐

SCHÜLER UND ELTERN

16. Wie beurteilen Sie folgende Aussagen über das Verhältnis zwischen
    Schülern, Lehrkräften und Eltern?

	Sehr einig 1	Teilweise einig 2	Teilweise uneinig 3	Sehr uneinig 4
1. Im allgemeinen herrscht hier ein freundlicher Umgangston zwischen Lehrern und Schülern	☐	☐	☐	☐
2. Die Meinungen der Schülerinnen und Schüler kümmert die meisten Lehrkräfte wenig	☐	☐	☐	☐
3. Die Kollegen ermuntern die Schüler häufig, die eigenen Gedanken zu äußern, auch wenn sie falsch sein könnten	☐	☐	☐	☐
4. Die Lehrkräfte bemühen sich, alle Schülerinnen und Schüler gleich zu behandeln	☐	☐	☐	☐
5. Probleme von einzelnen Schülerinnen und Schülern werden an unserer Schule sehr ernst genommen	☐	☐	☐	☐

	Sehr einig 1	Teilweise einig 2	Teilweise uneinig 3	Sehr uneinig 4
6. Die meisten Lehrer bemühen sich, dass auch die schwächeren Schüler dem Unterricht folgen können	☐	☐	☐	☐
7. Viele Lehrer bemühen sich bei uns, Schüler auch persönlich kennen zu lernen	☐	☐	☐	☐
8. Die Eltern nehmen aktiv am Schulleben teil	☐	☐	☐	☐
9. Die Eltern sind auch bei extracurriculären Veranstaltungen aktiv dabei	☐	☐	☐	☐

ZUR ARBEIT DES LEHRERS

17. Wie viel Zeit brauchen Sie durchschnittlich pro Woche für: *Bitte auf eine volle Stundenzahl runden.*

1. Unterricht .... ☐ Stunden
2. Vor- und Nacharbeit am Arbeitsplatz .... ☐ Stunden
3. Vor- und Nacharbeit zu Hause .... ☐ Stunden
4. Beratung von Schülern .... ☐ Stunden
5. Vorbereiten von Schüleraktivitäten .... ☐ Stunden

6. Elternkontakt .... ☐ Stunden
7. Weiterbildung und Fachlektüre .... ☐ Stunden
8. Konferenzen und Vorbereitung auf Schulebene .... ☐ Stunden
9. Fachliche Zusammenarbeit .... ☐ Stunden
10. Zusammenarbeit mit Betrieben und Organisationen außerhalb der Schule . ☐ Stunden

18. Nach welchen Kriterien planen Sie meistens Ihren Unterricht?
Rangieren Sie die Kriterien von 1 bis 5.
1 ist das wichtigste Kriterium und
5 ist das unwichtigste Kriterium.

Schreiben Sie alle Zahlen in die rechten Spalten.
Dabei soll jede Zahl nur einmal vergeben werden.

1. Fachlehrplan .... ☐
2. Beurteilungskriterien .... ☐
3. Prüfungen/Tests........................ ☐
4. Unterrichtsmaterial .... ☐
5. Unterrichtsmethoden................. ☐

19. Wer sollte Ihrer Meinung nach in der Zukunft <u>primär</u> bestimmen wie Schüler in der Schule erzogen werden sollen? *Bitte nur eine Antwort.*

Familie.. ☐1
Schule .... ☐2
Staat/Gesellschaft .... ☐3

VERANTWORTLICHKEIT UND LEHRPLAN

20. Für was werden Sie als Lehrerin/Lehrer verantwortlich gemacht?

Bei meiner Arbeit als Lehrerin/Lehrer habe ich Verantwortung dafür …

	Sehr einig 1	Teilweise einig 2	Sowohl als auch 3	Teilweise uneinig 4	Sehr uneinig 5
1. … dass der Unterricht in Einklang mit den Wertvorstellungen der Schule stattfindet	☐	☐	☐	☐	☐
2. … dass der Unterricht mit den beruflichen Ansprüchen des fachlichen Standards übereinstimmt	☐	☐	☐	☐	☐

D	A		5

	Sehr einig 1	Teilweise einig 2	Sowohl als auch 3	Teilweise uneinig 4	Sehr uneinig 5
3. … dass jeder einzelne Schüler ein angemessenes Unterrichtangebot bekommt	☐	☐	☐	☐	☐
4. … dass die Schüler zu guten Staatsbürgern im Einklang mit demokratischen Werten erzogen werden	☐	☐	☐	☐	☐
5. … dass die Schüler angesichts ihres Leistungsniveaus und ihrer Voraussetzungen so gut wie möglich abschneiden	☐	☐	☐	☐	☐
6. … dass die Schule bestmögliche Resultate bei öffentlichen Rankings erreicht	☐	☐	☐	☐	☐
7. … dass alle von meinen Vorgesetzten gefassten schul-politischen Beschlüsse ausgeführt werden	☐	☐	☐	☐	☐
8. … dass die Lernresultate der Schüler gegenüber meinen Vorgesetzten dokumentiert werden	☐	☐	☐	☐	☐

21. Bitte beantworten Sie folgende Fragen zum Lehrplan in Prozenten:

Bitte auf eine volle Prozentzahl runden.

1. In welchem Maße meinen Sie, dass Ihr Unterricht vom Lehrplan festgelegt sein sollte? .... |___|___| %
2. In welchem Grade wird Ihrer Meinung nach ein neuer Lehrplan von der existierenden Unterrichtspraxis aus bestimmt? .... |___|___| %
3. In welchem Maße werden Ihrer Meinung nach die Entwicklung von Lehrmitteln (Schulbücher etc.) vom Lehrplan bestimmt? ..... |___|___| %
4. Wieviel Spielraum sollte der Lehrplan den Lehrer geben den Inhalt ihres Unterrichts zu gestalten? .... |___|___| %

GENERELLES ÜBER INNOVATIONEN

22. Was wissen Sie über folgende Innovationen an Ihrer Schule?

	Gibt es 1	Gibt es nicht mehr 2	Hat es nie gegeben 3
1. Fächerübergreifender Unterricht	☐	☐	☐
2. Prosjektbasierter Unterricht/Projektunterricht	☐	☐	☐
3. Teamteaching (der Unterricht wird gemeinsam von zwei oder mehreren Lehrern vorbereitet, durchgeführt und ausgewertet)	☐	☐	☐
4. Führen eines virtuellen Tagebuches (z.B. Gebrauch von Weblogs)	☐	☐	☐
5. Gebrauch von fachspezifischer Programmware	☐	☐	☐
6. Gebrauch von IKT-basierter Kommunikation (z.B. e-mail, chat oder SMS)	☐	☐	☐
7. Leicht zugängliche Computerplätze für die Schüler	☐	☐	☐
8. Gebrauch von einem Learning Management System (LMS), ein Software-System als Lernplattform (z.B. Fronter)	☐	☐	☐
9. Zusammenarbeit mit anderen Schulen	☐	☐	☐
10. Internationale Zusammenarbeit	☐	☐	☐
11. Lerntagebuch schreiben	☐	☐	☐
12. Portfolio Bewertungen einsetzen	☐	☐	☐
13. Neue pädagogische Ausrichtung des Unterrichts	☐	☐	☐

23. Finden Sie diese Innovationen wichtig oder unwichtig im Bezug auf Ihren Unterricht?

	Wichtig 1	Unwichtig 2
1. Fächerübergreifender Unterricht	☐	☐
2. Prosjektbasierter Unterricht/Projektunterricht	☐	☐
3. Teamteaching (der Unterricht wird gemeinsam von zwei oder mehreren Lehrern vorbereitet, durchgeführt und ausgewertet)	☐	☐

Überprüfen Sie bitte, dass Sie alle Fragen auf dieser Seite beantwortet haben.

		Wichtig 1	Unwichtig 2
4.	Führen eines virtuellen Tagebuches (z.B. Gebrauch von Weblogs)	☐	☐
5.	Gebrauch von fachspezifischer Programmware	☐	☐
6.	Gebrauch von IKT-basierter Kommunikation (z.B. e-mail, chat oder SMS)	☐	☐
7.	Leicht zugängliche Computerplätze für die Schüler	☐	☐
8.	Gebrauch von einem Learning Management System (LMS), ein Software-System als Lernplattform (z.B. Fronter)	☐	☐
9.	Zusammenarbeit mit anderen Schulen	☐	☐
10.	Internationale Zusammenarbeit	☐	☐
11.	Lerntagebuch schreiben	☐	☐
12.	Portfolio Bewertungen einsetzen	☐	☐
13.	Neue pädagogische Ausrichtung des Unterrichts	☐	☐

24. Kennen Sie weitere Innovationen die im Laufe der letzten 5 Jahre
an Ihrer Schule versucht worden sind? *In Stichwörtern.*
Kreuzen Sie an, ob es die Innovationen noch gibt oder nicht.
Bitte GROßBUCHSTABEN verwenden, ein Buchstabe pro Feld.

	Gibt es immer noch 1	Gibt es nicht mehr 2
1.	☐	☐
2.	☐	☐
3.	☐	☐
4.	☐	☐
5.	☐	☐

DIE WICHTIGSTE INNOVATION AN IHRER SCHULE

25a. Was ist Ihrer Meinung nach die wichtigste Innovation der letzten 5 Jahre an Ihrer Schule
gewesen? Bitte geben Sie eine kurze Beschreibung.
Hier können Sie Ihre normale Handschrift benutzen. Bitte deutlich schreiben.

25b. Wer initiierte diese Innovation? Wer waren die Schlüsselpersonen? Wer war ebenfalls involviert?

25c. Welche Hilfsmittel, Methoden und/oder Technologien wurden benutzt?

KOMMENTARE

26. Was wäre für Sie eine wünschenwerte Innovation an Ihrer Schule?

27. Plant Ihre Schule etwas Neues einzuführen?

28. Haben Sie generelle Kommentare, oder Kommentare zu diesem Fragebogen?

D	A		8

Vielen Dank, dass Sie die Fragen beantwortet haben!