

# The administrative context of the Greenland primary and lower secondary school system - a governance system misaligned with learning

PhD dissertation

by

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## **Author's preface**

As I have experienced the Greenlandic education system at first hand, this dissertation is more than a strict academic curiosity, and rather an inquiry into questions, initiatives, relationships and places that have shaped not only my life, but the lives of my family, my classmates and community members. In many ways, the motivation behind this dissertation has been shaped through my experiences in the Greenlandic education system - and a wish to change things for the better. Coming from a home that speaks both Greenlandic and Danish, my way through the education system has been easier than most. Language is very much, perhaps more than ever, one of the most important factors when it comes to education - as to get an education in today's Greenland requires that you are able to speak at least one and preferably several languages besides Greenlandic.

An encounter that has left me with a big impression, and a strong desire to change things for the better, is that of a close friend of mine. Mattaaraq was the first in her family to graduate from high school. During the final month of exams, she studied the whole day, from morning until evening. Translating back and forth between Danish and Greenlandic as she prepared for an oral exam in history. She failed the exam, as she could not express herself sufficiently in Danish. I was troubled by the fact that Mattaaraq's attendance and motivation to learn were not sufficient to get her through an education system that was supposedly designed to be compatible with her mother tongue and culture.

Access to education is a crucial precondition to educational impact, but what matters most thereafter is the quality of education. In the context of Greenland, the access to education for those who cannot speak Danish at a sufficient level is severely limited. Culture and traditions also play a crucial part. What do we as a society value? Is there compliance, if not, is it because of a clash in values between Inuit and Western ways of being?

In Greenland, there is a large drop-out throughout the entire education system, which could serve as an indicator of the cultural transition process still going on and a mismatch between the general population's habitus and cultural capital, and the culture that dominates the education sector. Furthermore, it is important to understand that 'traditional education' still exists in Greenland and provides socialisation and the opportunity to

secure an economic basis for a large part of the population, who do not have a formal education or drop out early.

The notion of education is often lost as there is so explicit focus on formal education. Education is many things and cannot, in my opinion, be simplified into having a formal diploma that gives you access to certain jobs in the labour market. Ever since the introduction of Home Rule in 1979, education has been viewed as *the* solution to become more independent - both in terms of workforce and ultimately becoming an independent country. Education is also about language, common principals and cultural heritage. What type of education do we value as a society? Who is it benefitting? Ultimately, it is also a question of a sense of belonging. Is our education system culturally safe? Given the large drop-out numbers throughout the education system, one could talk about an escape from learning. If you cannot see yourself in school - then it is hard to belong. How can we make schools and learning meaningful for children? How do we create agency?

In various forums it is often asked what is needed to raise the level of education in Greenland. In my opinion, the question should rather be what is needed to lift the desire of learning and curiosity of children and students, and how to develop conditions for good learning environments. My motivation behind this dissertation is a desire to change the education system for the better, so that the administrative processes run with the child in the centre - as opposed to working 'for the sake of the system'. Throughout the dissertation I ask critical questions about why we do the things we do, what the purpose is and whether what we do is the best way to achieve our goals. I use the term 'we', as I consider myself as part of the broader system, and therefore feel I have an obligation and responsibility to do what I can to make things better. What is it that we adults need to do and are responsible for, if our children are not learning or thriving?

Sadly, there are many others like Mattaaraq - young Greenlanders with motivation to learn and get an education, but that have been failed by the system. There is a saying: '*in order to get where we want, we need to know where we are*'. What do we do to develop and improve learning conditions for our children? How do we articulate the problems? What are we focusing on? Are the problems something we can do something about? Are they simple, complicated or complex? What is the purpose, what are the challenges,

where do we want to go, what does it look like, how do we know if we are on the right path? Why do we measure the things we do and that way? What do we get out of measuring them? What is the data used for? For development? Are they used by primary users and practitioners?

I am well aware that my research touches upon something vulnerable and debatable - and with the particular perspectives I have used, I might focus on issues that others may think is less relevant. Parents are concerned with the well-being of their children; the teachers' union are concerned about the working conditions for teachers; politicians are concerned about the education level of the population in order to become economically self-sufficient and ultimately to become an independent nation. I could go on. In other words, education and governance is a field with many opinions and agendas. I can therefore overlook contexts or analyses that others would consider to be more relevant than what I have chosen to highlight in this dissertation. The view in which one sees the world is naturally shaped, not only by one's personal and relational experiences, but also by the theoretical and methodological views in which the research emerges. I have elaborated on this in detail in chapter 4.

Nuuk, January 2021.

*Mítlâarak Lennert*

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## **English summary**

Against the backdrop of the debates over the quality of the primary and lower secondary school in Greenland, this dissertation explores the following question: How does the current administrative context and legislation in the Greenlandic education system, focusing on the primary and lower secondary school, shape and structure the accountability relationships among principal actors?

To answer the research questions, I conducted an embedded case study to provide an in-depth analysis of the governance and management form of complex educational systems from a Greenlandic context. The empirical material in the dissertation was methodically generated through qualitative interviews with system-leaders and local practitioners, observed events and meetings and analysed relevant documentary material. An analytical framework, to analyse the interplay between governance form and the functions evaluations take, was developed in order to analyse and make sense of the data.

The dissertation is centred around four papers. Using approaches based on theories of complexity, governance, accountability and evaluation the research is covered in four component papers. The conclusion, based on the analyses and results identified in the different papers, is that the current Greenlandic governance form affects the accountability structure in the education system, the forms and functions evaluations take in such a way that activities are centred on process compliance and legitimisation of practice, and not on learning and improvement of quality. The conclusion is that the root causes of Greenland's low educational outcomes generally fall into one of two categories: a lack of accountability, and a lack of capacity. In other words, the systems that are set in place to secure quality education are not functioning due to a lack of follow-up.

There is a general discourse that the quality of education in the primary and lower secondary school is too low. And the education level of the population is too low - compared to e.g., the Nordic countries. Because different actors have different goals in the process, and hence different perceptions of what a good education system and quality is, it is important to be aware of the concept of quality, how it is defined, measured and manifested in the evaluation and monitoring processes of the education system.

Throughout this dissertation my objective has been to discuss whether systems, structures, processes, tools and practice are aligned for development or whether they run for the sake of the system without adding value. This dissertation questions the accountability system that is in place in the Greenlandic primary and lower secondary school system. The analyses point towards an accountability system and practice that is not compatible with the legislation. While the school legislation is child-and-learning-centred, the administrative processes are in contrast heavily focused on simple models, day-to-day operation and not on improvement of the education system. A lot of time and resources are spent collecting information that show that something is not right, as the results of the standardised tests remain low - however this information does not explain why. This combined with no systematic follow-up in relation to the information collected, results in what can be described as half a performance management system. In other words, an expensive and time-consuming practice and system, that adds little value in terms of school improvement.

The findings give insights on the administrative context and how the expectation that ‘one size fits all’ can be harmful, when the context is not considered. Paper I on coherence show the importance of cooperation and coordination between governance levels in terms of implementing and monitoring education reforms. Paper II on e-learning and iPads show that there is no quick technical fix to raise the quality of education, as the context matter to how the iPads can be used. If there is limited Wi-Fi connection, if the iPads are not brought to school or if the learning materials to be used with the iPads are not well developed, then the causal mechanism (technology) will not trigger to better education in that particular context. Paper III explores the context of a young nation where there is a need to build a nation by speaking Greenlandic in the classroom, and how this is important to how the level of education can be raised. If there is a shortage of teachers with the particular language skills, this is a contextual factor which is important to why mechanisms expected to create better education do not trigger in that particular context. Paper IV is yet another example; here performance-management is a script on how educational systems should be redirected in accordance with new public management. However, as policy and evaluation instruments are not used as intended, it again does not trigger the mechanisms that lead to better education.

The education system, based on the way information is collected and monitored, funding mechanisms, and how decisions are made, has a different purpose than the political purpose. The current system is coherent around other objectives, that do not produce a system in which universal attainment of high levels of learning becomes the driving force of key actors' (organisations and individuals) behaviours. Even though, politically it is an objective to provide quality education, the emerged objectives of the education system are coherent around an expansion of the education system and not on quality development schooling, and thus in a monitoring practice where there is little focus on content and quality, nor requirements or follow-ups. Improving quality is less visible, takes much longer time, and therefore perhaps carries less political cache than new classrooms and schools. The key constraint in the system therefore becomes the fact that accountability systems are more concerned with process compliance due to the typical management accountability, than it is with student learning. Processes that are not optimised for practices that, in some cases, end up directly counteracting the political aims and wishes.

Drawing parallels between the Greenlandic case and education governance research beyond Greenland, the component studies reveal strong convergence between challenges as experienced in Greenland and in other countries in general. Many reforms and policy instruments are adopted more or less uncritically across countries. This dissertation shows how policy and evaluation instruments, due to contextual and local factors, are not used as intended, as context shapes (evaluation) culture and conditions for development. Local opportunities in terms of capacity, motivation, culture, prioritisation, and knowledge are crucial for whether evaluation tools are used as intended. It is time to question the way things are done. What was the purpose, what did we end up with? Who is the system benefitting?

The findings also illustrate what seems to be a historical lack of coordination in connection with the implementation processes in respect to educational reform, where there has been no tradition of extensive cooperation and planning across municipalities and central government, or a solid tradition for monitoring and conducting utilisation focused evaluations.

This dissertation shows how education governance is complex, as there are many actors and agendas. The research argues that implementing education policies in general, and specifically 1:1 iPad learning in all primary and secondary schools in a whole country is a complex system change, and therefore demands a corresponding implementation, evaluation and monitoring approach.

The gap between the government's aims and the realities facing most Greenlanders is apparent. Given the set of infrastructural conditions, political economy, and local contexts, it is debatable to what extent the approach used in Greenland is right. The identified governance gaps point to a system where there is a perpetual state of process compliance and reaction, instead of action towards development. While policies were arguably made with the best of intentions, it happened in the absence of a strategic architecture that could have enabled key stakeholders to better plan for and respond to the challenges these policies would bring about, as school administrators admit to not have changed planning strategies to accommodate the change from the 1997 to the 2002 law (Demant-Poort, 2016, p. 182). Thus, in Greenland today, many children and families, especially those who live in smaller settlements and only speak Greenlandic, find themselves in an unenviable position: on paper included in the country's development project vis-a'-vis the education system, but in practice excluded from meaningful opportunity given the poor quality of that system.

The conclusion of this dissertation challenges the future regulation of the primary and lower secondary school system in Greenland. There is therefore a call for a debate about what the balance of hierarchical and horizontal institutional arrangements in terms of public provision of primary and lower secondary school in Greenland should be. In relation to this, the future structure of an accountability system should be discussed, in terms of what it is expected to fulfil, and to consider if it is possible to be effective under the current structures, which are to frame the regulation and practice of the school.

## **Eqikkaaneq (Summary in Greenlandic)**

Kalaallit Nunaanni meeqqat atuarfiata pitsaassusaata oqallisigineqartarnera tunaqqutartalugu una PhD-liaq apeqqut una misissorpaa: Kalaallit Nunaanni ilinniartitaanerup iluani, meeqqat atuarfiat sammillugu, ingerlatsinermit pissutsit inatsisillu qanoq soqutigisaqatigiit pingaarnerit akornanni nakkutilliinermi attaveqatigiinnerit ilusilersorpaat?

Ilisimatusarninni apeqqusiakka akiniarlugit piviusumiik paasissutissanik katersuisimavunga ilinniartitaanerup iluani ingerlatsinermit aqutsinermilu Kalaallit Nunaat aallavigalugu itisilerlugu misissorumallugu. PhD-liami paasissutissat katersorneqarput Naalakkersuisoqarfinni, kommunini, atuarfinnilu aqutsisut ilinniartitsisullu apersorneqarnerini; ataatsimiinnerit isumasioqatigiinnerillu peqataaffiginerini; aammalu inatsisit, nalunaarusiat pilersaarussiallu misissoqqissaarnerini. Misissuinermit najoqqutassiaq ineri-sarnikuuara, ingerlatsinermit pissutsit nalilersuisarnerillu atorineqartarneri qanoq ataqatigiinnersut misissorumallugit.

Allaaserisat sisamat PhD-liami tunngavigineqarput. Misissueriaatsit kompleksitetsteori, ingerlatsinermit, nakkutilliinermut nalilersuieriaatsinullu tunngavigalugit misissuineq allaaserisani sisamani saqqummiunneqarput. Inerniliusseq, allaaserisani misissuinermit inernerit tunngavigalugit, tassaavoq Kalaallit Nunaanni ingerlatsinerup ilusilersorneqarnera ilinniartitaanerup iluani nakkutilliinermut sunniuteqartartoq, qanoq nalilersuisoqartarneranut, imak suleriaaseqartoqalerluni ingerlatsinermit naammassiniaanermik, pitsaassutsimik ineriartortitsinngitsumik periuseqartoqarlersimalluni. Inerniliusseq imaappoq Kalaallit Nunaanni ilinniartitaanerup iluani angusat appasinnerinut pingaarnertut tunngaviusut tassaasut: nakkutilleeriaaseq taavalu piginnaasanik sulisoqarnermillu amigaaqartarnerit. Oqaatsit allat atorlugit, aqqissuussinerit ingerlatseriaatsillu pitsaassutsimik qulakkeerinnittussat siunertaminnut ingerlanngillat malittarineqarnatillu.

Oqallinnermit naliginnaavoq meeqqat atuarfiata pitsaassusaa angusarineqartartullu appasippallaartutut nalilersorneqartarneri. Kalaallit Nunaannilu ilinniartitaaneq Nunanut Avannarlernut sanilliunnerinut, appasippallaartoq. Soqutigisaqatigiit assigiinngitsunik anguniagaqartarmata, taamaasillutillu atuarfik pitsaasoq pitsaassuserlu qanoq isikkoqarneranik assigiinngitsunik isiginnittariaaseqarlutillu paasinnittariaaseqartarlutik, pingaaruteqarpoq pitsaassuseq qanorpiaq nassuiarneqartarnerisooq, uuttorneqartarnerisooq qanorlu

ilinniartitaanerup iluani nalilersuisarnermi nakkutilliisarnermilu isikkoqartarnersoq ersarissumik ilisimaarinnissaa.

PhD-lianni anguniagarisimavara ingerlatsinermi, suleriaatsini, ilusilersuinermilu sakkut sulisaaserlu ineriartortitsinermit imaluunniit ingerlatsinermi naammassiniaanermit tunngaveqarnerisut misissussallugit oqallisigalugillu. PhD-liap Kalaallit Nunaanni meeqqat atuarfianni nakkutilleeriaaseq apeqquserpaa. Misissuinerit nakkutilleeriaaseq sulisaaserlu inatsimmut naapertuutinngitsut tikkuussipput. Meeqqat atuarfianni inatsik imak nipeqarpoq meeraq ilinniarnertu qitiutillugit ingerlatsisoqassasoq, ingerlatsinerмили sulisaaseq illua tungianik pisariitsunik ullormiik ullormut tunngaveqartunik pingaartitsivoq, taamaasillunilu meeqqat atuarfiata pitsanngorsarnissaanut ingerlatsisoqarnani. Piffissaq aningaasallu annertuut atorveqartarput paasissutissat katersorneqarnerini pissusissami-soortumik ingerlasoqannginneranik takussutissiisunik. Meeqqammi atuarfianni angusat appasipput, kisianni paasissutissat taakkua takutinngilaat sooq appasinnerisut. Tamanna paasissutissat katersorneqartartut aallaavigalugit malittarinnittoqartannginnera ataqatigalu inernerivaa ingerlatseriaaseq affaannakumik ingerlasutut taaneqarsinnaaneranik. Oqaatsit allat atorlugit, ingerlatseriaaseq suleriaaserlu akisooq piffissamillu annertuumik atuisoq atuarfinni pitsaassutsimut ineriartortitsinermit iluaqutaan-ngitsoq.

Inerniliussat takutippaat ingerlatsinermi pissutsit taavalu iliuuseq periuuserluunniit ataaseq tamanut atuussinnaanissaanut ilimasuttarneq piffinni ataasiakkaani pissutsit periarfissallu eqqarsaatigineqanngikkaangata ajoqutaasarsinnaasoq. Allaaseriaq I takutippaa qanoq ingerlatsiviit assigiinngitsut (Naalakkersuisoqarfiit, kommunit, atuarfiillu) akornanni suleqatigiinnissaq ataqatigiissaarinissarlu aqqiissuuseqqinnerit atuutsinnerneqarnerini nakkutigineqarneranilu pingaaruteqartiginera. Allaaseriaq II iPad-inik atuutsitsilernimik sammisalik takutippaa sukkasuumik teknikkikkut aqqiineq atuartsininermit pitsaanagerusumut toqqaannartumik pilersitsinngitsoq, piffinni ataasiakkaani pissutsit iPad-it qanoq atorveqartarnerinik sunniuteqartarmata. Internet-ikkut attaveqaatit killeqarpata, iPad-it atuarfimmud nassarneqarneq ajorunik imaluunniit iPad-it atorlugit atuartsitsissutit naleqqut pigineqanngippata, atuartsininermit pitsaanagerusumut piffinni taakkunani iPad-it sunniuteqanngitsoortarput. Allaaseriaq III sammisarivaa Kalaallit Nunaat ineriartortinnerneqarnerani meeqqat atuarfianni kalaallisut ilinniartitaasinnaannissaq qanorlu ilinniartitaanerup qaffassarnissaanut pingaaruteqarnera. Kisiannili ilin-

niartitsisut kalaallisut ilinniartitsisinnaasut naammangippata piffinni ataasiakkaani tamanna ilinniartitaanermut pitsaanerusumut sunniuteqartanngillat. Allaaserisaq IV aamma takutippaa qanoq angusat aallaavigalugit aqutsineq nakkutilliinerillu siunertamigut, aqutseriaatsit nutaanerusut naapertorlugit, ilinniartitaanermut pitsaanerusumut aqutissisinnaasarnera. Kisiannili inatsisit nalilersueriaatsillu siunertamittut atorneqanngittarnerat pissutaalluni ilinniartitaanermut pitsaanerusumut sunniuteqanngitsoortarlutik.

Ilinniartitaanerup ingerlanneqarnera, paasissutissat katersorneqartartut nakkutigineqartartullu, qanorlu aningaasaliisoqartarnera aaliangiisoqartarneralu aallaavigalugit, politikikkut siunertamut naapertuutinngillat. Ilinniartitaanerup meeqqallu atuarfiata ingerlanneqarnerani anguniakkat aallaaviusut ilinniartitaanermik pitsaasumik pilersitsiniarnermi ingerlatsiviit soqutigisaqatigiillu akornanni pingaarnertut sulisitsinngillat. Politikikkut anguniarneqarneqaralarpoq ilinniartitaaneq pitsaasuussasoq. Taamaakkaluartorli ingerlatsinermi anguniakkat ilinniartitaanerup allisarneqarnissaanik aallaaveqarput, pitsaassutsimullu atassuseqarnatik. Imak paasillugu meeqqat atuarfianniik naammassinnittut toqqaannarlutik ilinniarfinnut ingerlaqqippata tamanna pitsaasutut isigineqarpoq. Taamaasilluni nakkutilliinermi meeqqat atuarfianni imarisat, pitsaassuseq, piumasaqaatit malitseqartarnerillu ukkatarineqaratik. Pitsaassuseq ineriartortinnissaa siviisarpoq, taamaasillunilu politikikkut anguniakkani ersernerlunnerusinnaasarluni assersuutigalugu atuarfinnik nutaanik sanaartornermiit. Ingerlatsinermi taamaasilluni killilersuinerpaanngorpoq nakkutilleeriaaseq ingerlatsinermik naammassiniaanermik pingaartitsinerusoq atuartut pitsaasumik atuartinneqarnissaanniik. Ingerlatsinermi periuousit piffimmi sulisaasinut tulluarsagaanngitsut, ilaannilu politikikkut anguniakkat akerlianik ingerlertarlutik.

Kalaallit Nunaanni ilinniartitaanermik ingerlatsinermi misissuineq takutippaa nunani allani unammillernartunut amerlasuutigut assingusut. Ilinniartitaanermi aqqissuusseqqittarnerit nakkutilleeriaatsillu apeqqusersorpallaarnagit tulluarsarnagillu nunat assigiinngitsut akornanni atuutsinneqalertarput. PhD-liap manna takutippaa nakkutilleeriaatsit nalilersueriaatsillu, piffimmi pissutsit aallaaviginagit, inatsimmi siunertarisat malinnagit atorneqartut. Piffinni ataasiakkaani periarfissat, piumassuseq, suleriaaseq, pingaarnersiortarneq ilisimasallu pingaaruteqarluinnarput nakkutilliinermi nalilersuisarnermilu siunertaq malillugu ingerlasoqassappat. Piffissanngorpoq meeqqat atuarfiata ingerlanneqar-

nera isornartorsiorneqarnissaanut. Suna siunertaralugu taamak ingerlatsisoqarpa? Suna anguneqarpa? Taamak ingerlatsinermi kikkunntu iluaqutaava?

Misissuinermi paasisat aamma takutippaat meeqqat atuarfianni aqqissuusseqqinnerit atuutsinniarneqartarnerini ataqatigiissarineq amigaataasarsimasoq. Ingerlatsiviit, naalakkersuisoqarfik, aqutsisoqarfik kommunillu akornanni annerusumik suleqatigiittarneq pilersaarusoqatigiittarneq naliginnaasimanngilaq. Aammalu nakkutilleeriaaseq nalilersueriaaserlu ineriartortitsinermit tunngavilik atorneqarnissaa sungiusimaneqanngitsoq.

PhD-liap manna aamma takutippaa ilinniartitaanermik ingerlatsineq imaannaanngitsuusoq, soqutigisaqatigiit anguniakkallu assigiinngitsut amerlammata. Misissuinerup takutippaa ilinniartitaanermi aqqissuusseqqinnerit atuutsinniarneqarneri imaannaanngitsuusoq, ingammillu assersuutigalugu *Kivitsisa* iPad-inik atuarfinni nuna tamakkerlugu atuutsinneqalernissaa imaannaanngeqisoq, taamaammallu pisariaqartoq anguniakkat eqquutsinniarneqarnerini, nalilersorneqarnerini nakkutigineqarnerinilu tulluarsakkamik ingerlatsisoqartariaqartoq.

Naalakkersuisut ilinniartitaanermut anguniagaat piviusorlu inuiaqatigiit atugarisaat ataqatigiinnginnerat ersarippoq. Kalaallit Nunaanni pissutsit eqqarsaatigalugit eqqartorneqarsinnaavoq ingerlatseriaaseq eqqortoq atorneqarnerisq. Misissuinerup takutippaa ingerlatsinermi sulisaasit imak ingerlasut ullormiik ullormut sulianik naammassiniaaneq qitiutillugu ingerlasut, taamaasillunilu ineriartortitsinissamut suliniuteqarneq killeqarluni. Aqqissuusseqqinnerit siunertagikkaluarlutik pilersaarusiugaanerat atuarfiit pisortaannik ilinniartitsisunillu naammagineqarsimanngitsoq misissuinerup takutippaa (Demant-Poort, 2016, p. 182), taamaasillutik meeqqat atuarfianni soqutigisaqatigiit Atuarfitalak eqqunneqarmat allannguutit piviusunngortinnissaannut unammilligassat pilersaarusiornissaannut periarfissaqarpiarsimanngillat. Taamaasilluni Kalaallit Nunaanni meeqqat ilaqutariillu amerlasuut, ingammik nunaqarfinni illoqarfinnilu mikinerni najugaqartut, kalaallisuinnarlu oqaaseqartut imak inissinneqarput: pappiaqqatigut Kalaallit Nunaanni ineriartortitsiniaanermi ilinniartitaanermi peqataatinneqarlutik, kisianni piviusumi periarfissarititaasut annikitsuaraallutik ilinniartitaanerup pitsaassusaata appasinnera pequtaalluni.

PhD-liap inerniliussaa Kalaallit Nunaanni meeqqat atuarfiani nakkutilleeriaaseq isornartorsiorpaa. Taamaammat pisariaqarpoq oqallisigineqarnissaa meeqqat atuarfiata ingerlanneqarnerani ingerlatsiviit soqutigisaqatigiilu assigiinngitsut akornanni ataqatigiissarineq qanoq pisassanersoq siuarsaanissaq ineriartortitsinissarlu anguniarneqarnerani. Tassunga atatillugu aamma nakkutilliisarnerup ilusissaa aamma oqallisigineqartariqarpoq, suna siunertarineqassanersoq, aammalu maannakkut nakkutilleeriaatsit ilusaata iluani pisinnaanersoq.

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# **PART I: INTRODUCTION AND OVERVIEW OF THE DISSERTATION**

## **Chapter 1: Introduction**

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### **1.1 Background of the problem**

Much hope is pinned on education in general to yield enhanced productivity, economic growth, social development and poverty reduction. However, for education to deliver on these expectations, it must be of sufficient quantity and quality to lead to meaningful learning among young people, a task known to pose considerable challenges globally. Reform is not new to education; despite well-intended outcomes of reform efforts, top down implementation dictated by people outside of education, has in many countries had limited impact, as a key challenge for countries is assuring alignment and consistency in governance approaches to guide their entire systems towards improving outcomes (Mourshed, Chijioke, & Barber, 2010; OECD, 2015).

While the education level within the population of Greenland is increasing<sup>1</sup>, 62 % of the workforce still have no education beyond primary and lower secondary school (Statistics Greenland, 2018). An analysis of the 2014 cohort's transition from primary to secondary education, four years after finishing Grade 10 shows that 59 % had either interrupted or not started an education (Greenland Statistics 2020; UDXTRFA1). Statistics further show that 32 % of the age group 16 – 25 in 2018 were neither in employment nor education (Greenland Statistics, 2020), meaning that a considerable part of the eligible workforce was not active. The difference in countries' levels of prosperity is related to differences in the dimensions of prosperity, often measured in skill and diligence, and prosperous economies often score high on both (Greenland Economic Council, 2017). A higher level of education is therefore a central starting point for higher prosperity in society and for financing of a welfare society like the one in Greenland (Greenland Economic Council, 2017; Greenland Ministry of Education, 2019; The Greenland Tax and Welfare Commission, 2011).

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<sup>1</sup> Looking at the population over 16 years, a development of approximately six percentage points over the past ten years.

Public discourse around the Greenlandic public primary and lower secondary school over the past 15 - 20 years has been very negative (N. Hansen, 2016; KNR, 2006, 2007; Kristensen, 2011; Kruse, 2015). The primary and lower secondary school is central to the Greenlandic society and the country's development. The vast majority have been through a primary and lower secondary education, meaning that the general debate is grounded in what can be called public knowledge, resulting in many opinions and aspirations on behalf of the school; politicians, trade unions, businesses, administrations, school leaders, teachers, parents and children; everyone has opinions about how the school works and performs; and about how the school does not work and does not perform.

The education system has a large number of important tasks in addition to providing students with professional knowledge and skills that have value for the rest of the education system and the labour market. The primary school - together with the family - helps to ensure that the common principles, values and the cultural heritage on which society is based are passed on to future generations. Society not only has a great interest in education but is also a significant player in the field both in terms of organisation, provision and financing of education. It is important to ensure that everyone has as equal an opportunity as possible when it comes to getting an education. Education is a core task for a welfare society, which is reflected in the fact that in terms of resources, education accounts for 18 % of the total public budgets in Greenland (Public Finance, Statistics Greenland 2020). However, more economic resources to the area of education will not in itself solve the challenges (Greenland Economic Council, 2017). The public sector / welfare state administers a considerable number of economic resources, and it is therefore important to continuously consider the following questions: are the resources spent on the right tasks? Is this effective in achieving the educational goals of Greenland?

In many ways, the motivation behind this dissertation has been shaped through my own experiences in the Greenlandic education system and led to a desire to explore the circumstances of the Greenlandic primary and lower secondary schools (Grades 1 - 10, ages 6 - 16), a municipal school, divided into three stages. Ever since the former Greenland Home Rule assumed the responsibility of education in 1980, parents, teachers, and politicians have discussed the organisation, cultural foundation and performance of the primary and lower secondary school (Lennert, 2014). The quality of education in the

primary and lower secondary school is a recurring theme in both media and political debates. Politically, education has over the years been viewed as the key to independence (Mølgaard, 1996; Motzfeldt, 2002; Turnowsky, 2017, 2018). The fact that the primary and lower secondary school has been unable to live up to the ambition of society and politicians, has left many with the question, as to why after three decades and billions of funds the education system is still struggling to provide quality education. There is a general discourse that the quality of education in the primary and lower secondary school is poor, and how the education level of the Greenlandic population is too low - compared to the Nordic countries.

The challenges of the primary and lower secondary school system, and the need for reform, is often debated in *Inatsisartut*, the parliament of Greenland. Since 1980, there have been four major education reforms (Lennert, 2015). In recent years, the parliament debates have been criticised by IMAK, the Teacher's Union in Greenland, for not going into detail and suggesting specific solutions when it comes to education reform and improvement (Sermitsiaq.AG, 2018). Likewise, Greenland's Economic Council has stated that multiple cohorts will be lost as the necessary reform is absent and cannot be adopted before 2020 or 2021 (Schultz-Nielsen, 2017).

The purpose of the 2002 *Atuarfitsialak*-reform was to improve primary and lower secondary school education. The teaching method was changed, as it departed from the traditional hourly teaching, which was based on one classroom, one teacher and one lesson, and towards a more project-oriented teaching method with the individual student at the centre (Greenland Parliament Debates, Agenda 29, 2002). The 2002 *Atuarfitsialak*-reform<sup>2</sup> fundamentally changed the way the teachers had evaluated earlier. Students should not only be involved in the goal setting and planning work on their own learning and schooling, but they should also be key players in assessing and evaluating their own learning, development and performance (Inerisaavik, 2009). Testing and evaluation based on learning outcomes is very new in the Greenlandic school culture. Key elements of the school reform introduced new principles for the students' learning and teaching, tools for planning and assessing the teaching, such as learning objectives, action plans, and

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<sup>2</sup> A full background and history on the 2002 reform, the cultural compatibleness, how support was sought and the initial implementation efforts can be read in Wyatt (Wyatt, 2012).

assessment of educational achievements. The first and only external evaluation (Brochmann, 2015) of the 2002 *Atuarfitsialak* reform was published in March 2015. The main conclusion of the external evaluation was that the weak academic achievements of the primary and lower secondary school in recent years were not due to the content of the legislation but on the lack of implementation and capacity in the municipalities. The research problem requires a research design that can provide nuanced knowledge derived from practice, while critically challenging and reflecting both practice and theory. Against this background, this dissertation is based on an iterative and abductive process, where the analytical framework has evolved through the course of the project.

From a professional perspective, with the current discourse and results surrounding the Greenlandic schools, it is safe to say that the current system does not work. With only 29 % of Greenlandic youth between the ages of 16 and 25 active in education (Statistics Greenland, 2020), one can say that there is a flight from education. The question is not how we raise the education level, but rather how to raise the curiosity and desire to learn among our kids, and the conditions for good learning environments. In complex systems there will always be equifinality and multifinality; the quality and improvement of quality in the primary and lower secondary school therefore depends on many factors and actors. In this dissertation I propose that one of the many ways to lift that task is with a proper administrative apparatus and the right evaluation tools.

This dissertation aims to examine the Greenlandic administrative and governance systems with a focus on the management chain between the administration levels in the education system; the self-government, and the municipalities that administer the primary and lower secondary schools<sup>3</sup>, concentrating on the nature of policy and evaluation tools. How can municipalities ensure that all students receive an education according to the framework set by the Ministry of Education? And, from the opposite perspective, what can the Ministry of Education do when there are problems in schools? Education reforms can only be effective if legislation and content are actually implemented. To achieve this, according to the OECD (2015:20), a coherent framework must be in place, with sufficient capacity to implement and interpret information and evaluations at all levels of the

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<sup>3</sup> In Greenland this is one unit.

education system. In other words, management and information flow in a complex education system are mutually dependent on each other. This dissertation sets up the argument that, in order to eventually improve the governance of education, it is necessary to analyse and describe the national and local administrative and political context, by mapping the cooperation and coordination of governments, policymakers and practitioners - and ultimately how these factors in combination affect the conditions for which education policy reforms and instruments are to perform under. For this reason, this dissertation draws on a political sociology approach. The theoretical landscape in which this is situated is rooted in different subfields, although mainly within governance and evaluation studies which is reviewed in detail in chapter 2.

The administrative systems, and more specifically the political and institutional settings in which reforms and instruments are embedded, have implications for the adoption and implementation processes of said reforms and policy instruments. Well-intentioned narrow reforms, such as higher teacher pay, improving inputs, and teacher autonomy that are implemented in ineffective systems may not be successful unless fundamental features are addressed (Watkins & Kaler, 2016). These features include the degree to which actors in local hierarchies of power support the reform; their willingness to implement; their capability for complex coordination of bureaucracies across systems, from the ministerial to the school level, and the ability of the state to exercise effective control over policy implementation. A positive example of overcoming these fundamental features is the Learning-As-You-Go approach in Ontario (Kuji-Shikatani, Gallagher, & Franz, 2016), where the interrelationships in the education system mean that classrooms, schools, districts and the ministry all need to work together as decisions and actions influence each other and the system as a whole. To ensure that initiatives are coherent and adapted in context, while maintaining their relevance, this requires partnership and cooperation from across the sector. The Ministry and its partners therefore benefit from a strong foundation in collaborative decision-making, which is informed by data (Ontario Ministry of Education, 2014).

A political sociology approach is contextually grounded, in the sense that it is compatible with historical institutional premises on the role of institutions in the mediation of global forces and agendas, but also in the sense that it provides actors operating at different

scales with voice and agency in understanding policy adoption. Using a political sociology approach to policy instruments, emphasises that meaning-making processes importantly interact with political, institutional and economic factors in the production of policies. This dissertation draws from this perspective and examines the administrative efforts to improve the quality of education in Greenland. While there are potentially many explanations, this dissertation explores how the structure of the administrative and governance systems, are affected by context, to discuss aspects that policy makers and implementers of reform will need to consider, if reform efforts are to successfully improve universal learning outcomes and ultimately the education level of the Greenlandic population.

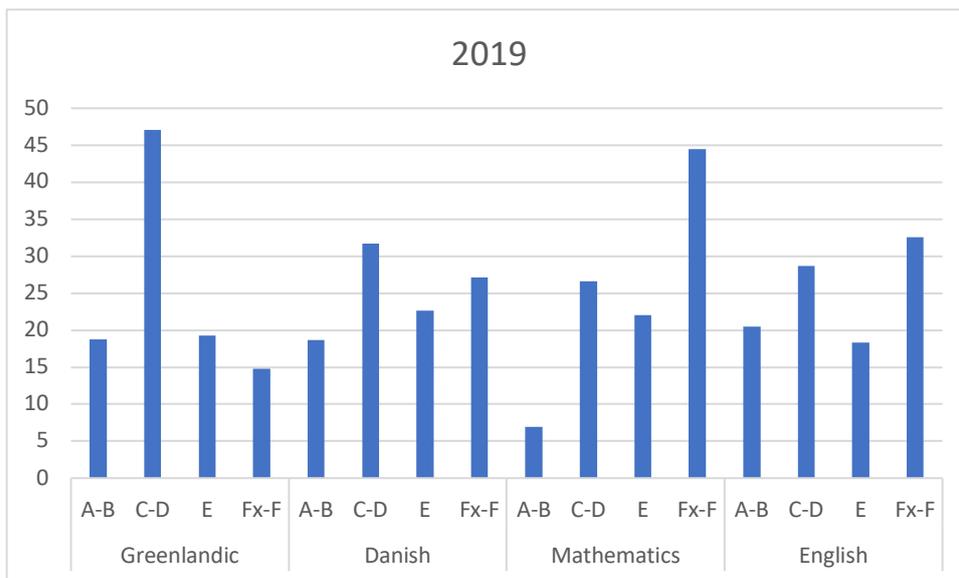
### **1.1.2 Statement of the problem**

#### **The importance of the quality of the primary and lower secondary school**

The structure, framework and quality of the primary and lower secondary school is important on an individual and a societal level. Partly because a large part of the Greenlandic population has the primary and lower secondary school leaving examination as the highest level of education, and partly because the primary and lower secondary school functions as a sorting mechanism for the qualifying educations (upper secondary education). On the societal level, the primary and lower secondary school is central for the development of the country, as the foundation for all further education is laid here and thus has implications for the overall level of education in Greenland. It is also where language, culture and history are taught and is therefore an important institution for the continuation and survival of societal values.

Figure 1 below shows the 2019 national grade distribution in the written final exams (Grade 10) in the four major subjects: Greenlandic, Danish, Mathematics and English. These subjects are major requirements for continuing in the education system.

Figure 1. Grade distribution in the written final exams in the four main subjects



Source: Statistics Greenland

The challenge becomes the gap between the primary school and further education, as too many finish Grade 10 without having the qualifications to continue directly in the education system. According to Statistics Greenland (2020), only 29 % of Greenland’s youth between the ages of 16 and 25 were active in education<sup>4</sup> at the end of 2018. 39 % were in employment, while 32 % were neither active in the education system nor employed. The problem is then how to raise the quality of the primary and lower secondary school in order to best prepare the students for what comes next.

### **Administration and education governance as a ‘system’s problem’**

Education systems as a whole are embedded in politically determined governance structures, policy processes, evaluation paradigms which in turn influence practice and possibilities of development in a myriad of ways. It has become more accepted (in line with the evolution of research from simple linear assumptions, to look at the world as complex, dynamic and non-linear) that the various parts of the policy process cannot be separated - they are interconnected. A system’s approach considers the interactions between the parts of an education system; in doing so, it seeks to understand how they work together to drive system outcomes, instead of focusing on specific elements in isolation (Bowman, Chettleborough, Jeans, Rowlands, & Whitehead, 2015).

<sup>4</sup> Education is classified as: boarding school, high school, vocational education or higher education.

By looking beyond the individual parts of the policy processes and identifying underlying factors, there is a better chance to develop policies that are able to tackle the deeper causes of poor performance; as some poor performance is driven not only by a teacher's individual capacity, but by the organisational and societal setting - incentives, accountability mechanisms, power relations - in which public school teachers operate, thereby implying that the system in part defines the teacher (e.g. Giddens' theory of structuration (Giddens, 1984)). Demant-Poort (2016) documented through a PhD project that Greenlandic schools more often prioritise that teaching hours and teaching subjects are allocated to the individual teacher based on administration and timetable considerations, rather than using teachers' competencies to teach what they are trained to teach. In doing so, processes for an effective organisation and administration are prioritised over the quality of learning.

PISA, and other standardised tests, have meant that education has become a competitive parameter among nations and can be quantified and ranked (Addey, Sellar, Steiner-Khamsi, Lingard, & Verger, 2017). Yet, while the debates over results are important, they have taught us surprisingly little about the limitations of systems that rely too much on hierarchical accountability mechanisms and bureaucratic procedures, how these mechanisms actually come to influence classroom practice, and what role both local and broader organisational contexts play in this matter. If the underlying causes of failure are not addressed, well intentioned reform efforts can fail (The World Bank, 2004; World Bank, 2018). According to Levy, Cameron, Hoadley, & Naidoo (2018) underlying causes are shortfalls in the effectiveness with which the human, financial, and physical resources available for educating children are used effectively. This leads to a consideration of governance, and its political determinants. When it comes to the effective delivery of those services, a growing body of research has strongly argued that politics matter - that incentives, individuals and institutions are inextricably linked to the successes and / or failures of development efforts (Andrews, 2013; S. Hickey, Sen, & Bukenya, 2015; Levy et al., 2018; Pritchett, 2018; Watkins & Kaler, 2016).

Fullan and Quinn (2016) define *coherence making* in education as a continuous process of making and remaking meaning in your own mind and in your culture, resulting in consistency and specificity and clarity of action across schools and across governance

levels, as a way to create consistency and alignment. On paper, education reform or adopting technology to support student learning and teacher needs is not terribly complex, once the task is defined and the right tools are identified. However, education reform can only be effective if policies are well implemented. On one end, implementation depends largely on the capacity and the resources at the local level to fulfil the reform objectives and put them into practice. On the other end, to support the process and the adoption of education technology, there must be a coherent framework in place, with sufficient capacity for conducting and interpreting evaluations at all levels of the education system (OECD, 2015:20), to monitor progress and intervene when necessary.

According to The World Bank (2018:175), the need for coherence between different parts of an education system makes it risky to borrow from other countries. An example is Finland, where well-educated teachers are given considerable autonomy, so they are able to tailor their teaching to the needs of their students. But lower-performing systems that simply try to transfer Finland's teacher autonomy into their own contexts, are likely to be disappointed - because if teachers are poorly prepared, unmotivated, and loosely managed, then giving them greater autonomy will likely compound the problem (World Bank, 2018). This has been the case in Greenland, when a curriculum approach was adopted that set objectives centrally but left implementation up to schools and teachers. The approach failed in many schools, in part because it proved to be a poor fit for the capacity of teachers and the resources they had at their disposal (Brochmann, 2015). This example illustrates why coherence between different system elements and the development of homegrown solutions are so important.

The above reform efforts are an example of how global and local trends are in interaction (even in the absence of international large-scale assessments (ILSAs)).

### **1.1.3 Research puzzle and questions**

For interpretive researchers, the 'question' is more commonly a topic, a puzzle, or a tension that draws their attention - often because of some prior, possibly experiential knowledge that informs their curiosity and suggests that this is an area worthy of research attention (Schwartz-Shea & Yanow, 2012). This dissertation has been guided by the following general research puzzle:

This dissertation is focused on how the administrative context affects how reforms are implemented, put into practice and ultimately how it affects educational outcomes. In other words, an inquiry into the concept of quality, systemic connections and underlying causes in the way the Greenlandic education governance system has been designed. It is thus not only the perspectives of individual actors, but the administrative conditions for the development of the education system that is interesting. While the puzzle has remained, the working research questions have been dynamic and evolved as I have gained more knowledge during the research process, informed both from the fieldwork and literature. This process is described in detail in chapters 3 and 4. The themes for the analysis have thus arisen in a continuous interaction between existing literature in the field, my background knowledge, the theoretical perspectives that have formed the basis for the collection of the empirical data, the conversations and the conduct of interviews and later reading and analysis of the transcribed interviews and observation notes.

The research question aims to examine the role of context in terms of how evaluative instruments are implemented in the primary and lower secondary school system. It does so within the context of the current governance and monitoring system set up by the 2002 Atuarfitsialak Education Act and by addressing the following overall research question:

*“How does the current Greenlandic administrative context, focusing on the primary and lower secondary school, shape and structure the accountability relationships among principal actors<sup>5</sup> in the quest to raise the overall education level of the population?”*

This question encompasses various topics and dimensions at different levels, which requires the formulation of sub-questions, in order to make the object of research more operational. As administrative context is a broad term, the sub-questions also serve to pinpoint the particular areas of administrative practice I am interested in. I have thus created four sub-questions; all four sub-questions are interlinked; to create development and evaluate, (1) one must first set policy objectives; (2) for successful implementation these objectives must be operationalised into shared action between principal actors; (3)

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<sup>5</sup> Principal actors in this dissertation are defined as the Ministry of Education, Agency of Education, municipalities, IMAK (Teachers’ Union), school principals, teachers.

this shared action must then be monitored to see if policy objectives are met; (4) evaluations are only useful if they are used for their intended purpose. Following this, the analysis is guided by the following sub-questions, which are addressed in the scientific articles presented in this dissertation<sup>6</sup>:

- (1) *What are the education policy goals and practices in Greenland?*
- (2) *What are the theories of actions and change among the principal actors, and are they coherent?*
- (3) *What quality inscriptions and infrastructure are used in education policy monitoring and making?*
- (4) *Are evaluation policy instruments used the way they were designed?*

Some brief definitions and reflections are in order; to clarify the *administrative context* I use the term political economies as defined by (Leftwich, 2006, p. 10) as “*all the activities of cooperation, conflict and negotiation involved in decisions about the use, production and distribution of resources*”. In its simplest form, Leftwich’s scheme distinguish actors (organisations or individuals) pursuing interests from institutions (which define rules of the game) and structural features of the environment (e.g., natural and human resources, economic, social, cultural and ideological systems). These actors, based on the forms of accountability system in use and political context, are then involved in different types of accountability relationships. Within this, I further focus on how *quality inscription* and *infrastructure*, as defined by Dahler-Larsen (2019:19), being (1) a documentation of quality, usually in the form of quantification, (2) the network of documents, computers, reporting mechanisms, experts and so on that make quality inscriptions possible, are used to legitimise status quo and practice.

This dissertation uses an embedded single-case study approach to answer the research questions set forth above. Qualitative data were generated from semi-structured interviews with administrative leaders, school principals and teachers.

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<sup>6</sup> Figure 8 in section 3.1 illustrates the connections between the research questions, theories and articles.

#### **1.1.4 Context for this study: The administrative context of the Greenlandic school: legal frameworks, structure and governance**

A number of features of the institutional arrangements put in place by the 1997 Greenland School Act are especially relevant for the present research. First, responsibility for policymaking, for resourcing the system, and for setting the overall regulatory framework was retained at the national level, while the responsibility of the daily operation of the schools was given to the municipalities and schools.

The primary and lower secondary schools are a municipal responsibility, and neither the Agency for Education (a subdivision under the Ministry of Education) or the Ministry of Education have any enforcement authority. Inatsisartut (the Greenlandic Parliament) sets the legal and governance framework for the primary and lower secondary school, while the detailed provisions are laid down by *Naalakkersuisut* (the Greenlandic Government). In the municipalities, the municipal council determines the goals and frameworks for schools' activities with by-laws. At each school, there are school boards, which - within the goals and limits set by the municipal council - lay down principles for activities of the school. The administrative and pedagogical management of the municipal school system is regulated locally by the individual municipality.

The educational system is like in many other countries, characterised by a decentralised multi-level governance system (Burns & Köster, 2016; Dozois, Langlois, & Blanchet-Cohen, 2010; Wilkoszewski & Sundby, 2014). This decentralisation has contributed to the fact that more decision-makers and more stakeholders have become more involved in primary and lower secondary schools. The many layers of administration make relationships complex, as the responsibility for a good primary and lower secondary school is shared between decision makers across the governance system. This leads me to the use of complexity theory as an overarching lense (elaborated in section 2.1.2).

The central level is required by law to carry out evaluations, collect and disseminate knowledge in order to strengthen the efforts of the municipal council in the field of primary school and lower secondary school to maximise resource utilisation. Table 1 below illustrates the supervisory obligations between governance levels as stated in the Greenland Primary and Lower Secondary School Act (2017).

Table 1. Supervisory obligations between governance levels

<b>Central level</b> (Ministry and Agency of Education)	<b>Regional level</b> (municipal administration and board)	<b>Local level</b> (school board, consisting of parent representatives)
<p>§ 37. The Greenlandic Government supervises the municipality administration of this Act.</p> <p>Sub-section 2. The Greenlandic Government may require municipal information deemed necessary to carry out its duties under this Act.</p>	<p>§ 43. The municipality council has the overall responsibility for the municipal school and ensure that all children of school age in the municipality are enrolled in public school or receive an education commensurate with what is usually required in primary and lower secondary school. The municipal council sets goals and frameworks for the school's activities. The municipality council regularly supervises the activities of the schools, including in relation to the school's compliance with the provisions of the education act.</p>	<p>§ 47. The school board carries out its activities within the goals and framework set out by the municipality council and shall moreover supervise the activities of the school.</p>

Source: Greenlandic Primary and Lower Secondary School Act 2017, author's translation

A major prerequisite for the anticipated success of *Atuarfitsialak's* objectives was to significantly improve the physical frameworks of the schools, and more bilingual teachers to lift the task (Greenland Parliament Debates, Agenda 29, 2002).

After the preparatory phase of experience gathering, preparation of a status description, and a nationwide survey of students' wishes and attitudes towards the school, a conference was held in September 1999. The conference expressed a number of recommendations for further reform. The result was a proposal for a legislation, which for the first time in history included socio-cultural perspectives of education. As something completely new, a 10-year compulsory programme was laid out, divided into three clearly defined stages, each with description of purpose and educational profile (Greenlandic Primary and Lower Secondary School Act, 2002). The school was to be grounded in Greenlandic culture, values, traditions and facts, but also have an international outlook.

### **1.1.5 Importance of this dissertation**

Research on the governing of education systems and education reform has flourished in the past decade. A large part of this research is characterised by a focus on power dynamics aiming to analyse decision-making and implementation issues of reforms (discussed in more detail in chapter 2), as it is argued that a close review of all major stakeholders - teacher unions, businesses, NGOs, religious authorities, international development agencies, and others - is a crucial first step to understanding potential sources of opposition and support (Bruns, McDonald, & Schneider, 2019). While the literature largely focuses on power dynamics (Bruns et al., 2019; Sam Hickey & Hossain, 2019; Kingdon, Little, Moe, Parton, & Sharma, 2014; Levy et al., 2018), the literature on how the nature of the specific constraints and possibilities within the administrative context and how this affects the implementation processes of policies in the education sector is very sparse. First, there is a lot of focus on the political and power play between different advocacy groups, but hardly any surrounding the capacity and structure of governance systems. This is lamentable, as research has shown that even if the requisite autonomy exists, it may not be enough, as schools may choose not to exercise the provided authority or may lack the will and capacity to do so (E. M. King, Özler, & Rawlings, 1999). This dissertation explores this gap in the literature and differs from the outlined contributions by focusing on how the structure of the administrative context affects how policy and evaluation instruments are implemented.

The aim of this dissertation is to make an empirical contribution through evaluating how the education sector has been situated within the different administrative contexts in Greenland, what kinds of policy instruments have been initiated, which outcomes it has led to, and why. Drawing on experiences from different types of regional contexts to understand how geography, governance structure, and capacity shapes the practical elements of the policy, this dissertation aims to make an empirical contribution by understanding how the nature of the specific constraints and possibilities within the administrative context affects the implementation processes of policies in the education sector.

A broader goal of the research is to anchor specific empirical findings within a multilevel (national, regional, and school) analysis of how context, politics, institutions and governance interact. My ambition is to deepen our knowledge and understanding of how, when and why this does (not) happen, and how these processes and practices are influenced by both the local, regional and broader national context. I do this by approaching the issue from a systems thinking perspective and by employing qualitative-interpretive methods as defined by Yanow & Schwartz-Shea (2014).

### **1.1.6 Elaborated context for this dissertation**

The empirical setting for the study is Greenland's public primary and lower secondary school (grades 1 - 10, ages 6 - 16), a public school, divided into three stages, all of which must be completed with tests (standardised testing). The school system, which is one unit, has just about 7.500 students in 73 schools (2018) along the 4.700 kilometre habitable coastline. There is a geographical challenge in terms of attracting and retaining qualified teachers in the smaller towns and settlements.

Figure 2. Greenland



Greenland is a young nation that introduced Self-Government in 2009 and had had Home Rule since 1979. Before that, Greenland was a Danish colony from 1721 until 1953, where with the amendment of the Danish constitution, Greenland was recognised as an 'equal society with the Danish', and a county in the Danish kingdom from 1953-1979. Since the Home Rule Act assumed the responsibility of education, the education system

has undergone many changes. Education has been given high priority and features prominently into the government's social and economic development plans.

The rapid societal development that took place in the period between 1950 and the introduction of Home Rule Act in 1979 naturally brought discussions centring around the lack of formal education more and more to the forefront. It led to an awareness of the necessity to expand the reach of education if industrialisation in the country was to succeed (Mikkelsen, 1963, p. 453). Education had to be a priority if the fundamental business development objectives were to be achieved. Without significant investment in the education system, the projected increase in demand for skilled labour, both in the short and long term, could not be covered without a significant influx of foreign labour. Prior to the introduction of Home Rule, the Danish state had made significant investments in the Greenlandic education system. The introduction of the Home Rule led to further intensified efforts, where one of the fundamental objectives was to adapt the education system to fit the needs of the Greenlandic people. Despite the political attention and priority, education quality as measured by standardised testing and oral examinations remains low.

One of the fundamental objectives after the introduction of Home Rule was to adapt the educational systems to Greenlandic conditions and culture. The cultural and economic transformation during the 1950s throughout the introduction of Home Rule resulted in significant challenges in the attempt of adapting frameworks, content and context to the educational system. There are two main structural challenges to the adaptation of the Greenlandic education system (Brincker & Lennert, 2019; Lennert, 2018); Firstly, given that the education system was based on the Danish education system, and the reality was, and still is today, that for Greenlandic students to continue studying after primary and lower secondary school it is a prerequisite that Danish is their second language and they have a working knowledge of the English language. Secondly, with only 56,000 people, the small and geographically dispersed population poses many political, economic and governance challenges.

In the new century the focus on education has come to the forefront by the formulation of education policies and plans which should be seen in the context of the signed

partnership agreements with the EU in education, which have had implications on what is being monitored and perceived as quality education.

## **1.2 Theoretical landscape**

There is a growing body of evidence on the different factors that contribute to education improvement, as a number of international research reports have reviewed the factors that contribute to quality education (See for example Fullan, 2015; Fullan and Quinn, 2016; Levin, 2010; Hargreaves and Shirley, 2012; Barber and Mourshed, 2007; Mourshed et al, 2010; Schleicher, 2012; Elmore, 2004; OECD, 2015). The takeaways being that to guide reform efforts, education systems rely on evaluation and assessment, and ensuring capacity at the local level to successfully implement reforms.

The shift from government to governmentality, or from regulation to self-evaluation, first described by Foucault (Foucault, 1991), has been applied to educational studies by scholars such as Stephen J. Ball, Christian Maroy and Jenny Ozga (Ball & Junemann, 2012; Maroy, 2008; Ozga, 2009), focusing on the changing role of the state in agenda setting, policy formulation, and policy evaluation drawing on Foucault's concepts of governmentality. Bidwell (1965) was one of the first authors to have described and analysed the school or the school system as a "*professional bureaucracy*". These developments and changes in forms of governance are multifaceted, multiscalar, work at different levels and move at different speeds (Ball & Junemann, 2012). Significant policy changes throughout the 1980s and into the 1990s encompassed the redesign of public services and welfare provision across the developed economies and produced a shift towards decentralisation, devolution and deregulation as key principles of restructuring. These policy developments reflected the dominance of neo-liberal principles in the design of reform and restructuring programmes, so that decentralisation and devolution were pursued with the aim of enabling the market to operate effectively (Ozga, 2009), and are drawn directly from the key tenets of New Public Management (Ball & Junemann, 2012).

During the last 15 years, the concept of governance has been introduced into educational research in order to study the changes in the regulation of school systems. A body of literature has evolved aiming to understand these changes by concentrating on the question, how regulation and performance of school systems is achieved, sustained and

transformed under the standpoint of coordination of action between various actors in complex multi-level systems (Altrichter, 2010; Barber & Mourshed, 2007; Mourshed et al., 2010; OECD, 2015; White & Levin, 2016; World Bank, 2018).

Currently, educational researchers such as Davis & Sumara (2006), Johnson (2008) and Snyder (2013) are focusing on the complex nature of education and offer complexity theory as a useful research paradigm, and a necessary mean for understanding change within complex social systems. Researchers and politicians have been aware of the increasing complexity of education systems across the developed world for some time (Burns & Köster, 2016) and have attributed it to several concurrent factors: 1) the growing diversity of actors' preferences and expectations, which places greater demands on education systems, 2) more decentralised and flexible management structures, 3) the increased importance of additional layers of governance at the international and transnational levels; and 4) rapidly changing and broadening information and communication technology. Johnson (2008) has in her work combined complexity theory with the model of ecological system developed by Bronfenbrenner (1995). This combination serves as a useful theoretical framework to examine the processes, inter-relationships and context within Complex Adaptive Systems, and how they are connected.

Increasing complexity in education systems has led to a greater degree of decentralisation and freedom in decision making power for schools and local authorities. Most central governments, however, are still held responsible by the general public for ensuring high quality education and performance. When governments grant some autonomy to municipalities or schools, there are greater demands to monitor and hold them accountable. It has been argued that accountability pressures have often led to an over-investment in testing and regulatory control (Fullan, 2011). In order to hold autonomous schools and local governing bodies accountable for their decisions and performance, different performance management, accountability and monitoring systems have emerged<sup>7</sup> (Abelmann, Elmore, Even, Kenyon, & Marshall, 2004; Elmore, 2004; Fullan, Rincón-Gallardo, & Hargreaves, 2015; Hargreaves & Shirley, 2009). The literature

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<sup>7</sup> Examples of different accountability and monitoring systems are covered in detail in chapter 2.

shows that in order for increased measurement and accountability to lead to improved learning outcomes, it is very important that the policy instruments are used as intended (Hatch, 2013; Verger, Fontdevila, Parcerisa, Fontdevila, & Parcerisa, 2019). This is discussed in further detail in chapter 2.

## **1.3 Frames that contextualise this dissertation**

### **1.3.1 The current political frame**

Greenland, being a former colony of Denmark, has governance and administrative systems based on the Scandinavian welfare governance systems. However, the Greenlandic context is fundamentally different than the Danish one, as the combination of geography and the vast distances between settlements and towns, the bilingual society, the colonial history, culture, student numbers, physical environment of schools, and the high turnover rate of teachers and staff pose unique circumstances and challenges. The rural-like Arctic geography and the scattered small population in Greenland have big implications in terms of economy, governance and education - among many (Greenland Economic Council, 2020). Firstly, by having a large geography with a scattered settlement pattern with large distances between towns and villages, making it a basic condition that it is difficult to reap economies of scale. Secondly, the global trend of urbanisation is also evident in Greenland, with the levels of education being higher in the bigger towns, resulting in difficulties of attracting and retaining educated labour force in the smaller towns and settlements. Thirdly, Greenland receives an annual block grant and subsidies from the EU resulting in that incomes and consumption opportunities in society are greater than what has been generated through domestic production (Greenland Economic Council, 2020). While these conditions are also present in other countries, the combination of these makes Greenland different from other small economies in several areas.

Figure 3. Map of Greenland and her five municipalities



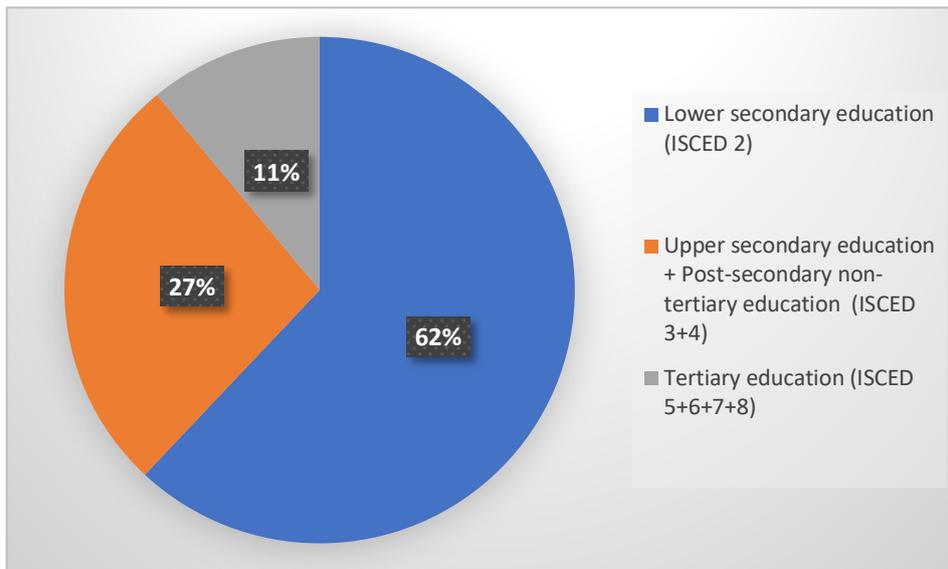
Like many countries globally, Greenland’s primary and lower secondary schools are facing a learning crisis, namely the situation where children reach late adolescence without even the most basic life skills as measured by standardised testing (Statistics Greenland, 2018; World Bank, 2018). The global learning crisis is exemplified by a recent report by the World Bank (2018): where in Kenya, Tanzania, and Uganda, when grade 3 students were asked recently to read a sentence such as “*The name of the dog is Puppy*”, three-quarters did not understand what it said. In rural India, just under three-quarters of students in grade 3 could not solve a two-digit subtraction such as “ $46 - 17$ ”. By grade 5 half could still not do so, and although the skills of Brazilian 15-year-olds have improved, at their current rate of improvement they will not reach the rich country average score in math for 75 years. While Greenland does not participate in PISA or other international standardised tests to measure literacy or numeracy, students are tested in grades 3, 7 and 10 through national standardised tests. In Greenland, the learning crisis is most evident in math, where two out of three either did not pass or barely passed the grade 10 exam (Figure 1 above).

Improving education access and quality has been a priority ever since Greenland assumed responsibility for the education sector in 1980. Political will as defined by Little (2011, p. 500) is '*a sustained commitment of politicians and administrators to invest the necessary resources to achieve specific objectives and a willingness to make and implement policy despite opposition*'; and considerable attention, political will and resources have been given to education in Greenland. In my master's thesis I did a review of 40 years of education policy in Greenland. It suggested that educational reform work has focused on the expansion of the educational system, and lacked objectives and strategies to guide the changes and implementation forward in the system in order to improve quality (Lennert, 2014).

According to the Arctic Human Development Report II, one of the key indicators of human development in the Arctic is access to education, the content of the education, and how well the education offered fulfils the needs of the community. Embedded in the term education are *values, history, languages and culture* (Arctic Social Indicators Follow-up to the Arctic Human Development Report, 2010, p. 67). Regardless of the age of the various systems in the Arctic, all school policies in the 1970s were made and administered from central capital cities, usually far distant from the schools themselves (Darnell & Hoëm, 1996). Even though great distances and political boundaries separate inhabited places in the far north there are more similarities in the historical development of education than differences. Likewise, problems associated with issues currently in contention are more alike than not from one country to the next.

The formal education system and the culture of education in Greenland is still young and with varying specific national and regional challenges. After the expansion of the school system in the 1950s, the majority of all children in Greenland went to primary school. The young generation of Greenlanders had thereby become acquainted with Western / Danish culture and the world of concepts to a greater extent than the previous generation. With only 62 % of the population having the primary and lower secondary school as the highest completed education (Figure 4 below), Greenland is a young nation in terms of education traditions and culture. The child's first day of school is a day of celebration and a milestone; just like it is still celebrated when children turn 6 months and 1 year.

Figure 4. 2018 Greenland's education level



Source: Statistics Greenland (2020)

### 1.3.2 Historical frame - decolonising education

A postcolonial perspective is necessary, as it draws attention to the implications of multiple forms of structural disadvantages for different groups in the Greenlandic population. There are differences in the way that the quality of education is experienced, and the kinds of barriers encountered by different groups of disadvantaged learners due to questions of language, culture and geography - and it is through understanding the interaction between these and other forms of disadvantage that a more holistic understanding of the barriers facing different groups in accessing a good quality education begins to emerge. As part of the decolonisation process, indigenous peoples around the Arctic by the end of the 20th century have redefined their political, economic, and social priorities with a recognition of indigenous cultures and languages (Johansson, Paci, & Stenersen, 2004, p. 179). Central to this process is the resocialisation of young people within their own cultures through education, to give them a sense of pride in their cultural heritage. It is a new situation, as a consequence of centuries of colonial rule that has deliberately undermined the cultural values of indigenous peoples through assimilative, and later integrative, educational policies (Maina, 1997, p. 294).

What has school and education policy meant for the Greenlandic society? In Greenland, the situation compared to other postcolonial countries has been different and more complex, as if one disregards the introduction of Christianity in the 18th century, and certain parts of the policy pursued in the 1950s and 1960s, have not met with resistance from the Greenlandic National Council. Unlike other former colonised and indigenous peoples around the Arctic, the Greenlanders constitute the majority of the population, and also have full law-related decision-making powers in many areas; including education (Darnell & Hoëm, 1996). This makes education in Greenland unique as the postcolonial context and society, where the policies, perspectives and content of education are developed, affect not only the educational situation, but the opportunities for change and development as well. However, education challenges from other indigenous peoples in the Arctic can largely be found in Greenland. With only 56,000 people, the small and geographically dispersed population poses many political and economic challenges. Today, most children in the Greenlandic schools are taught in Greenlandic, Danish and English from first grade.

One can ask the question: when the Inuit in Greenland, unlike other indigenous peoples, are the majority of the population, have had the responsibility and defining power in the field of education since 1980, why do we not have an education system, learning views, teaching materials, pedagogy and curriculum that reflects our culture and our relationship to our surroundings / nature? Why is this debate non-existent? Why is the debate only about results?

In my master's thesis I analysed the Greenlandic education policy and the resulting education system during the first decade of the Home Rule (Lennert, 2014). The most striking conclusion was that neither the traditional Greenlandic culture has had any great influence on the definition of the education system and the content of the educations. Although the Greenlandic language was prioritised politically in the education system, there was still no major coherence in the content, partly due to a lack of Greenlandic language educational material and Greenlandic teachers. The success of the then education system presupposed a good knowledge of the Danish language.

As a colonial power, Denmark pursued a protectionist policy, by isolating and 'protecting' the Greenlandic population from influence from the rest of the world. The aim of the policy was to keep the Greenlandic population from continuing to earn a living through the traditional occupation, seal hunting, and after the turn of the century in 1900, by fishing. Formal education only came into play when one could not be educated as a hunter (e.g., the fatherless) or was poor at the traditional professions: *The instructions of 1782 mention this matter and state that such training of Greenlanders may only take place when the persons concerned are not fit for the traditional profession* (Goldschmidt, Agersnap, Barfod, Gad, & Jensen, 1961, p. 18).

Historically, change and transition are defining characteristics of Greenlandic society. The socio-economic and cultural transformation from a traditional hunting and fishing society to a more modern has had, and still have, a significant impact on the educational system. Before the colonisation in 1721, Greenlandic traditional education was informal and occurred as a necessary social activity in the family and community. When the first missionaries in the 1720s began to teach Greenlanders to read, the teaching took place in Greenlandic. It was only after the adoption of a new policy in 1950, when the responsibility of schools moved from the church to the Danish Ministry of Domestic Affairs, that the Danish language and formal education was prioritised in the school setting (Kleivan, 1964).

The change came with the end of World War II, which led to the creation of the UN, and a focus on decolonisation and economic development. Specifically, Chapter XI of The United Nations Charter that deals with non-self-governing territories reflects the growing sense of the inevitability of political independence of these countries. Article 73 further requires countries administering those colonies "*to develop self-government, to take due account of the political aspirations of the peoples, and to assist them in the progressive development of their free political institutions*". The other main goal elucidated by this chapter is the political, economic, social, and educational development of these countries. The new tones in international politics became crucial for the political and economic development in Greenland (Skydsbjerg, 1999, pp. 15–16). The National Council's statements in 1948 about the new Greenlandic economic structure, led to the formation of a Greenland Commission, which submitted their report in 1950. With the end of World

War II, both Greenlandic and Danish sides expressed a need for an improvement in educational opportunities in Greenland, which meant that the Greenlandic school system had to be restructured and much more invested in the Danish language.

Following the requirements and goals of the UN Charter, it has been a political goal to get up to par with the Nordic countries in terms of education, health, social and economic development. An education system strongly rooted in the Danish system was inherited when the Home Rule assumed the responsibility for the educational sector in 1980. In accordance with changing policies over the years, the education system has gone through an evolutionary process. With the basic political consensus being a need for higher levels of education among the population, planning in the education policy front has been the subject of demands for quick results; partly to minimise imported foreign labour, and later, to achieve more autonomy and independence. However, there are big differences between the Nordic countries that Greenland is usually compared with. The quantification of education is a matter of how to measure human capital. Building human capital takes time and traditions. What the statistics do not show is the evolution. It is not always necessarily useful to compare with other countries. This requires a contextual understanding, since comparing the Greenlandic figures with the Nordic ones, you compare with countries with long traditions in educational culture. Many of the elements the Greenlandic society is built around is taken from other societies and cultures where development has been going on for longer time. Politically, Greenland has imported, and still do, structures and systems adapted to other societies. This results in certain difficulties throughout the system, especially in the education system.

The school in the form we know it is one of the 'products' of the modern world, and although it has now been developed over several generations, it has advanced at a speed that has been difficult for a large part of the population to keep up with. The education system has had an impressive growth, as statistics show that more people come through the education system. If the purpose of the last 50 years of education policy has been to expand the education system and get more through the education system - then one can call it a success. However, in 2015, 71 % of students (Grade 10) graduated with a diploma with one or more grades that are not sufficient to allow students to meet the admission requirements for a secondary education (Greenland Ministry of Education, 2015). Given

the political will and commitment, we must ask ourselves: why haven't the education sector done better in terms of providing quality education? Why is status quo legitimised? According to Moe & Wiborg (2017) "*education systems are what they are, and indeed, the schools are what they are - everywhere in the world, regardless of the nation - because politics makes them that way*". Thus, in order to improve the education level and ultimately become an independent country, it is critical to pinpoint the causal mechanisms in the governance and administrative systems that contribute to poor performance in the primary and lower secondary school system.

### **The post-colonial perspective**

From a post-colonialist perspective, a lot of research has been done on how conformity between culture and education system gives students better results. In Canada, research has shown that in the teaching of First Nations and other minority groups, schools that respect and support a child's culture show significantly better results in educating students (Hamme, 1996; Ladson-Billings, 1995; McCaleb, 1994). The way a student learns is influenced by the values and cultural background that the student brings from home (Johansson et al., 2004; Ladson-Billings, 1995). The activities, which are grounded in important cultural values, occur in the primary socialisation of many children of indigenous peoples, and result in a learning and communication style that often conflicts with the values, teaching and assessment methods that are in the classroom (Hamme, 1995, 1996). Pedagogy should provide the theoretical tools and resources necessary for understanding how culture works as an educational force, how public education connects to other sites of pedagogy, and how identity, citizenship, and agency are organised through pedagogical relations and practices (Giroux & Searls, 2008). The critique of colonial education continues to be significant because this structure conditioned the reactions that led to reform efforts in the post-colonial era. This critique of colonial and post-colonial conditions in the education system, together with a search for a common identity, highlights the need for further research to uncover and re-evaluate the goals, methods and results of the traditional, pre-colonial forms of education, with a view to guide future reforms aimed at an education system that is institutionally adapted to the Greenlandic population.

According to Inuit Circumpolar Council indigenous knowledge “*is a systematic way of thinking applied to phenomena across biological, physical, cultural and spiritual systems. It includes insights based on evidence acquired through direct and long-term experiences and extensive and multigenerational observations, lessons and skills*” (Inuit Circumpolar Council, 2020). It has developed over millennia and is still developing in a living process, including knowledge acquired today and in the future, and it is passed on from generation to generation.

### **The drop-out rates as a form of reaction**

Education can be viewed from two sides; from a cultural perspective, where education is identity-creating, to learn culture and language, and from a socio-economic perspective, where there is a need for an educated workforce in connection with Greenland's transition to a modern country. Public education is about more than job preparation or even critical consciousness raising; it is also about imagining different futures and politics as a form of intervention into public life (Giroux & Searls, 2008, p. 187). Schools can play a significant role in mediating the relationship between culture and nation state. It is most evident in its institutional form, as schools that promote skills, values, history, language and ways of thinking and behaving (Johansson et al., 2004; Rasmussen, Rasmus Ole; Barnhardt, Raymond; Keskitalo, 2010). Looking at culture as dynamic and constantly evolving and identifying strategies that are most effective in building cultural identity in close interplay with an effective education system are issues that need to be addressed in order to meet these challenges and include an understanding of the historical relations between Greenlandic culture and Eurocentric education systems.

The prominence of the socio-economic angle in Greenland is amplified by a statement in relation to the presentation of the 2021 budget from the Minister of Finance, Vittus Qujaukitsoq; “*the young people must take a bigger part of the responsibility and demand more of themselves in order to complete an education or take part in the labour market*” (Berthelsen, 2020 (author’s translation)). However, research shows that one might need to start looking at dropouts, as an institutional critique; instead of looking at what it is the student does not have, can or does, the educational institutions must look at how the institution or system can be arranged to suit the students' needs and prerequisites (Hamme, 1996). This view was brought up by Aviâja Egede Lynge, the Greenland

spokesperson for children; *“There is no question that the students are less gifted. Rather, they have had to develop other parts of their giftedness than that typically measured in e.g., the school system. So when we have to look at the reasons for dropout, we have to look at the children's living conditions and well-being”* (K. Kristiansen, 2020 (author’s translation)).

This section has sought to emphasise what can be described as conflicting world views in research and education in Greenland: one grounded in a profound connection to place and land, and *“that goes beyond observations and ecological knowledge, offering a unique ‘way of knowing’”* (Inuit Circumpolar Council, 2020); the other grounded in human beings as separate from and superior to nature (e.g. New Public Management discourses). The latter world view and the way of doing things is so ingrained in all parts of the education system that it is hard to question. Questioning status quo would mean a fundamental change to the education system, by focusing more on values, and not necessarily skills that can more easily be measured and evaluated. An education system based on an Inuit world view would have to consider the difficult balancing of on one side staying true to the culture and language of the majority of the population, and on the other side weakening the neoliberal agenda in the education system - and thus the production of labour in the quest for independence. Depending on the vision of independence, Greenland can through technocratic and economic measures become independent, but without an education system and view of learning that is based on our own culture and values, we risk an independence that is not culturally sustainable.

### **1.3.3 The theoretical frame**

From the beginning of this dissertation, it has been my ambition to approach the field with an open mind, allowing myself to look closer and deeper at the governance mechanisms behind education reform in Greenland. As research on education systems are limited in the Arctic, I have found it necessary to draw on research and theoretical concepts from outside the Arctic. I elaborate on how I have operationalised the theoretical frames in part II and III.

To understand the conditions for educational reforms, I draw on a body of literature synthesised by Kingdon, Little, Moe, Parton, & Sharma (2014) and Hickey & Hossain

(2019) that deal with the political explanations for lagging quality in education systems. Education reform does not take place in a vacuum, but under specific constraints and opportunities, many of which are politically driven, shaped by the interests and incentives facing different stakeholders, the direct and indirect pressures exerted by these stakeholders, and by formal and informal institutions. Each of these factors influences different aspects of education reform. However, the literature on the political economy of education is underdeveloped in geographical scope, robustness of methods utilised and theoretical richness. Large parts of the world, remain virtually untouched by research on the ways in which political economy forces affect their education sector decisions, processes and outcomes (Kingdon et al., 2014).

Within the paradigm of political economies, I also engage governance theories (Altrichter, 2010; Ball & Junemann, 2012; Duit & Galaz, 2008; Maroy, 2008) and especially the interplay of governance and evaluation (Hanberger, 2013). The theory of complexity offers a means to analyse emerging patterns and trends to illuminate how the disparate system parts are, or are not, working together (McQuillan, 2008). A central concern of complexity theory, and complex adaptive systems, is with the relationships among the elements, or actors, that constitute a particular and sufficiently complex environment or system (Mason, 2008). The concepts behind complexity theory give rise to analyse the reform processes retrospectively, as a way to learn more about the elements, power structures and relationships in the complex system - but also as a framework to navigate current reform processes, as the successful implementation of a centrally designed reform depends largely on the capacity and the resources on the local level to fulfil the reform goals and put them into practice, as the amount and quality of connections between system elements likewise impact a system's ability to adapt (Trombly, 2014).

While the literature above aims to describe the governance system and the political level, I use evaluation theory, and more specifically the question of embeddedness of evaluative thinking in governance systems, to discuss a possibility to transform the administrative processes and the implementation of policy / evaluation instruments to be more oriented toward development and improvement of practice. Evaluative thinking, as defined by Patton (Patton, 2013), is systematic, intentional and ongoing attention to expected results.

It focuses on how results are achieved; what evidence is needed to inform future actions and how to improve future results. These bodies of literature provide essential insights into the discussed topics in this dissertation. Together, they form the methodological (chapters 3 and 4) and theoretical landscape in which I situate this dissertation (chapter 2), and in the light of which I discuss its contributions and implications in the closing chapter (chapter 6).

#### **1.4 Methodology and scientific theory**

I use the philosophy of Critical Realism (elaborated in chapter 3) as an overall methodological foundation. My approach to the theoretical and methodological framework, and the selection of theories and methods, has been influenced by complexity theory, as I have intentionally searched for theories and research that are informed by the principles of complexity. Critical realism and complexity theory are related by the paradigm of *systems thinking* (background provided in section 2.2.1). The primary goal of a Critical Realist informed study on governance forms will be to understand the very nature of the mechanisms, its causal powers (ability to influence change) and liabilities (susceptibility to change). A critical realist explanation involves a gradual transition “*from actions through reasons through rules and thence to structure*” (Sayer, 1992). The actions undertaken by actors within the governance form will therefore become an important unit of analysis. By focusing on the actions, and related perceptions and decisions concerning the policy instruments, as well as the consequences of these actions, perceptions, and decisions with regard to the function of evaluation.

In order to capture more precisely the interactions taking place within the different layers of administration, I have used theoretical conceptions of governance, evaluation and concepts of accountability, which are the core of my analytical framework, which I will unfold in more detail in part III and chapters 4 and 5. Critical realism incorporates an interpretivist epistemology (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998; J Mingers, 2004), where reality is seen to exist largely outside of our understanding of reality, but we navigate that reality through our own frame of reference, itself socially determined, and therefore sees social structures as ontologically real entities (Bhaskar, 1978). Critical realism is a philosophical approach with a post-positivist paradigm that

has at its heart the idea of generative causality via causal structures, or mechanisms<sup>8</sup>, which possess powers or tendencies to behave in certain ways. Structures, or mechanisms, are characterised in terms of parts and wholes, boundaries, emergence, hierarchy, information and feedback and the observer.

This dissertation uses an embedded single-case study approach to answer the research questions set forth in section 1.1.3. Qualitative data were generated from semi-structured interviews with administrative leaders, school principals and teachers. An embedded case study is a single-case study involving units of analysis at more than one level (Yin, 2018). This occurs when, within a single case (the first level), attention is also given to a sub-unit or sub-units. In this dissertation, the Greenlandic education governance system as a whole is the main unit and first level of analysis, as this dissertation is an inquiry into the concept of quality, systemic connections, underlying causes and deeper weaknesses in the way the Greenlandic education governance system has been designed.

Following my interest in actual practices in terms of how policy and evaluation tools are translated as they unfold in ‘real-time’ (Schatz, 2009) and in ‘real-life’ settings in the classroom and administrative practices, my methodological approach is further anchored in the qualitative-interpretive research tradition, as these methods are generally recognised for being well-suited to capture the (patterned) actions, meanings and beliefs of actors, to present accounts of situated practices that boast depth, texture and nuance, and to produce rich and contextualised findings.

When operationalising the research questions, the relationship between the problem, the theoretical concepts and the empirical material is important. Therefore, the research design is briefly explained below based on the research questions presented. My research design is an embedded case study of the primary and lower secondary school system and comprises empirical investigations in local schools, and the administrative and policy arena of which they are part. The approach is qualitative-interpretive, as the aim is to understand how actors try to navigate in these systems, how they understand key concepts, how they coordinate and adapt them to local contexts. In interpretive research, meaning making is key to the scientific endeavour: its very purpose is to understand how

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<sup>8</sup> In essence, a structure or mechanism is the same as a system.

specific human beings in particular times and locales make sense of their worlds. And because sense-making is always contextual, a concern with ‘contextuality’ - rather than ‘generalisability’ - motivates research practice and design (Schwartz-Shea & Yanow, 2012, pp. 10–11). This choice is based on the objective to analyse the macro and micro dynamics of educational reform; how administrative systems shape behaviour among actors and ultimately how that effects how policy and evaluations instruments are utilised. Interviews and observations were conducted to answer micro dynamics; and to answer the macro dynamics documents on policies, history and overall system structure were gathered and analysed.

A political sociology approach supports a sensibility towards the ‘macro’ in the ‘micro’; i.e., how the broader institutional and political context is reflected in situated interaction, and how situated interaction in turn serves to maintain or change institutional orders on a system level and therefore draws meaning and purpose from these circumstances rather than seeking to abstract from them. The approach further acknowledges that teachers, managers and other actors of the public-school system are already engaged in a broad range of practices that constitute daily organisational life. Their work is informed, enabled and constrained by organisational goals, practical considerations, human and economic resources, and processes of negotiation and sense-making regarding a variety of topics. New policies, such as the introduction of policy / evaluation instruments, develop in a dense environment of already existing policies, and are connected and affected by everything that is already going on at the different arenas of organisational life of the school system; local schools and municipal administrations, policy arenas, professional communities and society as such. *Therefore, earlier policies form a central part of the systemic environment of policy-making* (Jann & Wegrich, 2006, p. 45).

A more detailed overview of the methods, data and analysing strategies is provided in part III (chapters 3 and 4).

## **1.5 The analysis**

I situate my research in the literature outlined above and aim to contribute to our understanding of the interplay between governance form and evaluation, but also draw on other sources of theory to guide my fieldwork and interpret my findings. As my approach is complexity theory informed, I am interested in the interplay between systems and actors. My interpretation of the existing theoretical literature and the gaps that emerged has resulted in a conceptual framework containing the following elements, which will be unfolded and discussed in chapter 4.

The elements of my analytical framework are rooted in different subfields, although mainly within governance and evaluation studies. Notably, these theoretical perspectives and concepts were not laid out in detail, systematised or operationalised in the beginning of the project, but were instead developed as a result of reflexive interplay between theory and empirical findings and other forms of knowledge about the world (Schwartz-Shea & Yanow, 2012:27). The process of building an analytical framework to make sense of my findings has thus been iterative and abductive. During my fieldwork, new concepts, relationships and possible explanations were continuously generated as part of the process, and I sorted, discarded or developed these along the way.

As education being a service and not a product (Pritchett, 2018), its quality cannot lie exclusively in the final output. At a theoretical level this involves questioning the assumptions and values that often remain implicit in dominant understandings of quality and to pose alternative understandings. It has also meant seeking out methodologies that reflect as far as is possible the realities of Greenlandic practitioners, learners, policy makers and researchers.

## 1.6 Overview and structure of dissertation - the published papers

This dissertation comprises a covering paper embracing fieldworks and four papers (see List of Publications: PAPER I, II, III, and IV) that all contribute to the research objectives set forth (section 1.2.2). The papers serve to synthesise the fieldwork and to elicit suggestive measures from each of the respective studies in an attempt to answer the research questions presented in section 1.3. When reading the covering paper of this dissertation, some overlap and repetition between the covering paper and component papers must be expected due to the necessity for the papers to be able to stand alone.

Table 2. Overview of this dissertation and chapters

Part I: Introduction	1. Introduction, research questions, empirical setting
Part II: Theoretical framework	2. State of the art: complexity theory, evaluation theory, governance theory, and accountability systems
Part III: Research design, methods, data and analytical framework	3. Research design, generating data 4. Analysing data
Part IV: Analysis - the component papers	5. Papers
Part V: Discussion and synthesis	6. Conclusions

Part I is the Introduction, which comprises this chapter. Part II unfolds the theoretical background (chapter 2) in more detail. Part III presents the research design for the study and the analytical framework. Part IV presents the papers in full. Part V consists of my synthesis and conclusion. Chapter 6 present the conclusions, which comprises a summary and discussion of the main findings, followed by some reflections on limitations, relevance and generalisability and a discussion of the main contributions of the study and implications for research and practice.

## **1.7 List and summaries of component papers**

**Paper I:** Coherence in the Greenlandic education system? Educational planning and evaluation in Greenland from a complexity theory perspective.

**Paper II:** Implementing iPads nationwide in the Greenlandic primary and secondary school system under difficult conditions.

**Paper III:** Building a nation in the classroom - Exploring education policy in post-colonial Greenland.

**Paper IV:** The role of evaluative thinking in generating, evaluating and scaling innovations in learning: A case study of the Greenland education system.

Papers I, II, III and IV can be read in full in 'PART IV: The component papers'.

### **1.7.1 PAPER I: Coherence in the Greenlandic education system? Educational planning and evaluation in Greenland from a complexity theory perspective (published)**

Published in Artic Yearbook 2018. Peer-reviewed.

The article addresses the following sub-question of the overarching research questions: (1) what are the theories of actions and change among the principal actors and are they coherent? And (2) what are the education policy goals and practices in Greenland?

The article analyses how the current institutional context and legislation in the Greenlandic education system influence effective evaluation and supervision processes for ongoing development and quality assurance.

The article is a case study analysis of the Greenlandic education governance system through the lens of complexity theory and examines the governance approach with an emphasis on the primary and lower secondary school system (grades 1 - 10, ages 6 - 16). The article analyses how Greenland addresses the challenges and opportunities to the educational system, and how stakeholders work for system improvement. How do the different primary stakeholders implement education policies in a complex environment and how are they supported in this process? The role of national government versus local government and school boards in countering the quality of teaching provided is examined.

A solid primary school is an important part of the foundation for creating a strong and sustainable society. Almost every country has undertaken school system reforms during the past two decades, but very few have succeeded in improving their systems from poor to fair, to good to great, to excellent (Mourshed et al, 2010). History, culture and context matter for understanding applicability, if any, of one educational innovation over another. This can be said to have been the case in Greenland. One of the fundamental objectives after the introduction of Home Rule in 1979 was to adapt the Danish structures and systems to the Greenlandic conditions and culture. The article aims at analysing the Greenlandic education governance system and how the central level design, organise and steer education systems across complex multilevel governance arrangements. In governing educational systems, how the central and the decentralised levels interact and communicate and how this affect trust, cooperation and negotiation of conflicts and ultimately the outcomes of reform.

### **1.7.2 PAPER II: The Political Economy of Education Reform: iPads for every student in Greenland (published)**

Published in Arctic Journal 2020. Peer-reviewed.

The article addresses the following sub-question of the overarching research questions: (1) what are the theories of actions and change among the principal actors and are they coherent? And (2) what quality inscriptions and infrastructure are used in education policy making?

The article presents a review of the policy domain and political settlements within the education sector in Greenland, illustrated with an analysis of the past 10 years of education policies and current reform work. The research, developed through a documentary analysis, observations and interviews aims to investigate the background for implementing education technologies in the form of iPads nationwide in the primary and lower secondary school system in Greenland. The article gives an overview of the general political economy of education reform in an Arctic context and specifically the ICT policy environment surrounding the iPad project, the implementation strategies and processes used with a focus on the coordination between the central and local governance levels. The results provide important insights into the ongoing, and forthcoming, implementation of a nationwide 1:1 iPad learning in the Greenland education system, and

further argues that it is a complex whole system change, and therefore demands a corresponding implementation, evaluation and monitoring approach.

### **1.7.3 PAPER III: Building a nation in the classroom – Exploring education policy in post-colonial Greenland (published)**

Published in *Including the North: Comparative studies of inclusion policies in the circumpolar north*. Peer-reviewed.

The article addresses the following sub-question of the overarching research questions: what are the education policy goals and practices in Greenland?

The article offers an analysis of the education policy goals and practices in Greenland, a former colony of Denmark. It situates Greenlandic education policy within the context of nation-building processes. The article examines the emergence of the contemporary Greenland education system up until 2009. It considers the socio-political and historical dimensions and effects that accompanied the introduction of formal schooling and the adaptation to the Greenlandic context, culture and language. Co-authored with Benedikte Brincker, Copenhagen Business School. The publication is part of a collaboration under the UArctic focusing on Teacher Education.

### **1.7.4 PAPER IV: The role of evaluative thinking in generating, evaluating and scaling innovations in learning: A case study of the Greenland education system (in peer review)**

To be published in the book *“Education, Equity and Inclusion: Teaching and learning for a Sustainable North”* by Springer in 2021.

The article addresses the following sub-questions of the overarching research questions: (1) what quality inscriptions and infrastructure are used in education policy monitoring and making? And (2) are evaluation policy instruments used as they were designed to?

The case study focuses on the Greenlandic public education governance system with an emphasis on the primary and lower secondary school system concentrating on how the Greenland education system is generating, evaluating, and scaling innovations in learning with a focus on the policy instruments used for monitoring and evaluation. The Greenland education system has had an impressive growth over the past 50 years. But how are things

with the quality and content of the primary school? The role of national government versus local government in countering the quality of learning is examined. What types of objectives are being set, what is being monitored and for what purpose? This paper dives into the conditions for evaluative thinking and sense making across the multi-level education governance system in Greenland, where at least 80 percent of the schools are rural, and if and how, evaluative thinking is embedded in the Greenlandic education governance system. In the article I discuss the overall objectives for the education system, how context shapes evaluation culture and conditions for development, and how reforms inspired by foreign countries do not make sense if country and regional specific contexts, needs, stakeholder involvement and capacity building are not considered.

## **PART II: THEORETICAL AND CONCEPTUAL FRAMEWORK**

### **Chapter 2: Theoretical framework**

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This chapter presents the theoretical framework with relevance to my inquiry into the issue of how administrative contexts shape accountability mechanisms. The theoretical landscape in which this study is situated is rooted in different subfields, although mainly within governance and evaluation studies. I have grouped the review into four topics: 1) evaluation theory, 2) Complexity theory, 3) governance theories, and 4) accountability theories. In the context of my study these subfields are interlinked by a) the shift from government to governmentality, or from regulation to self-evaluation, and the resulting decentralisation of education management and thus greater complexity; and b) the evaluation and accountability demands put in place by the decentralisation process.

My approach to the theoretical framework and selection of theories is influenced by complexity theory, as I have intentionally searched for theories and research that are informed by the principles of complexity. In view of my background and interest in evaluation and education governance, I found it natural to dive into the principles behind systems and complexity thinking. As I was beginning my research and reviewed existing studies and evaluations of the Greenlandic education sector, I found it problematic that they did not take the complexities of the system into account.

I started out with complexity theory and evaluation theories as the main theoretical lenses as I conducted the first part of my research. My objective in this search was to find theoretical explanations as to what is happening, why it is happening, and how the situation or explanation could be different. This process is also reflected in my analytical framework presented in chapter 4 where I present two different analytical models; during my analysis of my first round of interviews, I was left with some unanswered questions as to why and how context affects the use of evaluation instruments. I therefore decided to look into theories of governance and administrative structures to help answer my research question. This process is explained in further detail in chapters 3 and 4.

Notably, the theoretical perspectives and concepts presented in this chapter were not laid out in detail, systematised or operationalised from the beginning of the project, but were instead developed as a result of reflexive interplay between theory and empirical findings and other forms of knowledge about the world (Schwartz-Shea & Yanow, 2012:27). During my fieldwork, new concepts, relationships and possible explanations were continuously generated as part of the process, and I sorted, discarded or developed these along the way. This process resembles the four generic phases of Critical realism research (Mingers & Brocklesby, 1997): 1) **appreciation** of the research situation as experienced by the researchers involved and expressed by any actors in the situation, and prior literature and theories; 2) **analysis** of the information from the first stage so as to understand the history that has generated it, and the particular structure of relations and constraints that maintain it. Explanation will be in terms of possible hypothetical mechanisms or structures that, if they existed, would produce the phenomenon that has been observed, measured, or experienced; 3) **assessment** of the postulated explanation(s) in terms of other predicted effects, alternative possible explanations; and 4) **action** to bring about changes if necessary or desired, or to report on and disseminate the research results.

## **2.1 Evaluation theory as a discipline and method**

In recent years, evaluation has played an increasingly important role in both the private and public sectors, where it has become a standard procedure for policy initiatives and reforms to be evaluated to assess their value and effectiveness. Evaluations are known in many forms and are carried out at different levels and agendas. Both science in general and evaluation in particular are evidence-based processes with conclusions derived from systematic study to understand and explain how some aspect of the world works. Evaluators work in different arenas using different methods and draw on a wide range of disciplines. Evaluators do not define evaluation in the same way, and evaluation is not always recognised as a scientific discipline in the same way as other sciences. Patton (2018, p. 187) contributes to this discussion by further expanding the definition of evaluation and linking it to the definition of what science is:

*“Science is a systematic study of how the world works. Evaluation science is a systematic study of how and how well interventions aimed at changing the world work. Evaluation science involves the systematic examination of the merit, value, utility and significance of what is assessed by adhering to scientific norms that include the application of logic, using transparent methods, submitting results to be reviewed, and providing evidence and explicit rationales. To support causes, interpretation, valuation and assessment”.*

Patton (2018) further describes how some evaluation-related activities, such as routine monitoring, internal improvement-oriented learning feedback, responsibility checklists, reporting, and unpublished evaluations do not always meet the criteria of a scientific study - but these methods are, however, applications of the methods of evaluation in practice.

Scriven (1967) defines evaluation as the systematic determination of merit, the value of an object. Systematic means that evaluators use explicit rules and procedures to substantiate judgments and make decisions. Merit is the absolute or inherent value of an object, while value is the relative value of an object in a given context. This definition of evaluation includes elements of feedback to the decision makers who must manage the evaluation results, the employees being evaluated, or the target audience of the evaluation.

In his interpretation of the evolution of the evaluation discipline, Vedung (2010) describes various evaluation waves: (1) instrumental application of evaluation, (2) evaluation must be useful in democracy, (3) the neoliberal evaluation wave and (4) the wave of evidence. Common to the four waves is that they are ‘backward’. The models differ mainly in terms of the nature and content of the data. It is also about what and who the evaluation should serve, as well as what values they represent. A formal purpose is set up in the beginning of the evaluation - simplified, be it for example ‘control’ or ‘learning’ - and the evaluation is then organised so that it reaches as precisely as possible the *intended use for intended users* (Patton, 2012). The purpose of the evaluation is decisive when choosing a method (e.g., use of statistics versus qualitative interviews with users; unilateral focus on expenditure versus a broader focus on quality and goal achievement).

Modern organisations and institutions are characterised by frequent changes, adaptations, dynamics and system changes. There is often also a high level of innovation, which means that there is often a lack of knowledge as well as agreement when it comes to defining strategies. A model that seeks to incorporate the complex reality of institutions today is seen in Patton's developmental evaluation. The model differs significantly from Vedung's traditional evaluation waves, with developmental evaluation first and foremost emphasising development to a greater extent than (mere) change; interaction processes to a greater extent than causal mechanisms around single factors; as well as the complexity of the problems and the norms, rules and behaviour of the surrounding systems (Boolsen, 2017).

### **2.1.2 Complexity theory and evaluation theory**

The transition from traditional modes of evaluation to an approach that supports the complexities of social innovation is described in Developmental Evaluation founded by Michael Quinn Patton: *“because evaluation typically carries connotations of narrowly measuring predetermined outcomes achieved through a linear cause-effect intervention, we want to operationalize evaluative thinking in support of social innovation through an approach we call developmental evaluation. Developmental evaluation is designed to be congruent with and nurture developmental, emergent, innovative, and transformative processes”* (Patton, 2007, p. 1).

According to Boolsen (2017a), developmental evaluation moves from the theoretic to the theorised, from the one-dimensional to the multidimensional and dynamic; from distant to responsible; from the organisation's focus on budgets and deadlines to the employees' focus on accountability and high professional quality in the work. In short: in developmental evaluation, context is more closely involved than in traditional evaluations; many factors must be considered simultaneously; and this diversity is reflected in the scientific thinking and methods in the development of the evaluation design. Adding a complexity perspective to developmental evaluation helps those involved in or leading innovative efforts incorporate rigorous evaluation into their dialogic and decision-making processes as a way of being mindful about and monitoring what is emerging (Patton, 2007, p. 4). The traditional and complexity-based evaluation forms are compared in Table 3 below.

From the perspective of traditional evaluations, evaluation of reforms and education systems is difficult, as policies have to remain relatively consistent (e.g., due to changing governments, volatile funding, and changes in overall economy). Programme evaluation can also be difficult, because attributing improvements to specific interventions is especially challenging when their impacts only emerge in the long run. From the perspective of Developmental Evaluation, the purpose is more to support the development of innovation and adaptation in a dynamic environment, and ultimately not a model to scale up or test. In other words, complexity-based developmental evaluation shifts the locus and focus of accountability.

Table 3. Contrasts between traditional and complexity-based evaluations

<b>ONE-DIMENSIONAL: TRADITIONAL EVALUATIONS</b>	<b>COMPLEXITY BASED: DEVELOPMENTAL EVALUATIONS</b>
<u>Purpose</u> : supports improvement, summative testing and accountability.	<u>Purpose</u> : to support the development of innovation and adaptation in dynamic environments.
<u>Roles and Relationships</u> : positioned as an outsider to ensure independence and objectivity.	<u>Roles and relationships</u> : placed as an internal team function integrated into the process of collecting and interpreting data, framing questions and model development.
<u>Accountability</u> : focused on external authorities and funders based on explicit and ordered criteria.	<u>Accountability</u> : centred on the values of the innovators and wishes to make a difference.
<u>Options</u> : strictly focused on opportunities, traditional research and disciplinary standards of quality dominate.	<u>Options</u> : application focused; options selected for development.
<u>Measurement</u> : measures performance and success against predetermined goals and SMART results.	<u>Measurement</u> : develops measurement methods quickly as results arise; methods can change during the evaluation as the process unfolds.
<u>Evaluation results</u> : detailed formal reports, validated best practice, generalise across time and space. May cause fear of error.	<u>Evaluation results</u> : fast real-time feedback, different user-friendly forms of feedback. Evaluations promote learning.
<u>Complexity and uncertainty</u> : evaluator try to control the design, implementation and evaluation process.	<u>Complexity and uncertainty</u> : learning to respond to lack of control, keeping in touch with what unfolds and responding accordingly.
<u>Standards</u> : methodical competence and commitment to rigor, independence; credibility with external authorities and sources of funding; analytical and critical thinking.	<u>Standards</u> : methodological flexibility, adaptability, system thinking, creative and critical thinking balanced; high tolerance for ambiguity, open and flexible teamwork and social skills: able to communicate rigorous evidence-based perspectives.

Adapted from (Patton, 2007)

## 2.2 Complexity theory - thinking in systems

In this section I discuss the development of systems thinking and main lines of the different theoretical waves, education reform and complexity theory, overview of complexity theory and complex adaptive systems.

### 2.2.1 Background on systems thinking and complexity theory

Systems thinking, or the systems approach, developed in its modern form with a burst of new ideas in a range of disciplines, such as biology, psychology and quantum physics, during the 1920s and 1930s. The most fundamental idea of systems thinking is the anti-reductionist one that we cannot explain the behaviour of objects and entities purely in terms of the nature and constitution of their parts and components (Mingers, 2016). During the 1970s, there was a major epistemological break within systems thinking in which a new stream of thought based on constructivism or phenomenology was initiated; the development can be grouped into *hard systems thinking* (phase 1, also called first-order systems thinking), *soft systems thinking* (phase 2, also called second-order systems thinking), *critical systems thinking*, and *complexity theory* (non-linear dynamical systems) (Mingers, 2016, pp. 28 - 35).

While phase 1 was carried out within the prevailing positivist paradigm, the new paradigm of phase 2 was the result of the positivist critique during the 1970s that led to a strongly constructivist view of epistemology and ontology: the essential difference being that the members of a social system, such as an organisation, would inevitably bestow their own meanings and senses on the system. While phase 1 (*general systems theory* (Bertalanffy 1950)), *cybernetics* (Weiner 1948; von Neumann 1958; Shannon and Weaver 1949) and *system dynamics* (Forrester 1961) focused on physical systems, the purpose of phase 2 (*soft systems methodology*) was not to describe or design an objective system, but instead to articulate and explore the differing perceptions held by participants within a problematic situation, and by doing so possibly to bring about an agreed improvement to the situation.

Drawing mainly on the work of Habermas, *Critical systems thinking* (Flood and Jackson 1991; Midgley 1995; Mingers 1980) is a critical stream of systems thinking that developed during the 1980s. The approach recognised the role and limitations of both hard and soft systems thinking, and maintained that there was also a need for emancipatory systems thinking (Mingers, 2016, p. 35).

Finally, complexity theory, also known as non-linear dynamical systems theory, developed during the 1970 and 1980s in a range of sciences - biology, chemistry, mathematics and economics (Kaufmann 1995; Waldrop 1992). Chaos and complexity are the results of a Kuhnian revolution that emphasises instability, far-from-equilibrium, sudden change, sensitivity to initial conditions, and complex behaviour from simple models.

All of the different theories in phase 1, phase 2, critical systems theory and complexity theory revolve and have developed around the same sets of following concepts: *relationships, emergence, hierarchy, boundaries and feedback*.

### **2.2.2 Education reform and complexity theory**

Many countries are inspired by foreign education reforms, and to varying degrees import ideas and tools to their own reform efforts. An example is the rise of international large-scale assessments such as PISA. Externalisation, or external policy referencing, is a concept that seeks to understand how global education policy ideas and programmes are recontextualised as they are inserted into national education policy fields. The concept 'externalisation', highlights how a social sub-system, such as the education system, instigates and processes external references, including references to 'foreign examples' and 'international consensus' going back to Niklas Luhmann's systems theory (Luhmann & Schorr, 2000). However, the way reforms and policy instruments play out are very different from country to country, due to the power of context, whether it is due to policy coalition or capacity, as not only are policy ideas and programmes constantly borrowed cross-nationally but they often become detached from the particular national context of their origin and then widely circulated as 'international standards' in national policy-making discourses (Zymek & Zymek, 2004).

Cohen, Manion, & Morrison (2007) argue that complexity may offer an *emerging paradigm* in educational research because it “*not only provides a powerful challenge to conventional approaches to educational research but also suggests both a substantive agenda and set of methodologies*” (ibid. 2007). In many ways, the principles behind complexity theory are a continuation of what was done in cybernetics, general systems theory and chaos theory (Cilliers, 2001). Complex systems are open systems where the relationships amongst the components of the system are usually more important than the components themselves.

While educational reforms often target specific elements of an education system, such as what students learn or how teachers teach, the concept of system reform can, according to Fullan (2011), be applied to (1) reforms affecting multiple levels of the education system; (2) reforms that strive to make changes through a defined system, such as reforms across the country; (3) reforms designed to influence, in minor or significant ways, all students and staff in the school or system; or (4) reforms that may vary widely in design and purpose but reflect a consistent educational philosophy or that aims to achieve common goals.

The capability to act in social systems is based on structural elements, on a structure of regulation which organise rights and competences of disposal in a way which is specific to the particular system (Altrichter, 2010). A system is a collection of elements or actors, each of which has its own objectives, and a collection of feedback loops connecting the elements / actors. The feedback loops provide information to elements / actors on the basis of which their actions / behaviours can change, and conditional on their actions, information on their success relative to their objectives, which also can change their actions.

According to Moore (2015) a *system* is structured with an allocation of responsibilities across types of organisations, which then can be managed and held accountable for their responsibilities in various ways. An education system is a collection of “*institutions, actions and processes that affect the ‘educational status’ of citizens in the short and long run*” (Moore, 2015, p. 1). Education systems are made up of a large number of actors (students, teachers, parents, politicians, bureaucrats, civil society organisations)

interacting with each other in different institutions (schools, municipalities, ministry departments) for different reasons (developing curriculums, monitoring school performance, managing teachers). All these interactions are governed by rules, beliefs and behavioural norms that affect how actors react and adapt to changes in the system (The World Bank, 2004), also known as political economies. Before diving too deep into the political economies of education systems (section 2.3), below I will give a theoretical overview of complexity theory and governance systems, as they have, as I will show in the analysis and conclusion, great implications for how policies are carried out in practice.

### 2.2.3 Complexity theory and complex adaptive systems

#### *Simple, complicated and complex problems*

Before diving deeper into the realm of complexity, I will elaborate on the differences between simple, complicated and complex settings. Glouberman & Zimmerman (2004) provide a good description of the differences between simple, complicated and complex problems (see Table 4 below).

Table 4. Simple, complicated and complex problems

<b>Simple</b> Following a recipe	<b>Complicated</b> Sending a rocket to the moon	<b>Complex</b> Raising a child
Easy to do. Easy to repeat once done. 'Recipes' essential. Expertise is not necessary. Standardised product.	Hard to do. Formulas are critical. High levels of expertise in several fields are necessary. Rockets are fundamentally similar. There is a high degree of security in the performance when the original problems are solved.	Formulas have limited use. Raising a child gives experience, but no guarantee of success with another. Expertise can contribute, but is neither necessary nor sufficient for success. Each child is unique and must be taken individually. Uncertainty about the result remains.

Source: Adapted from Glouberman, S., and Zimmerman, B. (2004).

In a simple problem, like baking a cake, a formula, or recipe can be followed and repeated with relatively little expertise and is expected to produce roughly uniform results. Simple problems can be clearly defined, and an appropriate response is found. In other words,

changes are linear and non-dynamic. In an educational context, this can be transferred to the use of best practice, and standardised testing procedures.

Complicated issues on the other hand, are a world of the known unknown, where expertise and data analysis are keywords. With a complicated problem, it is not enough to follow proven formulas or recipes, as a higher degree of expertise is often required, as it may be necessary to draw on expertise in order to produce a successful result. When successful results are achieved, they can, in most cases, be replicated. Glouberman and Zimmerman illustrate this with an example of sending a rocket to the moon. Many different inputs are needed to reach the final goal, but once done, it can be repeated and requires far less analysis and expertise than it did in the initial phase, as all additional rockets, usually have a similar starting point and follow the same processes to reach their goals. In short, a complicated problem, once resolved, remains solved.

When it comes to complex problems, Patton (2013) elaborates further on the characteristics of complex settings as: 1) difficult to define; 2) involves stakeholders with different interests, values, and positions; 3) varies from person to person, from school to school, from community to community; 4) is constantly evolving; and 5) has no clear answer or measures of success. Complex issues, in other words, are a world of unknown unknowns. According to Glouberman and Zimmerman recipes and experience have limited use, as it is a world of constant instability and unpredictability. There are no real answers, only emergent behaviours, as a response to context. Expertise can help but is not enough to solve complex issues. Instead, it is necessary to take a differentiated approach to each unique issue, giving space to let the patterns appear so that they can be identified, and an answer can be developed. According to Snyder (2013) this is done best by increasing the level of interaction and communication in the system to its highest affordable level. This concept in an education context provides a greater scope to dive into relationships and context, which play a major role in implementation or development processes.

Complex problems are also often referred to as *wicked problems*. The term *wicked problems* was originally coined by Rittel and Webber (Rittel & Webber, 1973) as the opposite of ‘*tame problems*’, where the latter can be resolved with traditional methods

because it is easy to define cause-and-effect relationship of the problem as well as the solutions. They are complex, with linkages to other issues evolving in a dynamic social context, and tackling one often leads to unintended consequences of generating new sets of wicked problems. They are strongly stakeholder dependent, often with little consensus about what the problem is, let alone how to resolve it (Head & Alford, 2015; Rittel & Webber, 1973). The definition of a problem influences the range and types of solutions that are deemed relevant, and so different actors will often seek to define the problem in different ways: problems are socially constructed. Since the problem cannot be clearly defined, and its boundaries may be narrowed or broadened at different times, different actors are likely to have different opinions as to when and whether the problem might be considered solved, rendering any solution partial and temporary.

#### *Complexity theory and Complex Adaptive Systems*

Currently, many educational philosophers and researchers are focusing on the complex nature of education and offer complexity theory as a useful research paradigm, and a necessary means for understanding change within complex social systems (e.g., Burns & Köster, 2016; Davis & Sumara, 2006; Johnson, 2008). A central concern of complexity theory is with the relationships among the elements, or agents, that constitute a particular and sufficiently complex environment or system (Mason, 2008, p. 33).

In complex systems, by “*not assuming predictable and linear interactions among discrete elements, complexity instead draws attention to the evolving interrelationships among system elements at various levels of the system*” (McQuillan, 2008, p. 1773). This focus on interrelationships is especially important in the Greenlandic educational governance setting, as coherence between stakeholders in various levels of the governance layers is decisive for planning in implementation, change and development for the better.

Because individual actors within the system possess autonomy, they can both act to shape and be shaped by the system (e.g., Giddens’ theory of structuration (Giddens, 1984)). In complex adaptive systems, the recurring and adaptive patterns that reproduce and emerge are, according to Stacey (2007), determined by a set of rules, and by interactions with other agents, agents adjust their behaviour accordingly (self-organise) and thereby form *population-wide patterns*. This implies that complex adaptive systems, unlike most other system theories that view systems from a macro perspective, view systems from local

individual interactions, and thus a bottom up and micro perspective approach. This systemic view is compelling, as nothing stands alone; everything interconnects and constantly evolves.

The theory of complexity “*offers a means to analyze emerging patterns and trends to illuminate how the disparate system parts are, or are not, working together*” (McQuillan, 2008, p. 1773). The concepts behind complexity theory gives rise to analyse the reform processes in the Greenlandic schools retrospectively, as a way to learn more about the elements, power structures and relationships in the complex system, but also as a framework to navigate the current reform processes.

Carlisle & McMillan (2006) argue that, although developed in the natural sciences, Complex Adaptive Systems (CAS) have managerial implications in the organisational sphere. From the complexity standpoint, organisations are dynamic systems. They are complex adaptive systems comprised of agents (people) who experiment, explore, self-organise, learn and adapt to changes in their environments. In this dissertation, the theory of CAS, with features of equilibrium, emergence, self-organisation, and feedback-loops will provide a theoretical framework to identify and analyse critical stages (emergence points) of the reform process as it evolves and give opportunities for ongoing evaluation and adjustments at the local level. The properties behind CAS characterise how some type of organisations hover between stasis and entropy, and are constantly evolving and developing around the critical state, “*while one cannot control the process of emergence within complex systems, complexity explains that it is possible for one to influence it*” (McQuillan, 2008, p. 1773).

#### **2.2.4 Framing education systems and schools as complex adaptive systems**

According to Snyder (2013), the governance of education systems, and the implementation of reforms, falls under complex situations, where “*the complex nature of educational governance, involving myriad layers and actors, can be an overwhelming problem with no clear entry point for policy makers*” (ibid. 2013,p. 6). Three characteristics of complex education systems magnify the technical challenges of managing them. Firstly, systems are opaque. Many of the goals pursued by these actors are hard to observe, as there are many interactions among the actors, whether they take

place in the classroom or in the bureaucracy. Secondly, systems are *sticky*; reforms to improve learning are hard to launch, and they take time to bear fruit. Thirdly, implementing reforms successfully requires capacity that many bureaucracies lack (World Bank, 2018).

Educational initiatives often try to operate in a complicated context, when in fact they are in a complex (Duit, et al., 2010), in which experts or government officials are devising a policy geared towards a single or relatively small set of problems, and adopt it, in the belief (or hope) that the solution they deploy are whole, complete, is widely reproducible and easy to imitate. By using methods that are designed for a complicated or simple context, and the context is in fact a complex; the initiatives often do not make far.

Researchers and politicians have been aware of the increasing complexity of education systems across the developed world for some time (Burns & Köster, 2016) and have attributed it to several concurrent factors: 1) the growing diversity of actors' preferences and expectations, which places greater demands on education systems; 2) more decentralised and flexible management structures; 3) the increased importance of additional layers of governance at the international and transnational levels; and 4) rapidly changing and broadening information and communication technology.

#### *Schools as Complex Adaptive Systems*

An individual school can be viewed as Complex Adaptive System, within a larger Complex Adaptive System, the education system as a whole (Table 5 below). Johnson (2008) has in her work combined complexity theory with the model of ecological system developed by Bronfenbrenner (1995). This combination serves as a useful theoretical framework to examine the processes, interrelationships and context within Complex Adaptive Systems, in this case the Greenlandic schools, and how they are connected.

Table 5. Five layers of a Complex Adaptive System of a school

<i>Microsystem</i>	Interactions on the interpersonal level. When this theory is extended from human development to organisational and an individual school is the unit of interest, a microsystem of the school would include students, parents and family members, administration, teachers and the community.
<i>Mesosystem</i>	The bi-directional links between microsystems (i.e., teacher and pupil, or administration and parent). An example of a mesosystem of an individual school can be seen in the interactions and dynamics between two of its micro-systems, for example home-school collaboration.
<i>Exosystem</i>	(Elements of the community) the larger social system in which individuals act and at the same time is influenced by the system. The exosystem thus exerts a one-way influence that either directly or indirectly affect the development of the school. The exosystem of an individual school may consist of such structures such as law, economics and politics.
<i>Macrosystem</i>	The underlying culture of the society the system is operating under (regional or national interests). The macro system of an individual school is shaped by the local cultural, political, social and economic reality and values, but also of the entire country. A school system cannot be addressed in isolation from the surrounding community. Thus, the development of the primary school in Greenland has naturally been, and is still, affected by the same changes that society as a whole has been exposed to. Greenland has in a very short time undergone a transition, from a society that put minimal demands on formal education, to a modern knowledge society, with high demand on formal education.
<i>Chronosystem</i>	Both short-term and long-term time horizons, affecting individual and systemic actions. The chronosystem of an individual school can therefore be represented by both day-to-day and year-to-year developmental changes that occur in the school's students, teachers, curriculum, etc. - as well as the total number of years in service (since a new school faces challenges and opportunities that differ from those in a school that has been in operation for a longer time).

Adapted from Johnson (2008)

Johnson's approach builds on an ecological model claiming that the environment consists of four layers of systems, all interacting in complex ways that may both affect and be affected by the development of the agent (Bronfenbrenner, 1995). Bronfenbrenner has later added a fifth dimension, comprising an element of time. This extension of complexity theory, according to Johnson (2008), can be extended to model complex systems and contexts of a school district or an individual school.

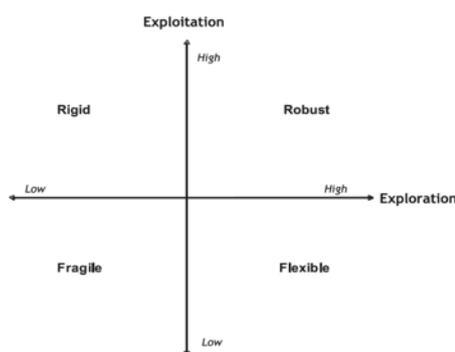
### **2.3 Governance forms and their implications for evaluation practice**

Complexity theory has influenced my choice of theories within governance. In my search for literature that examines the governance of education systems, I have specifically searched for research that applied complexity theory. These theories serve to conceptualise the abstract relationships between actors in a complex system in a more practical and less abstract way.

A political economy approach emphasises the importance of politics and sets out a framework to map the motivations and behaviour of governments and policymakers - seen in relationship with the national / local politico-institutional context and ultimately how these factors in combination affect the conditions for which policy reforms and instruments are to perform under. Within the paradigm of political economies, the concepts of policy subsystems, political coalitions (also called political settlements), and policy instruments are central. These concepts are described in the following sections. To illustrate that politics and institutions are of great importance for how policy instruments are implemented in practice, this section covers an overlook of different forms of governance and their implications for practice.

Duit and Galaz (2008), building on the works of Kooiman (2003) and Pierre & Peters (2005), suggest examining governance from a Complex Adaptive Systems perspective in order to embrace the complexities of governance systems and their abilities to embrace change and uncertainty. They do this by proposing that the adaptive capacity can be seen as a function of *exploitation* and *exploration*. *Exploitation* (Figure 5 below) is understood as the capacity to benefit from existing forms of collective action, while *exploration* is understood as the capacity of governance to nurture learning and experimentation (Duit & Galaz, 2008).

Figure 5. Governance forms



Source: Duit and Galaz (2008)

Table 6 below elaborates further on the governance forms and describes the conditions for the different governance forms, and summarises the different governance forms and their implications for opportunities for exploitation and exploration of circumstances.

Table 6. Governance forms

Rigid	Robust	Fragile	Flexible
<p>Maximises stability while lacking flexibility vis-à-vis changing circumstances. Coordination and co-operation are high, but responsiveness to external changes is slow and incremental due to either biased or weak feed-back.</p> <p>For example, “étatiste”, “liberal democratic state”, and “state-centric governance”.</p>	<p>Combines a high capacity for exploration with an equally high level of capacity for exploitation, and is thus well equipped for handling steady state governance, long-term transformation processes, and sudden changes alike.</p> <p>For example, ideal state, no empirical examples.</p>	<p>Weak capacities for exploitation and exploration form, a vicious circle where difficulties of accumulating knowledge and capital due to high transaction costs also inhibits the capacity to adapt to new circumstances and to buffer the effects of shocks, which in turn makes it even harder to achieve collective action.</p>	<p>Denotes a condition in which the governance system has well-developed capacities for exploration (e.g., learning processes, feedback loops, monitoring schemes, resources, and capital), but is lacking in the capacity to transform the gains from exploration into objects of exploitation.</p> <p>For example, the flexible governance system bears some resemblance to the Dutch governance and Governance without Government models. Exploration is nondirected, non-hierarchical, and carried out independently by multiple actors trying to maximise individual utility through mutual non-coordinated adjustment and exploration of emerging niches.</p>

Source: Duit and Galaz (2008)

*Rigid governance* forms maximise stability while lacking flexibility vis-à-vis changing circumstances. Coordination and cooperation are high, but responsiveness to external changes is slow and incremental, due to either biased or weak feedback. The ideal state, *Robust governance forms*, combine a high capacity for exploration with an equally high level of capacity for exploitation and is thus well equipped for handling steady state governance, long-term transformation processes, and sudden changes alike. *Fragile governance forms* have weak capacities for exploitation and exploration, resulting in a vicious circle, where difficulties of accumulating knowledge and capital due to high transaction costs, inhibits the capacity to adapt to new circumstances, and to buffer the effects of shocks, which in turn makes it even harder to achieve collective action. *Flexible*

*governance forms* denote a condition in which the governance system has well-developed capacities for exploration through learning processes, feedback loops, monitoring schemes, resources, and capital, but is lacking in the capacity to transform the gains from exploration into objects of exploitation. Exploration is nondirected, non-hierarchical and carried out independently by multiple actors trying to maximise individual utility through mutual non-coordinated adjustment and exploration of emerging niches. Therefore, the type of governance form adopted has a great theoretical influence on the flexibility in the possibilities for action and the degree to which the management system is adaptable as a function of the quality of feedback mechanisms and adaptive capacity.

### **2.3.1 Governance gaps**

After describing overall governance forms, this section describes in more detail what types of governance gaps can occur when the governance form is not optimal (Table 7 below).

A main challenge in multi-level systems is the question of who retains the responsibility for oversight and steering. This is particularly true for the education sector, as there is a general trend towards more comparability and compatibility of curricula and education outcomes across regions and countries: even in very decentralised systems, the central level will need to retain some steering capacity, if national or international standards are to be monitored and met (Burns & Wilkoszewski, 2013). Hence, the inherent asymmetry between the various governance levels in multi-level contexts persists. This asymmetry leads to governance gaps in seven areas: information, capacity, fiscality, policy, administrative, objectives and accountability (Charbit, 2011; Charbit & Michalun, 2009).

Governance gaps in the administration and governance of the Greenlandic primary and lower secondary school system are covered and analysed in Paper I: “*Coherence in the Greenlandic education system? Educational planning and evaluation in Greenland from a complexity theory perspective*”.

Table 7. Governance gaps in multi-level education governance systems

<b>Governance gap</b>	<b>Description</b>
Information gap	Asymmetries of information (quantity, quality, type) between different stakeholders, either voluntary or not. The central governance level often has better access to quality information (e.g., comparative data on school performance) than the local level. Also, the central level usually has better capacity to use this information. At the same time, the local level has direct access to information on how policy reforms affect schools - data that the central level first needs to gather. This information asymmetry on both sides can hinder the successful implementation of educational policies.
Capacity gap	Insufficient scientific, technical, infrastructural capacity of local actors, in particular for designing appropriate strategies. This gap occurs when there is a lack of human capital and financial resources between levels of government.
Fiscal / funding gap	Unstable or insufficient revenues undermining effective implementation of responsibilities at sub-national level or for crossing policies. Sub-national governments' own revenues (taxes and fees) often exceed their expenditure responsibilities in education, while the lower levels in the system suffer from too few financial means.
Policy gap	This gap results from the incoherence between sub-national policy needs and national level policy initiatives. It can occur when ministries take a purely vertical approach to policy issues that are inherently cross-sectoral.
Administrative gap	This gap occurs when the administrative scale for policy making, in terms of spending as well as strategic planning, is not in line with functional relevant areas. A very common case concerns municipal fragmentation which can lead jurisdictions to set ineffective public action by not benefitting from economies of scale.
Objective gap	An objective gap can emerge, when the various levels do not coordinate their aims to make them coherent across policy areas. This is particularly the case when objectives are prioritised asynchronously: a national education ministry might look for strong accountability measures to foster international competitiveness of the system, whereas municipalities might first look for necessary infrastructure and capacity building.
Accountability gap	Difficulty to ensure the transparency of practices across the different constituencies. This gap occurs when the necessary institutional quality measurement mechanisms for each governance level are lacking or misplaced.

Source: Classification of Charbit (2011)

### 2.3.2 Policy subsystems and political coalitions

Political coalition analysis focuses on how the balance of power between social groups tends to ensure that institutions function primarily to distribute goods and status to powerful groups, in order to maintain their agreement with the basic rules of the game (Hickey & Hossain, 2019). Thus, studying the motivations, institutions, and individuals that comprise a political settlement provides insight into how meaningful and equitable change can be brought about and sustained.

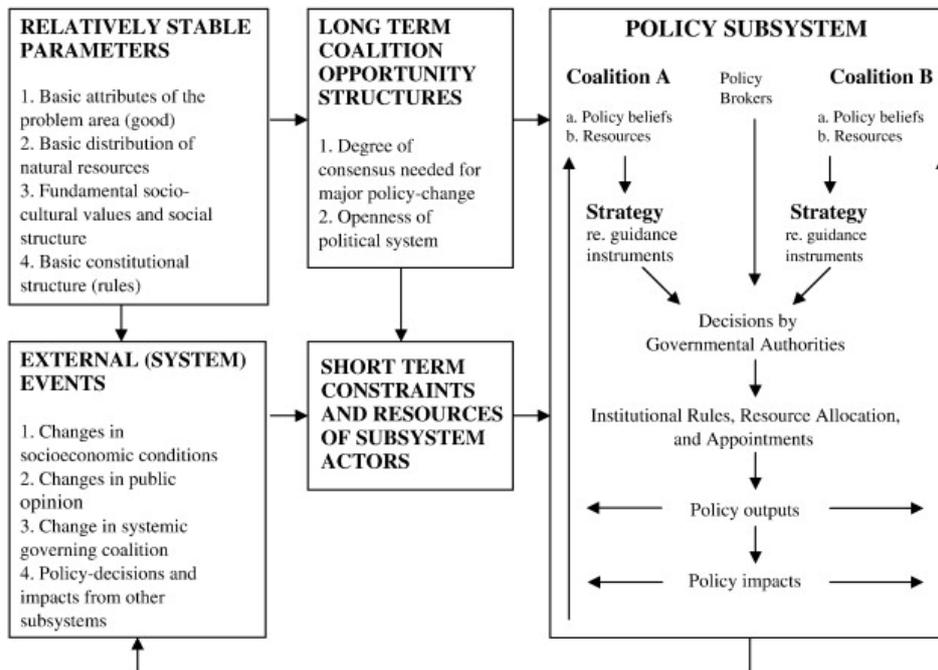
The Advocacy Coalition Framework (ACF) is a framework of the policy process developed by Sabatier and Jenkins-Smith to deal with wicked problems, those involving substantial goal conflicts, important technical disputes, and multiple actors from several levels of government (Hoppe & Peterse, 1993). Sabatier and Jenkins-Smith introduced three “*foundation stones*” or assumptions for the analysis of public policies: (1) a macro-level assumption that most policymaking occurs among specialists within a policy subsystem, but that their behaviour is affected by factors in the broader political and socio-economic system; (2) a micro-level “*model of the individual*” that is drawn heavily from social psychology; and (3) a meso-level conviction that the best way to deal with the multiplicity of actors in a subsystem is to aggregate them into “*advocacy coalitions*” (P. a. Sabatier & Christopher, 2007, pp. 191–192).

The ACF assumes that policy actors have a three-tiered belief system structure of decreasing importance. The first one is that of the *deep core beliefs*, which includes normative and ontological assumptions regarding human nature, essential values (freedom, equality), prioritizing the welfare of specific groups, the roles of the government and the market, and the definition of who should participate in making public policy. Due to their intensity, they are the most difficult to change. The second level identifies beliefs related to public policies, *policy core beliefs*, which refer to a set of assumptions regarding a subset of issues such as political priorities, collectives that should be favoured, the relative power of government and markets, the expected role of government authorities and officials, etc. These are the beliefs that usually help the most in binding coalitions together. Lastly, the third level is that of *secondary beliefs*, which have a narrower scope, because they do not relate to a group of subset of policies or laws, but rather to programmes or specific tools. Therefore, they are, theoretically, less intense than those of the upper levels (P. a. Sabatier & Christopher, 2007).

Figure 6 below models public policy as a translation of competing beliefs, especially regarding contested issues. The framework considers the underlying context (relatively stable parameters and external events) for the policy system as a whole. It then looks at the structure of the governance system (long term coalition opportunity structures), which sets up the arenas and possibilities for influence (short term constraints and resources of subsystem actors). A very central part of the framework is the policy subsystem, where

different coalitions interact with each other and policy brokers. Policy subsystems are defined by a policy topic, territorial scope, and the actors directly or indirectly influencing policy subsystem affairs. The interaction or negotiations then result in a government action programme and operational outputs and impacts, which then can loop back to the system.

Figure 6. General model of policy change (ACF)



Source: The Advocacy Coalition Framework (P. a. Sabatier & Christopher, 2007)

The Advocacy Coalitions Framework (ACF) considers a set of policies as a whole, assuming the interdependency and interaction between the different stages, and establishing a ten-year time frame for the analysis. Traditionally, a major focus of ACF research has been to examine how two or more fairly stable coalitions, most frequently defined by their unique beliefs and patterns of coordination, function in a policy process. ACF contents that public policy is determined by a contest between actors but conceives them as being part of coalitions based on ideas. It holds that the beliefs and the behaviour of public policy actors operate within informal networks, each of them represented by a sub-sector of policies. Inside each sub-sector, policies are structured, at least partially, by the networks built by its most important participants. Each actor seeks to obtain the policies most compatible to her or his beliefs, and, in order to succeed, seek allies, share

resources and develop combined strategies with groups with similar beliefs, especially if this interaction repeats over time.

Actors within a given subsystem “*can be aggregated into a number of advocacy coalitions composed of people from various organizations who share a set of normative and causal beliefs and who often act in concert*” to further policies that align with their values (P. A. Sabatier, 1988, p. 133). The role of policy brokers is to help competing coalitions, or forced coalition actors, to reach negotiated agreements or ‘*an unsatisfactory, yet acceptable*’ alternative.

As with any model or framework, the ACF Framework cannot contain every (complex) aspect of reality and simplifies the reality into selected parameters, structures and systems. The ACF in general lays out policy and decision making as a very planned and rational process. In reality that is of course not always the case as policymakers have an electoral base that can cause them to be reactive and risk creating unplanned policies.

### **2.3.3 Policy subsystems and advocacy coalitions in the Greenlandic primary school administrative system**

Given the context of the multi-level governance system in Greenland and disparities in the local contexts and resources, there is a gap between the central and decentral levels of administration in the formulation and implementation processes of education policy. Greenland is a small country with few organised interest groups specialising in the area of education policy and therefore leaves the governance levels with the majority of power when formulating and initiating education policies. I have chosen to focus on two major advocacy coalitions, namely the central and decentral governance level and how they frame their policy beliefs and how they coordinate in the formulation of education policies.

The two coalitions share deep core and policy beliefs, which includes normative and ontological assumptions regarding human nature, essential values, prioritising the welfare of specific groups, the roles of the government and the market, and the definition of who should participate in making public policy. The problem definitions are also similar, as both coalitions wish to improve the quality of schooling. The differences appear clearly in the policy and secondary beliefs as shown in Table 9 and 10 below - namely in the

coordination, the expected roles of government officials and how to achieve the improvement of the primary and lower secondary school.

Coalition 1 (Table 8 below) consists of the central Ministry of Education and Agency of Education (a subdivision under the Ministry). This coalition is natural and linked to the organisational structure of the Greenland education system.

Table 8. Coalition 1: The Ministry of Education and Agency of Education

<b>Problem definition</b>	To increase the number of young people completing a youth education. The aim is to lift the whole group of young people, including those who do not continue in the education system after lower secondary education.
<b>Policy belief</b>	Political priorities: external accountability, policy formulation. Top-down approach.
<b>Secondary beliefs</b>	A restructuring of the organisation of the education system. A coherent and flexible education system to provide more entries to secondary education while providing smooth transitions between the 1 <sup>st</sup> - 12 <sup>th</sup> school year.
<b>Resources</b>	Resources on central level. Legislative power in the formulation and initiation on nationwide policies.

Coalition 2 (Table 9 below) consist of all five municipalities in Greenland. The coalition is historic, as the municipalities in Greenland have never formed a unified front in the area of education before. The coalition started when two municipalities in 2014 embarked on an ambitious project together, where all students from 1<sup>st</sup> to 10<sup>th</sup> grade and teachers in 2 out of 5 municipalities, Qeqqata Municipality and Municipality Kujalleq, were given iPads for use for both educational and leisure purposes. The project was funded by the Villum Foundation<sup>9</sup> in cooperation with the two municipalities. The role of national government versus local government in countering the quality of learning is examined. This will mean that an entire country will be implementing Edtech in the form of 1:1 iPad learning in the primary and lower secondary school system, with high ambitions and hopes for the overall improvement of educational outcomes:

*The objective is an increase in grades in the subjects Greenlandic, Danish, English, and Mathematics of 10 % after 5 years and 30 % 10 years after the start of the project. In the same way, the goal is that 10 % more young people begin - and later complete - a relevant education after 5 years and 30 % after 10 years. (Municipalities Joint iPad Project Application, 2017, author's translation).*

<sup>9</sup> The Villum Foundation is a part of the Vellux Foundations based in Denmark.

Table 9. Coalition 2: The Municipalities (Avannaata, Qeqertalik, Qeqqata, Sermersooq, Kujalleq)

<b>Problem definition</b>	The project is to be seen as a response to a challenging geography with many small and remote schools and a primary school, according to recent evaluations in urgent need for significant improvements.
<b>Policy belief</b>	Municipal authorities responsible for carrying out and implementing policies. Bottom-up approach.
<b>Secondary beliefs</b>	" <i>A lift of the Greenlandic School</i> " boils down to three headings: Competence, Content and Technology, which are examined as coherent entities in a system where management and context play a decisive role. With technology as a lever and tool, the joint municipal project wish to launch a significant quality boost. During a five-year period, a new pedagogical approach and culture in schools, higher grades of students, and more young people have the skills and motivation for completing education after primary school.
<b>Resources</b>	Resources and knowledge on the local level. Financial resources from private foundations.

The Coalition 1 reform proposal is unique in the sense that there is no exact counterpart to it anywhere in the world, due to the context of Greenland, but reflects globally fashionable ideas, some of which are used as justifications in the Greenlandic policy documents.

Although there are no direct references to externalisations in the description of the Coalition 2 reform, the introduction of ICT in education is a global trend. An international advisory group with members from UNICEF (HQ), World Bank, Ceibal Foundation (Uruguay), UNICEF Korea, Apple and Danish professor Jens Rasmussen has been created (Municipalities Joint iPad Project Application, 2017), presumably as an externalisation to generate additional meaning and justification for the reform.

Historically, there has been a more or less direct education policy transfer from Denmark to Greenland. The 2002 *Atuarfitsialak* reform is seen by policymakers and politicians as the first attempt of formulating policy that is adapted to the Greenlandic culture and context. Five years prior to the *Atuarfitsialak* reform an amendment to the existing legislation introduced a beginning shift from government to governmentality, as the municipalities and local school boards were given the responsibility to operate the schools and thereby placing a greater degree of freedom to respond to diverse and local demands. This move from government to governance involves according to Ling (2000, in Ball & Junemann, 2012) a set of changes in the modalities of the state, and a set of new

relationships within and to the *central level*, involving new actors, new interests, purposes, the insertion of rationales and practices.

The new assessment methods (including national standardised testing in grades 3 and 7) introduced in 2002 also represent a beginning shift from regulation to self-evaluation as seen in Ozga (2009) and Maroy (2008). However, as national or municipal performance indicators and goals are yet to be formulated, this shift cannot be designated as complete.

## **2.4 Unpacking evaluative thinking and steering and its role in education governance**

There are different kinds of accountability systems in play in education governance systems. This section serves to discuss the underlying foundations and the rationales for evaluative thinking in order to create conditions to use the information collected in the monitoring processes for development of status quo.

*Evaluative thinking* (Patton, 2013) is systematic, intentional and ongoing attention to expected results. It focuses on how results are achieved; what evidence is needed to inform future actions and how to improve future results (Patton, 2013). Evaluation methods and evaluative thinking provide the tools for systematically gathering and interpreting evidence that can be used to provide information about progress and provide feedback loops for adjustment, abandonment, extension and new learning. *Evaluation steering* (H. F. Hansen, 2012) is recognised as an important policy instrument in educational governance (Lindensjö & Lundgren, 2000; Lundgren, 2006). Evaluation steering - that is how evaluation is set up to meet the needs of governance - is based on different assumptions and involves different steering mechanisms in different models of governance.

Among the key responsibilities of leaders at all levels of the education system are to clarify system goals and to articulate and monitor the progress being made toward achieving them. Evaluative thinking is a process that enables ongoing adaptations to address the ever-changing learning needs within the classroom, school, regional, and government environments (Kuji-Shikatani, Gallagher, Franz, & Börner, 2016). H. F. Hansen (2012) uses the term *systemic evaluation governance* to define how evaluation is

carried out with steering ambitions and targeted at several actors in a field. Evaluative thinking is therefore a way of thinking that largely depends on how it is articulated in the policy language and the capacity of the different levels of administration in order to take advantage of the information to develop and improve learning conditions for students.

Having a continuous cycle of generating hypotheses, collecting evidence, and reflecting on progress, allows the stakeholders (e.g., innovation leaders, policymakers, funders, participants in innovation) an opportunity to try things, experiment, make mistakes and consider where they are, what went right and what went wrong, through a fresh and independent review of the course and the effects of the innovation (Earl & Timperley, 2015).

#### **2.4.1 Quality concepts, approaches to measurement and continuous improvement**

Performativity and responsibility are necessary concepts in multilevel settings in order to steer from distance, as when governments grant more autonomy to municipalities or schools, there are greater demands to monitor and hold them accountable. Much then rely on how performativity and quality is defined. Is it quality from the perspective of effectiveness? Or from a more holistic sense? What does quality look like, on system level, on school level and on classroom level? The concept of quality in education is multifaceted; it does not possess any specific definition; different scholars have interpreted the concept differently. The differences lie not only in the way the concept is defined but is also reflected in the manner in which quality is measured, and once a criterion of quality becomes incorporated into a quality standard, the concept of quality travels when the standard travels and standards do not always specify their limitations (Dahler-Larsen, 2019, p. 9), which then can have implications for local practitioners and consumers.

The difficulties in developing an initial understanding are compounded by the fact that there is no universally accepted definition of quality or education quality (Dahler-Larsen, 2019; Jain & Prasad, 2018; Tikly, 2010; Tikly & Barrett, 2013). A further point is that the indicators of education quality that are most commonly used by governments and international agencies including completion and survival rates and scores in standardised tests often lead to a narrow view of quality that does not capture the range of possible

outcomes that may be required by learners in the global era or an indication of the underlying processes (Schneider, 2017).

But one thing is to measure, another thing is to do something about it. According to the World Bank (2018), for learning metrics to be effective, they must overcome two important challenges: ensuring that information leads to action, and minimising the potential perverse impacts of measurement. To date, there is no nationwide target over the level of the standardised tests and graduating class exams in the primary and lower secondary school, nor are there a sanctions or rewards system behind the performance measurement and management system.

#### **2.4.2 Functions of evaluation**

Common to the traditional and recent evaluation waves is that evaluation is a systematic process, involves data collection, and is a process for improving knowledge and decision making (Russ Eft & Preskill, 2009). Dahler-Larsen (2004) formulates the following seven uses of evaluations: (a) instrumental with emphasis on control, and (b) instrumental with emphasis on learning. Both a) and b) are applications of evaluations that emphasises appropriateness in relation to an official purpose. (c) Informative, debating, value-adding, an application that emphasises the public and deliberative democracy. (d) Strategic and (e) tactical, which is an application that emphasises the political agenda (based on (Dahler-Larsen & Larsen, 2001)). The focus is on different levels of evaluation and depending on what those 'ordering' the evaluation requires, Dahler-Larsen's seven uses of evaluation can be supplemented by, or lead to, the following purposes of evaluation: accreditation, accountability, monitoring, goal achievement, consumer protection, needs assessment, product or project improvement, understanding or support, social change or decision making.

Although evaluations can fulfil all these functions in governance, the focus of the conceptual framework is on the accountability and improvement function. The prerequisites for different functions differ, and a few are the same for almost all functions (e.g., evaluation should be of acceptable quality, accurate, relevant and credible).

## **2.5 Accountability systems, monitoring and evaluation forms**

This section covers the literature on accountability systems within the governance of education systems. The first part focuses on different accountability systems, while the second part focuses on different evaluation paradigms, their impact on evaluative thinking and how data is used for quality improvement.

Getting all parts of an education system to work together is difficult, and the agencies responsible for designing, implementing, and evaluating education policies often lack the capacity to take on this role (World Bank, 2018) - and failure to tackle these technical and political constraints can trap countries in a low-learning, low-accountability, high-inequality equilibrium.

### **2.5.1 Policy instruments**

Policy instruments are central to both conceptualise and understand current public sector reforms and changing forms of governance (Le Galès, 2010). A state-centric governance model needs evaluative information concerning how policy instruments work in lower levels of government. These instruments can include regulative instruments (e.g., laws, rules and regulations), economic instruments (e.g., government grants and subsidies), and information instruments (e.g., programme objectives and reporting obligations). Likewise, the local-regional model needs evaluative information about policy instruments developed by local governments.

Laws and regulation are important policy instruments to steer education, and policy instruments such as NLSAs (national large-scale assessments) and TBA (test-based accountability systems) have been globally adopted. Taking the global adoption into account, Verger et al. (2019) argue that the reception and evolution of these data-intensive policy instruments need to be seen as context-sensitive, contingent and path-dependent, as the evolution and future use(s) of policy instruments are conditioned by the previous instruments in place (Verger et al., 2019). Once policy instruments are adopted, they have major potential implications, as many policy instruments create their own structures of opportunity in ways that were unforeseen, and can generate broader political effects in

governance structures and even in the main goals that policy systems are expected to pursue (Bezes, 2007; Kassim & Le Galès, 2010; Verger et al., 2019).

Policy instruments used for accountability purposes in education are covered in depth in the following section.

### **2.5.2 Accountability systems**

A key function of evaluation in governance is the promotion of democratic accountability and transparency. In general, accountability systems refer to the mechanisms and instruments used to ensure that individuals, groups, organisations, and institutions meet their obligations (Hatch, 2013). Accountability generally consists of three phases: 1) an information phase, 2) a debating phase, and 3) a phase of consequences and sanctions (Schillemans, 2008). In education, phase 1 consists of the schools providing reasons for their actions, explain themselves and pass information about their performance to the accountees (central or regional government); the accountees in turn pass judgment on the performance. In phase 2, the information at hand is discussed, which then in phase 3 formulates positive or negative consequences (praise and promotion, more freedom or naming and shaming, formal disapproval, tightened regulation, discharge of management, or ultimately, termination of school).

In education systems, a conceptual distinction can be made between two different accountability forms: external accountability (also referred to as bureaucratic, hierarchical or vertical accountability) and internal accountability (also referred to as horizontal and professional accountability) (Adams & Kirst, 1999; Elmore, 2004; Firestone, 2002; Levitt, Janta, & Wegrich, 2008). The external accountability model is a top-down and hierarchical model, where schools are understood as an instrument for education policy on the national, regional and local level. External accountability is when system leaders assure the public through transparency, monitoring and selective intervention that the education system performs the tasks that are set in accordance with societal expectations and requirements in relation to legislation. It enforces compliance with laws and regulation and holds schools accountable for the quality of education they provide. Schools and teachers are held accountable for the quality of the education they provide - measured as student test results and / or other quality indicators. Formal

authority alone may be used to enforce compliance in the external accountability model, but that authority can be reinforced with performance incentives such as financial rewards or sanctions.

Internal accountability arises when individuals and groups assume personal, professional and collective responsibility for continuous improvement and success for all students (Hargreaves & Shirley, 2009), and therefore presupposes non-hierarchical relationships. It is directed at how schools and teachers conduct their profession, and / or at how schools and teachers provide multiple stakeholders with insight into their educational processes, decision making, implementation and results. Each of the two types of accountability can be further divided into two subsections (see Table 10 below).

Table 10. Four forms of school accountability

Vertical and external	<b>Regulatory school accountability:</b> compliance with laws and regulations, focuses on inputs and processes within the school. Mechanism: reporting to higher levels of school authority.
	<b>School performance accountability:</b> periodic school evaluations. Mechanisms include: 1) standardised student testing, 2) public reporting of school performance, and 3) rewards or sanctions. (Rosendkvist, 2010; Levin, 1974).
Horizontal and internal	<b>Professional school accountability:</b> professional standards for teachers and other educational staff. Mechanisms: credible, useful standards and the creation of professional learning communities (Levitt et al., 2008; Davis, 1991).
	<b>Multiple school accountability:</b> involving students, parents, communities and other stakeholders in formulating strategies, decision-making, and evaluation (De Vijlder et al., 2002; Levin, 1974).

Source: Adapted from (Elmore, 2004; Hooge, Tracey, & Wilkoszewski, 2012).

In view of consequences placed on the outcome, in education a distinction between high-stake and low-stake is common (Morris, 2011; Rosenkvist, 2010; Verger et al., 2019). High stake implies that significant rewarding or punishing is coupled to the third phase described above, while with low-stake accountability such a coupling is absent. Stronger forms of sanctions are not necessarily more effective or influential than weaker forms (Schillemans, 2008), as the context surrounding a school is decisive for what is possible to do with the available resources and opportunities at hand. According to Fullan, Rincón-Gallardo & Hargreaves (2015), it is more important to invest in the issues that develop internal accountability than to increase external accountability, as the importance of internal accountability precedes external accountability across the entire system. Put in

another way, the internal accountability of the institutions must be present, if the intention of external accountability is to be achieved.

## **2.6 Reflections on theoretical framework**

Theories, governance systems and policy instruments are created and designed for specific contexts and administrative systems. As described in the introduction, Greenland is a nation with a young administration and formal education system. This of course creates challenges of applying a theoretical framework based on Western / international literature that has been developed for policy analysis on nations with a much longer history and resulting in different administrative contexts. During the research process, I have reviewed policy analysis studies in both OECD (Burns & Köster, 2016; Hooge et al., 2012; OECD, 2015; Rosenkvist, 2010) and developing countries (Glewwe & Muralidharan, 2015; Kingdon et al., 2014; Moore, 2015; Pritchett, 2018) to get a better understanding of how policy instruments are expected to work in different contexts. Research shows that countries as a result of globalisation adopt travelling ideas and reforms (Czarniawska & Sevón, 2006; Dale, 2005; Meyer, 2002) to an increasing degree. The studies also show that travelling ideas and reforms play out differently due to different traditions, capacity (both in terms of number of staff and capabilities), the structures of administrative systems and power relations among policy coalitions.

Ideas and reforms ‘travel’ for many different reasons; one reason I would like to draw attention to is the search for what works and in the case of education governance the ambition to improve the quality of education. In the context of this dissertation, it is evident that ideas and theories also have travelled from abroad to Greenland. This was necessary, as research on the administrative and governance systems in Greenland are very limited. Similar to what countries ought to do when adopting travelling reforms, I have done my best to be aware that the theories in my theoretical framework were developed for, and in different contexts. For this reason, I have operationalised the theoretical framework into two different analytical models which I present in chapter 4.

# PART III: RESEARCH DESIGN, METHODS AND DATA

## CHAPTER 3: Methods: Generating data

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Having introduced the empirical setting in section 1.1.6, I now present the research design and discuss the rationales behind my choices regarding participants and sites. This chapter introduces the research design, sources and methods used to generate data for this dissertation. Methodology is the link between ontology, epistemology and theory informing the research, and the practice of conducting that research. According to (Yanow & Schwartz-Shea, 2014, p. xvii) qualitative methods as a category and a descriptor increasingly does not capture the full range of non-quantitative methods used in empirical social science research. Such a discussion rests on an understanding of what is meant by ‘science’ and the criteria for assessing the quality of research. Researchers make claims to knowledge - to claim that something is knowable entails a related claim in regard to its ‘reality status’ - epistemological and ontological claims are mutually implicating, and they implicate methodological choices. The difficulty with the ‘qual-quant’ nomenclature goes beyond a misleading understanding of what constitutes qualitative research. Increasingly the term is being used to refer not to the traditions of meaning-focused or lived experience-focused research, but to small ‘n’ studies that apply large ‘n’ tools (e.g., King, Keohane, & Verba, 1994). What we are increasingly looking at these days methodologically is, instead, a tripartite division among quantitative, positivist-qualitative, and traditional qualitative methods (Yanow & Schwartz-Shea, 2014, p. xx). The latter have been increasingly been termed ‘interpretive’ methods because of their intentional, conscious grounding in the ontological and epistemological presuppositions of the continental interpretive philosophies of phenomenology and hermeneutics and their American counterparts of symbolic interactionism, ethnomethodology, and pragmatism among others.

Qualitative-interpretive methods are not troubled by some of these issues that appear to concern those following methodologically positivist approaches; establishing concepts to be tested in the field, problems of measurement and sample size, or building databases

(Yanow & Schwartz-Shea, 2014, p. xix). What is problematic here is that quantitative methods are, by and large, informed by positivist philosophical presuppositions, and their evaluative criteria (three of the most prominent criteria for the evaluation of social research being reliability, replication and validity (Bryman, 2016, p. 41)) have grown out of these ontological and epistemological presuppositions, whereas traditional qualitative methods are informed, explicitly or not, by interpretive philosophical presuppositions and have their own evaluative standards (Yanow & Schwartz-Shea, 2014, p. xix). An interpretive approach makes the same fundamental demands on the researcher as other forms of scientific practice in that it must be systematic and conducted with an attitude of doubt (Schwartz-Shea & Yanow, 2012). Ways of dealing with these demands, however, differ from those of positivist and variable-based approaches, as do the criteria for judging whether the attempt has been successful. The following sections describe and discuss the various steps I have taken in my efforts to meet the criteria relevant to interpretive research as well as possible. The aim of the chapter is to illustrate the work that went into producing the research and provide a reflexive, and sufficiently transparent account, which will allow readers to judge the persuasiveness and trustworthiness of the analyses that will be presented in the following chapters (Schwartz-Shea & Yanow, 2012). I begin by describing how I went about generating data. I then describe the process of coding, analysing and interpreting the data, before reflecting on evaluative criteria.

### **3.1 Research design and process**

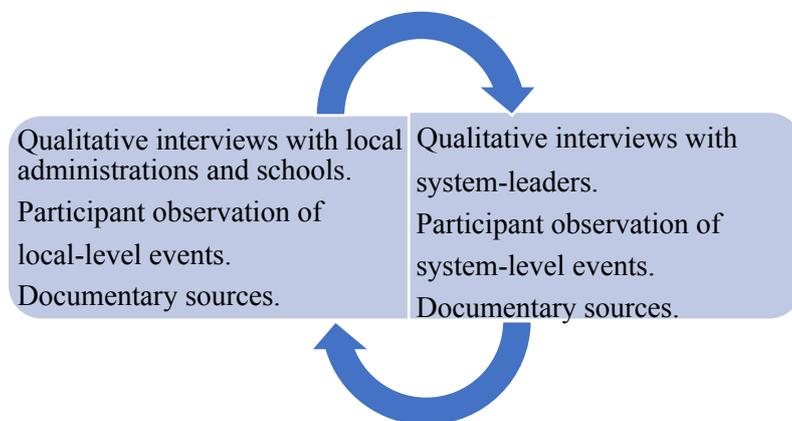
When operationalising the research questions, the relationship between the problem, the theoretical concepts and the empirical material is important. Therefore, the research design is explained below on the basis of the research questions presented in section 1.3. In the following, I will introduce my research design and the specific sites and participants that are included.

Using a political sociology approach to policy instruments emphasises that meaning-making processes importantly interact with political, institutional and economic factors in the production of policies. The approach is qualitative-interpretive, as the aim is to understand how actors try to navigate in these systems, how they understand key concepts, how they coordinate and adapt them to local contexts. What lead me to choose

to follow an interpretive path is largely the set of ontological and epistemological presuppositions undergirding the initial shaping of my research questions. In interpretive research, meaning making is key to the scientific endeavour: its very purpose is to understand how specific human beings in particular times and locales make sense of their worlds. This choice is based on the objective to analyse the macro and micro dynamics of educational reform; how administrative systems shape behaviour among actors and ultimately how that effects how policy and evaluations instruments are utilised. Interviews and observations were conducted to answer micro dynamics; and to answer the macro dynamics documents on policies, history and overall system structure were gathered and analysed.

Figure 7 below presents the elements of the research design. The arrows illustrate that the different elements between the system and local level have been carried out simultaneously and have informed each other throughout the process.

Figure 7. Elements of the research design



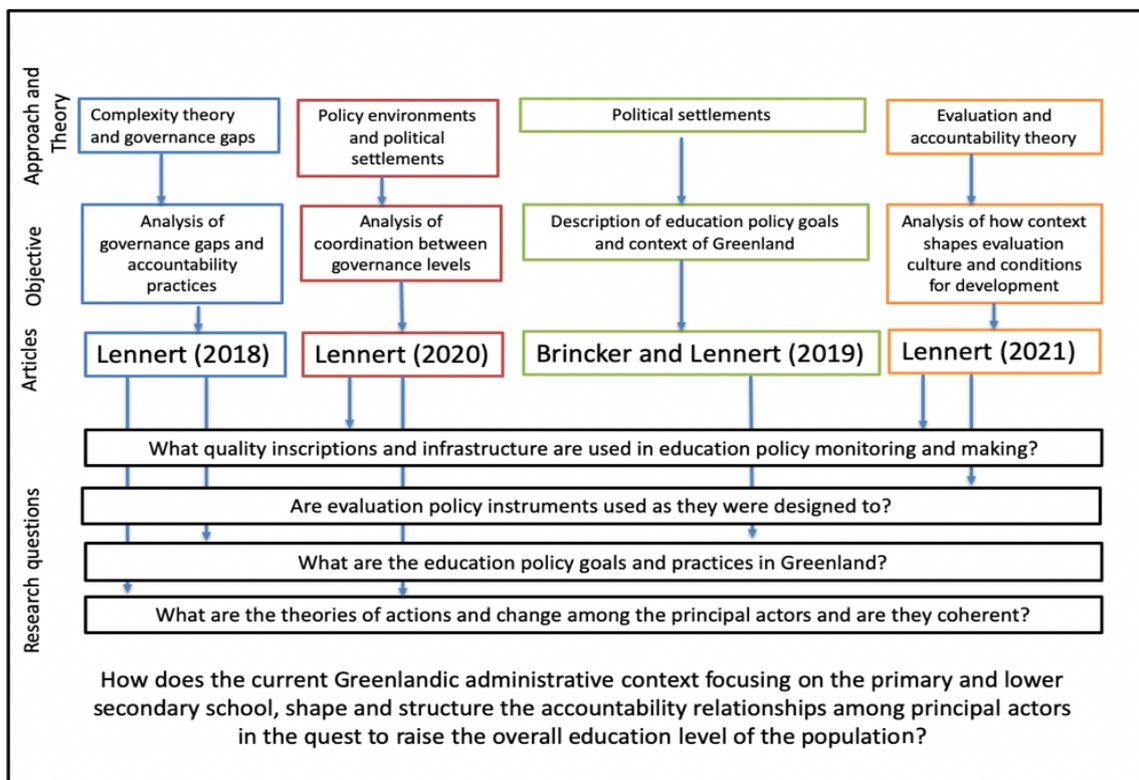
My analytical framework (presented in detail in chapter 4) implies the need for an approach which enables the researcher to follow developments over time, and across organisational and interorganisational spaces, while remaining sensitive to meanings and practices as they unfold in particular contexts (Zilber, 2008, p. 157). I set out to capture organisational and professional practices regarding how evaluation tools and evaluative thinking are used in the governance of the Greenlandic primary and lower secondary

school system. The studies on which this dissertation rests are not ethnographic per se; however, the fieldwork arguably comprises elements of ethnographic character due to the included method of participant observation. The main unit of observation is actions (i.e., doings and sayings of participants), and the unit of analysis is practices or patterns of actions focusing on how evaluations are used. To answer my research questions, I have interviewed system-leaders and local practitioners, observed events and meetings and analysed relevant documentary material. Word-based methods and writing, researcher reflexivity, and the exploration of multiple meanings and their ambiguities, especially in policy contexts in which contention over the policy issue under study is common (Yanow, 2006b).

Figure 8 below illustrates the operationalisation of the research questions, theories and empirical material. Based on the research objectives and focus of the research project, four articles are selected and included in this thesis to represent the research undertaken. The four articles cover different angles and analysis of the area of research and thus contribute to the investigation of the research questions.

As Figure 8 also implies, each article feeds into discussions related to one or more sub research questions, and the four sub research questions all have the purpose of contributing to the answer to the overall question: ***“How does the current Greenlandic administrative context focusing on the primary and lower secondary school, shape and structure the accountability relationships among principal actors in the quest to raise the overall education level of the population?”***.

Figure 8. Research design



### 3.2 Explanatory mechanisms: systems thinking and critical realism

Philosophers of science have for long argued that both our values and world views influence the way we do research, irrespectively if we recognise it or not. I therefore begin by anchoring my approach in the philosophy of Critical Realism (Mingers, 2004). Critical Realism takes “*an interest in complex networks of theoretical and observable elements characterizing efforts going beyond the surface of social phenomena*” (Alvesson & Sköldbberg, 2009, p. 40), which I have found helpful in terms of how to go about answering my research questions.

Critical Realism has been developing since the late 1970s by the philosopher Roy Bhaskar with the ambition to provide a more theoretical, but also more realistic substitute for positivism and social constructionism in offering principles and ideas for science (Alvesson & Sköldbberg, 2009, p. 39). In its emphasis on underlying patterns, Critical Realism shares some tangential points with hermeneutics and critical theory; in its

searching for some kind of scientific laws, and in its view of the commonality of social science and natural science research, it shares ground with positivism (Alvesson & Sköldbberg, 2009, p. 16). Critical Realism is a philosophical approach with a post-positivist paradigm that at its heart has the idea of generative causality via causal structures, or mechanisms<sup>10</sup>, which possess powers or tendencies to behave in certain ways. Structures, or mechanisms, are characterised in terms of parts and wholes, boundaries, emergence, hierarchy, information and feedback and the observer. The actual and empirical events that occur in the world are then seen as resulting from the interactions and interplay of these structures and interplay.

Critical Realism does not deny the value of definitions of the social reality that is produced. Of course, social phenomena are acknowledged to be different from those studied in the natural sciences, but the active construction of social reality by individuals, and collectives thereof, is still downplayed (Alvesson & Sköldbberg, 2009, p. 41).

In addition, a division between structure and agency is emphasised. These two aspects should be studied separately rather than together, as suggested by structuration and action theories. Structural impact, it is argued, mediates an objective influence and thus forms actions and provides actors with guidance. Structures are consequently taken to precede and determine actions, which in turn are seen as capable of gradually changing the former. Proponents of Critical Realism look at the sharp distinction between structure and human action as important to the analysis and enlargement of a space for action, which in turn is connected to the critical agenda of Critical Realism (Alvesson & Sköldbberg, 2009, p. 44).

Structure and mechanism are two of the most central parts within Critical Realism. Mechanisms have implications in terms of different effects and events, the forces and characteristics that mechanisms produce, and the intricate connections between different structural levels that contribute to the complexity of causal forces, and that make possible the treatment of these as single, isolated factors (Alvesson & Sköldbberg, 2009, p. 42), causality should thus not be understood in terms of universal, predictable patterns, but rather as contextual and emergent.

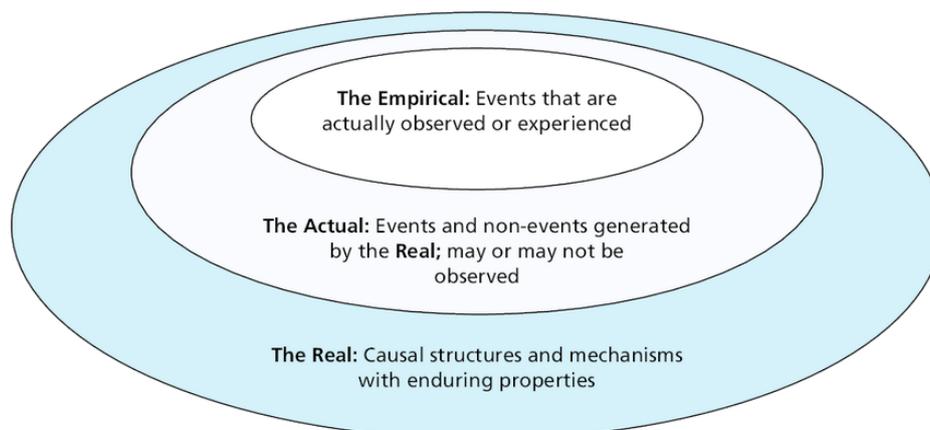
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<sup>10</sup> In essence, a structure or mechanism is the same as a system.

Ontology regards the existence of facts and objects, while epistemology regards whether we can know them or not, and if objectively or subjectively. Critical Realism incorporates an interpretivist epistemology (Archer et al., 1998; Mingers, 2004), where reality is seen to exist largely outside of our understanding of reality, but we navigate that reality through our own frame of reference, itself socially determined, and therefore see social structures as ontologically real entities (Bhaskar, 1978). In other words, causal mechanisms operate largely independent from the mind and action of individuals.

For Bhaskar, reality is both intransitive (existing independently of humans) and stratified (Archer et al., 1998). The stratified nature of reality in Critical Realism is understood in three dimensions (Figure 9 below): the empirical domain is where experiences may be obtained by direct observation; the actual domain refers to the pattern of events that occur, whether the actors or researcher experience them directly or not; and the real domain consists of “*the processes that generate events, in which generative mechanism or causal powers exist independently with a tendency to produce patterns of observable events under contingent conditions*” (Mingers, 2016, p. 19). As causal mechanisms become activated and actualised, events occur. Opposing structures or mechanisms in the real domain may not be visible or noticed, until one is stronger, and there is a tipping point. Therefore, while events that emerge are observable and bring about outcomes that are themselves observable, the mechanisms that enacted those powers are neither transparent nor static in nature.

Figure 9. The stratified nature of reality in Critical Realism



Source: (Mingers, 2004)

### **3.2.1 A critical realist perspective on evaluation and the case of education governance**

As Critical Realism sees social structures as ontologically real entities, it makes it possible to also contemplate governance structures as ontologically real entities, which can have emergent powers to cause events under certain conditions. Thus, in this sense I view governance forms as social structures, which like other social structures can change over time. A governance structure can be considered to be transforming (changing) or reproducing itself (staying the same) in response to triggers of change over time, as social structures do not exist independently of the agents' conceptions of what they are doing. Thus, agency always requires some degree of interpretation and understanding of the meaning of the actions undertaken<sup>11</sup>. Although this does not imply that agents cannot be mistaken; and it does not require that they be fully aware of the consequences of their activity.

The primary goal of a critical realist informed study on governance forms will be to understand the very nature of the mechanisms, its causal powers (ability to influence change) and liabilities (susceptibility to change). A critical realist explanation involves a gradual transition "*from actions through reasons through rules and thence to structure*" (Sayer, 1992). The actions undertaken by actors within the governance form will therefore become an important unit of analysis. By focusing on the actions, and related perceptions and decisions concerning the policy instruments, as well as the consequences of these actions, perceptions, and decisions with regard to the function of evaluation.

Within Critical Realism, case research is seen as being particularly fruitful in explaining complex social phenomena by identifying deep processes and structures that cause particular events to happen and furthermore by identifying the necessary conditions for this to occur (Easton, 1998).

A critical realist explanation involves a gradual transition "*from actions through reasons through rules and thence to structure*" (Sayer, 1992, p. 112). The actions undertaken by actors within the different levels of administration involved in the accountability relationships will therefore become an important unit of analysis.

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<sup>11</sup> Giddens' double hermeneutic (Giddens, 1984).

### 3.2.2 Reflections on the use of Critical Realism in an Arctic context

In this section I reflect on how I have used Critical Realism in an Arctic context. My approach to Critical Realism has been pragmatic in the sense that I have used what I thought was useful from the principles behind the philosophy. In general, Critical Realism does not engage with methodological matters much. It is a philosophy that cannot directly contribute to the disclosure of structures and mechanisms that produce and impact a certain, chosen, object of study. Critical Realism has informed my analysis, my application of methods, and choice of theories - but I have not followed all the prescriptions behind the philosophy. Critical Realism is a philosophy for and not about science; it is generally prescriptive and it can support research by offering an overall frame of reference and by “*affecting the questions put to reality, and the manner in which it is done*” (Alvesson & Sköldbberg, 2009, pp. 43 - 44), which is how I have applied Critical Realism.

Critical Realism sees social structures as ontologically real entities, but I use interpretive-qualitative methods that are grounded in constructionist philosophical assumptions. Although this may seem contradictory, Critical Realism is in essence highly pluralist in terms of both ontology and epistemology. It recognises the existence of a whole range of entities - material objects and forces; social structures and practices; conceptual systems such as languages, beliefs and reasons; and feelings and experiences (Mingers, 2016, p. 189). All of these are ‘real’ because they have causal efficacy, even though they may not be observable or perceptual (Sayer 1992, 2000). These entities do differ, however, in our means of access to them (Figure 9 above, the empirical, the actual and real domain).

Traditionally, there has been a tendency to link a particular set of research methods to a particular philosophical paradigm. Critical Realism does not prescribe to a particular method, but instead stress the importance of multimethodology and that the goal of research should be explanation rather than mere description or summarisation (Mingers, 2016, p. 189). Physical objects can be observed and measured; social norms and practices require qualitative investigation, while personal values and feelings require hermeneutic or phenomenological analysis.

Critical Realism, with its focus on deeper lying mechanisms, is in my opinion useful in an Arctic context. From the standpoint of this dissertation and the case of education governance in Greenland, too much effort goes in measuring and summarising only what is observable in terms of statistics and results without questioning the underlying mechanisms that cause them.

### **3.3 Case study research**

Case study is an approach to social science research that focuses on particular cases that are of relevance to the focus of research interest. I adopt the definition of a case by George & Bennet (2005) as *an instance of a class of events*. They further define the term *class of events* as referring to a phenomenon of scientific interest, such as revolutions, types of governmental regimes, kinds of economic systems, or personality types that the researcher chooses to study with the aim of developing theory, or generic knowledge.

Case study data collection provides the opportunity to employ multiple sources of data. As such, rich and descriptive data reveals the complexity involved within the selected case site. Qualitative methodology encourages detailed description and fits the objectives to document the circumstances surrounding educational policies and practices in Greenland. Practice, *or the way of doing things*, is defined by Bennett & Checkel (2014) as socially meaningful and organised patterns of activities. As practice can differ from policy intentions, inquiries into ‘the way of doing things’ among the different actors in the governance system provides important information for understanding the context of the reform processes in the education system in Greenland.

The primary purpose of the embedded case study is to provide an in-depth analysis of the management form of complex educational systems from a Greenlandic context. The study uses an empirical-analytical approach rather than a theoretical-conceptual one. The purpose of the case study is to provide a picture of the relationship between legislation and administrative practice in the Greenlandic primary and lower secondary school.

The research is anchored empirically in a single country, where the education governance system is the unit of observation and analysis. The goal is not comparison, but an inquiry into why things are as they are. My research is not theory-testing, but exploratory, since

the key concepts were not precisely formulated from the start of the project but grew out of the research process as a result in itself.

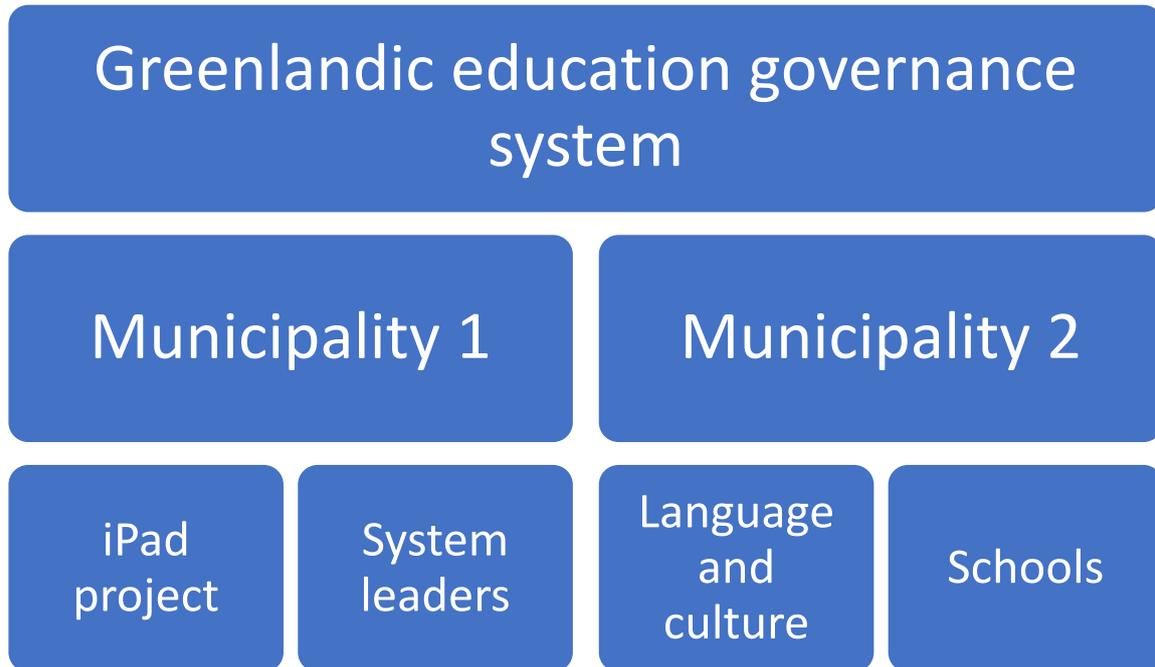
### **3.3.1 Embedded single-case design**

An embedded case study is a single-case study involving units of analysis at more than one level (Yin, 2018). This occurs when, within a single case (the first level), attention is also given to a subunit or subunits. In this dissertation, the Greenlandic education governance system as a whole is the main unit and first level of analysis, as the dissertation is an inquiry into the concept of quality, systemic connections, underlying causes and deeper weaknesses in the way the Greenlandic education governance system has been designed. The subunits serve to give deeper insights to the systemic connections and to add significant opportunities for extensive analysis, enhancing the insights to the single case. An interest of structured and focused comparison lies in selective aspects of the cases rather than in complete description of each case.

The Greenlandic primary school governance system was selected as the primary case because of following factors: 1) Greenland and its indigenous population have had full responsibility and authority of the area of education for nearly 40 years; 2) post-colonial context and bilingual setting, and low education level in the indigenous population; 3) a big proportion of the student population are at risk students; 4) vast geographic area with resulting high turnover in trained school staff; and 5) easy access to persons of interest, schools and data.

The above factors make it interesting to examine how the governance and school system is structured, and the knowledge acquired can be useful for schools and countries outside Greenland. Two out of five Greenlandic municipalities were selected based on their size. A small and a big municipality were chosen as cases to ensure variance and different contexts. School case selection was based on a document analysis examining the level of results from the standardised testing. The elements of the embedded case study design are illustrated in Figure 10 below.

Figure 10. Embedded case study design



As mentioned earlier, the overall Greenlandic education governance system is the main case. To arrive at a deeper understanding of the relationships between the different levels of government, I have chosen to include the following subunits / cases: municipality 1 (including four schools), municipality 2 (including two schools), iPad-project 'Kivitsisa' (including all five municipalities), system-leaders (including system leaders from all levels of the governance system), and language and culture as a whole.

The rationale behind the selection of subunits is explained in section 3.3.3.

### 3.3.2 Role of theory in case studies

Case studies may be divided into: exploratory, descriptive and explanatory case studies (Yin, 2018) - categories related to the specific purpose of the case study. This research focuses on understanding the administrative context in the governance of the Greenland primary and lower secondary school - with an emphasis on how the policy and evaluative instruments are implemented. In that way, the aim of the research is not to generate or test theory through a case study. The goal is instead to understand the case by means of theory. I seek to explain when, how and why policy and evaluation instruments are used

differently across governance levels. The research is therefore an explanatory case study - using both an inductive and a deductive approach.

Theory can offer concepts for understanding, structuring and analysing contexts, while also leaving room for reflexivity. Theoretical perspectives and concepts do not emerge on their own but are created by the researcher. The analytical framework presented in chapter 4 is informed by literature, my experiential knowledge and partly grew out of my efforts to make sense of what I was hearing in interviews and observing in the field (both national in terms of country, but also global in terms new research presented at conferences and papers).

I used an abductive approach (Mingers, 2016, p. 53), accordingly, I did not systematise or ‘operationalise’ the different analytical concepts prior to generating and analysing my data - but engaged instead in an abductive and iterative process (Schwartz-Shea & Yanow, 2012). Before starting my fieldwork, and during months of generating and reflecting on data, I continuously sought to develop a sense of how the different concepts that I was interested in had been conceptualised and discussed in the scholarly literature which underlines this dissertation. Throughout this process, some theoretical perspectives came to shape my analysis of what I was observing, while others were discarded. Alongside this process, the centrality of policy instruments, the importance of institutional and governmental structures, and capacity in terms of implementation practices gradually became more prominent in my analytical and theoretical memos. I explain the process of abduction in my analytical framework in more detail (chapter 4).

### **3.3.3 Choosing local organisation sites and interview participants**

Based on my interest in system-level developments, I chose to conduct qualitative interviews with central organisational actors (policy makers, municipal education directors, school principals and teachers) and observe national and local meetings and events.

My choice of specific municipalities, specific cases (the iPad project and the case of language and culture), and schools as sites for my fieldwork was first and foremost based on the wish to elucidate differences between contexts and the way evaluative thinking

and monitoring practices manifests. Therefore, I selected the local sites for my fieldwork among municipalities and schools which, according to my own background knowledge and relevant documents, had differences in practice.

Specifically, I chose Kommuneqarfik Sermersooq (municipality 1) and Qeqqata Kommunua (municipality 2) due to their difference in size and capacity in terms of staff. Although they have similar tasks and responsibilities and are governed by the same laws, there are substantial differences between the two municipalities and the ways in which they have chosen to monitor their schools. The obvious difference between the two municipalities lies in their size and number of inhabitants. Choosing two municipalities instead of just one is a way of triangulating the data (i.e., through sites and sources as well as methods). Comparing similarities and differences between the two provides more breadth and nuance to the analysis of how policy instruments have been operationalised both locally, and nationally, and enhances the grounds for analytical and theoretical generalisation with regards to how policy instruments play out in different contexts.

The iPad '*Kivitsisa*' project was chosen to analyse the coordination and facilitation of stakeholders between the different actors in the central and local administrations in terms of implementation of a project at this scale.

The system-leaders case was chosen to elucidate purpose and agreement among key stakeholders in terms of quality, assessment of current legislation, and the division of responsibilities in the administration. In this round of interviews, I had an ambition to interview all municipal education directors in Greenland - however, due to time and resource constraints, this was not possible.

The language and culture case was chosen to describe the contextual factors of Greenland in terms of developing the education system.

The observations and interviews are not intended to be 'representative' of the state of affairs in Greenlandic municipalities and schools in general, as this is neither possible nor relevant to my ambition, which is to elucidate monitoring practices, the role of evaluative thinking and develop analytical concepts and theoretical generalisations that may have some relevance in other cases and contexts.

During my fieldwork, I have not experienced rejections of my requests for interviews and wish to observe events (though a few required a good deal of time and patience to arrange). Participants in the study represent the following organisations: Ministry of Education, Agency of Education, and the five municipalities Avannaata Kommunea, Qeqqata Kommunea, Kommuneqarfik Sermersooq and Kommune Kujalleq. It is important to note that not all potentially relevant actors are represented. This is mainly due to time and resource constraints, both on my part and the potential interviewees. Perhaps more important to note is that the families and children, who are key actors in schools, are not represented in this study. This is partly due to the fact that, as organisational actors, citizens are practically invisible in this field. There are no current parent-led associations, and they are therefore not influential and cannot therefore be considered political elite actors.

### **3.3.4 Reflections on choice of type of case study**

Traditional qualitative methods require a flexible response ‘in the moment’ to observational and interviewing circumstances, and so they are not ‘rigorous’ in the literal sense of the word - they do not follow a stepwise course in the way that quantitative studies are described as doing (Yanow & Schwartz-Shea, 2014, p. xviii). That requisite flexibility also means that the research design often changes in the face of research-site realities that the researcher could not anticipate in advance of beginning the research (Schwartz-Shea & Yanow, 2012).

I started out with a project description where Developmental Evaluation (Patton, 2011) was the foundation of the research design. However, the more I read, talked to people, conducted interviews and made observations, I found that the problem was somewhere else than 'just' the way polices are evaluated. The question 'how can it be this bad' could not be answered with the original research design. The principles behind Developmental Evaluation and Complexity Theory are still the foundation of the research, although not as prominent as initially thought.

The original research design was a comparative case-design to follow a couple of schools and municipalities for a number of years and document if a new way of evaluating would change practice and what results it would bring. In the original research design parents

and students were included as interview participants in order to see how evaluation instruments were perceived<sup>12</sup>. The intention was to set up '*Learning As You Go*' (Kuji-Shikatani et al., 2016) monitoring and developmental evaluation projects in two primary schools to be followed the next couple of years. The ambition of the research was to develop a developmental evaluation model that was based on the demands, wishes and opportunities within the educational system in Greenland, with a focus on primary and lower secondary schools, with emphasis on promoting the culture of evaluation, and to promote learning and development. However, to do that, the governance system as a whole, the municipalities, and schools have to have some basic foundation for the research design to work as intended. Given the time and resources it would take, I did not have the opportunity to pursue that strategy. Instead, I ended up with a research design that focused more on the administrative system as a whole, concentrating on the underlying causes of learning shortfalls and the deeper weaknesses in the institutional arrangements, as it is the system that is the foundation of what is possible to do and what is not. Interviews, data and observations that were focused on the developmental evaluation model were discarded. Although a lot of time and preparation was lost, I gained a lot of insight through this process.

This change in research design was a result of a constant-comparative method (Cohen et al., 2007), where a constant comparison method of analysis has its roots in grounded theory in which the process of data collection and data analysis is interactive, iterative, and can be revised with new information. Schwartz-Shea & Yanow (2012) also describe that requisite flexibility also means that the research design often changes in the face of research-site realities that the research could not anticipate in advance of beginning the research. The themes of the analysis have thus arisen in an abductive interaction between existing literature in the field, the background knowledge of the field, the theoretical perspectives that have formed the basis for gathering the empirical data, the interviews themselves and conducting interviews and subsequently reading the transcribed interviews and observation notes.

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<sup>12</sup> I interviewed a parent before I changed the research design. This data has been discarded.

According to Schwartz-Shea & Yanow (2012), due to the researcher’s ongoing and evolving learning while in the field, as well as her or his limited control over settings and the persons in them, or over materials in an archive, interpretive research is, and has to be, much more flexible than other forms of research.

In spite of these limitations, I believe that the chosen actors and sites represent a reasonable selection in terms of different perspectives on the use of evaluation instruments in the governance of the Greenland education system.

### 3.4 Overview of data sources

Below, table 11 presents an overview of system-level and local sources of data.

Table 11. Overview of research techniques and data sources

<b>Research technique</b>	<b>Data</b>
<b>Text analysis of relevant primary documents</b>	Parliamentary / governmental documents Inatsisartut / parliament debates §37 questions on education Discussion papers and press releases Consultation and reports Municipal documents Municipal council and education committee documents School level Budgets Project plans School council reports Quality reports School strategies
<b>Secondary analysis</b>	Internal and external evaluations of policy Newspaper articles
<b>Semi-structured elite interviews with key stakeholders</b>	Policy makers System leaders Representatives of school boards Heads of schools Teachers
<b>Participation in field-level conferences and events</b>	Observation notes

### **3.5 Generating data**

This section describes the methods and practicalities involved in generating data, including the role of my observations of system-level events, my approach to interviewing system leaders and school teachers, the practicalities involved in gaining access to local sites, building research relationships and trust, and conducting fieldwork in busy organisational settings.

#### **3.5.1 My role in the data generating process**

I selected the local sites for my fieldwork among municipalities and schools which, according to my own background knowledge and relevant documents, had differences in practice. Prior to beginning my PhD project, I worked at the Greenland Ministry of Finance where I got background knowledge on the general governance and administrative systems in place in the public sector as well as building a network among administrative leaders and politicians. I grew up and went to primary and lower secondary school in Qeqqata Municipality. My position as a researcher and the way I have dealt with my proximity to the field is further elaborated in section 3.6.

#### **3.5.2 Interpretive interviews with system leaders and school teachers**

The interview offers a special opportunity to gain insight into how the participants themselves experience and understand the world. Qualitative interviewing, according to Patton (2002), assumes that the perspective of others is *meaningful, knowable, and able to be made explicit* (p. 341). While a structured interview has a formalised, limited set of questions, a semi-structured interview is flexible, allowing new questions to be brought up during the interview as a result of what the interviewee says. I developed the interview protocol using a combination of introductory and background questions to establish rapport as well as open-ended questions meant to allow the participant to share her or his own experience around the topics relevant to the research questions.

The primary and lower secondary school has been under public criticism for many years - therefore an appreciative semi-structured interview approach (Cooperrider & Whitney, 2005) where elite informants are free to reply within their framework. The interview guides were constructed with the principles behind *The Success Case Method*

(Brinkerhoff, 2003) and *Appreciative Inquiry* (Cooperrider & Whitney, 2005) interview method. The Success Case Method is designed to confront and seek out success stories, bringing them into light in the form of stories so they can be weighed and measured (are they good enough?), provided as motivational and practical examples for others, and learned from to get a better understanding why things worked, or why they did not. The Appreciative Inquiry method was chosen on the basis that it focuses on opportunities rather than problems and that by engaging the (positive) potential and visions of employees can transform an organisation. At the heart of Appreciative Inquiry is the appreciative conversation, a dialogue between organisation or members of the community and stakeholders, using questions about experiences from highlights, appreciation, and what gives life to the organisation or community at its best. In other words, Appreciative Inquiry is focusing on what works.

I used the same interview guide for all informants, but I augmented the interview guide by adding relevant factual details, to be able to ask more specific questions in each case. This provided a way of exploring actors' (changing) theorisations, explanatory narratives and aspirations for the future. The interview guide was a set of themes and open questions. My consideration leading me to use an open-ended approach was a desire to maximise response validity. Open-ended questions provide a greater opportunity for respondents to organise their answers but within their own frameworks. This increases the validity of the responses and is best for the kind of exploratory and in-depth, but it made coding and later analysis more difficult.

Interview protocols were sent by e-mail in advance to all interviewees. This action has both advantages and disadvantages. On one hand, the preparation process allows for the interviewee to prepare or collect their memories to give a more detailed response. Having the questions beforehand allows one to mull over the questions, pull out relevant references, and in general, prepare much more well-rounded answers. On the other hand, having preparation time also allows for rehearsal and the ability to polish one's answer to become one that is less authentic than if asked on the spot.

Before the beginning of each interview, I gave a brief overview of my research problem, explained the research process and anonymity before asking if the interviewees were okay

if I recorded the interview. All interviewees consented to having the interview recorded. Interviews were held in public locations, at either an office at the university or at the interviewee's own office. They lasted an average of an hour. At the conclusion of each interview, I asked the interviewees whether they had something to add, or if they had any questions about the process or my research in general. Notes were not taken during the interviews, as I wanted to focus on the interviewees spoken words. However, I wrote down my impressions of the interviews immediately following the interviews. All interviews were digitally recorded and transcribed.

In terms of silences, during the formal interview where the tape recorder was on, the interviewees were very diplomatic and were careful not to say anything critical about their workplace. However, when the interview was done and the tape recorder was shut off, the following informal (and off the record) conversation tended to be more honest and often many relevant points have emerged. These silences and differences could have been caused by a number of reasons, which I reflect on in section 3.6.

My background knowledge helped me engage in a common unfolding of past events and yield more nuanced reflections during interviews. However, many of the interviews contained surprises. It follows from these reflections that the data and knowledge that was generated from these interviews, and from those with municipal actors as well, is to be regarded as a result of mutual sense-making and co-production of meaning between the participant and myself. When analysing the data, I have paid as much attention to the micro-context in which answers were given (including the question that was posed, the mood of the interview, and the relation between myself and the participants) as to the answers themselves, so as not to misinterpret 'bold' statements or expressions of irony, but take their situatedness into consideration.

### *3.5.3 First round of interviews*

The first round of fieldwork and interview sessions were conducted in the Spring and Summer of 2017. The interviews were centred on the complexity model (Figure 12, page 114) to examine how the different actors interact and ultimately affect the individual school. The approach is qualitative, with a focus on principles in relation to successful practices, evaluation methods and tools used in the administration of Greenlandic primary and lower secondary

schools. The underlying research questions in this interview round sounds: 1) what are some characteristics of successful primary schools and their practices? How can the municipalities, school principals and teachers learn from each other? What works and what are the prerequisites? 2) Is there coherence in the focus and target areas of the various actors? And 3) how do municipalities monitor schools, and how do schools use data in planning processes?

Theoretically, primary and lower secondary schools are affected by both external and internal conditions as illustrated and described in Figure 12. There are circumstances that are beyond the control of the individual school, but which are central to how the individual school functions in everyday life. Depending on the capacity of the individual school (internal conditions), the school responds differently to the on paper same challenges and affects the output (in the form of graduates, their results and their further progress in the education system). The success case study involves examining what circumstances affect the primary school and how different actors handle the issues (successfully). This part of the project looks at reform processes, by seeking a deeper understanding of change in academic achievement within a given school. The research design is a model that analyses the sources of energy loss, points of bifurcation, and levels of initial sensitivity within the complex layers of the system. This study also looks at coherence in the education system. Since it is conceivable that the functioning schools have a better basis in the form of better-off students (absence of social problems and challenges of home-school cooperation), a struggling school in a positive development was also selected<sup>13</sup>. This school is taken in as a case study to identify specific challenges that may not be present in successful schools. A private school in Nuuk, NIF, was also included as a case, to study the differences between private and public schools in a Greenlandic context.

In this round of interviews, two Greenland municipalities, 5 municipal primary and lower secondary schools and 1 private school were selected to elucidate context and how the challenges are tackled in the different localities (Table 12 below). The most successful schools in the two Greenlandic municipalities (in terms of standardised test results) are

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<sup>13</sup> The criteria for selecting a struggling school were based on quality reports, standings on standardised testing and school leaving exams.

examined in order to identify factors and indicators that can be used continuously in the constant development of schools. The interview guide (Appendix A) contained questions of experience, best practice, principles, etc. under the hypothesis that the challenges of the good schools, will also apply to the schools that can be characterised as less good.

Table 12. List of interviewees and their positions. First round of interviews.

<b>Position</b>	<b>Municipality and school</b>
Director of education	Kommuneqarfik Sermersooq
School principal	School 1
Chair of school council	School 1
Teacher	School 1
Teacher	School 1
School principal	School 2
Chair of school council	School 2
Teacher	School 2
School principal	School 3
Chair of school council	School 3
Teacher	School 3
Teacher	School 3
School principal	School 4
Teacher	School 4
Director of education	Qeqqata Kommunua
Chair of municipal council	Qeqqata
Education committee	School 5
School principal	School 6
School principal	School 6
Teacher	

#### *3.5.4 Second round of interviews*

The second round of interviews was conducted in the Spring and Summer of 2019. The interview guide (Appendix B) contained questions of purpose and agreement among key stakeholders, their understanding of their role, how they use policy and evaluative instruments in their daily work.

The ambition was to interview all municipal education directors; however, due to time and resource constraints, it was not possible to interview a representative from Kommune Qeqertalik. Table 13 below is a list of all interviewees and their positions.

Table 13. List of interviewees and their positions. Second round of interviews.

<b>Position</b>
Deputy Minister of Education
Head of Agency of Education
Head of Office, IMAK, Teachers' Union
Director of Education, Kommune Kujalleq
Director of Education, Avannaata Kommunia
Director of Education, Qeqqata Kommunia
School consultant, Kommuneqarfik Sermersooq

### *3.5.5 Transcription of interviews*

All interviews were recorded and then transcribed, following a principle that is not as detailed as what one uses for e.g., conversation analysis (Steensig, 2010), where all the sound details are also important. The emphasis is in my analysis on meaning, but it is also important how things are said - whether there is hesitation, uncertainty, angry or happy expression. I transcribed all the interviews myself, as I saw it as part of the analysis. It gave me a chance to get the material 'under my skin' and notice aspects of the interview that I might have missed in the situation. It was also a way of making notes on what might have been said between the lines and taking that into consideration in the analysis.

In the later use of quotes in the analysis, I have sought a reader-friendly term. Therefore, part of the text is purified for e.g., self-corrections and pause markers, unless they have been meaningful, for example in a few cases where the interviewer is very much looking for the words and obviously very much in doubt.

### **3.5.6 Observations**

Besides shaping the puzzle and overarching research question of the study, notes and observations from these events served as a valuable source of background knowledge during the process of generating data. Table 14 below is a list of national and local level events that I participated in and observed.

Before the starting of each meeting, I introduced myself, or I was introduced by the meeting leader, as a researcher. My role in the listed meetings was a non-participating observer with interaction. I observed the interactions between the participants and what

type of information they presented. During breaks I had informal conversations with participants and scheduled formal interviews.

In terms of establishing and maintaining relationships during the fieldwork, in a context of a small country and community, gaining access is not a one-time event, but something that has to be maintained, and can sometimes change over time (Cunliffe & Alcadipani, 2016). Establishing and maintaining professional relationships in terms of practicalities involved in gaining access to local sites and events was helpful. The observations provided me with a sense of whom I should talk to. Gaining access to political elite actors is not always easy. Being a 'known face' in the community also made it, I would argue - easier to gain access to events as there was already a trust that I could build on. This strategy builds on 'selecting sites with a minimum of gatekeeping obstacles' (Angrosino, 2007, p. 31). Having an appreciative approach was also decisive, as the primary and lower secondary school system is a field that has been criticised by media, politicians and the public for many years.

During the fieldwork and observations, concrete added value has emerged compared to if I had done interviews exclusively. The interaction between the different levels of government and school principals gives an indication of, for example, power relations, who do not necessarily emerge by talking to them, just as everyday experiences and examples are more difficult to recall during the interview situation, while during the observations they occur along the way and continuously. The observations have helped shape interview guides and given the opportunity to take concrete examples from everyday life into interview situations in order to get elaborations, as interviews here are a way to strengthen my observation experiences.

Table 14. Participation in meetings, conferences and events 2017-19

MEETING, PLACE AND YEAR	PARTICIPANTS	NATURE OF MEETING	DURATION	ACCESS	OUTCOME
Workshop on revision of the legal framework, Nuuk, November 2016.	Ministry of Education, Board of Education, Ministry of Finance, IMAK <sup>14</sup> , Education directors from all municipalities.	Closed setting. Discussion on the current legal framework and monitoring of the primary and lower secondary school.	2 days.	By invitation.	Context and background on legal framework, observation of relationships between administrative levels.
National school principal seminar, Sisimiut, 2017.	Ministry of Education, Board of Education, IMAK, Education directors from all municipalities, school principals from all schools.	Closed setting. Annual seminar. Presentation and discussion on current legal frame-work and ongoing reform work.	3 days.	Access granted by Head of Board of Education.	Observation of relationships between school principals, municipalities and ministry of education.
Seminar on teacher development courses, Nuuk 2018.	Ministry of Education, Board of Education, IMAK, municipal education directors, school principals from Sermersooq.	Closed setting. Seminar and discussion on the effect and reform of teacher development courses. Meeting minutes sent out to all participants.	1 day.	By invitation.	Background on current reform efforts, observation of relationships between administrative levels.
Future Greenland Conference, Nuuk, 2019.	Representatives from business community, Government of Greenland, politicians, researchers.	Closed setting. Conference with breakout sessions focused on the primary and lower secondary school. Broadcasted publicly.	2 days.	By invitation.	Observation of discourse around the school system among politicians and business community.
Inatsisartut (parliament) debate, Nuuk, 2019.	Parliament members, observers.	Open setting. Discussion on the quality of the primary and lower secondary school. Meeting broadcasted on radio.	Half a day.	Public.	Observation of discourse around the school system among parliament politicians.
Apple Education Strategic Planning workshop, Sisimiut, 2017.	Ministry of Education, Board of Education, IMAK, Education directors and staff from two municipalities, school principals and teachers from two municipalities.	Closed setting. Workshop on the implementation of iPads. No workshop minutes.	2 days.	Access granted by Municipal Education Director.	Background on iPad case: implementation, observation of relationships between municipalities, ministry, principals and teachers.
Municipality School principal meeting, Sisimiut, 2017.	Municipality administrative staff, school principals of the municipality.	Closed setting. Meeting minutes public.	Half a day.	Access granted by Municipal Education Director.	Observation on relationships between municipality and principals - what and how evaluative tools are used.
Observation of monitoring meeting between municipality and school principal, Sisimiut 2017.	Municipality Education Director, school principal, vice-school principal.	Closed setting. Discussion between municipality and school principal on the school's quality report. Meeting minutes not public.	8.30 am - 4 pm.	Access granted by Municipal Education Director.	Observation of relationship between school leaders and municipality; how monitoring takes place in practice.

<sup>14</sup> Greenland Teachers' Union.

Throughout the research process I have generated many pages of notes from my observation and participation in meetings. These data, however, are not reflected in the dissemination of the research in neither the articles nor in this covering paper in terms of thick description. Instead, I have used my notes in the process of generating data: to identify relevant actors, recollect moods from various events (e.g., increasing enthusiasm and consensus or conflict and tension), and to recall specific situations or statements from central actors, which I was then able to refer to during interviews. This served to provide more nuance to participants' retrospective sensemaking, and to anchor conversations about developments and turning points more precisely in the flow of time.

### **3.5.7 Documents and artefacts**

As previously noted, the analysis also draws on a range of documents and other artefacts; e.g., policy and strategy documents, meeting agendas, standardised documents, evaluation and monitoring reports and other tools. Some of these, I found on official websites, or were handed to me by participants to demonstrate or illustrate what they had told me during interviews. Others I identified by following more or less explicit directions from participants. My approach to collecting this material was guided by the general idea that documents and artefacts do not make a difference by themselves; they must be mobilised and implemented in order to matter. I therefore paid close attention whether central documents were mentioned during the interviews and observations.

I have read and interpreted this material alongside the transcripts and notes from the interviews or situations in which where they were brought up.

### **3.5.8 Coding, analysis and interpretation**

Following the nature of the research design, and the fact that I was doing research in my own culture, during my analysis I was very conscious of preestablished interpretations; my own, the interviewees', and that of other researchers. To move beyond that, I tried out different techniques and approached the data in different ways. Below, I provide an account of how I have attempted to do so.

I imported all of my data, including interview transcripts and field notes to the NVivo software. In terms of analysing the interviews, I re-read the transcripts and notes several times before coding into themes. Coding involves categorising data according to themes and concepts. I used an open, inductive coding process. An open code phase means that codes are generated from the data material instead of using codes that reflect theoretical categories, and can be described as letting the 'data speak' (Charmaz, 2006). The first coding that I did on the first interview round was a process where I began by coding large chunks of the data into broad overarching themes and named everything that I thought was important and interesting into broad categories. Some of these categories were themes or concepts, such as coherence or monitoring. Following the principle of abduction, I made use of grounded open-ended approaches to coding, (inspired by grounded theory (Glaser & Strauss, 1967), but not following all the prescriptions of this method). Overall, this open coding process provided structure for a grounded understanding of the units of analysis, based on the observations and interviews.

I kept a fieldwork diary where I wrote down observations, field notes and memos. I re-read my notes several times during the analytical process. Some were discarded and others were developed and refined and eventually turned into analytical themes, and new memos were created as new ideas, puzzles, insights or connections emerged.

Finally, it is important to note that a large part of the analytical work also takes place during the writing process, what Schwartz-Shea & Yanow (2009) refer to as text work. As my dissertation is article-based, I have continuously written over the research period and published articles. Hence, the analysis has been going on in several periods. And as my analytical and conceptual framework has been developing, informed by new data and knowledge, the subsequent process of choosing precisely how to present the results in this summary section of the dissertation involved additional processes of analysing and theorising, and it was only in this process that the pieces eventually fell into place. Therefore, the reader will notice that the relation and focus between the concepts in the articles is presented in a slightly different way than in this summary section, while the centrality of these concepts, and the argument that they are closely related, remains unchanged.

### **3.6 Ethical considerations**

Ethical issues are part of a wider consideration of the role values play in the research process, but the ways in which values are relevant is not just to do with ethical dimensions of research. Values intrude in all phases of the research process - from the choice of a research area to the formulations of conclusions. Meaning that the researcher is influenced by a variety of presuppositions that in turn have implication for the conduct of social research. The main areas of ethical concern relate to: harm to participants, lack of informed consent, invasion of privacy, and deception (Bryman, 2016). The literature, and my own experience, suggests that insider research often fail to anticipate the ethical issues that arise. This is, not uncommon any form of qualitative research “*where often ethical challenges and dilemmas are unexpected and emerge as the research unfolds*” (Wiles, 2013, p. 9).

#### **3.6.1 Fieldwork in own culture - the problems of bias and objectivity**

In this section I reflect on my role as someone who has been through the education system I am researching and being a part of a small country and community, where gaining and maintaining access has certain opportunities, but also limitations. I use the term insider researcher as described by Toy-Cronin (2018), where being an insider researcher is not a stable, one-dimensional position, but is reactive and unstable, moving depending on time, place, topic and participants (Toy-Cronin, 2018, p. 457).

When the researcher is at the same time part of the research object, or when studying her or his own field, participatory objectification takes a new turn, as the researcher makes her or his own universe the subject of research. Although speaking both Greenlandic and Danish was a big strength during my fieldwork, in addition to knowing the context and cultural framework, a limitation of studying one's own personal frame of understanding (or cultural affiliation) is the ability to challenge the knowledge or practice that is not necessarily questioned. Within the social sciences, there is according to Giddens (Kaspersen, 2001) a double hermeneutic, as the researcher observes and interprets a reality that has already been interpreted by the lay people who themselves constitute the subject of the researcher. As a result, concepts and theories circulate back and forth between the researcher and the researcher's target group. When the researcher is at the

same time part of the research object, or when studying her or his own field, participatory objectification takes a new turn, as the researcher makes her or his own universe the subject of research. Thus, there is the potential for bias on my part, which could impact the outcome of the study, making this a very challenging balancing act of being objective and non-judgmental in my thoughts, observations, and actions.

My position as a researcher was to approach the field and interviewees from a place of neutrality as the primary and lower secondary school is a field with many different opinions and agendas. Throughout the research process, interviews and informal talks I was met with opposing views and disagreements on how things should be done in the administration of the school system. I did my best to not engage in the discussions with my personal opinions and instead approached the discussions objectively by not agreeing or disagreeing. My lack of intervention generally, was something I justified on the risk of being seen as partial to a specific group and risk certain actors not wanting to participate in interviews, or them not feeling free to speak their opinion.

Gaining access is also a political process. Access to an organisation is usually mediated by gate-keepers, who are concerned about the researcher's motives: what the organisation can gain from the investigation, what it will lose by participating in the research in terms of staff time and other costs, and potential risks to its image (Bryman, 2016). Once access has been gained, researchers often find that *getting on* in organisations entails a constant process of negotiation and renegotiation. Alongside ethical issues, politics (in the sense of the working-through of power or contests over its exercise) also play an important role. Social researchers are sometimes put in the position where they have to *take sides*. Over the course of my research, I was interviewed several times by the media and appeared on national TV. During these interviews I tried to be diplomatic, and not take sides as this could harm my research process, my access to informants and meetings, and role as an objective researcher. Still, I was contacted by several interviewees, some directly, others in interviews, where they asked for an elaboration on what I had said on either TV or radio.

Being a part of the community, I have been in situations where I had to construct roles to achieve a distance. Once in the field, interactions begin (and analysis and sense-making

continue), producing many possibilities for reflection. My chosen or given role also has implications for the kinds of information being accessed or blocked. Having a past as an athlete and having personal relations with some of the informants, I had to continuously alternate between the roles I take on, and the roles and positions that have been given and were given to me. It is this interaction that I will try to approach a description of throughout this section. Of course, it is always a problem to maintain the balance between proximity and distance in qualitative studies, but the problem is posed if the researcher has personal relationships with people in the environment being studied (Repstad, 1987).

On the one hand, I have been able to use my background knowledge to argue that I have not had to spend a long period of time entering the field, as I have already established a relationship of trust with the informants and as I am familiar with the field. On the other hand, it may be a methodological weakness that I am 'involved' in advance in the environment to be investigated (Repstad, 1987). Since I grew up in Greenland, have been through the education system and worked in the Self-Government, and especially in a small community like Greenland, my informants will either know me personally, or know who I am due to the professional community. One solution may, for example, be to cultivate the proximity during the data collection, but create a distance to the field during the interpretation of data (Repstad, 1987). Being part of both fields can thus constitute both advantages in relation to access and additional knowledge, but at the same time create blind spots in relation to possible analysis categories.

The researcher's role in qualitative research is critical, as s/he collects data and implements analysis; therefore, my role in this study was that of an observer-as-participant, as I was the primary instrument of data collection and analysis that collected, coded, and analysed the data from interviews and observations to uncover the emerging concepts and patterns. There is no doubt that my own background, experiences, and ways of perceiving the world have had an influence on this study and the methodological paths chosen. Findings never speak for themselves but are inevitably coloured by our own assumptions: "*Even scientists only observe 'facts' through the use of lenses made up of concepts and theories*" (Silverman, 2007).

I had a range of relationships to the different participants and was neither truly 'inside' nor 'outside' in relation to any group. I also related differently to various members of each group depending on a range of factors such as the extent and nature of our pre-existing relationship and their level of involvement in the research. I knew some of the informants privately. Of course, it is always a problem to maintain the balance between proximity and distance in qualitative studies, but the problem is put up front if the researcher has personal relationships with people in the environment being studied (Kristiansen & Krogstrup, 2015). When reading the interview transcripts, there were situations where it would have been ideal to ask for an elaboration, or where I have held back. However, there were also situations where, due to the personal relationship, I could have been bolder and ask questions without being nervous of offending the interviewee. The personal relations and being part of the community was also helpful in terms of the practicalities involved in gaining access to local sites.

Managing of-the-record comments can be difficult, as clearly once a researcher has been told something, albeit confidentially, they cannot be unaware of it. One way for me to avoid any loyalty conflicts or biases, if I have received information from informal channels, I have tried to use that information in my interviews, by asking for elaboration in formalised, agreed interviews - so as to move from informal knowledge to formal data collection to avoid using knowledge, received in relaxed or informal contexts. In terms of the silences mentioned in section 3.5.2, the differences between what is said in interviews and what I observed in meetings, I have when possible brought up this difference and ask the next informant about it. The challenge, however, has been that the nature of the information I have observed in meetings or received in informal contexts has often been more honest and brutal, whereas the informants - especially those interviewed at their workplace - tend to be much more diplomatic when the tape recorder was on. Often there have been many relevant points after the tape was turned off. And what do you do with this information? I have chosen not to use them directly, however, all the knowledge that has emerged in the fieldwork process - both formal and informal - has helped to shape the analysis written here.

Given my proximity to the field and interviewees, a short discussion on researcher bias and objectivity is necessary. According to Yanow (2006a, p. 104) what it means to be

objective as a researcher is based on the assumption that “*the researcher can generate knowledge of the research setting, its actors and their acts, its events, language, objects, etc., from a point external to it*”, and to have both physical and emotional distance from it. Yanow (2006a) mentions two types of biases: 1) confirmation bias, where the researcher might be suspected to select only that evidence that will confirm a prejudice for or against an argument (whether in data collection and/or analysis); and 2) ‘going native’, where a researcher becomes too emotionally close to particular ideas or individuals, losing the affective distance perceived as necessary for non-biased assessments of evidence. I cannot construct completely objective analysis categories, but I can make the process more transparent. When constructing analysis themes and categories, I continuously asked myself where these came from. Asking these questions is part of the preparation for the analysis, and therefore rarely part of the dissemination of the research. I cover this challenge in more detail in chapter 4.

### **3.6.2 Anonymity and ethics in a small community**

Commonly, social science researchers disguise the site of the research to protect identity of the institution or the site of the research (Toy-Cronin, 2018, p. 461). In the research context, confidentiality is taken to mean that identifiable information about individuals collected during the research process will not be disclosed and that the identity of research participants will be protected through various processes designed to anonymise them, unless they specifically choose to be identified (Wiles, 2013, p. 42). In a small community, stricter ethical circumstances are at stake, as participants in the field will be able to quickly recognise themselves and each other in quotes. Tolich and Davidson have discussed the problems of protecting confidentiality in any research setting in a small place, where just a few descriptive details can make the possible sites of research or participants so narrow as to make them identifiable (Tolich & Davidson, 1999, pp. 77–80). So, the question becomes: who should be anonymised and to what extent? Protecting individuals’ identity was challenging. It is common to assign participants pseudonyms to protect their identity (Toy-Cronin, 2018, p. 461). A key reason why I have chosen to anonymise the names of all interviewees has been that the informants have been able to speak more freely as it was made clear to them that they would not be quoted by name. Unless the quote was said in a public meeting, I anonymised the participant. If the

participant was named, or even when they were not, I sent all direct quotes to participants for approval. The most important argument for anonymising, however, has been that the main object of analysis is the administrative system and culture, not a single organisation, a specific school or individuals, but the evaluation habits and routines of the Greenlandic school administration. It is thus not individuals who, for example, will be portrayed in a critical light, but rather a culture that is described, mirrored and analysed.

In terms of informed consent, as explained in section 3.5, at the beginning of each interview I gave a brief overview of my research problem, explained the research process and the anonymity of the interviewee before asking if it was okay if I recorded the interview. In hindsight I realised that I should have prepared a document explaining the objectives of my research, what the interviews would be used for, how data would be stored, and how the interviewee's anonymity would be protected. I do not present the individual participants in detail, but consider them as a collective, partly to preserve anonymity, and partly because it is not the individual that is central. I have chosen to anonymise the persons, by not stating their name, age, or gender. Sometimes, however, these things will appear from what the informant says. I have thus chosen to divide the informants into groups according to where in the administrative system they work.

In terms of power relations between myself as a researcher and my interviewees, I consider the relationships to be symmetric. A big reason for that is that I came from an institution outside the administrative system of the school. I did my best to make clear that I did not have a hidden agenda, that I did not side with a particular institution, and that my interest was in differences in context. As explained in section 3.5.2, I used Appreciative Inquiry as a method in my interviews, this to make clear to my informants that my purpose was not to point fingers.

All the data was analysed and stored in the software programme NVivo. The interviews were recorded and transcribed. In the transcription of interviews, I coded participant and school names in such a way that they could not be recognised.

### **3.6.3 Member-checking, validation and return of knowledge**

Although the researcher's ambition is that the knowledge produced is used for improvement, reflection or dialogue, many things can happen to the material that is beyond the power of the researcher. The primary and lower secondary school is a field filled with different agendas, ambitions and emotions. The interviewees and players in the field can become exposed or the material may even contribute to creating unfortunate consequences for the interviewees. As a researcher, it is therefore necessary to carefully consider what is vulnerable in the field and what is at stake for the interviewees. I may find out something that does not fit into the prevailing understandings (or I already know I do) - how do I present this knowledge without alienating the field so much that they completely reject the analyses and will not participate at all in a dialogue about the issues raised? And conversely, that I get so scared of the reactions of the field that I censor myself.

In conflict-filled spaces with many agendas - such as the administration of the Greenlandic public school - as a researcher, one must try to ensure that one's research methods are ethically legitimate. As it is not certain that all the interviewees will like the presentation of the research, and therefore will not like to read their words and shared experiences in the context in which I (the researcher) present them. Therefore, there are also ethical assessments as to whether certain quotations, statements and situations can be omitted in the dissemination of some conclusions, and still be able to do reflective, critical research. That balancing act is difficult but important, and I have done my best to validate my analyses along the way in different ways. The fieldwork has spanned over three years, which has given me the opportunity to present and discuss my work, both with previous and new interviewees, with research colleagues and with the public. I have, among other things, entered into an active dialogue about the project along the way, both in public spaces and in the media, where I have given presentations about my work in various seminars and conferences, for students at the University of Greenland, and by interviews by both Greenlandic and Danish media.

As this dissertation is article based, I have also sent both individual quotes to interviewees for approval, and later also entire articles for reading prior to publication, to check if I had not misunderstood statements or taken them out of context.

### **3.7 Evaluating qualitative-interpretive research**

My choice of research design obviously comes with some inherent limitations, and the choices I have made have implications for evaluating the findings of this dissertation. In this section, I will present some reflections on what is considered to be relevant evaluative criteria for interpretive research, and how the research presented here measures up to these criteria. In the previous pages I have presented what I have done and justified the method choices I have made.

In this section, I will first reflect on these choices and limitations, before addressing issues of relevance and generalisability. I will then go on to discuss the methodological quality of the analysis, i.e., its validity - whether the results of the study are consistent, credible and recognisable. I will conclude by discussing the extent to which the results are transferable or generalisable.

This section is ultimately about evaluating the knowledge claims I put forward as a result of my analysis. Ways of evaluating the trustworthiness of knowledge claims are different in interpretivist and positivist approaches. The iterative sense-making process in interpretivist research makes it hard to assess an a priori design where all the details are fixed from the beginning. How to come to terms with the variables gestalt and criteria for evaluating the quality of qualitative research has been widely discussed since the late 1970s (Yanow & Schwartz-Shea, 2014, p. 124). The criteria and terminology for assessing qualitative research is still an evolving debate, as scholars interpret the link between techniques and criteria in quite different ways. According to Yanow & Schwartz-Shea (2014, p. 128) interpretive researchers working on developing appropriate evaluative criteria face the following dilemma: either to reclaim and redefine recognised methodologically positivist terms in order to communicate with researchers across the board, or to invent new terms that better fit research conducted within an interpretive gestalt. In the following section I will present how I understand these criteria and how this dissertation measures up to these.

### 3.7.1 Adapting reliability and validity for qualitative-interpretive research

Interpretive research is usually conducted with the goal of understanding contextualised meaning-making and is based on another set of ‘philosophical wagers’ and standards than what is the case in positivist research (Schwartz-Shea & Yanow, 2012). Commonly accepted positivist standards include validity, reliability, replicability (Bryman, 2016; Schwartz-Shea & Yanow, 2012): the *validity* of a given variable concerns whether the particular indicator used by the researcher measures what it is supposed to measure; the *reliability* rests on the idea that the same measurement procedure, carried out by two or more researchers within the same project, can produce the same result; while the *replicability* concerns the question of whether the same research project if carried out by another researcher, would produce the same results. These three standards make sense in the context of positivist assumptions about the stability of social world and its know-ability by human researchers. In contrast, interpretive understandings of social phenomena are dynamic and fluid and historically constituted, making it difficult, if not impossible, to guarantee that a repeated data collection process would produce the same results.

Schwartz-Shea & Yanow (2012) describe trustworthiness as being the ultimate evaluative criteria and interpretive equivalent of the familiar concepts of validity and reliability. In qualitative and interpretive research, trustworthiness is described as a way of adding credibility, validity, and rigor to the study (Creswell & Poth, 2018). As mentioned earlier, different authors have different stances when it comes to the criteria and terminology on how to evaluate the quality of qualitative research. Trustworthiness according to Bryman (2016, p. 384) is made up of four criteria<sup>15</sup>: 1) credibility (internal validity), 2) transferability (external validity), 3) dependability (reliability), and 4) confirmability (objectivity). Beside these four criteria, Schwartz-Shea & Yanow (2009) identify reflexivity, data analysis strategies, and member-checking as relevant evaluative criteria for interpretive research. I will address my understanding below and how I have strived to live up to them (as there are overlaps between these criteria, I have combined some of them).

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<sup>15</sup> The parallel term in quantitative terminology in parenthesis.

### **Credibility**

Establishing the credibility of findings entails both ensuring that research is carried out according to the principles of good practice and submitting research findings to the members of the social world who were studied to validate and confirm that the researcher has correctly interpreted that social world. Techniques to confirm credibility are referred to as *respondent validation* (also called member-checking by Schwartz-Shea & Yanow, 2009) and *triangulation*.

Member checking involves checking with members (i.e., research participants or other people in the setting that was studied) whether they are able to recognise the researchers' account of their lived experiences. Again, from an interpretive standpoint, member checking is a way of becoming aware of differences between the researcher's and members' own interpretations. During and following the data collection, I debriefed with the aforementioned interviewees in multiple ways and at multiple times to do a reality test on my analysis and interpretation of the data (Patton, 2012). Patton (2002) describes reality testing as a step that not only increases the accuracy of interpretations, but also engages stakeholders on the evaluative process thereby increasing buy-in. In practice, I sent both individual quotes for approval, and later also entire articles for reading, to check if I had misunderstood statements or taken them out of context.

In terms of data analysis strategies, the research is based on triangulation of methods, sources of data and theoretical lenses. The notion of triangulation (Bryman, 2016) is often taken to imply that one can arrive at a more 'complete' picture of a social phenomenon, or practice, by drawing on a wider range of methods and sources. It is seen as a way to get closer to the 'truth' about a phenomenon and to avoid the 'bias' that might stem from relying on one method or source alone. Using different forms of triangulation can therefore help to explore different facets and arrive at different, if not necessarily contradictory, conclusions about what is going on. For example, by asking interviewees about the nature and purpose of different policy instruments, such as the standardised testing conducted in grades 3 and 7, and comparing their answers to how the results of the standardised test are used in practice, I do not expect to arrive at one overarching truth about how it should be done.

### **Transferability**

Qualitative findings tend to be oriented to the contextual uniqueness and significance of the aspect of the social world being studied. This is also true for my findings. Lincoln & Guba (1985) argue that whether findings “*hold in some other context, or even in the same context at some other time, is an empirical issue*”. My intention with this research has not been to generalise my findings to other contexts - instead I wanted to investigate how the context of the Greenland school administrative system affect how policies (often deriving from global ideas such as New Public Management or neo-liberalist agendas) are adapted and implemented. In order for others to make judgements on whether my findings can be transferred into other contexts, I have done my best to produce a *thick description* (Geertz, 1973), that is, rich accounts of the details of a culture. An overview of my data sources is provided in Table 11.

### **Dependability**

Lincoln & Guba (1985) propose the idea of dependability and argue that researchers should adopt an ‘auditing’ approach to establish trustworthiness, where the idea is to ensure that complete records are kept of all phases of the research process. Peers would then act as auditors during the course of research and at the end to establish to what extent proper procedures have been followed (Bryman, 2016, p. 384). As the auditing idea is very time demanding of the auditors, this approach to enhancing the dependability has not become pervasive.

While it is not exactly an audit trail as described by above, I have every six months written a report on the progress of my dissertation, including arguments and reasonings for the choices and changes I have made, discussed it with my advisors, and then submitted it to the PhD school at University of Greenland for review.

### **Confirmability**

Confirmability is concerned with ensuring that, while recognising that complete objectivity is impossible, the researcher can be shown to have acted in good faith (Bryman, 2016, p. 386), and the researcher has not overtly allowed personal values or theoretical inclinations into the research process. I reflect on my role as someone who has been through the education system I am researching and being a part of a small country

and community, where gaining and maintaining access has certain opportunities, but also limitations in terms of researcher bias and objectivity (see section 3.6.).

### **Reflexivity**

Reflexivity refers to a researcher's active consideration of, and engagement with, the ways in which her or his own sense-making, and the particular circumstances that might have affected it, relate to the advanced knowledge claims. The fieldwork diary helped to keep check on my assumptions, whether informed by theory, observations or interviews, and how it was reflected in my analysis. I re-read my material several times, and continuously reflected on any bias that could have formed.

### **3.7.2 Limitations**

When discussing Greenland's development and education system, it is necessary to reflect on the historical and cultural context - this is the subject of Paper III - as the low quality of education in Greenland can partly be explained by the education traditions among the post-colonial society and population. A majority of students are to this date still the first generation in their families to complete an education beyond primary and lower secondary school. The question of how the formal education system and culture fits with the principles, language and culture of the Greenlandic population is not one that I have engaged in my study, but arguably has major implications to the state of the education system today.

I have conducted my field work in two out of five municipalities. I have spent a limited number of days in the field over a limited period of time. I have been constantly aware of the risk of uncritically adopting a certain view, either informed by literature, observations or interviews, and let it influence my analysis. I have tried to balance this in various ways: by interviewing a broad range of stakeholders in the primary and lower secondary school system, engaging in informal conversations during events, and by reviewing various policy documents. Still, there is no question that, since the majority of my interviews were with administrative leaders, their perspective or experience of the way things were have influenced my observations and conclusions.

An important aspect of my research design concerns the accountability relationships between the different levels of administration and how evaluations and information are

used to improve status quo or in reform work. I have developed an analytical framework, in order to make sense of the theory I have been reading and the observations I have made. In drawing my conclusions, I have relied on both my analytical framework and my empirical data. With regards to my data, I have previously pointed out that I have not interviewed all relevant actors. Talking to *more* teachers and school principals would most likely have provided me with a more nuanced understanding of the circumstances of how information and evaluations are used in everyday practice.

Researching the education system that I myself have been a part of, and conducting fieldwork in my own culture, have had its advantages, in terms of developing and focusing the research questions, gaining access to events and stakeholders and lastly when interpreting the data. However, this experiential knowledge also has its downsides, in terms of the risk of imposing preconceived notions on either interview participants, and then later on the data during the analysis, and thereby risk jumping to conclusions before having explored alternative explanations. To this end, engaging with a broad range of stakeholders, diverse bodies of literature and critically minded colleagues has helped me shift perspectives and see things in different ways.

After having reflected on the limitations of this dissertation, I still believe the topic and findings are highly relevant in the debate around the Greenland education system.

## CHAPTER 4: Dealing with the data - analytical framework

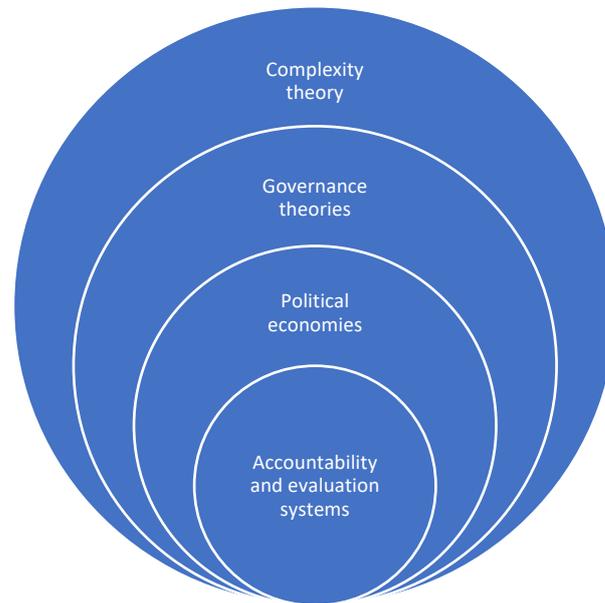
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### 4.1 Introduction

In this chapter I describe how I have analysed the data that I have generated, and outline the link between theoretical concepts, research questions, interview guides and themes for analysis. To arrive at new interpretations while remaining true to the generated data material, analysis must be methodical, systematic and intellectually rigorous: it requires principled and disciplined thought (Yanow & Schwartz-Shea, 2014). Perhaps most importantly, analysis is not considered a separate stage, but an ongoing activity throughout the entire research process. I introduce the main components of the two analytical frameworks I developed to guide my analysis in sections 4.2 and 4.3. The first analytical framework builds on complexity theory and complex adaptive systems: I operationalise the primary and lower secondary school as a complex adaptive system and use the concept of Coherence (Fullan & Quinn, 2016) and use The Advocacy Coalition Framework outlined in chapter 2 to analyse the interrelationships in the system. Compared to the theories of political economies and accountability systems discussed in chapter 2, the second analytical framework shift the perspective from questions about the power of policy coalitions, to instead examine the interplay between governance and evaluation form (section 4.3).

Figure 11 below illustrates an overview of the applied theories in this dissertation. I used complexity theory as the over-arching concept - thereby framing education systems as complex phenomena. I then used the work by Duit and Galaz (introduced in section 2.3) who examine governance from a Complex Adaptive Systems perspective, in order to analyse the complexities of governance systems and their abilities to embrace change and uncertainty according to their structure and capacity. A political economy approach emphasises the importance of politics and sets out a framework to map the motivations and behaviour of governments and policymakers - seen in relationship with the administrative context and ultimately how these factors in combination affect the conditions for which policy reforms and instruments are to perform under. In the centre, I have accountability and evaluation systems, which are the core of this dissertation.

Figure 11. Overview of theoretical framework



According to Goertz (2006), concepts are the heart of theory and methodology in social sciences since they supply the raw material for theories and constitute the basis to measure empirical phenomena. Concepts can be desegregated in three levels (ontological, constitutive and indicative), and are used as tools to understand the interaction between a specific phenomenon and its causes, acting as a mediator between theory and the empiricalness. The ontological level identifies the purpose of the concept; the constitutive level specifies the conceptual attributes to be analysed; and the indicative level attaches indicators to the constitutive level for its measurement. The indicator level, in turn, encloses indicators to the constitutive level, affiliating it to measurable variables.

To analyse the generated data at the macro (governance level) and micro (school level), I have developed two analytical frameworks - one for the national / macro another for local / micro. The two analytical frameworks are also a testament to the development of this dissertation. In the first phase of research, I focused on the first analytical framework (Figure 12 below), which serves to conceptualise the general interrelationships in a school in order to emphasise context - that every school has a different context, opportunities, even though they are under the same law. As the PhD project has been evolving throughout the research process, I found it necessary to develop a second framework (Figure 13 below) that looks more specifically at the interplay between governance form

and evaluation. This came about as a result of the first phase of the PhD project, as I came to realise that I needed to know more than general relationships between different actors - I wanted to know why the relationships were shaped that way and why.

#### **4.1.1 Different interpretations on key evaluation and monitoring instruments**

This section serves to connect the theoretical concepts to the research questions. The working hypothesis is, as the Greenlandic education accountability form is not sufficiently described in policy documents, it becomes a matter of interpretation of reality, and interpretation of the framework. The research of Demant-Poort (2016) also testifies to this, as he found that science teachers interpret the centrally set learning goals as suggestions for teaching, not as the intended meaning. There is therefore much freedom in terms of how to use the policy and evaluation instruments. From the perspective of street-level bureaucracy (Lipsky, 2010), the main challenge to increasing the use of research is that practice often unfolds in highly complex and stressful organisational contexts, where many barriers to 'ideal' decision-making exist; including time constraints, limited and uncertain information, the need to accommodate various systems and regulations, multiple stakeholders and lack of qualified supervision. These conditions, which Lipsky (2010) point to as characteristic of much work in frontline of public services, leave little motivation, time and encouragement for the individual to engage with and use research.

As the governance form and system sets up conditions for action, so does policy and evaluation instruments. It becomes a matter, where it is not only the instruments used to evaluate that are in question, but how these are interpreted and put to practice. The policy and evaluation instruments may be top notch, but if the different levels of administration do not have the capacity to take advantage of them and use them as intended it makes no difference. It all goes back to how the governance form is designed and structured.

To sum up the conceptual level, critical realism as an ontology helps to see (and therefore to study) actions as dynamic processes, changing, learning and reproducing, contingent on mechanisms set in place by causal mechanisms.

## **4.2 The first analytical framework: the Greenlandic primary and lower secondary school as a Complex Adaptive System**

As framed in chapter 2, I view education systems and schools as Complex Adaptive Systems. A complex adaptive system can consist of several interlinked systems. In this sense I have framed, in line with the choice of embedded case study methods, the overall governance system as the overarching system, and municipalities and schools as systems within the system.

The first analytical framework (Figure 12 below) is concentrated on how individual schools, embedded with the interaction and connectivity of the four system layers, are perched precariously between a state of stagnation and entropy, and minor changes in an element of a system layer can have a profound impact on the developmental processes and outcomes that are observed over time.

The model is an operationalisation of the work of Johnson (2008), where she combined complexity theory and ecological systems (section 2.2.4). The individual school is the unit of interest with the following different systems that affects the operation.

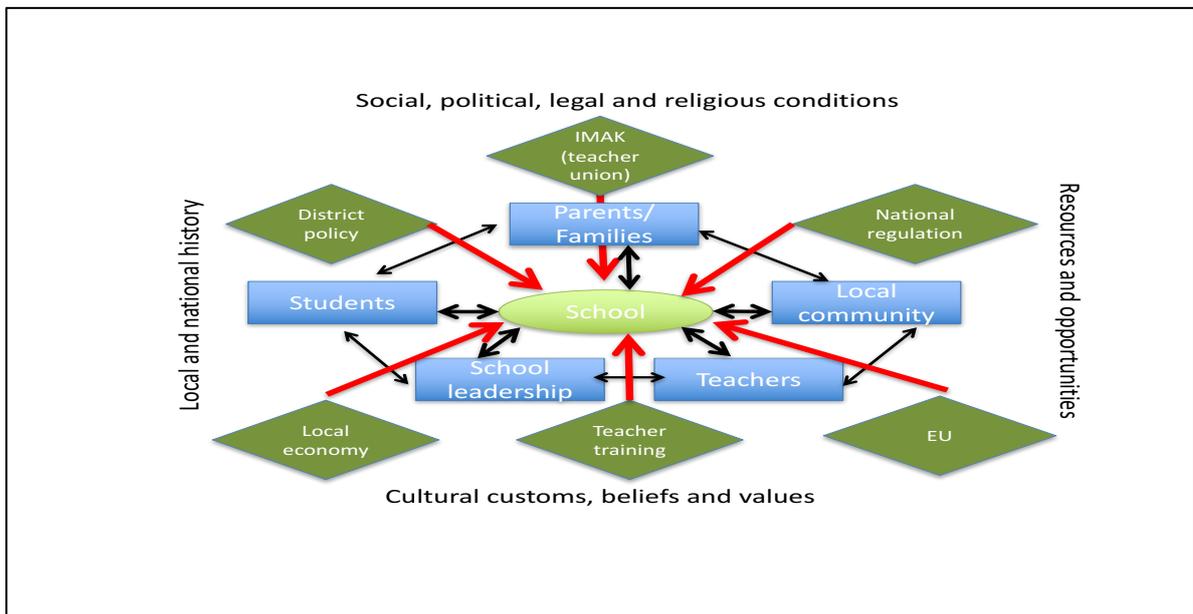
1. The blue boxes represent the micro and mesosystem. The microsystem is interactions on the interpersonal level between students, parents, teachers, school leadership and community (microsystem, the thick black arrows), the mesosystem is the bi-directional links between microsystems, e.g., between teacher and student or home-school collaboration.
2. The green boxes represent the exosystem, which comprises elements of the larger social system such as national regulation, the EU, the Teacher Training College, the local economy, district / municipal policies and the teachers' union IMAK. The exosystem exerts a one-way influence (the red arrows) that either directly or indirectly affect the development of the school.
3. The macrosystem is represented by the black text surrounding the boxes; the underlying culture of the society the system is operating under (regional or national interests). The macro system of an individual school is shaped by the local cultural, political, social and economic reality and values, but also of the entire country. A school system cannot be addressed in isolation from the

surrounding community. Thus, the development of the primary school in Greenland has naturally been, and still is, affected by the same changes that society as a whole has been exposed to. Greenland has in a very short time undergone a transition, from a society who put minimal demands on formal education, to a modern knowledge society with high demand on formal education.

4. The fifth and final dimension is the chronosystem. Both short-term and long-term time horizons, affecting individual and systemic actions. The chronosystem of an individual school can therefore be represented by both day-to-day and year-to-year developmental changes that occur in the school's students, teachers, curriculum etc., as well as the total number of years in service (since a new school faces challenges and opportunities that differ from those in a school that has been in operation for a longer time).

This model is useful when analysing the context and what factors are likely to affect the implementation of reforms or new policies. The key focus in this framework is the interrelationships between the different actors. I draw on the concept of coherence (Fullan & Quinn, 2016) to analyse these interrelationships and draw inferences to reform efforts by the national level and the contexts of municipalities and schools. More specifically, to analyse coordination between the different actors and governance levels, I have used The Advocacy Coalition Framework outlined in chapter 2.

Figure 12. The Greenland primary and lower secondary schools as a Complex Adaptive System



Needless to say, the circumstances and capacities of the primary schools varies greatly from the towns school with up to 400 students to the small settlement schools with just a couple of students. The multiplicity of actors and institutions in an education system makes the outcomes of efforts to improve learning unpredictable. Learning is a complex process that is difficult to break down into simple linear relationships from cause to effect. The multiple interactions that characterise teaching and learning and the almost continuous feedback that they provide can result in teachers, parents, and students adapting their behaviour in unpredictable ways (World Bank, 2018). More generally, many factors outside the classroom and the school system, including health and economic shocks, can alter the impact of interventions aimed at improving learning. Failure to learn and adjust policies in response to such changes often means that interventions do not work as planned.

Table 15 below illustrates the operationalisation of Figure 12 (above) into analytical concepts and the connections between data and analysis in the published articles of this dissertation.

Table 15. Analytical concepts and focus of Figure 12

<b>Analytical concept</b>	<b>Focus of interview, observations and review of policy documents</b>	<b>Article</b>
Goals of education policy	Review of policy documents to determine education policy goals	Brincker and Lennert (2019); Lennert (2018)
Coherence	Review of policy documents and interviews with key stakeholders to investigate the coherence of education policies across governance levels	Lennert (2018)
Context	Review of policy documents and interviews with key stakeholders to determine local context and opportunities	Lennert (2018)
Political settlements and coalitions	Interviews with key stakeholders and observations at key meetings to determine the relationships between political settlements	Lennert (2020)

### **4.3 Second analytical framework: the interplay between governance form and functions of evaluation**

The purpose of this section is to operationalise the applied theories in this dissertation and to discuss the interplay of evaluation and governance and to develop a conceptual framework (Maxwell, 2013) for my empirical investigation of this interplay and key functions of evaluation in the Greenlandic education governance system. Drawing on the outlined literature in chapter 2, in this section I present an analytical framework for my analysis of how evaluation and policy instruments work in an education system as a function of inherent governance structures.

I argue that it is necessary to view education systems as complex adaptive systems, where good feedback systems are necessary in order to govern them. Accountability systems and the way education systems are monitored is an important political force currently at work in whole system reform in education systems, which must be considered when addressing the issue of the implementation of policy instruments in specific contexts. I draw on insights from the literature on governance and political economies of education systems to get a better understanding of the processes by which policy coalitions adopt

reforms and instruments can be expected to affect the evaluation form and thereby the functions of evaluation.

Table 16 below presents an overview of the concepts that I include in my analytical framework. The first theoretical lens revolves around the concepts of evaluative thinking and steering, and their role in whole system reform and education accountability systems. I argue that evaluative thinking is a necessary component of successful innovation and involves more than just measurement and quantification.

The second lens focuses on governance forms as theorised by Duit and Galaz (2008). It revolves around two central concepts: the degree of exploitation and exploration. The concepts describe in terms of capacity and rigidity of the governance form, the degree of how well governments are able to implement increasingly complex and contentious tasks, under pressure and at a scale.

I then, within the framework and literature on political economies and governance theory outlined in chapter 2, use the concepts of *evaluative thinking* and *governance forms* to set up a framework to analyse how policy and evaluation instruments are influenced and structured by institutional and governance structures. Notably, the conceptual framework presented here has co-evolved alongside my fieldwork. It is the result of an abductive and iterative process (Schwartz-Shea & Yanow, 2012), reflecting my ambition to conceptualise what I was observing, as opposed to observing what I had already conceptualised.

The framework, developed on the basis of the above theories, implies that the governance structure in which public policy and evaluation are embedded affects the function of evaluation (Figure 9 above). The focus is on two functions of evaluation, namely accountability and improvement, but the framework also considers four further functions that evaluation may have in democratic governance, namely critical, learning, legitimatisation, and symbolic functions (Dahler-Larsen, 2004).

Accountability systems (monitoring and evaluation systems) produce streams of quantitative evaluative information (Stame, 2006). In the framework, a distinction is made between three types of evaluation, typically used in education monitoring systems

that differ in structure, scope, and the knowledge produced. Type I evaluation refers to a system that is indicator-based, producing continuous evaluative information on inputs, processes, outputs and outcomes of policies and programmes, in which case it mainly collects data on inputs and outputs for the purpose of monitoring implementation. Type II evaluations has a higher focus on compiling outcome and performance measures indicating such things as achievement of objectives. Type III evaluation refers to stand-alone studies that generate quantitative and / or qualitative knowledge. In terms of whether the types of evaluations are able to function effectively under conditions of uncertainty and complexity will be determined by the governance form (rigid, robust, flexible or fragile) and the specific conditions (context of other structures). Evaluative thinking is a condition within the ‘Under specific conditions’ concept.

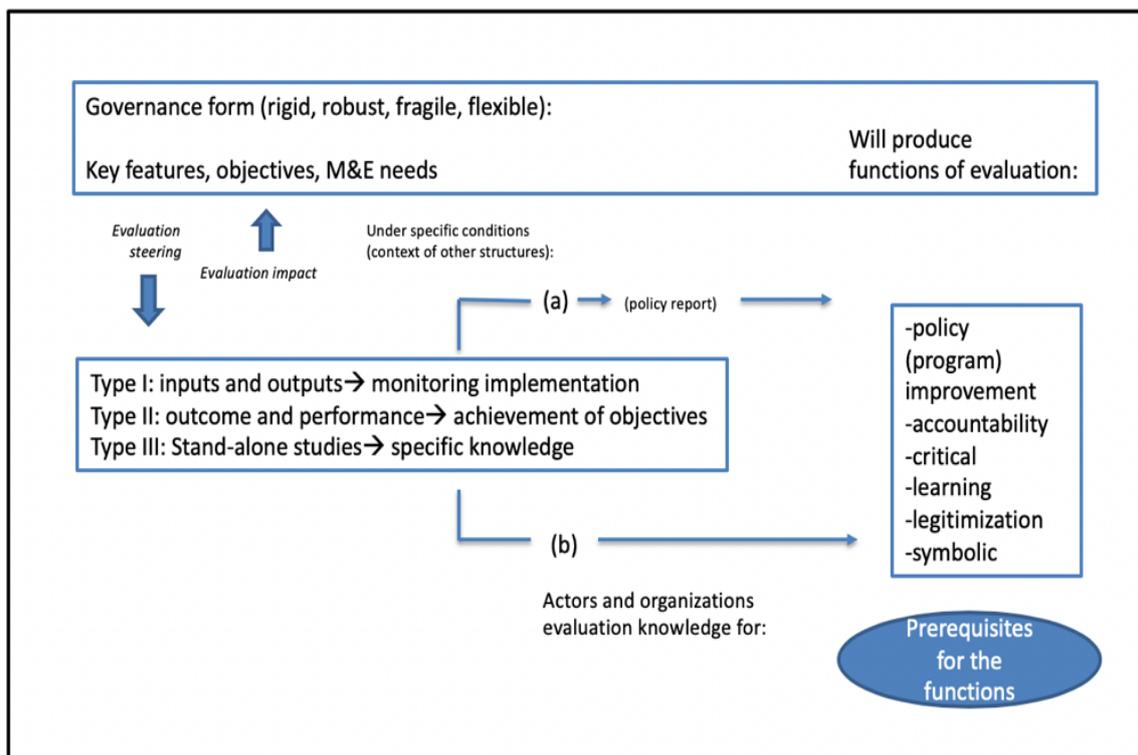
According to Patton (2011), enhancing the quality and accuracy of evaluation data through better methods and measures will add little value unless those using the data (whether they are policy makers, administrative staff, school leaders or teachers) have the capacity to think evaluative and critically, and be able to appropriately interpret findings to reach reasonable and supportable conclusions.

Table 16. Desegregation and overview of concepts in analytical framework 2

<b>Constitutive level: Analytical concepts</b>	<b>Definitions and dimensions</b>
Governance form	Rigid, robust, fragile, flexible. Including governance gaps.
Evaluative thinking	Is systematic, intentional and ongoing attention to expected results. It focuses on how results are achieved; what evidence is needed to inform future actions and how to improve future results.
Functions of evaluation	Policy (programme) improvement, accountability, critical, learning, legitimisation, symbolic, process compliance.
Type of evaluation	I: monitoring and Evaluation (M&E) system that is indicator-based, producing continuous evaluative information on inputs, processes and outputs/outcomes of policies and programmes. II: evaluation refers to stand-alone studies that generate quantitative and/or qualitative knowledge.
Prerequisites for evaluation functions	Capacity to implement and interpret information and evaluations at all levels of the education system.

Building on these concepts, Figure 13 below is an attempt to illustrate how I conceptualise the relations between governance form and functions of evaluation. The framework illustrates that the governance form has an impact on the type of evaluation steering and accountability, which then structures the functions. Depending on specific (local) conditions, policy and evaluation instruments set in place by a central government can have different functions. It is an ongoing process, as the events can affect the nature of its structure and is therefore emergent over time. For example, an evaluation or event can change the governance structure in place. There is therefore a double hermeneutic (Giddens, 1984; Kaspersen, 2001), and thus a two-way relationship. Giddens talks about double hermeneutic as every action has two interpretations; one is from the actor herself / himself, the other of the investigator who tries to give meaning to the action s/he is observing.

Figure 13. Analytical framework 2



The evaluation system can have functions such as legitimising a certain governance form or justifying more inspections in a policy domain (arrow b), while the same evaluation can fulfil different functions for different actors and organisations. It all depends on the agenda behind those using the evaluative information.

Compared to the debates over political economies of education outlined in chapter 2, this framework shifts the perspective from questions about power dynamics between different policy coalitions, to examine instead how context and governance form can shape the functions of policy and evaluation instruments.

Table 17 below illustrates the operationalisation of Figure 13 (above) into analytical concepts and the connections between data and analysis in the published articles of this dissertation. As mentioned in section 3.1, Figure 13 was developed in the last phase of the research, and therefore has not been used as an analytical tool in all the published articles.

Table 17. Analytical concepts and focus of Figure 13

<b>Analytical concept</b>	<b>Focus of interview, observations and review of policy documents</b>	<b>Article</b>
Governance form	Review of policy documents to determine governance form; interviews with key stakeholders to determine the degree of exploitation and exploration opportunities.	Lennert (2018)
Evaluative thinking	Review of policy documents and interviews with key stakeholders to investigate whether and to what extent evaluative thinking is present.	Lennert (2020)
Functions of evaluation	Review of policy documents and interviews with key stakeholders to determine what evaluations are used for.	Lennert (2020)
Type of evaluation	Review of policy documents, instruments and evaluation reports to determine what type of evaluation is conducted.	Lennert (2020)
Prerequisites for evaluation functions	Interviews of key stakeholders to determine whether prerequisites are present.	Lennert (2020)

#### 4.4 The role of theory in the analysis

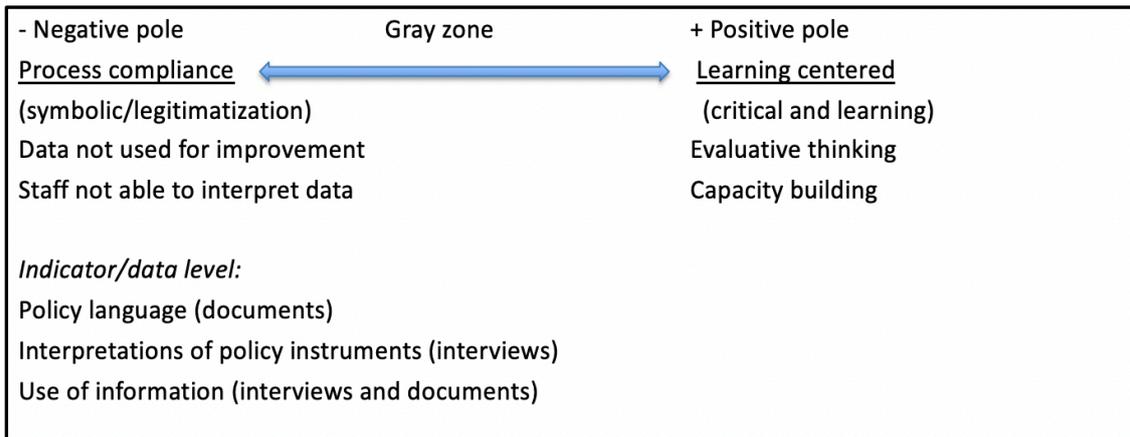
The design of the analysis is contingent on how to understand the relationship between the theory and the empirical, in other words the scientific gaze in which the analysis has come into being is crucial. I have not set out to test a hypothesis or a theory from empirical conditions, and the theory is thus not oriented toward an explanation of a cause-effect interaction aimed to show the general or universal regularities (Schwartz-Shea & Yanow, 2012). However, theory has been an important tool. As stated in section 4.3.2, I used an abductive approach. In the process of abduction, I followed the principles behind Critical Realist research RRREIC (Bhaskar, 2010):

- Resolution of complex phenomena into components
- Redescription in an explanatory meaningful way
- Retroduction of potential hypothetical explanatory mechanism
- Elimination of alternative competing explanations
- Identification of causally efficacious mechanisms
- Corrections of earlier findings / theories

In operationalising the above principles I used typological theories (George & Bennet, 2005). A *typological theory* is a theory that specifies independent variables, delineates them into the categories for which the researcher will measure the cases and their outcomes, and provides not only hypotheses on how these variables operate individually, but also contingent generalisations on how and under what conditions they behave in specified conjunctions or configurations to produce effects on specified dependent variables (George & Bennet, 2005). It identifies both actual and potential conjunctions of variables, or sequences of events and linkages between causes and effects that may recur. The goal of typological theorising is to identify the variety of causal patterns that can lead to the outcome of interest and determine the conditions under which these patterns occur.

Throughout the research process, in line with the abductive approach, I wrote up several hypotheses as typological theories in my process of analysing, informed from theory and practice, which I then, with the generated data, sought to seek “*inference to the best explanation*” (Lipton, 2004). Figure 14 below is an example of one of my typological theories, with the example of how evaluations can lead to a practice of process compliance (symbolic evaluation) or evaluations that promote and measure student learning outcomes.

Figure 14. Typological theory of the functions of evaluations



This chapter represents my attempt to create transparency with regards to how I have generated and analysed my data. Next is the actual analysis and findings of my research.

## PART IV: ANALYSIS

### CHAPTER 5: The component papers

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Having accounted for the relevance of this dissertation, presented the research questions and the underpinning objectives, provided a guiding overview of the structure of the dissertation, having unfolded the theoretical framework, the chosen methods, as well as a having described and reflected upon how the research approach evolved by the findings of the initial studies to the final field studies, the four component papers on which the covering essay of this dissertation rests are presented in the following. The papers are presented in the form that was requested by the journal. Citation format, style and font therefore differs from this covering paper.

## **PAPER I**

# Coherence in the Greenlandic Education System? Educational Planning & Evaluation in Greenland from a Complexity Theory Perspective

Mitdlárak Lennert

*A solid primary school is an important part of the foundation for creating a strong and sustainable society. Almost every country has undertaken school system reforms during the past two decades, but very few have succeeded in improving their systems from poor to fair to good to great to excellent (Moursbed et al., 2010). History, culture, and context matter for understanding applicability, if any, of one educational innovation over another. This can be said to have been the case in Greenland. One of the fundamental objectives after the introduction of Home Rule in 1979 was to adapt the Danish structures and systems to the Greenlandic conditions and culture. This article aims to analyze the Greenlandic education governance system and how the central level design, organizes and steers education systems across complex multilevel governance arrangements. In governing educational systems, how the central and the decentralized levels interact and communicate and how this affects trust, cooperation and negotiation of conflicts, and ultimately the outcomes of reform, will be discussed.*

## Introduction

This article is a case study analysis of the Greenland education governance system through the lens of complexity theory. It examines the governance approach with an emphasis on the primary and lower secondary school system (grades 1-10, ages 6-16). *Coherence* in education systems is defined by Fullan and Quinn (2016) as the *shared depth of understanding about the purpose and nature of the work* across governance levels. In terms of enabling better teaching and greater outcomes for students, the focus of this article is on how the governance system coordinates and evaluates the strategies around these efforts.

Unlike other former colonized and Indigenous peoples around the Arctic, the Greenlanders constitute the majority of the population, and also have full law-related decision-making powers in many areas, including education (Darnell & Hoem, 1996). This makes education in Greenland

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unique as to the postcolonial context and society; the policies, perspectives and content of education affect not only the educational situation, but the opportunities for change and development in the society as well. However, the challenges in education that other Indigenous peoples in the Arctic face, can largely be found in Greenland as well. With only 56,000 people, the small and geographically dispersed population poses many political and economic challenges. While the education level within the population of Greenland is increasing,<sup>1</sup> 60% of the workforce has no education beyond primary and secondary school (Statistics Greenland, 2018).

The formal education system and the culture of education in Greenland is still young and with varying specific national and regional challenges. One of the fundamental objectives after the introduction of Home Rule was to adapt the educational systems to Greenlandic conditions and culture. The cultural and economic transformation during the 1950s throughout the introduction of Home Rule resulted in significant challenges in the attempt of adapting frameworks, content and context to the educational system in Greenland.

Greenland is facing the same challenges as education systems outside the Arctic, namely the pressure for better results and an increasing level of education in the population. However, in addressing these challenges, Greenland has a different starting point than most developed countries, and therefore has different opportunities and options available. Exploring developments in the Greenland context highlights what may be crucial to develop policies that both address and reveals some of the challenging cultural, geographic, political, and economic realities. This article examines these differences and opportunities, but also the similarities that cut across nations when it comes to effective education governance.

### **Literature Review: Education Governance & Complexity Theory Framework**

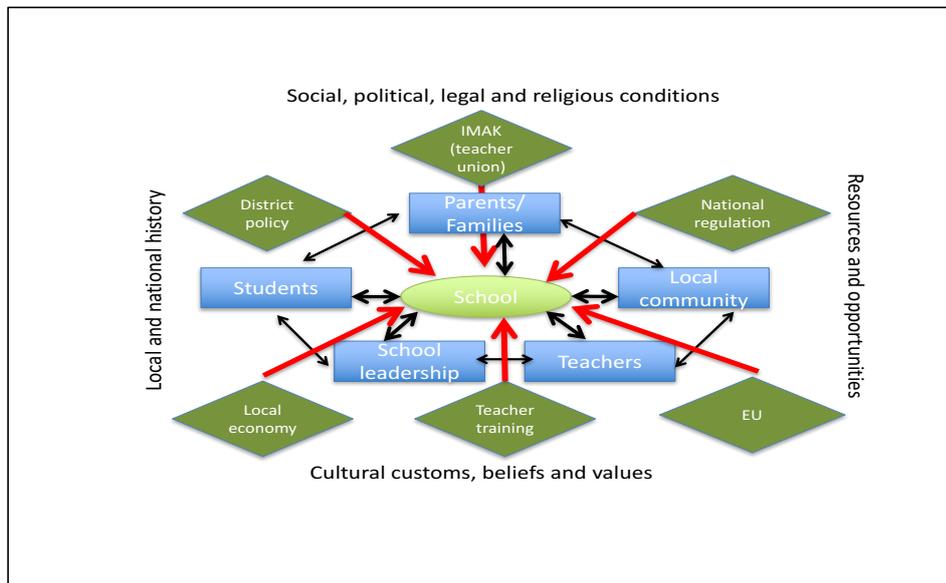
There is a growing body of evidence on the different factors that contribute to education improvement. A number of international reports have reviewed the factors that contribute to quality education (See for example Fullan, 2015; Fullan & Quinn, 2016; Levin, 2010; Hargreaves & Shirley, 2012; Barber & Mourshed, 2007; Mourshed et al., 2010; Schleicher, 2012; Elmore, 2004; OECD, 2015). The takeaways being that to guide reform efforts, education systems rely on evaluation and assessment, and ensuring capacity at the local level to successfully implement reforms.

Currently, many educational philosophers and researchers are focusing on the complex nature of education and offer complexity theory as a useful research paradigm, and a necessary mean for understanding change within complex social systems (e.g. Snyder, 2013, Johnson, 2008). The theory of complexity offers a means to analyze emerging patterns and trends to illuminate how the disparate system parts are, or are not, working together (McQuillan, 2008: 1773). A central concern of complexity theory is *thus* with the relationships *among* the elements or agents that constitute a particular and sufficiently complex environment or system (Mason, 2008: 33). The concepts behind complexity theory give rise to analyze the reform processes retrospectively, as a way to learn more about the elements, power structures and relationships in the complex system, but also as a framework to navigate current reform processes. The successful implementation of a centrally designed reform depends largely on the capacity and the resources on the local level to fulfill the reform goals and put them into practice, as the amount and quality of connections between system elements likewise impact a system's ability to adapt (Trombly, 2014). A key challenge for countries is assuring alignment and consistency in governance approaches to guide their entire systems

towards improving outcomes. Fullan and Quinn (2016) defines *coherence making* in education as a continuous process of making and remaking meaning in your own mind and in your culture, resulting in consistency and specificity and clarity of action across schools and across governance levels, as a way to create consistency and alignment.

Understanding the origins of the dynamics of educational systems from a complexity lens opens up a fresh perspective for thinking about and managing these systems. As according to Trombly (2014: 48), complex systems whose *agents and* elements are isolated from one another are both slower to adapt and less likely to achieve genuine learning; *while* those whose *agents and* elements regularly engage *and coordinate* with one another are far more *capable* to learn and thrive (Trombly, 2014: 48). In complex systems, by not *rather than* assuming *such* predictable and linear interactions among discrete elements *in an educational system*, *complexity theory* instead draws attention to the evolving inter-relationships among system elements at various levels of the system (McQuillan, 2008: 1773). This focus on interrelationships is especially important in the Greenlandic multilevel educational governance setting, as coherence between stakeholders in various levels of the governance layers is decisive for planning in implementation. The assumptions that lead to stability of educational systems are deeply rooted in the overlapping structures that comprise the system (Model 1 is an example of a complexity model of the Greenlandic primary and lower secondary school) and indeed, within the social and cultural context in which they operate. It is essential to understand the micro-structural relationships that shape the macro behavior of the system if change efforts are to be successful.

**Model 1.** A complexity model of the Greenland primary and secondary school system



The figure illustrates how groups and organizations affect the everyday life of the school in question, but also how they affect each other.<sup>2</sup> Schools and education systems are self-organized in that their structure and function often spontaneously shift as the actions and reactions of

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autonomous agents become interlinked. Schools and *education* systems are also emergent in that, as *the continual evolution and communication between actors* transcends the sum of the component parts (Johnson, 2008), while, however, the communication that takes place between actors within schools and the education systems is often dependent on the coherence of the short-range relationships and constructive communication within the system.

### Research Problem

According to Fazekas and Burns (2012) policy making needs to be aligned to its governance structure and take into account the respective responsibilities of different actors. This article analyzes how Greenland addresses the challenges and opportunities to the educational system, and how stakeholders work for system improvement. How do the different primary stakeholders implement education policies in a complex environment and how are they supported in this process? The role of national government versus local government and school boards in countering the quality of teaching provided is examined.

### Methodology

The research design, inspired by the Governing Complex Education Systems case study structure (Burns & Köster, 2016), emphasizes the analyzing of reform processes with a focus on planning, evaluation and coherence between the different actors. The present study takes a qualitative case study approach to analyze the Greenland primary and lower secondary school governance system.

Case study data collection provides the opportunity to employ multiple sources of evidence. As such, rich and descriptive data reveals the complexity involved within the selected case site. Qualitative methodology encourages detailed description and fits the objectives to document the circumstances surrounding educational policies and practices in Greenland. Practice, *or the way of doing things*, is defined by Bennett and Checkel (2014: 241) as socially meaningful and organized patterns of activities. As practice can differ from policy intentions, inquiries into 'the way of doing things' among the different actors in the governance system provides important information for understanding the context of the reform processes in the education system in Greenland.

### Data Collection and Analysis

Yin (1982) considers three research methods particularly suited for examining public policies: (1) non-structured interviews; (2) documentation study; and (3) participatory observation. Empirical data were collected using in-depth interviews (n=17), informal interviews (n=10), documentary analysis and field observation (over 2 years). Observations at key meetings and interviews with primary stakeholders in different levels of government about their experiences and understandings of roles were conducted. The observation notes and interviews were transcribed and analyzed using the Nvivo software. The interview excerpts were translated by the author.

### Limitations

This study applies an empirical–analytical approach rather than a theoretical–conceptual one. I have chosen not to focus on pedagogy or curricula, however important these subjects might be in themselves, as there is much less focus on the school 'system' itself – the critical infrastructure that underpins performance – and how it creates conditions for great education for every child.

**Table 1.** Overview of research techniques and collected data

Research technique	Data
Text analysis of relevant primary documents	Parliamentary/governmental documents and documents produced at local level
Secondary analysis	Internal and external evaluations of policy
Semi-structured elite interviews with key stakeholders	Policy makers Representatives of school boards Heads of schools Teachers
Observation of key meetings between governance levels	Observation notes

### The Educational Context of Greenland

Greenland is a self-governing country within the Kingdom of Denmark. An education system strongly rooted in the Danish system was inherited when the Greenland Home Rule assumed responsibility for the education sector in 1980. In accordance with changing policies over the years the education system in Greenland has gone through an evolutionary process. With the basic political consensus being a need for higher levels of education among the population, planning in the education policy front has been the subject of demands for quick results; partly to minimize imported foreign labor, and later, to achieve more autonomy and independence.

Given that the education system was based on the Danish education system, the reality was, and still is today, that for Greenlandic students to continue studying after primary and lower secondary school it is a prerequisite that they have a working knowledge of the Danish and English language. Greenland has one university, *Ilisimatusarfik*, which offers 11 university degrees. Many Greenlandic students therefore obtain undergraduate and graduate degrees, free of tuition, in Denmark.

Today, the modern public primary and lower secondary school system, which is the focus of this research, has just about 8,000 students in 87 schools along the 4,700 kilometer habitable coast line, from Qaanaaq and Siorapaluk in the far north to Nanortalik and Narsaq Kujalleq in the south, to Ittoqqortoormiit in the East. 2017 statistics from the Ministry of Education show that 40% of the children that complete primary and lower secondary schooling do not directly continue in further schooling. The primary and lower secondary school is one unit.

### Background and Outcome of the 2002 *Atuarfitsialak*<sup>3</sup> Reform

Your starting point in a school reform often has a big impact on where you end up. The work with *Atuarfitsialak* (The Good School in Greenlandic) had shown the necessity that the entire primary and lower secondary school should be redefined from being a copy of another system into an international school based on Greenlandic culture and values. A key person in the reform process wrote:

We had to tear everything down to build it up again. It is to be a Greenlandic school, which should be competitive, international, and based on research. That has been the task here in Greenland, where there has not been much research. (Hindby in Folkeskolen, 2003, author's translation).

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The purpose of *Atuarfitsialak*-reform was to improve primary and lower secondary school education. The teaching method was changed, as it departed from the traditional hourly teaching, which was based on one classroom, one teacher and one lesson, and towards a more project-oriented teaching method with the individual student at the center (Greenland Parliament Debates, Agenda 29, 2002). A major prerequisite for the anticipated success of *Atuarfitsialak* objectives was to significantly improve the physical frameworks of the schools, and more bilingual teachers to lift the task (Greenland Parliament Debates, Agenda 29, 2002).

After the preparatory phase of experience gathering, preparation of a status description, and a nationwide survey of students' wishes and attitudes towards the school, a conference was held in September 1999. The conference expressed a number of recommendations for further reform. The result was a proposal for a legislation, which for the first time in the Greenlandic history included the socio-cultural perspective of education. As something completely new, a 10-year compulsory program was laid out, divided into three clearly defined stages, each with description of purpose and educational profile (Greenland Primary and Lower Secondary School Act, 2002). The school was to be grounded in the Greenlandic culture, values, traditions and facts, but also have an international outlook.

A 'Study of Readiness' conducted by the Agency of Education (Inerisaavik, 2004), a subdivision under the Ministry of Education, was completed at the end of 2003 (same year as the start of implementation). The key results were that 10% of the teachers reported that they had detailed knowledge of formal elements in the reform and teachers reported lack of capacity building, information, teaching materials, cooperation and trained teachers as barriers for implementation.

In 2015 the primary and lower secondary school was evaluated by an external consultancy (EVA, 2015). The evaluation concluded that the municipal school authorities, including school leaders, have not been able to create or support intended changes in leadership, teaching and practice that are needed to create the educational environments that support the demands of modern society on the professional and human competencies of our children. Conclusions from the 'readiness study' (Inerisaavik, 2004) and the external evaluation (EVA, 2015) conducted 12 years later indicate that the necessary clarity and capacity to implement the intentions behind the reform has not been sufficient.

### **Steering from the Centre in Greenland: Governance Gaps, Roles and Responsibilities**

The educational system in Greenland is, like many other countries, characterized by a decentralized multi-level governance system (e.g. Wilkoszewski & Sundby, 2014; Blanchenay, Burns & Köster, 2016). This decentralization has contributed to the fact that more decision-makers and more stakeholders have become more involved in primary and lower secondary schools. The many layers of administration make relationships complex, as the responsibility for a good primary and lower secondary school is shared between decision makers across the governance system (see also Table 2). A main challenge in multi-level systems is the question of who retains the responsibility for oversight and steering. This is particularly true for the education sector, as there is a general trend towards more comparability and compatibility of curricula and education outcomes across regions and countries: even in very decentralized systems the central level will need to retain some steering capacity, if national or international standards are to be monitored and met (Burns &

Wilkoszewski, 2013). Hence, the inherent asymmetry between the various governance levels in multi-level contexts persists. This asymmetry leads to governance gaps in seven areas: information, capacity, fiscality, policy, administrative, objectives and accountability (Charbit, 2011; Charbit & Michalun, 2009).

The seven governance gaps are explored in the context of Greenland in the following sections. Schools are per force highly decentralized as the Greenlandic people live in small towns and settlements along the coastline. To be effective, reforms have to reach into even the most distant classrooms, which mean they may have to go through multiple levels of administrative hierarchy, including provincial, municipal, and school-level directors any of whom can delay, dilute, or distort reforms (Bruns & Schneider, 2016).

**Table 2.** Governance gaps in multi-level education governance systems

<b>Governance gap</b>	<b>Description</b>
Information gap	Asymmetries of information (quantity, quality, type) between different stakeholders, either voluntary or not. The central governance level often has better access to quality information (e.g., comparative data on school performance) than the local level. Also, the central level usually has better capacity to use this information. At the same time, the local level has direct access to information on how policy reforms affect schools – data that the central level first needs to gather. This information asymmetry on both sides can hinder the successful implementation of educational policies.
Capacity gap	Insufficient scientific, technical, infrastructural capacity of local actors, in particular for designing appropriate strategies. This gap occurs when there is a lack of human capital and financial resources between levels of government.
Fiscal/ funding gap	Unstable or insufficient revenues undermining effective implementation of responsibilities at sub-national level or for crossing policies. Sub-national governments' own revenues (taxes and fees) often exceed their expenditure responsibilities in education, while the lower levels in the system suffer from too few financial means.
Policy gap	This gap results from the incoherence between sub-national policy needs and national level policy initiatives. It can occur when ministries take a purely vertical approach to policy issues that are inherently cross-sectoral.
Administrative gap	This gap occurs when the administrative scale for policy making, in terms of spending as well as strategic planning, is not in line with functional relevant areas. A very common case concerns municipal fragmentation which can lead jurisdictions to set ineffective public action by not benefitting from economies of scale.
Objective gap	A gap in objective can emerge, when the various levels do not coordinate their aims to make them coherent across policy areas. This is particularly the case when objectives are prioritized asynchronously: a national education ministry might look for strong accountability measures to foster international competitiveness of the system, whereas municipalities might first look for necessary infrastructure and capacity building.
Accountability gap	Difficulty to ensure the transparency of practices across the different constituencies. This gap occurs when the necessary institutional quality measurement mechanisms for each governance level are lacking or misplaced.

**Source:** Classification of Charbit (2011).

The primary and lower secondary schools in Greenland are a municipal responsibility, and neither the Agency for Education (a subdivision under the Ministry of Education) nor the Ministry of Education have any enforcement authority. *Inatsisartut* (the national parliament) sets the legal and governance framework for the primary and lower secondary school, while the detailed provisions are laid down by *Naalakkersuisut* (the national government). In the municipalities, the municipal council determines the goals and frameworks for schools' activities with by-laws. At each school, there are school boards, which - within the goals and limits set by the municipal council - lay down principles for activities of the school. The administrative and pedagogical management of the municipal school system is regulated locally by the individual municipality.

**Table 3.** Overview of key roles, interests and interventions

Stakeholders	Role/interest	Intervention repertoire
Central level: Ministry of Education and The Agency of Education	<ul style="list-style-type: none"> <li>-Responsible for the overall quality of teaching in primary and secondary schools</li> <li>-Professional consultancy service</li> <li>-Development of teaching materials</li> <li>-Evaluation of primary and secondary school activities</li> <li>-Provider of teacher professional development courses</li> <li>-Overall supervision/monitoring of primary and secondary schools</li> </ul>	<ul style="list-style-type: none"> <li>-Development of national policy</li> <li>-Development of quality norms</li> <li>-Supervision of quality of teaching</li> <li>-Can establish requirements and criteria in the form of accreditation models for achieving the purpose and foundation of the primary school</li> <li>- Issues curricula, learning objectives and standardized tests</li> <li>-Appoints external examiners</li> </ul>
Regional level: (Municipal Council and administration)	<ul style="list-style-type: none"> <li>-Owner of school buildings and responsible for their maintenance</li> <li>-The municipal council regularly supervises/monitors the activities of the schools</li> </ul>	<ul style="list-style-type: none"> <li>-By-laws</li> <li>-Hiring and</li> <li>-Supervision of quality of teaching</li> <li>-Establishes goals and frameworks for the school's activities</li> </ul>
Local level: Parent School Council	<ul style="list-style-type: none"> <li>-The school board carries out its activities within the goals and limits laid down by the municipal board, and supervises the activities of the school.</li> <li>-The school board sets objectives for the school's teaching and other activities.</li> </ul>	<ul style="list-style-type: none"> <li>-Approves the school's teaching plan for each school year.</li> <li>-Supervision of quality of teaching</li> </ul>
School principal	<ul style="list-style-type: none"> <li>-Manages and is responsible for the day to day operation in the school</li> </ul>	<ul style="list-style-type: none"> <li>-Internal quality monitoring</li> <li>-Prepares proposals for the school board regarding the school's teaching plan for each school year</li> </ul>

Coherence in the Greenlandic Education System?

Teacher	-Responsible for the quality of teaching in the classroom	and guidelines for other school activities -Make changes in the classroom -Contact with parents -Motivating the students
Parents and students	-Client of the education system, some formally part of local school council	-Participate actively in the school -Assist with day-to-day activities

**Source:** Greenland Primary and Lower Secondary School Act 2017, Government of Greenland. Author’s translation

Decentralization has allowed local authorities and schools a greater degree of freedom to respond to diverse and local demands. Individual schools can formulate programs and school visions, missions and values with a high degree of autonomy. There are no requirements from the central or decentralized level to the existence or content of these, other than they must fit within the overall intentions of the Education Act and the municipal by-laws. Given the multilevel governance structure in the education system, the division of roles and responsibilities is a continuous matter of debate. Tension exists between steering and control on outcomes by the national government on the one hand, and the autonomy of the municipalities and schools regarding the delivery of education on the other. The central government acts as regulator for the education system, setting the legal framework and rules within which increasingly autonomous schools must operate. Alignment in multi-level systems is a major challenge, particularly in those most decentralized systems (Hopfenbeck et al., 2013; Blanchenay, Burns & Köster, 2016). Apart from the increased role for schools and local administrations, there is a host of other stakeholders (including teacher unions, teachers, parents, the media and students themselves, see also Model 1) that play a significant role. When it comes to setting a national education strategy, negotiation and dialogue have therefore become important governance mechanisms.

The central level is required by law to carry out evaluations, collect and disseminate knowledge in order to strengthen the efforts of the municipal council in the field of primary school and lower secondary school to maximize resource utilization. In practice, due to an expressed lack of resources and capacity by the Agency of Education, this is limited to the collection and validation of data in the form of reports, standardized test results and final examination results. As shown in Table 3 and 4, the central, regional and local level of the governance system all have supervisory obligations. These obligations, however, are not specified in content nor frequency, other than what is stated written in the Greenland Primary and Lower Secondary School Act 2017. These obligations are summarized in Table 3.

**Table 4.** Supervisory obligations between governance levels

Central level (Ministry and Agency of Education)	Regional level (Municipal administration and Board)	Local level (School board, consisting of parent representatives)
§ 37. The Greenland Government supervises the municipality administration of	§ 43. The municipality council has the overall responsibility for the municipal school and ensure	§ 47. The school board carries out its activities within the goals and framework set out by the

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<p>this Act. Sub-section. 2. The Government of Greenland may require municipal information deemed necessary to carry out its duties under this Act.</p>	<p>that all children of school age in the municipality are enrolled in public school or receive an education commensurate with what is usually required in primary and lower secondary school. The municipal council sets goals and frameworks for the school's activities. The municipality council regularly supervises the activities of the schools, including in relation to the school's compliance with the provisions of the education act.</p>	<p>municipality council, and shall moreover supervise the activities of the school.</p>
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**Source:** Greenland Primary and Lower Secondary School Act 2017, author's translation

The regulation and supervision structure of the Greenland education system reflects the traditional forms of education regulation elsewhere, known as the bureaucratic-professional model,<sup>4</sup> which is based on arrangements such as control of conformity to rules, the socialization and autonomy of the teaching professionals and the joint regulation regarding questions of employment or curriculum.

The supervisory obligations by the central level is hampered by the fact that the Agency of Education is on one hand obligated to supervise the quality of teaching and on the other have the responsibility for capacity development and professional learning of the teachers and schools. This construction in practice, results in the entire management and supervision of the school system resting on reports by the local school board and statistics without a professional, external authority to question the quality and validity of this information. Nor are there formulated any follow-up or support mechanisms following the results of a supervision in a school with 'underperformance', or formulated any threshold for when a school underperforms. Apart from the formal supervision, centrally appointed examiners perform indirect supervision.

According to the Greenland Primary and Lower Secondary School Act (2017), local school boards, consisting of parent representatives, carry a significant role and responsibility, when it comes to the management and supervision of primary and lower secondary schools.

There are probably some things about the board work as in which the board is given quite much power in relation to the regulation and such. But where the boards do not really manage to take that power. So, if a board wanted something, really wanted, then there are really many options for the board (Interview, Chairman of School Board, School X).

The local school council, a construction introduced in 1997, are to present an annual report to the municipality council. The purpose of the annual report is to strengthen the ability of the municipality council to carry out their supervisory obligation. The annual report documents the municipality school system and shall give the municipality council the foundation for assessing the academic level at the municipality primary and lower secondary schools and the opportunity to intervene if necessary (Qeqqata Municipality, by-laws, author's translation).

The only kind of supervision we perform, is actually based on information from the school management. And we have not taken the initiative to come and observe anything, so it has been

driven exclusively through the information we receive from the management on how it goes. (Interview, Chairman of School Board, School X)

They (the school board) are in lack of both insight and skills to assess almost all the details of a school leader's tasks. And that is on a regular day. On difficult issues or assignments, e.g. follow up on municipal guidelines, there is no help for them. Finally, they're in no position to question any disposition from either school leadership or municipal direction. That's bad! (Interview, School leader, School Y)

The above interview excerpts illustrates an international trend; in countries where school decentralization reforms have granted significant power to school level councils including parent representation, researchers have found that parents often do not feel empowered to challenge the views of school directors and teachers, given income and class disparities (Bruns & Schneider, 2016).

The school principal is responsible for the day to day operation in the school and internal quality monitoring, and according to above interview excerpts, provides all material and information for which the supervision structure rests upon. One school leader has experienced a significant lack of assistance from the authorities:

Supervision as a concept is completely absent in our line of work. If, as a school leader, you ask for advice, counsel or guidance you will likely get a non-answer or a reminder on municipal goals. The idea of dialogue on a specific difficult matter seems not to exist. You're on your own! I have not experienced anyone perform supervision on a leadership basis. Nobody seems to want to know or learn what is actually going on at the schools, much less in the classrooms. Once the guidelines have been formulated the general perception seems to be that they're already in effect. Well, it doesn't work like that! (Interview, School leader, School Y)

### Summary of Governance Structure

Practice and governance structure are defined partly by the interrelationships (see also Model 1) in the governance system and society as a whole. The decisions and practice are influenced by the networks and context the stakeholders find themselves in. Every vital part of the system – school, community, municipality, and government – contributes individually to the system as a whole to drive improvement and success.

According to Fazekas and Burns (2012) policy making needs to be aligned to its governance structure and take into account the respective responsibilities of different agents. When reorganizing decision making and strengthening local capacity, education systems should have capacity at the ministry level, and support at regional and local levels to drive large-scale improvements (OECD, 2015). One can discuss if that is the case in Greenland. The governance structure seems to have been designed for a bigger society, and so will require a greater level of capacity at all governance levels. The respective responsibilities throughout the system is distributed between governance levels and offers a high degree of autonomy. However, this high degree of autonomy needs to be accompanied with the required capacity, support mechanisms and knowledge to fulfill the intentions of policy. Due to the composition and capacity of the local parent school boards to carry out the responsibility, the foundation of which the supervision of quality assurance rests upon should therefore be questioned.

The legislation has not looked at practical possibilities and does not fit into the Greenlandic conditions. It is not adapted to everyday life (Governance meeting observation November 2016, comment by Kujalleq Municipality).

Capacity, both in the form of staff and funding, varies greatly among the five municipalities, as the municipalities with the lowest populations also have the highest numbers of settlement schools.<sup>5</sup>

### **Drivers For Change – How Does Greenland Work for System Improvement?**

In the previous section the focus was the governance structure, the roles and responsibilities of agents at the various levels of the education system. In this section, the analysis focuses on how the various stakeholders address quality and what types of strategies for planning and implementation have been used to set a direction, to ensure capacity and ownership at local level, and lastly how these efforts are monitored and evaluated.

Fullan (2011) defines drivers as policy and strategy levers that have the least and best chance of driving successful reform. A right driver is identified as a *policy or initiative* that ends up achieving better measurable results for students, while a wrong driver is identified as a deliberate policy that has little chance of *changing status quo and* achieving the desired result. The right drivers are effective because they work directly on changing the culture and practice. Fullan (2011) further states intrinsic motivation, instructional improvement, teamwork, ‘allness’ as the crucial elements for whole system reform and aligning the goals of reform.

According to McQuillan (2008: 1781), all education reforms assume that some *system*, be it a classroom, school, district or nation, is ineffective. The root cause of the ineffectiveness, depending on where in the hierarchy one sits, seem to be a matter of how one should frame the discussion – in terms of people or numbers. As expressed by a school teacher:

I do not believe that the political ambitions are compatible with the reality of the school. I think those politicians should try to get out and experience what a public school is! And it does not matter if we speak the highest political level or the municipal level. They set some goals, but they never come out and see the reality. It quickly becomes a matter of numbers and percentages, and the numbers they should preferably be black on the bottom line (Interview, School teacher, School C).

The following sections look at what lead drivers and underlying theory of action has been employed over the last 15 years of education policy in Greenland.

### **Objectives, Accountability Structures and Evaluative Thinking**

According to the OECD (2015) the key to guide education policy improvement is to establish a small number of clear, prioritized and measurable goals that can drive the system for all those involved. Fullan and Quinn (2016) likewise identify accountability as a driver for system improvement, however for that to work, there needs to be a culture of evaluation in the system. It must make sense to evaluate. To evaluate, objectives must be formulated. So, what types of objectives are being set, what is being monitored and for what purpose? Evaluation culture and an intent to pursue overall strategies is expressed as a requirement by the central level in the below excerpt, but there is no further information on how this should be done.

Resources allocated to education must be exploited optimally to consistently pursue overall strategies. This requires a strong evaluation culture that can continuously inform the administrative

and political level of the impact of the efforts (Ministry Education Strategy, 2015, author's translation).

An interim evaluation report (2010) for the 2002 *Atuarfitsialak* reform revealed that there is much data that describes public schools from many perspectives, however, that data was either difficult to access, often not on a digitalized form, or presented in such a way that makes it difficult for policy makers to analyze the numbers and make decisions (Inerisaavik, 2011).

Specification of policy objectives and means is one of the factors influencing successful implementation (Mazmanian & Sabatier, 1983; Blackmore, 2001). The Ministry of Education has since 2005 developed education strategies and plans on system and national level. A direction is set from the central level with a framework legislation and an overall education strategy. However, this direction is not defined or clarified further. A review of 30 years of education policy in Greenland suggests that educational reform work has lacked objectives and strategies to guide the changes and implementation forward in the system (Lennert, 2014). As a result, there has been no national monitoring of the education system prior to the 2005 Education Plan. The only current system-level monitored objectives for the primary and lower secondary school consists of quantitative output targets, e.g. proportion of cohorts continuing directly in the education system and the proportion of trained teachers. A wish for more elaboration on the centrally set direction and goals was expressed by a municipal board member, as there is no clarification of what is meant by quality, and therefore makes the concept subjective.

What is behind the statistics and numbers? What is it that we need to work on? We all have the same overall goal, that is better outcomes for our kids. But how we reach our goals, is the question. We all have goals, but we need to have a closer look at the implications of these goals and how to reach them (Interview, Municipal Board Member).

*Naalakkersuisut* (the national government) states in their Education Strategy (2015) that it is their intention to strive for more people completing an education and therefore better able to support themselves and their families. In addition, education in Greenland is seen as a means of a self-sustaining economy and independence; the overall objective of the education system is “for cohorts who complete primary and lower secondary school by 2015, 70% shall obtain training/education leading to a vocational or professional qualification before the age of 35” (Ministry Education Strategy, 2015: 8).

The stated theory of action can be said to position the rationale of education for the sake of society, not the individual. This contradicts on some level the 21<sup>st</sup> century knowledge and information society Greenland is situated in and the value of knowledge (especially Indigenous knowledge<sup>6</sup>) in itself.

The Education Strategy (2015) forms the basis for Greenland's cooperation with the EU through the Partnership Agreement (European Commission, 2014).<sup>7</sup> The Partnership Agreement provides a responsibility to ensure that the level of education is raised, that this is done effectively and that the efforts are continuously evaluated. The agreement has meant that the Self-Government of Greenland has focused even more on results and progress in education, as the Partnership Agreement has a reporting obligation on a set of indicators. Interviews with municipal staff and board members indicated a lack of inclusion in the construction of the indicators and a wish for better consultation processes.

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Better consultation processes are needed. We would like to be consulted on how we'd like to govern our schools, because we are the ones in charge of the operation, the implementation and supervision. Maybe, if they listened more to our needs we would all end up with a solution that we were satisfied with. If they listened more carefully and asked for what information we have and used that in their planning. Better cooperation on top-down and bottom-up approaches. From the politicians to the ones who carry out the change in the field and vice versa. That connection needs to be better (Interview, Municipal Board Member).

In Europe the traditional form of education regulation through rule-governed processes, centralized legal frameworks and shared assumptions has been shifting to and been replaced by goal-governed steering of outputs and outcomes, accompanied by the monitoring of targets (Maroy, 2008). The 2002 Atuarfitsialak reform introduced standardized national tests in the subjects Greenlandic, Danish, English and Math, and School Quality Reports to monitor the quality of schooling. At the same time, key objectives on outcomes related to the standardized tests were not specified, and the central or municipal level have not established follow-up mechanisms, like high-stakes incentives or mechanisms to support struggling schools, that are characteristic of accountability policies. As a consequence, one could argue that Greenland has only moved "half-way" toward accountability.

The intentions with standardized tests, differentiated teaching and ongoing evaluation, while looking good on paper, have not been fully implemented, as illustrated by a school teacher:

I simply don't think that we are good enough in conducting ongoing evaluation. We set up some pointers, some benchmarks with the standardized tests, the final examinations, and midterms, so we have some data there. The ongoing evaluation, however, we are not good enough at that. We are not good enough to state and write down the goals of an activity, and determine how we measure that when we are done (Interview, school teacher, School C).

A focus on external accountability is further exemplified by an expressed wish from the central government to introduce international comparable tests as a means to raise the quality of education and teaching.

Naalakkersuisut wishes to introduce the use of international comparable tests to ensure a high quality in primary and lower secondary schools. This will be an important tool for developing the primary and lower secondary school in the future (Ministry Education Strategy, 2015).

However, the focus and needs of teachers are more on internal accountability and student-centered evaluation.

If you go over to the municipality and ask, they will say that we must have the highest marks in the country. But I look at it differently, because I'd rather have a look at the starting points of the students and how much they have improved. I think that is more interesting, I think it's impossible to compare cohorts because there are too many different factors that play into that. It's not two pieces of wood, it is people we work with (Interview, School teacher, School C).

The interview excerpts and analysis illustrate the differences in *shared depth of understanding* across the governance levels, namely between classroom, municipal and central levels of government on how the primary and lower secondary school system should be monitored and with what indicators.

## Conclusion

The findings illustrate what seems to be a historical lack of coordination in connection with the implementation processes in regards to educational reform, where there has been no tradition of extensive cooperation and planning across municipalities and central government, or a solid tradition for monitoring and conducting utilization focused evaluations. Complexity theory and developmental evaluation, to a large extent, focus on the constructive and evolving interrelationships between the key stakeholders at various levels of the education system. Relationships between the central administration, municipalities and school leaders have historically not been particularly good, but according to the data collected, there is a turnaround in progress. These relationships will be key in shaping a constructive policy environment and setting a clear and coherent framework for the school system in Greenland.

Schools and education systems, are also structure-determined as they adapt to changes within social, economic, and political contexts while internalizing, learning from, and evolving from systemic memory inherent in the system. As mentioned in the introduction, the formal education system is young in Greenland, which is also illustrated by the education level in population.

The challenges in the Greenland education governance system touches upon all seven multi-level governance gaps (see Table 2). The Greenlandic education system is an example of a complex dynamic system, whose elements are isolated from one another, and the policy making is not aligned to its governance structure and the respective responsibilities of different actors are not taken into account. The multilevel governance structure seems to complicate the constructive planning and steering of the primary and lower secondary school system due to a lack of clarity (and possibly a lack of agreement) about roles and tasks, as strategies are not consistent nor guiding (administrative and objective gap). Whether the planning of education reform relies on an evidence-based understanding of the characteristics of the Greenlandic school system and is constructed in such a way that reform contributes significantly to improved student achievement and well-being, can be questioned (policy gap). The governance structure is also fragile due to limited staff on all levels with great responsibilities not limited to education (administrative and capacity gap), with close links to the small and scattered populations in the municipalities that puts pressure on the funding of the school system (fiscal gap).

The purpose of national education strategies and plans is unclear due to the simple and positivistic nature of monitored indicators. Existing strategies are not constructed to guide change, and there is no alignment between governance levels. At the system level, no theory of action or plan has been formulated on how to raise the quality of the primary and lower secondary school. Stakeholders with responsibilities in the quality of primary and lower secondary school area formulate their own strategies and objectives, which are not held up on a major theory of action or strategy. This causes mismatches and lack of coherence in the objectives, and resulting priorities, formulated from the central level with the rest of the system (e.g. the Teacher Training College, the municipalities, and the schools). The lack of alignment across a multilevel governance system therefore makes negotiation, cooperation, and coordination a necessary and important tool.

Apart from the centrally set curriculum learning outcomes, no standard or objective is set on the level of quality of the standardized tests or final examinations. There is a lack of clarity in what is meant by the quality of the primary and lower secondary school, how to raise or increase quality and by what means. The nationally monitored objectives say nothing about quality. Whether

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students continue directly from lower secondary schooling in the education system is often influenced by the limited capacity of education programs, number of available apprenticeships, and ultimately not the results of the final examinations. To use the proportion of trained teachers as a quality indicator is unfortunate, as practice is more complex, and the quality of schooling is influenced by a variety of factors that cannot be reduced to one indicator – trained teachers.

Whether the current supervision structure serves its purpose should be questioned (accountability gap). Following the international shift toward a post-bureaucratic ‘governance by results’ model (Maroy, 2008), Greenland has in the past 10-15 years been increasingly focused on results in the monitoring of the system. This article suggests that developments in Greenlandic policies demonstrate the difficulties of navigating the tensions between promoting two key aspects of accountability—internal and external and the challenges of building capacity for both. There is a great focus on external accountability and results. Without a foundation on internal accountability, external accountability drivers have limited effects (Abelmann et al., 1999). There is a strong need for a focus on internal and collective accountability and an incorporation of qualitative evaluation initiatives in individual institutions to get indicators of what works. A dual focus on both performance and impacts will allow for a critical assessment of the extent to which and whether goals are met.

The current situation in Greenlandic education policy is characterized by the lack of basic analyses, studies of developments in the field, the effects of different actions; on the other hand, a considerable amount of positivistic information is gathered in the form of statistics (information gap). This total reliance on statistics is most likely linked to lack of evaluation capacity and evaluation culture. The formulated objectives, and the monitored indicators, are output goals that assume that the foundation is well functioning. However, Greenland has an education and school system in strong need of development and quality improvement. A blind focus on desired output goals is therefore not sufficient in driving the change forward. Without evaluations that look at contexts and other variables such as day-to-day teaching, it is difficult to see which initiatives lead to what results. Supervision and monitoring only looks at intended consequences. What are some unintended consequences of policy?

In 21<sup>st</sup> century complex systems there is a need for continuous innovation, assessed through co-learning (within and across classrooms, schools and municipalities; and school to municipality to ministry). Structures and networks to do so in Greenland are limited. There is therefore a strong need for a type of data management that can track emergent and changing realities, and feeding back meaningful findings in real time to the practitioners. A way of thinking characteristic of complexity and developmental evaluation (Patton, 2011).

Systems thinking, complexity and developmental evaluation together offer an interpretive framework for engaging in sense making (Patton, 2011). Sense making across governance levels and classrooms is identified by Fullan and Quinn (2016) as an imperative factor for successful implementation of education reform. One thing is the coordination and cooperation between governance levels, institutions and key stakeholders to secure a coherent framework and infrastructure. Another is implementing the wanted change in the classroom and working towards the desired outcomes. To create conditions for system wide development there is a need for a discussion between the governance levels and all relevant stakeholders on the root causes of the current conditions of the system and how to address them. A discussion centered on how to raise

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the bar for all and what success and quality look like in practice. On national, municipal, school and classroom level. General principles, guidelines and frameworks to clarify roles, tasks and expectations should then be formulated in cooperation and consensus.

## Notes

1. Looking at the population over 16 years, a development of approx. 6 percentage points over the past ten years.
2. A more detailed discussion of a similar complexity model of a school can be found in Johnson (2008).
3. Greenland Education Act 2002, it has since been amended (2012, 2017) with minor changes. The pedagogical intentions, structure and governance remain as it was.
4. The model brings “state, bureaucratic, administrative” regulation and a “professional, corporative, pedagogical” regulation together (Barroso, 2000).
5. Avannaata Kommunea, for instance, has a population of 10.600 and 26 schools (2018). At the same time, it is the municipality that is the most challenged by an extensive geography (stretching from Siorapaluk to Ilulissat) and complex infrastructure. Two settlement schools were closed in 2017.
6. While acknowledging that there are ongoing debates in both academic, applied contexts and among Indigenous Peoples about the appropriate concept to use when discussing knowledge and indigeneity, the definition by Bohensky and Maru (2011) is provided: *Indigenous Knowledge is holistic and often encompasses interrelationships between diverse phenomena, including social and environmental phenomena.*
7. A full description of the Partnership Agreement and monitored indicators can be read in the annual planning and implementation reports conducted by the Ministry of Education: <http://naalakkersuisut.gl/~media/Nanoq/Files/Attached%20Files/Uddannelse/Engelsk/Annual%20Work%20Plan%202017.pdf>

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## PAPER II

## The political economy of education reform: iPads for every student in Greenland

**Abstract:** *The research, developed through a documentary analysis, observations and interviews aims to investigate the background for implementing education technologies in the form of iPads nationwide in the primary and lower secondary school system in Greenland. This article gives an overview of the general political economy of education reform in an Arctic context and specifically the ICT policy environment surrounding the iPad project, the implementation strategies and processes used with a focus on the coordination between the central and local governance levels. The results provide important insights into the ongoing, and forthcoming, implementation of a nationwide 1:1 iPad learning in the Greenland education system, and further argues that it is a complex whole system change, and therefore demands a corresponding implementation, evaluation and monitoring approach.*

**Keywords:** edtech, ICT education policy, Arctic education policy, decentralized education governance, complexity, developmental evaluation

### Introduction

This paper is a conceptual analysis of the Greenlandic ICT policy environment, focusing on implementation and evaluation strategies and methods addressing a practical problem with the case of the implementation of 1:1 iPad<sup>1</sup> learning. For the purposes of this paper, the terms *ICT* (Information and Communication Technology) and *Edtech* (Education Technologies) are used to describe software, systems and devices that are used to support the activities of teaching and learning.

Digital technology has become an everyday part of young people's lives both at home and in the classroom. Similar to many parts of the world, 21st Century and digital skills are in great focus in Greenland, and has been incorporated in the education legislation (Parliament of Greenland, 2002), stating that IT must be part of and a tool in teaching in all subjects. Through recent years, increased use of ICT in teaching in Greenland has come to the forefront as a means to support educational opportunities in areas with few teacher resources. A sparse population confined to small settlements, a big geographic area with resulting substantial use of resources and high turnover in trained school staff makes Greenland ideal for ICT and distance education, and makes Greenland an interesting case when it comes to ICT and education policies.

In 2018, only 13 pct. of the primary and lower secondary school's<sup>2</sup> graduating students started secondary education in the immediate aftermath of the primary school, while approx. 45 pct. of the

<sup>1</sup> Meaning one iPad for each student and each teacher

<sup>2</sup> Corresponding to ISCED level 2

students started a youth education a year after primary school (Greenland Ministry of Education, 2019). In 2014, all 1-10 grade students and teachers in two out of five municipalities, Qeqqata Municipality and Municipality Kujalleq, were given iPads for use for both educational and leisure purposes. The project was funded by the Villum Foundation<sup>3</sup> in cooperation with the two municipalities. At the same time, Wi-Fi was set up not only in schools, but also throughout towns and settlements making it possible for pupils to access the Internet in their free time and use their iPads for reading and self-learning. The remaining 3 municipalities are to implement 1:1 iPad learning in the period 2018-2022. This will mean that an entire country will be implementing 1:1 iPad learning in the primary and secondary school system<sup>4</sup>, with high ambitions and hopes for the overall improvement of educational outcomes:

*The objective is an increase in grades in the subjects Greenlandic, Danish, English, and Mathematics of 10 % after 5 years and 30 % 10 years after the start of the project. In the same way, the goal is that 10 % more young people begin – and later complete – a relevant education after 5 years and 30% after 10 years.*

(Municipalities Joint iPad Project Application, 2017 author's translation)

Education systems as a whole are embedded in politically determined governance structures, policy processes, evaluation paradigms which influence practice and possibilities of development in a myriad of ways. For the purpose of understanding the politics of development I adopt the definition of political economies as *all the activities of cooperation, conflict and negotiation involved in decisions about the use, production and distribution of resources* (Leftwich, 2006). On paper, education reform or adopting technology to support student learning and teacher needs is not terribly complex, once the task is defined and the right tools are identified. However, education reform can only be effective if policies are well implemented. On one end, implementation depends largely on the capacity and the resources at the local level to fulfill the reform objectives and put them into practice. On the other end, to support the process and the adoption of education technology, there must be a coherent framework in place, with sufficient capacity for conducting and interpreting evaluations at all levels of the education system (OECD, 2015a), to monitor progress and intervene when necessary.

According to the OECD (2015b), to deliver on the promises technology holds, countries will need a convincing strategy to build teachers' capacity, and policy-makers need to become better at building support for this agenda. Thus, to reap the benefits of Edtech there are demands on

<sup>3</sup> The Villum Foundation is a part of the Vellux Foundations based in Denmark.

<sup>4</sup> Grades 1-10, ages 6-16.

coherence on strategies across various policy actors and institutions, to create the wanted impact on school structures and classroom practices. In 2017 the Ministry of Education presented a renewed strategy for digitization and ICT specifically for the primary school (Greenland Ministry of Education, 2017). The strategy presents 3 overall themes covering digital material, digital competencies, and ICT infrastructure. Output and efficacy objectives are listed in each theme. The strategy will be covered in detail in the thematic analysis in the findings section.

This article addresses the background for implementing education technologies (iPads) and specifically looks at the coordination and facilitation of stakeholders between the different actors in the central and local administrations in doing this. This article focuses on the Greenland ICT context and the events that led up to the implementation of 1:1 iPad learning for all primary and lower secondary schools. It gives an overview of the ICT policy environment surrounding the 1:1 iPad learning project, the Greenland context, implementation strategies and processes used for Edtech products and services nationwide. The article furthermore provides a rationale for an evaluation design that considers the complex nature when monitoring implementation progress and development. The main aspect of the research with worldwide relevance is a crucial point to match the evaluation design and methods to the nature of the situation, as traditional evaluation methods are not sufficient in conditions of complexity and rapid change.

### **Background and context of Greenland**

Greenland is a self-governing country within the Kingdom of Denmark. When the Greenland Home Rule took on the responsibility for the education sector in 1980, an education system strongly rooted in the Danish system was inherited. The education system in Greenland has since then, in accordance with changing policies over the years, gone through an evolutionary process. With the basic political consensus on being the need for higher levels of education among the population, the planning in the education policy sphere has been the subject of demands for quick results; partly to minimize imported foreign labor, and later, to achieve more autonomy and independence. Unlike other former colonized and indigenous peoples around the Arctic, the Greenlanders constitute the majority of the population, and also have full law-related decision-making powers in many areas; including education. However, the education challenges from other indigenous peoples in the Arctic can largely be found in Greenland. With only 56,000 people, the small and geographically dispersed population poses many political and economic challenges.

Today, the modern public primary school system, which is the focus of this research, has just about 8,000 students, scattered in around 80 schools across 2.166 million km<sup>2</sup> of land/coastline. The educational system in Greenland is, like many other countries, characterized by a multi-level governance system (e.g. Burns & Köster, 2016; Wilkoszewski & Sundby, 2014), making the relationship and power structures complex. At the center, the Ministry of Education has the legislative power and the supreme supervisory responsibility of the quality of education, while the daily operation of the schools is run by the five municipalities in cooperation with the school leaders and parent school boards.

Since the mid 1990s a number of pilot projects focusing on distance learning, several of which have been carried out in primary and lower secondary schools in Greenland. A 2015 Ph.D. study determines that distance education has been perceived as teaching where technical solutions are used to establish a traditional education situation. The study concludes that distance learning has been used without educational or didactic clarifications and the absence of a pedagogical concept has made it difficult to establish distance education as part of the education system in Greenland. Difficulties are considered in conjunction with ambivalent, central management, where the Ministry of Education has been attempting to navigate for local involvement and ownership (Øgaard, 2015).

#### **Literature review**

As the objectives with ICT and Edtech in Greenland are centered around system and school development the following literature review focuses on characteristics of successful education reform, implementation strategies and processes for Edtech initiatives from the lens of complexity theory.

#### **Rationale for ICT and Edtech implementation**

Implementing technology in the classroom involves a change in culture and traditional teaching environment. According to Kozma (2011) a major concern for policy-making relates to the modalities for designing and implementing plans and strategies likely to produce such results. Despite large scale investments in ICTs by governments, and private investments by families and communities, the impact of technology use in education is a topic intensely debated, and often difficult to determine, due to a variety of factors related to specific implementation modalities and contexts (Trucano, 2016). The use of portable tablet devices in schools is seen as one of the 'hot trends' for technology adoption in schools (Clark & Luckin, 2013), along with plans for technology in education that sometimes promise to improve the efficiency of education processes, delivering better results at lower cost.

The introduction of tablet devices into schools is not without its controversies and a growing scholarly critique (Clark & Luckin, 2013; Gray, Dunn, Moffett, & Mitchell, 2017; Selwyn, 2014), and Merchant (2012) suggests that such technology can disturb the ‘fragile ecology’ of the classroom by opening up the possibilities for different kinds of learning, communication and interactions. Lynch & Redpath (2014) also warn that there are tensions when potentially transformative technologies meet institutionalized educational practices, and a more critical perspective around what works and why in educational technology is needed (Bulfin, Johnson, & Bigum, 2015), as the link from more technology to better results is far from direct, with many actors involved in making the required changes happen, as much depends on the underlying structure and capacity of the education system, infrastructure, planning and coordination.

What this shows is that the successful integration of technology in education is not so much a matter of choosing the right device, the right amount of time to spend with it, or having the best software, as technology can amplify great teaching, but great technology cannot replace poor teaching. In schools, as well as in other organizations, technology often increases the efficiency of already-efficient processes, but it may also make inefficient processes even more so (OECD, 2015b:190). The key elements for success, according to Kozma, (2011), are systemic policies, aligned with national needs and priorities, and doing this within the nation’s developmental context, and keeping in mind the teachers, school leaders and other decision makers who have the vision, and the ability, to make the connection between students, computers and learning.

The conclusion that emerges is that schools and education systems are, on average, not ready to take full advantage of the potential of technology. Gaps in the digital skills of both teachers and students, difficulties in locating and developing high-quality digital learning resources, a lack of clarity on the learning goals, and insufficient pedagogical preparation for including technology meaningfully into lessons and curricula, can create a disconnect between expectations and reality.

#### **Schools and Education Systems as Complex Systems**

Schools and school systems meet the criteria, suggested by Davis & Sumara (2006), as qualities necessary for a phenomenon to be classified as complex. Understanding the origins of the dynamics of educational systems from a complexity lens opens up a fresh perspective for thinking about and managing these systems. The amount and quality of connections, e.g. the cooperation between different governance levels and other primary stakeholders, between system elements likewise

impact a system's ability to adapt and evolve. The successful implementation of a centrally designed reform depends largely on the capacity and the resources on the local level to fulfill the reform goals and put them into practice. Complex systems whose elements are isolated from one another are both slower to adapt and less likely to achieve genuine learning; those whose elements regularly engage with one another are far more apt to learn and thrive (Trombly, 2014). The assumptions that lead to stability of educational systems are deeply rooted in the overlapping structures that comprise the system and indeed, within the social and cultural context in which they operate. A key challenge for countries is assuring alignment and consistency in governance approaches to guide their entire systems towards improving outcomes. Fullan & Quinn (2016) defines *coherence making* in education as a continuous process of making and remaking meaning in your own mind and in your culture, resulting in consistency and specificity and clarity of action across schools and across governance levels, as a way to create consistency and alignment.

Under conditions of complexity, processes and outcomes are unpredictable, uncontrollable, and unknowable in advance. Developmental evaluation is an approach to evaluator and/or innovator collaboration with potential to address this need (Dozois, Langlois, & Blanchet-Cohen, 2010; Gamble, 2008; Patton, 2011, 2012). Systems thinking, complexity and developmental evaluation together offer an interpretive framework for engaging in sense making (Patton, 2011). Sense making across governance levels and classrooms is identified by Fullan and Quinn (2016) as an imperative factor for successful implementation of education reform. This approach is used with success in the Ontario Ministry of Education (Gallagher, Malloy, & Ryerson, 2016; Kuji-Shikatani, Gallagher, & Franz, 2016; Zegarac & Franz, 2007), where this iterative process is an important tool in infusing evaluative thinking across governance levels, creating a close link between research, data and practice to develop the overall system.

#### **Research Methods**

The present study takes a qualitative case study approach to unravel the narrative of the implementation of 1:1 iPad learning in the Greenland primary and secondary school system. Qualitative methodology encourages detailed description and fits the objectives to document the circumstances surrounding reforms in ICT education policies and practices in Greenland. The data is analyzed through the lenses of a political sociology approach to education reform and policy instruments, which is combined with analytical premises deriving from complexity theory. Case study data collection provides the opportunity to employ multiple sources of evidence, as *case studies examine the operation of causal mechanisms in individual cases in detail* (George &

Bennet, 2005). As such, rich and descriptive data revealing the complexity involved within the selected case site is provided.

#### **Case selection**

The implementation of ICT, in the form of 1:1 iPad learning, in the Greenland primary and lower secondary school system was selected as the primary case of analysis to explore the causal mechanisms in the planning and implementation processes in a country with a decentralized education governance system, a big geographic area, a small population, a developing ICT infrastructure and a high turnover in administrative and trained school staff. These factors make it interesting to look at the planning and implementation processes in the different governance levels of the education system. The knowledge acquired may be useful for schools and countries with similar positions.

#### **Data collection and analysis**

Process tracing (Bennett & Checkel, 2014) was used to analyze the data by creating a timeline of events to systematize data and provide an overall overview. Process tracing took place in the form of *practice tracing*. Practice is defined as socially meaningful and organized patterns of activities; in lay parlance, they are ways of doing things (Bennett & Checkel, 2014). Inquiries into ‘the way of doing things’ among the different actors in the governance system provides important information for understanding the context of the reform processes in the education system in Greenland.

Yin (1982) considers three research methods particularly suited for examining public policies: (1) non-structured interviews; (2) documentation study; and (3) participatory observation. National and municipal data sources were collected in the form of strategies, school data, internal and external evaluations. Current and historical policy documents including legislation, and meeting materials (i.e., agendas, minutes) from the parliament and the local governance (i.e., municipality) were also collected. Empirical data were collected using in-depth interviews (n=16), informal interviews (n=5), documentary analysis and field observation (over 3 years). Observations at key meetings and interviews with primary stakeholders in the different levels of government about their experiences and understandings of roles were conducted. The observation notes and interviews were transcribed and analyzed using the Nvivo software. The interview excerpts were translated by the author.

**Table 1. Overview of research techniques and collected data**

Research technique	Data
Text analysis of relevant primary documents	Parliamentary/governmental documents and documents produced at local level Project plans, budgets and evaluations
Secondary analysis	Internal and external evaluations of policy
Semi-structured elite interviews with key stakeholders	Policy makers Representatives of school boards Heads of schools Teachers
Observation of key meetings between governance levels	Observation notes

**Political economies of education reform: The ICT policy environment and change processes in Greenland**

The following section analyzes the current state of the existing ICT policy environment and change processes in the context of the Greenland 1:1 iPad learning project in the primary and secondary school system from a complexity perspective. Process tracing of major events and primary stakeholder meetings leading up to the decision of implementing iPads as a teaching tool nationwide will exemplify how ICT in education has been dealt with and prioritized by the decentral and central government administrations.

IT in education was incorporated as a requirement in the legislation in 2002, to be a part of and as a tool in teaching. According to legislation, IT should therefore be an integral part of teaching in grades 1 through 10, and further in the education system. Specifics about the requirements and implementation of IT in education has since been very scarcely mentioned in the national education and ICT strategies that have been implemented since 2005. School site IT has in various documents (National ICT and digitization strategies, working papers, meeting minutes) been loosely coupled with distance education, as both are key elements in school development and improving student outcomes overall.

The iPad project has its origin in the 2012 Qeqqata Sustainability Project. As equal access to IT and education for all students was a key objective in the Sustainability Project, a dialogue between the Villum Foundation and the Qeqqata Municipality was initiated, which resulted in an application and subsequent USD 2,7 mio. grant in 2013, which also included the Municipality of Kujalleq.



lecturers, travelling and accommodation expenses for teachers) were organized and financed by the two municipalities in front.

In 2015 and 2016 major external evaluations of the primary and lower secondary school system and Teacher Training College were carried out, where the overall conclusion was that the many points of weaknesses identified in the practice of the primary and secondary school was a result of insufficient implementation of the legislation (Danmarks Evalueringsinstitut, 2015) and a lacking connection between the Teacher Training College curriculum and the practice in the schools (Danmarks Evalueringsinstitut, 2016). The evaluations also showed indications of a deeply incoherent system where a common standpoint for the various actors in the primary and secondary school governance system, seemingly, was absent.

The iPad project in the two municipalities was evaluated in 2016, two years after handing out the devices to all students and teachers. An evaluation of any project will always depend on the goals set in the beginning, and the evaluation (Bundgaard & Steensig, 2016) indicate that there has not been a clear purpose nor distinct goals to monitor in the implementation process. The purpose of the evaluation was to assess the current status of the project.

*If the goal has been for two years to move the school system in the municipality of Kujalleq and Qeqqata Municipality in a fundamentally different direction - an iPad-based, innovative pedagogy based on producing and self-learning students in an innovative project work form - there is still a very long way to go. If the first two years are seen as an introductory phase, with the aim of creating small changes - as a basis for greater - and a slowly emerging new identity and self-understanding in the municipal school system, one is close to the goal. (Bundgaard & Steensig, 2016)*

A combination of an inadequate ICT infrastructure and clarity of purpose in how iPads should be used made the conditions for implementation difficult. The evaluation described a number of rookie mistakes and startup issues, and how key personnel described that they were not ready. A condition not unlike other countries that have embarked on similar projects (Kozma, 2011; OECD, 2015b).

*The challenges most commonly encountered by teachers are that students do not bring iPads to school, internet problems, and students use iPads for purposes other than teaching in class. (Qeqqata Municipality, 2016)*

*As it is at the moment, it is apparently quite acceptable to "do as usual". It will require structure, a systemic view and management to change this. (Bundgaard & Steensig, 2016)*

The iPad project has since grown beyond the two municipalities to a national project with participation from all five municipalities in Greenland. With the headline "A Lift of the Greenland

School" the municipalities began a historic cooperation in 2015, bringing together a national primary and lower secondary school development project. After a series of planning meetings and study trips to schools in England with iPad project experiences, the municipalities developed a joint application in 2016 to a Danish foundation. After receiving comments from the foundation on requirements on more cooperation and alignment across municipalities, the municipalities sent a revised application in 2017, which was accepted in the spring of 2018. To anchor the cooperation, a permanent forum has been established, which will meet twice a year and evaluate progress and challenges. In addition to representatives from the municipalities, the forum will consist of invited relevant parties. "A lift of the Greenland school" boils down to three headings: Competence, Content and Technology, which are examined as coherent entities in a system where leadership and context play a decisive role.

#### **2017 National School Principal Seminar – observation of change processes, coordination and relationships between key stakeholders**

Due to the long coastline, there are limited opportunities for the country's schools to meet face-to-face and share knowledge. Travelling between towns are limited to plane and boat connections and are expensive. School leader seminars are arranged by the National Education Board approx. every two years and is a forum for information sharing and dialogue between the Ministry of Education, the National Board of Education, municipalities and school leaders. With the heading 'Common vision' the 3-day 2017 seminar was commenced, although it was not clarified what was meant by a common vision, and what the implications would be. The program had a strong focus on IT didactics and ICT infrastructure. Professionals from the Ministry of Education, the National Board of Education, municipalities, schools and businesses attended. According to the head of the National Education Board, the purpose of the seminar was to initiate close cooperation with the municipalities.

A number of strategies and future reforms were presented (Table 3). The seminar was the first times the school leaders had gathered after a 2015 external evaluation of the primary school and a 2016 Teacher Training College evaluation. The evaluation reports were not mentioned and none of the strategies presented were directly linked to the evaluation results, except the reform of the Teacher Training College.

<sup>5</sup> There was a school leader seminar in the town of Ilulissat in May 2015, but there has been no major follow-up on the evaluations on a school leader forum

**Table 3. Strategies and reforms presented at the seminar**

<b>Strategies</b>	<b>Reforms and changes in legislation</b>
Renewed strategy of Ilinnisiorfik <sup>6</sup> Teacher professional development courses Digitization and ICT in the primary school	2017 changes in legislation Upcoming education reform Teacher Training College

No strategies or initiatives were linked to overall objectives for the primary school. The various institutions presented strategies and project-oriented objectives, but did not link to an overall strategy for the development of the primary and secondary school system. Which led to following comments from two managing directors from the municipalities:

*Qeqqata Municipality: Did you think about or take into consideration the iPad project or the reform of the Teacher Training College when developing the new education reform? There has not been a word about IT or digitization so far.*

*Kujalleq Municipality: Is it the plan that the Education Board will allocate funding at national level for the development of primary schools? We cannot keep working separately. There must be coordination. Now we have spent so much municipal money on this. It would be completely incomprehensible if the Government and Education Board do not want to cooperate.*

Among the school leaders and municipal managing directors there were expectations to a major follow up on the evaluation reports from the 2015 and 2016 external evaluations, quality reporting criteria, monitoring and other centrally led efforts.

*School leader: In view of the future, it is desirable that the municipalities have a cooperation forum where plans can be made based on the results of the primary school. I would like to recommend planning based on research and studies.*

Interviews with primary stakeholders indicated conflicting views on who is responsible for presenting follow up strategies and setting a direction for development. The interviews further indicated that cooperation offers have come with short reporting time or with too many requirements that the different stakeholders had not been able to stand in for. As a new initiative, the Education Board and the Municipal Managers have agreed on ongoing dialogue meetings to better collaborate on the development of the Greenlandic primary and secondary school.

### **Thematic analysis**

<sup>6</sup> Teaching material developing and publishing house

In order to analyze the policy environment in depth I draw on the themes and characteristics used in the analysis are inspired by the SABER-ICT<sup>7</sup> Framework Paper for policy analysis developed by Trucano (2016) for the World Bank. The framework considers policy intent in eight policy areas commonly identified in educational technology policies around the world. These relate to (1) vision and planning; (2) ICT infrastructure; (3) teachers; (4) skills and competencies; (5) learning resources; (6) EMIS (Education Management Information Systems); (7) monitoring and evaluation; and (8) equity, inclusion, and safety. For each theme, the framework presents four developmental policy stages: latent; emerging; established and advanced. These levels are artificially constructed categories, which represent key elements along an underlying continuum. The following section provides an in-depth analysis carried out in 8 policy themes and explores the overall ICT policy environment in which the national iPad project is carried out.

#### **Policy theme 1: Vision and planning**

The institutional arrangement is characterized by the overall (small) size of the Greenland education management system, where only a small number of people have related dedicated responsibility. Needless to say, articulating and disseminating a vision to help guide efforts to introduce and utilize ICTs to support teaching and learning is important. At the legislative level, there are strong overall linkages between education ICT policy and other policy areas. There is regular annual public expenditure on ICT in education, on infrastructure and some non-infrastructure items.

The process-tracing table (Table 1) shows that the individual municipalities and the Ministry of Education have had separate processes for their ICT visions and implementation plans for the primary school. One unique condition is that the 1:1 iPad learning project has been carried out and funded entirely by the municipalities and through their cooperation with foundations and businesses. The Qeqqata and Kujataa municipalities each contribute roughly USD 0.3 million annually for operation and maintenance. All areas within vision and planning policies are either emerging or established. However, while there seems to be a will to cooperate across municipalities and with the central government, a common front is still lacking when it comes to operationalization of legislation and strategies into practice.

*Our primary school is undergoing major changes and is faced with growing pressures from all sides - teachers, parents, students and, not least, external stakeholders. It is therefore necessary that we jointly create one vision and work in the same direction across the country* (Minister of Education in (Greenland Ministry of Education, 2017).

<sup>7</sup> Systems Approach for Better Education Results for Information and Communication Technologies

In regards of the teaching capacity and knowledge of IT the Teacher Training College has in their renewed 2018 curriculum incorporated IT didactics as an independent subject and as learning objectives in other subjects, which to a higher degree align the competences of teachers with the reality they will meet in the schools. In conclusion, this policy theme can be characterized as *established*. There is a strong policy focus in this area but an overall strategy with participation from all policy actors is missing.

**Policy theme 2: ICT (information and communication technologies) infrastructure**

While developing ICT infrastructure in general has been a focus area in Greenland, there are still large disparities in the use of and access to the Internet among the population as a result of the price. The ICT infrastructure varies greatly from school to school. Currently, the Self-government owned ATTAT network is the only Internet provider for schools. While energy supply is not an issue, and while all schools have Internet access, the capacity, speed and costs are challenges. All students and teachers in the country will have access to an iPad in the near future.

An external evaluation of the iPad project (Bundgaard & Steensig, 2016) illustrates challenges in the Internet connection speed and stability, in spending on Internet usage, in storage capacity on computers and on iPads, in forgotten login codes and in difficulty using applications and operating systems. A 2015 external evaluation of the primary and secondary school (Danmarks Evalueringsinstitut, 2015) showed that 93 pct. of teachers responded that they would like to use IT more in the classroom. When asked what prevented them from using IT more, more than half (56 pct.) responded that their school lacked (useable) computers or iPads. For 45 pct. of city school teachers and 30 pct. of settlement school teachers, it is a practical obstacle that the school does not have enough capacity on the network, while 43 pct. respectively 59 pct. indicate a lack of a sufficient connection.

On a practical note, limitations in the availability of necessary or useful iPad applications (apps) for teaching pose further challenges (Bundgaard & Steensig, 2016). Following the SABER-ICT framework this policy theme is identified as *advanced*, bearing in mind that every student and teacher will presumably have access to a personal iPad.

**Policy theme 3: Teachers**

Trucano (2016) states that support for teachers is often deemphasized in the early stages of ICT implementation in education; over time, most education systems slowly invest more in related

technical and pedagogical professional development for teachers. After a slow start, a turnaround of the system seems to be under way.

While the Greenland legislation on the primary and secondary school states that IT should be integrated in the teaching of all subjects as part of the teaching and as a learning tool, it says nothing about how often it should be done. According to the 2015 external evaluation, 13 pct. of teachers do it daily and 33 pct. at least every week. 25 pct. Use computers in teaching at least once a month, while 28 pct. of teachers respond that they use computers less often than each month (Danmarks Evalueringsinstitut, 2015).

Based on the recommendations from the 2016 external evaluation (Danmarks Evalueringsinstitut, 2016) of the Teacher Training College the curriculum was revised, incorporating IT in all subjects as tools and developing new classes on IT didactic (Ilinniarfissuaq, 2018). An adjustment to the necessary skills for a teacher demanded by the new digital reality. As part of the municipalities' iPad project, all primary and lower secondary school teachers and teachers at the Teacher Training College will be given iPads. According to Trucano (2016), competency standards for teachers are often revised over time to reflect the new demands placed on teachers as a result of the increased use of ICTs. These basic ICT-related teacher competency standards have not yet been defined in Greenland.

A new strategy (2017) for centrally established teacher professional development courses states that more emphasis will be laid in the development needs of the teachers and schools. National general and ICT-related resource centers for teachers are being set up (Ministry of Education, 2017). The Education Board is working on a series of introductory iPad starter videos with a focus on didactics and a high level of professionalism. The Qeqqata Municipality has developed a website ([www.atuarfiit.gl](http://www.atuarfiit.gl)) which functions as a forum for collaborative learning, iPad news and instruction manuals.

This policy theme is identified as *emerging*. Teacher IT skills have become a main focus area and initiatives are under way to equip teachers with training and support to actively use education technologies and didactics in their teaching.

#### **Policy theme 4: Skills and competencies**

This policy theme focuses on the skills and competencies of pupils. No ICT literacy or digital competency standards have yet been formulated on policy level. There are some, mostly low level,

ICT literacy/digital competency efforts. At the level of strategy (Ministry of Education, 2017), digital skills and digital didactics are mentioned as a focus area. As for the skills and competencies of pupils, the centrally developed learning objectives for pupils that came into force with the 2002 reform have not yet been revised, and have to a large part become outdated. At school and learning objectives level, IT is included as a requirement in all subjects as tools. However, there are no specific learning goals for IT knowledge. This policy theme can therefore be characterized as *emerging*.

**Policy theme 5: Learning resources**

According to Trucano (2016) in the early stages of ICT deployments in schools, investment in devices is often prioritized over investments in digital content and learning resources. This can be said to be true for the case of Greenland. While IT has been a requirement in teaching since 2003 and iPads have been in use in two out of five municipalities since 2014, the amount of digital learning resources developed and translated into Greenlandic and adapted to the Greenland culture is scarce. There is ongoing work in digitizing teaching materials. A renewed strategy for supporting the development, dissemination and utilization of digital learning resources was presented at the National School Principal Seminar (December 2017). This policy theme can therefore be characterized as *emerging*.

**Policy theme 6: EMIS (education management information systems)**

A comprehensive EMIS is described as “a system of people, technology, models, methods, processes, procedures, rules, and regulations that function together to provide education leaders, decision makers, and managers at all levels with a comprehensive, integrated set of relevant, reliable, unambiguous, and timely data and information to support them in completion of their responsibilities” (Cassidy, 2006). There is no coherent system in Greenland for collecting and systematizing data as described by Cassidy (2006) above. This policy theme is therefore characterized as *latent*.

**Policy theme 7: Monitoring and evaluation, assessment, research and innovation**

There is little monitoring of the Greenland educational system in general, and specifically for the use of ICT, the monitoring that exists is irregular, incomplete and relates primarily to access to infrastructure. Impact of ICT use is neither measured systematically nor published. With the 2002 reform (Education Act, 2002), impact evaluations were introduced into the legislation, describing that the central government is responsible for collecting and disseminating knowledge and impact evaluations of a number of initiatives to strengthen municipal efforts in primary school. In practice,

impact evaluations are by the Board of Education referred to as "difficult". Statistics and evaluations of test results and final examinations are published annually for each subject. ICT is currently not used in formal assessments. At the strategy level (Ministry of Education, 2017) it is an objective that the final written examinations in the primary and secondary school are conducted digitally. There is no, or minimal, publicly available Research and Development (R&D) activities on innovative pilots related to ICT education. This policy theme is therefore characterized as *latent* at best *emerging* in some areas.

#### **Policy theme 8: Equity, inclusion and safety**

There are no direct policies or legislation on child digital safety issues, and the education system does not currently play a specific role in educating children about related risks. On strategy level (Ministry of Education, 2017), one of the objectives is a stronger focus on a more secure use of the Internet among school children. Some parents' school boards and the newly formed Parents' Association in Nuuk have raised a discussion together with the topic of child welfare. This policy theme is therefore characterized as *latent – or, at best, emerging*.

#### **Summary of findings**

This section summarizes the findings of the process tracing and thematic analysis of the ICT change processes and policy environment. To address the unique opportunities, and challenges, presented by the landmark project, it is necessary to look at the themes systematically and as interconnected entities in order to create sustainable change, as schools are complex systems, in which change and interactions are not seen as predictable and linear. The eight themes examined in the thematic analysis, in line with the principles of complexity theory, are interrelated and overlap. In fact, all themes fit into the three main headings of the Joint iPad Project (see also Table 4). This connection also shows that the Joint iPad Project could be monitored using already developed frameworks to monitor development and progress, comparable to other systems in the world.

The findings illustrate what seems to be a historical lack of coordination in connection with the implementation processes in regards to educational reform, where there has been no tradition of extensive cooperation and planning across municipalities and central government, or a solid tradition for monitoring and conducting utilization focused evaluations. However, the findings indicate (see Table 4) that there is a will to move towards a more common vision, planning and working method across governance levels, based on the needs of the schools. Complexity theory and developmental evaluation, to a large extent, focus on the constructive and evolving

interrelationships between the key stakeholders at various levels of the education system. Relationships between the central administration, municipalities and school leaders have historically not been particularly good, but according to the data collected, there is a turnaround in progress. These relationships will be key in shaping a constructive policy environment and setting a clear and coherent framework for the school system in Greenland.

**Table 4. Summary of findings of ICT policy environment analysis**

<b>Policy theme</b>	<b>Policy stage</b> (Latent, Emerging, Established, Advanced)	<b>Joint iPad Project main headings</b> (Technology, Competence and Content)
Vision and Planning	Established	Content
ICT infrastructure	Advanced	Technology
Teachers	Emerging	Competence
Skills and Competences	Emerging	Competence
Learning Resources	Emerging	Content
EMIS	Latent	Technology
Monitoring and evaluation, assessment, research and innovation	Latent, emerging in some areas	Competence
Equity, inclusion and safety	Latent, emerging in some areas	Content

Together these findings provide important insights into the ongoing, and forthcoming, implementation of a nationwide 1:1 iPad learning in the Greenland education system.

### **Conclusion**

This paper argues that implementing 1:1 iPad learning in all primary and secondary schools in a whole country is a complex system change, and therefore demands a corresponding implementation, evaluation and monitoring approach. The findings from the thematic analysis (Table 4) conclude that most ICT policy areas are either established or emerging. The policy areas that are lacking behind are policy themes 6 through 8, and are themes mostly concerned with evaluation and monitoring.

Several years after the beginning stages of the Greenland iPad project the conclusion is that the education system has not been ready to take full advantage of the potential of technology. A lack of cooperation and coherence on strategies across the various policy actors, institutions and schools, has made it difficult to create the wanted impact on classroom practices. The paradox lies in the

ambitions of a country wanting to introduce a 1:1 iPad learning for all pupils, but having no plans for curriculum or the professional development of teachers in advance has made it difficult to for including technology meaningfully into lessons and curricula. The two municipalities have paved much of the way forward, and in their own words, gone through bumps in the road and rookie mistakes. As a result, the basic ICT infrastructure has improved, there is a greater focus on technology nationally, digitized learning materials are being developed and there is a better platform for cooperation between the central and decentral levels of administrations.

The challenges identified in the external evaluations of the iPad Project (Bundgaard & Steensig, 2016), Greenland primary and lower secondary school (Danmarks Evalueringsinstitut, 2015), thematic analysis, in line with the conducted literature review, point at a need to invest in evaluation and monitoring capacity development, in order to develop sound evidence, feed it back to institutions, thereby creating conditions for development and sound policy making. One thing is the coordination and cooperation between governance levels, institutions and key stakeholders to secure a coherent framework and infrastructure, another is implementing the wanted change in the classroom and working towards the desired outcomes. Matching the evaluation design and methods to the nature of the situation is crucial, as traditional evaluation methods are not sufficient in conditions of complexity and rapid change.

#### **Discussion and policy recommendations – from plan to practice**

This section presents a discussion of the ongoing implementation and evaluation process, seen in the light of previous evaluations and experiences from the two first iPad municipalities.

Boolsen (2013), after years of working with evaluations of the education sector in Greenland, recommended in a paper about evaluation traditions and methods applied in Greenland, a revised evaluation approach, in which a paradigmatic shift from a positivist to the hermeneutic would be necessary in order to change the education picture.

A focus on the themes that were identified as latent or emerging is highly recommended. The policy areas that are lacking behind are policy themes 6 through 8, and are themes mostly concerned with evaluation and monitoring. The Joint iPad project lays out the same overall goal for all municipalities (stated in the introduction), although two out of five municipalities have had iPads for four years at the start of the joint project. In practice, this means that some municipalities will have more time to achieve the goal than others. As can be expected, the implementation plans and

theory of change varies from municipality to municipality, given the very different contexts and starting points. Learning from the implementation process and evaluations of the two first municipalities, the overall goals should be broken down into smaller intermediate targets and the characteristics of successful practice and activities needed to accomplish these goals should be described. Indicators of practice (new pedagogical and didactic culture) should be developed, and decisions regarding what data should be collected, by whom and how often, to support the implementation and monitoring process, should be made before the start of the implementation process.

The specific attention to context in the description of the iPad Project is noteworthy and it will be interesting to see how this focus will influence the implementation process, as schools and school systems, are also structure-determined as they adapt to changes within social, economic, and political contexts while internalizing, learning from, and evolving from systemic memory inherent in the system.

If the complexity of the project is taken into account when designing the implementation and evaluation processes, the self-organization and nested characters of complex systems can be a good thing and a strength, not a weakness, as a surprising aspect of the phenomenon of self-organization is that it can happen without the assistance of a central organizer (Davis and Summara 2006:84). Creating co-developmental processes, rather than top-down procedures, according to the principles of complexity theory, will create better conditions for the dynamic and emergent context in which the implementation takes place. The facilitation and support systems of the implementation process will therefore be crucial for the project's success, and close cooperation between the project manager, the municipalities and the steering committee will be necessary, as ownership and inclusion at local and school level will be absolutely crucial in order to come about a change at the proposed level.

Many countries currently consider the rate of change in educational achievement status to be partially indicative of adequate yearly progress. This change is often conceptualized using a relatively simple linear equation (e.g. a new pedagogical method or new technology leads to better results). However, there are several assumptions inherent within this way of thinking. Not only is the school treated as a closed system, this linear thinking also rests on assumptions of proportionality and additive functions. For example, there are developmental periods at which

achievement levels can be expected to fluctuate. Ongoing utilization-focused impact evaluations (Patton, 2012) can help pointing out potential gaps between rhetoric and reality, or utility, that can help inform the development of future policies related to technology use in education that are more relevant and impactful.

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## **PAPER III**

# **BUILDING A NATION IN THE CLASSROOM: EXPLORING EDUCATION POLICY IN POST-COLONIAL GREENLAND**

**BENEDIKTE BRINCKER AND MITDLARAK LENNERT**

## **INTRODUCTION**

This chapter offers an analysis of the education policy goals and practices in Greenland, a former colony of Denmark(1). It situates Greenlandic education policy within the context of nation-building processes. Studies on nation-building have long argued that the relationship between education and nation-building is an important area of investigation, especially in former colonies, such as Greenland, where nationalism has been foundational for independence from colonial rule(Akar & Albrecht, 2017; Chatterjee, 1993; Gellner, 1983; Hechter, 2013). These studies have made clear distinctions among the terms ‘nation-building’, ‘nationalism’ and ‘national identity’. Nation-building signifies the cultural and political processes aimed at constructing a nation. Nationalism is a political ideology and movement that aims for the unity, autonomy and identity of a nation. National identity refers to the collective identity at the national level (Hall, 2013; Smith, 1991).

As a point of departure in this conceptual framework, the aforementioned studies have directed attention to the importance ascribed by nation states, in general, and former colonies, in particular, to a standardised compulsory educational system in which instruction is provided in a common language, i.e. the national language. This creates an overarching national identity that can serve to consolidate and to strengthen social cohesion and to reduce barriers and divisions. In this view, albeit national identity involves elements that are constructed in opposition to other groups, nationalism is also a source of solidarity (Miller, 2000). However, an education policy that is informed by a nationalist agenda often conflicts with the aims and practices of an education policy that seeks to embrace diversity, be it cultural, linguistic or socio-economic. Hence, nationalist education policies run the risk of reproducing existing social barriers and divisions in a society and cementing, rather than reducing, social inequalities (Akar & Albrecht, 2017). Thus, there is a trade-off between achieving social cohesion and social inequality.

This chapter explores the possibility of a trade-off between social cohesion and social inequality in the goals and practices of Greenlandic education policy beginning in 1979 when the country gained home rule. Several studies have explored this trade-off in education policy. Examples can be found in New Zealand in the context of the country's bicultural education policy (Lourie, 2016) and in Catalonia in the unfolding competing conceptualisations of language, social cohesion and cultural diversity in the classroom (Dooly & Unamuno, 2009).

Education is a pressing issue in Greenland. For years, the country has struggled, with little success, to address and to eliminate a competence gap that negatively affects the labour market. The competence gap that confronts Greenland is twofold. On the one hand, employers demand skills that are not, or are only to a very limited extent, present in the Greenland labour force. Consequently, employers recruit staff internationally, most notably from Denmark, Greenland's former colonial ruler. On the other hand, employers need the non-skilled labour that is available in Greenland. However, non-skilled workers lack the incentive to take these jobs because of the relatively small difference between the minimum wage and unemployment benefits. Hence, there is a clear understanding in Greenland that the country needs to improve its educational system to address the competence gap and that this begins with primary and lower secondary school education.

The chapter first presents the context for Greenlandic education policy. This is accomplished by a focus on two vital elements: indigeneity and isolation, and colony and county. The chapter then explores Greenlandic education policy since the introduction of home rule in 1979. The emphasis is on the interactions among nation-building processes and education policy, governance structures, and teacher training. Finally, the chapter returns to the question that has guided this research, i.e. the possibility of a trade-off between social cohesion and social inequality. It concludes with the findings.

## **THE GREENLAND CONTEXT**

### ***INDIGENEITY AND ISOLATION***

Greenland is the largest island in the world (2.1 million km<sup>2</sup>). The country is often considered to be both North American and European. Geographically, it is part of the North American continent. However, given that Greenland was a Danish colony for more than 200 years (1719–1953) and a Danish county for more than 20 years (1953–1979), it is also considered part of Europe.

While Greenland is the largest island in the world, it also has the lowest population density in the world. It has approximately 55,000 inhabitants who live along the coastline, mostly on the west coast. Almost one-third of the population (17,000) resides in the capital, Nuuk. Among the population are the Inuit, who are recognised by Denmark and the international community as an indigenous people. Thus, their rights are secured under the United Nations Declaration on the Rights of Indigenous Peoples. However, the Greenland Inuits constitute an unusual group of indigenous peoples. Unlike some of the other peoples protected by the declaration, the Inuit are not a minority. Instead, they constitute the majority population of Greenland, and their language, Greenlandic, or, more accurately, the Greenlandic Inuit language is the majority language (Brincker & Nørregaard-Nielsen, 2015).

Greenlandic is spoken on the west coast of Greenland. On the east coast, which is much less densely populated, the population speaks a dialect that is so different from that of the west that it is sometimes considered a separate language (Brincker, 2017). Hence, Greenland has two languages. To this could be added a

third, the Thule dialect, which is spoken in the northwest. However, most debates on language concentrate on the relationship between Greenlandic and Danish, the language of the former colonial power, which still plays a dominant role in Greenland, especially in Nuuk. Hence, Greenland is a multilingual indigenous community in which Greenlandic, East Greenlandic, the Thule dialect and Danish are spoken. This community is relatively isolated geographically. However, with climate change and the resulting changes in the permafrost, glacier ice and sea ice, Greenland has been receiving an unparalleled amount of international attention in terms of geopolitics, environmental risks, the potential existence of natural resources below the ice and the prospect of new shipping routes.

#### ***COLONY AND COUNTY***

From 1721 to 1953, Greenland was a Danish colony. In 1953, the country became fully integrated into the Danish state, and it gained the status of a Danish county. This was in sharp contrast to the tendency of colonies around the world to gain independence. With its Danish county status, Greenland became aligned with Denmark, Sweden, Norway, Finland and Iceland on their journey to becoming universal welfare states.

During the county years, 1953–1979, Greenland embarked on a very rapid modernisation process that included education. The argument was that for Greenland to achieve the same level of economic prosperity as the rest of Denmark, it would need to become industrialised. Industrialisation in turn required that education be given priority (Mikkelsen, 1963). Without significant investments in education, the projected increase in the demand for skilled labour, in both the short- and long-term, could not be satisfied without a significant influx of migrant workers, especially from Denmark. The beginning of the 1970s thus marked a period of increased prioritisation of education in Greenland.

Subsequent to the formation of a nationalist movement in the late 1960s and 1970s and the repeated calls for autonomy, Greenland gained home rule status in 1979. Thus, the Danish-developed welfare system was transferred to and implemented in the semi-autonomous Greenlandic administration within the framework of the Danish Realm. In many aspects of government policy, the introduction of home

rule resulted in radical breaks from the mindset and policies of the 1950s and 1960s. One of these was education, which was identified as the first area to be transferred from Danish to Greenlandic authority and jurisdiction. The next section explores Greenland's education policy beginning in 1979 when jurisdiction shifted from Denmark to Greenland.

## **EDUCATION POLICY IN GREENLAND**

### ***EDUCATION POLICY AND NATION-BUILDING***

With the introduction of home rule and the responsibility for education residing with the home rule government, one of the primary education policy objectives became the definition of the framework for and content of educational programs from a Greenlandic rather than a Danish perspective to increase the relevance to Greenlandic culture. The Greenlandic language, which in the previous 10–15 years had been overshadowed by the Danish language, was now being given higher priority (Binderkrantz, 2008, 2011).

The political goal was to reduce the number of migrant workers, a large proportion of whom came from Denmark, and to make Greenland self-sufficient regarding its labour force. Combined with the policy of *Greenlandization*, an idea that captured the spirit of the 1980s when Greenlandic culture, traditions and values were a focus, education became an important part of the development of a Greenlandic nation and an overarching Greenlandic national identity.

After the emphasis on Greenlandic values and language during the 1980s, the focus shifted in the early 1990s to the quality and need for Danish language proficiency. This was a reaction to the unintended consequences of the 1980s education policies, most notably the limited opportunities for students whose primary and lower secondary instruction had been in Greenlandic. These students, whose only or primary language was Greenlandic, were impeded from furthering their education, e.g. attending upper secondary school, because the language of instruction was Danish. This was in sharp contrast to the experiences of the bilingual students for whom the transition from lower to upper secondary school, with instruction in Greenlandic, to high school, with instruction in Danish, was not a problem. The

Danish-language students who did not speak Greenlandic were denied access to the teacher training college in Nuuk because they could not speak Greenlandic (Dagsordenspunkt 30-1, FM 1995:14).

With the 1990 school reform that was implemented in the mid-1990s, non-Greenlandic speaking students were no longer required to receive separate instruction in Danish-speaking classes. A two-tiered school with Danish and Greenlandic sections was considered a relic of the past. Instead, Danish-speaking students were to be integrated into the Greenlandic-speaking classes. The national politicians hoped to accommodate Greenlandic- and Danish-speaking students in the same classroom. The integration policy was discussed throughout most of the 1990s. A major obstacle was the lack of support materials for teaching Greenlandic as a foreign language to non-Greenlandic-speaking students just as there were limited materials for teaching Danish as a foreign language to non-Danish-speaking students. In addition, there was a severe shortage of qualified teachers in both subjects. Hence, although the education policies were designed to accommodate one nation in one classroom, resources such as teaching materials and trained teachers, which were preconditions for the successful implementation of these policies, were not in place.

#### **GOVERNANCE AND REGULATION**

In 1997, a new regulation that entailed the reform of the governance structures for primary and lower secondary schools was passed. The regulation was a result of recommendations from the Municipal Reform Commission and a project group that had found the existing governance structures too hierarchical and lacking sufficient opportunities for localisation. According to the project group, this made it exceedingly difficult to fully benefit from local knowledge and instructional experience. In some cases, this resulted in an uneven distribution of competencies and, thus, an imbalance between expertise and financial responsibility (Dagsordenspunkt 35, FM 1997).

The regulation created the foundation for the primary and lower secondary schools being jointly governed by the home rule government and the municipalities. As part of the reform, school boards were established at all schools to improve cooperation

among parents, policymakers and teachers and to stabilise the work of each school. The purpose was to allow those who are directly involved in the schools to have greater influence and, at least in principle, to pay relatively more attention to the local contexts within which the individual schools operated.

Finally, in early 2000, the *Atuarfitsialak* (good school) reform was implemented. It expanded the debate on governance and regulation by placing the child at the centre of education. This represented a shift in Greenlandic education policy from the central national level with a focus on nation-building, to the local level with an emphasis on the local context and, finally, to the level of the individual child. This movement occurred against the general perception that after more than 20 years of Greenlandic authority over education, the initiatives and reforms had not been successful in adapting the primary and lower secondary schools to the Greenlandic context. According to the policymakers, the *Atuarfitsialak* reform was the first attempt to create a truly Greenlandic school designed to fulfil the needs of the people of Greenland (§6, Landstingsforordning nr. 8 af 21. maj 2002 om folkeskolen)(Dagsordenspunkt 35, EM 2001:1).

The *Atuarfitsialak* reform was launched in an environment in which political parties were thought to have spent more time discussing the cultural differences between Greenlanders and Danes in the abstract than addressing the social barriers and divisions in the population. An educational system on Greenlandic terms that could unite the people of Greenland in an overarching identity and achieve social cohesion had been much desired, but the terms had never been laid out. The reforms under home rule had lacked clearly defined goals and objectives that could be operationalised throughout the education system. The focus had been on the development of governance and regulatory frameworks rather than their implementation.

In 2009, the Home Rule Act was replaced with a new act granting self-rule to Greenland: the 'Self-Rule Act'. This act recognises that, pursuant to international law, the people of Greenland have a right to self-determination (Lov nr. 473 af 12/6/2009). The introduction of the Self-Rule Act did not significantly affect education policy. Presently, the *Atuarfitsialak* reform still constitutes the legal framework for primary and lower secondary schools in Greenland. However, in recent years, initiatives have been launched to evaluate the *Atuarfitsialak*. These initiatives were

triggered to a large extent by the general perception that Greenland needed to address and to eliminate its competence gap if the country was to become fully independent of its former colonial power, Denmark. This perception has mirrored the general understanding that tackling the competence gap would need to begin with primary and lower secondary school education. Recently, the Ministry of Education embarked on a major reform to restructure the entire education system. It is based on the evaluations of K-12 school systems around the world. A main purpose of the reform is the development of better links between elementary and higher education. This involves increasing compulsory schooling from 10 to 12 years and strengthening coherence and consistency within the school system. An important goal of this reform is that all villages, regardless of size, be able to offer instruction from Grades 1 through 8. It is the plan that upon completion of the 8th grade, students can receive 9th and 10th grade instruction in their local cities. The final two years, Grades 11 and 12, would be done in 'campus cities'. The adoption and implementation of this reform have not yet occurred.

### ***TEACHER TRAINING***

In 2016, the Danish Institute of Evaluation conducted an evaluation of the teacher training college in Nuuk at the request of the University of Greenland. The Institute concluded that the teacher training college in Nuuk was facing serious problems regarding education quality. This was most pronounced in mathematics and English as a foreign language. On the basis of the grades awarded in the final examination, the Institute concluded that the quality of instruction in Danish as a foreign language was somewhat higher than those awarded in mathematics and English. However, according to the Institute, this covers a great spread and 45 percent of a graduating class received grades in Danish as a foreign language that were as low as those awarded in English and mathematics (EVA, 2016).

This situation is problematic especially because Danish is still central to the Greenlandic educational system. Thus, young Greenlanders who want to educate themselves beyond lower secondary school must master Danish. The use of both Greenlandic and Danish in the Greenlandic educational system therefore constitutes a challenge for those who speak only, or mainly, Greenlandic. This problem was identified in the 1990s. While Greenlandic-speaking students do not

experience language problems in the primary and lower secondary schools, they are disadvantaged upon entry to upper secondary school if they do not have good Danish language skills.

The reasons for the gap between the primary and lower secondary schools and the rest of the education system is complex. However, a shortage of Greenlandic-speaking teachers qualified to teach at the secondary level and the lack of instructional materials written in Greenlandic appear to be the main reasons. These factors have played a dominant role in the ongoing situation in which upper secondary education is conducted in Danish. The argument has often been made that the size of the Greenlandic population is not conducive to an education system in which instruction is provided exclusively in Greenlandic. An independent Greenland needs a population that is fluent in many languages. Whether one of these languages should be Danish, the language of the former colonial power, remains an open question. In the present situation, where Danish is the language of instruction in upper secondary schools, it remains the language of social mobility. An individual who does not speak Danish cannot advance in society. Hence, contrary to the hopes and good intentions invested in the long line of education reforms that have been implemented since the introduction of home rule in 1979, Greenland's tendency to reproduce social, most notably linguistic, barriers that date back to the period of colonialism remains. Danish, the language of the former colonial ruler, is still the language of social mobility.

## **DISCUSSION AND CONCLUSION**

Studies on nationalism have asserted that educational policies that seek to create social cohesion and to construct an encompassing national identity through a standardised compulsory state school system with instruction in a common language, i.e. the national language, risk promoting elitism. This is particularly true in societies in which nationalism has been foundational for independence from colonial rule (Akar & Albrecht, 2017; Chatterjee, 1993; Hechter, 2013). These societies risk being confronted with the dilemma of making a trade-off between achieving social cohesion or social equality. Greenland may be considered an example of such a post-colonial society.

Since the introduction of home rule in 1979, there have been ongoing attempts at adapting the education system, in terms of frameworks, content and governance structures, to the population and the context of the country. This chapter has addressed two dominant aspects of that context: indigeneity and isolation, and colony and county. The vast geographical distances and small population scattered along the coastline with a predominance of settlements in the west create difficulties for the settlements and smaller towns along the coast and especially in the east, south and north to attract, to select and to retain trained teachers. As a result, the schools in these areas must often rely on untrained part-time teachers. Inevitably, this affects the quality of education and exacerbates the negative effects of the current structure in which primary and lower secondary school instruction is conducted in Greenlandic and upper secondary school instruction is conducted in Danish. This arrangement promotes a bilingual, highly educated local elite who typically reside in the major cities, especially the capital. This group is left in a relatively more advantageous position than those who live in the outlying areas. They often do not master Danish, the language of the former colonial power, and they have not necessarily been taught by teachers who are as well trained as those in the larger cities.

It must be noted that the above-described situation is not unique to Greenland. It can be observed in many post-colonial countries. Thus, it is not uncommon for a local highly educated elite with a nationalist agenda to replace the colonial power only to strengthen the existing societal divisions and barriers (Akar & Albrecht, 2017). Avoiding this trade-off between social cohesion and social inequality and enabling both social cohesion and social equality to flourish remains a concern. It is a matter of designing an education policy that supports Greenlandic nation-building processes while reducing the social inequality that threatens to divide Greenland into an affluent centre on the central west coast and an impoverished periphery. This question must be addressed urgently if Greenland is to close its competence gap.

Greenland face a competence gap that negatively affects the labour market. There are two sides to this competence gap. Employers demand skills that are not, or are only to a very limited extent, present in the labour force in Greenland. As a consequence, they recruit staff internationally, most notably from Denmark, Greenland's former colonial ruler. Employers also need non-skilled labour that is

available in Greenland. However, non-skilled workers lack the incentives to take these jobs because of the relatively small difference between the minimum wage and unemployment benefits. Consequently, Greenland has not been successful in achieving the level of economic development and growth that would permit economic independence from Denmark, which annually provides a block grant that constitutes approximately 50 percent of the national budget. The continued dependence on the former colonial power is a thorny issue for many Greenlanders. A growing group aspires to achieve full economic and political independence. Therefore, this group has applauded national policies that support nation-building processes. This includes an education system that provides instruction in a common national language. The problem with the use of both Greenlandic and Danish is that opportunities for social mobility are available only to individuals who master both languages. Danish fluency is necessary for social advancement. This situation influences the competence gap faced by Greenland and the attempts to address and to eliminate it.

#### *ENDNOTES*

1. Danish and Greenlandic historians and Arctic researchers have been debating whether or not Greenland was a Danish colony. It is not within the scope of this work to participate in that debate (Thisted, 2005, 2009).

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#### *LAWS AND REGULATIONS*

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## **PAPER IV**

## The role of evaluative thinking in generating, evaluating and scaling innovations in learning: A case study of the Greenland education system

### Abstract

*This case study focuses on the Greenland public education governance system with an emphasis on the primary and lower secondary school system concentrating on how the Greenland education system is generating, evaluating, and scaling innovations in learning with a focus on the policy instruments used for monitoring and evaluation. The Greenland education system has had an impressive growth over the past 50 years. But how are things with the quality and content of the primary school? The role of national government versus local government in countering the quality of learning is examined. What types of objectives are being set, what is being monitored and for what purpose? This paper dives into the conditions for evaluative thinking and sense making across the multi-level education governance system in Greenland, where at least 80 percent of the schools are rural, and if and how, evaluative thinking is embedded in the Greenland education governance system. In this paper I discuss the overall objectives for the education system, how context shapes evaluation culture and conditions for development, and how reforms inspired by foreign countries do not make sense if country and regional specific contexts, needs, stakeholder involvement and capacity building are not considered.*

Keywords: Education policy, decentralized education governance, accountability, evaluative thinking

Are education systems generating, evaluating, and scaling innovations in learning, and if not, why not? In 21<sup>st</sup> century complex systems there is a need for continuous innovation, assessed through co-learning (within and across classrooms, schools and regional administrations; and to ministries). Evaluative thinking is systematic, intentional and ongoing attention to expected results. It focuses on how results are achieved; what evidence is needed to inform future actions and how to improve future results (Patton, 2013). This paper hopes to begin creating a bird's-eye view focusing on current efforts in how evaluative thinking is embedded into schools and educational administration or educational policy, to improve learning outcomes. With a case study from Greenland it is illustrated what it means to embed evaluative thinking and capacity building in the governance and system structures across different contexts, and what it may look like in practice. Among the key responsibilities of leaders at all levels of the education system are to clarify system goals and to articulate and monitor the progress being made toward achieving them. Evaluative thinking is a process that enables ongoing adaptations to address the ever-changing learning needs within the classroom, school, regional, and government environments. (Kuji-Shikatani, Gallagher, Franz, & Börner, 2016).

In order to comprehend educational outcomes across the Arctic, education must be placed in a historical and cultural context, such as education traditions among the post-colonial society and population, with a majority of students to this date still are the first generation in their families to get

an education. Yet, this way of explaining the trajectory of the primary education system and level of education in the Arctic is incomplete, as it assumes that the development of an education system follows an apolitical template for how one should go about developing a system of education based on the needs of the people – which has been the case in Greenland since the 1980s, where the education sector has been in the forefront in the post-colonial development policies, and thus highly prioritized both in terms of resources and political will.

This paper dives into the conditions for evaluative thinking and sense making across the multi-level education governance system in Greenland, where at least 80 percent of the schools are rural, and if and how, evaluative thinking is embedded in the Greenland education governance system. This paper argues, in order to understand how educational change unfolds in the Arctic, it is necessary to analyze and describe the political economy, the governance and institutional structure, in order to map the conditions for change, motivations and behavior of governments and policymakers, and ultimately how this affect the conditions for which educational reforms are to perform under.

#### **Political economies, accountability relationships, policy tools and modes of evaluation**

Humans erect institutions and establish norms of cooperation and reciprocity in order to achieve predictability, stability, and low costs for social interactions (North, 2005), so how are Arctic education governance systems and institutions structured? Why are they structured this way, and what are the consequences of current governance structures? How good are the governments of Arctic education systems to nurture learning and experimentation in a way that benefits communities?

Increasing complexity in education systems has led to a greater degree of decentralization and freedom in decision making power for schools and local authorities. Most central governments, however, are still held responsible by the general public for ensuring high quality education and performance. In order to hold autonomous schools and local governing boards accountable for their decisions and performance, different performance management, accountability and monitoring systems have emerged. To reap the benefits of evaluative thinking, it must be embedded in schools and education systems. Education systems as a whole are embedded in politically determined governance structures, policy processes, evaluation paradigms and influence practice and possibilities of development in a myriad of ways. For the purpose of understanding the politics of development I adopt the definition of political economies as *all the activities of cooperation, conflict and negotiation involved in decisions about the use, production and distribution of resources* (Leftwich, 2006). In its simplest form, Leftwich's scheme distinguish

actors (organizations or individuals) pursuing interests from institutions (which define rules of the game) and structural features of the environment (e.g. natural and human resources, economic, social, cultural and ideological systems). These agents, based on the forms of accountability system in use and political context, are then involved in different types of accountability relationships<sup>1</sup>.

Laws and regulation are important policy instruments to steer education, and policy instruments such as NLSAs (national large-scale assessments) and TBA (test-based accountability systems) have been globally adopted. Taking the global adoption into account, Verger et al (2019) argue that the reception and evolution of these data-intensive policy instruments needs to be seen as context-sensitive, contingent and path-dependent, as the evolution and future use(s) of policy instruments are conditioned by the previous instruments in place (Verger et al., 2019). Once policy instruments are adopted, they have major potential implications, as many policy instruments create their own structures of opportunity in ways that were unforeseen, and can generate broader political effects in governance structures and even in the main goals that policy systems are expected to pursue (Bezes, 2007; Kassim & Le Galès, 2010; Verger et al., 2019).

In education systems, a conceptual distinction can be made between two different accountability forms: external accountability (also referred to as bureaucratic, hierarchical or vertical accountability) and internal accountability (also referred to as horizontal and professional accountability) (Adams & Kirst, 1999; Elmore, 2004; Firestone, 2002; Levitt et al., 2008). The external accountability model is a top-down and hierarchical model, where schools are understood as an instrument for education policy on the national, regional and local level. External accountability is when system leaders assure the public through transparency, monitoring and selective intervention that the education system performs the tasks that are set in accordance with societal expectations and requirements in relation to legislation. It enforces compliance with laws and regulation and holds schools accountable for the quality of education they provide. Schools and teachers are held accountable for the quality of the education they provide – measured as student test results and/or other quality indicators. Formal authority alone may be used to enforce compliance in the external accountability model, but that authority can be reinforced with performance incentives such as financial rewards or sanctions.

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<sup>1</sup> A full description of accountability relationships in education systems can be read in (Pritchett, 2015)

Internal accountability arises when individuals and groups assume personal, professional and collective responsibility for continuous improvement and success for all students (Hargreaves & Shirley, 2009), and therefore presupposes nonhierarchical relationships. It is directed at how schools and teachers conduct their profession, and/or at how schools and teachers provide multiple stakeholders with insight into their educational processes, decision making, implementation, and results. Each of the two types of accountability can be further divided into two subsections (see Table 1 below).

**Table 1. Four forms of school accountability**

Vertical and external	<b>Regulatory school accountability:</b> Compliance with laws and regulations; focuses on inputs and processes within the school. Mechanism: reporting to higher levels of school authority.
	<b>School performance accountability:</b> Periodic school evaluations. Mechanisms include: 1) standardized student testing, 2) public reporting of school performance, and 3) rewards or sanctions. (Rosendkvist, 2010; Levin, 1974).
Horizontal and internal	<b>Professional school accountability:</b> Professional standards for teachers and other educational staff. Mechanisms: credible, useful standards and the creation of professional learning communities (Levitt et al., 2008; Davis, 1991).
	<b>Multiple school accountability:</b> Involving students, parents, communities and other stakeholders in formulating strategies, decision-making, and evaluation. (De Vijlder et al., 2002; Levin, 1974).

Source: adapted from (Elmore, 2004; Hooge et al., 2012).

According to Fullan, Rincón-Gallardo, & Hargreaves (2015), it's more important to invest in the issues that develop internal accountability than to increase external accountability, as the importance of internal accountability precedes external accountability across the entire system. Put another way, the internal accountability of the institutions must be present, if the intention of external accountability is to be achieved.

#### **Traditional modes of evaluation and Developmental Evaluation**

Turning back to evaluative thinking and Developmental Evaluation, according to Boolsen (2017a), developmental evaluation moves from the theoretic to the theorized, from the one-dimensional to the multidimensional and dynamic; from distant to responsible; from the organization's focus on budgets and deadlines to the employees' focus on accountability and high professional quality in the work. In short: in developmental evaluation, context is more closely involved than in traditional evaluations; many factors must be considered simultaneously; and this diversity is reflected in the scientific thinking and methods in the development of the evaluation design. The traditional and complexity-based evaluation forms are compared in Table 2.

**Table 2. Contrasts between traditional and complexity based evaluations**

TRADITIONAL EVALUATIONS	COMPLEXITY BASED, DEVELOPMENTAL EVALUATIONS
<u>Purpose</u> : Supports improvement, summative testing and accountability	<u>Purpose</u> : to support the development of innovation and adaptation in dynamic environments
<u>Roles and Relationships</u> : Positioned as an outsider to ensure independence and objectivity	<u>Roles and relationships</u> : placed as an internal team function integrated into the process of collecting and interpreting data, framing questions and model development
<u>Accountability</u> : Focused on external authorities and funders based on explicit and ordered criteria	<u>Accountability</u> : centered on the values of the innovators and wishes to make a difference
<u>Options</u> : strictly focused on opportunities, traditional research and disciplinary standards of quality dominate	<u>Options</u> : application focused, options selected for development
<u>Measurement</u> : Measures performance and success against predetermined goals and SMART results	<u>Measurement</u> : develops measurement methods quickly as results arise; methods can change during the evaluation as the process unfolds
<u>Evaluation results</u> : detailed formal reports, validated best practice, generalize across time and space. May cause fear of error	<u>Evaluation results</u> : Fast real-time feedback, Different user-friendly forms of feedback. Evaluations promote learning.
<u>Complexity and uncertainty</u> : Evaluator tries to control the design, implementation and evaluation process.	<u>Complexity and uncertainty</u> : Learning to respond to lack of control, keeping in touch with what unfolds and responding accordingly
<u>Standards</u> : methodical competence and commitment to rigor, independence; credibility with external authorities and sources of funding; analytical and critical thinking	<u>Standards</u> : methodological flexibility, adaptability, system thinking, creative and critical thinking balanced; high tolerance for ambiguity, open and flexible teamwork and social skills: able to communicate rigorous evidence-based perspectives.

Adapted from (Patton, 2007)

From the perspective of traditional evaluations, evaluation of reforms and education systems is difficult, as policies have to remain relatively consistent (e.g. due to changing governments, volatile funding, and changes in overall economy). Program evaluation can also be difficult, because attributing improvements to specific interventions is especially challenging when their impacts only emerge in the long run. From the perspective of Developmental Evaluation, the purpose is more to support the development of innovation and adaptation in a dynamic environment, and ultimately not a model to scale up or test.

### Methods

The data is analyzed through the lenses of a political sociology approach to education reform and policy instruments, which is combined with analytical premises deriving from historical institutionalism. In this respect, it is expected that the politico-administrative regimes to which countries adhere strategically mediate the variegated adoption and evolution of policy instruments in education.

This paper examines the role of evaluative thinking in the political drivers of the Greenland primary and lower secondary school system and its impact upon learning outcomes for students. It does so within the context of addressing the overarching research questions, including:

*What type of assessment tools are used in measuring learning outcomes/ quality (of education) in the Greenland public primary/ elementary school system? How are learning assessment data used in monitoring progress? Are learning assessment data used in education policy making?*

*What types of objectives are being set, what is being monitored and for what purpose?  
What do the indicators measure? (schooling vs learning – is there a shift as we go further away from the classroom?)*

*What is the problem and can the evaluation instrument/ tool or policy solve it?*

The objective of this paper is to give a critical view of the architecture of Arctic education systems; how the governance and institutions are structured, how formal education systems and cultures fit with the principles, language and culture of the indigenous populations in the Arctic. A broader goal of the research is to anchor specific empirical findings within a multilevel (national, regional, and school) analysis of how politics, institutions and governance interact in the Arctic. The research questions will explore to what extent evaluative thinking is embedded into the legislative framework, working procedures of the governing bodies, schools and classrooms with the purpose to improve learning outcomes for students. The design of this study was done with the aim of exploring the above listed research questions through an analysis of the key institutions, individuals and interests of Greenland's education sector. This paper draws from existing literature and policy reports, semi-structured interviews, and observations. A summary of the research techniques can be read in full in Table 3.

**Table 3. Summary of research techniques and data**

Research technique	Data
Text analysis of relevant primary documents	Parliamentary and governmental documents and debates Municipal documents and debates Consultation and reports Project plans, budgets and evaluations
Secondary analysis	Internal and external evaluations of policy
Semi-structured elite interviews with key stakeholders	Policy makers Municipal leaders Representatives of school boards Heads of schools Teachers
Participation in field-level conferences and events	Observation notes

**The promise of education – and the challenges. The expansion of the Greenland education system – improving the access to education**

Greenland is a self-governing country within the Kingdom of Denmark. With only 56,000 people, the small and geographically dispersed population poses many political and economic challenges. The modern public primary and lower secondary school system (Grades 1-10), has just about 8.000 students in 87 schools along the 4.700 kilometer habitable coast line. The rural conditions mean that there are permanent teacher shortages in many places, as turnover rates are high. Since the Greenland Home Rule assumed the responsibility of education in 1980, the education system has undergone many changes. Education has been given high priority in Greenlandic society, and features prominently into the pro-independence government's social and economic development project. Prior to the introduction of Home Rule, the Danish state had made significant investments in the Greenlandic education system. The introduction of the Home Rule led to further intensified efforts, where one of the fundamental objectives was to adapt the education system to fit the needs of the Greenlandic people. the promise of education has been big<sup>2</sup>. Promises and expectations of increased autonomy, improvement of living conditions (salaries), and politically, last but not least, a wish for an independent Greenland.

Despite the political attention and priority, education quality remains low. Input thinking in the form of improving access to education by expanding the education system was done by resuming the responsibility of the education sector from the Danish state. Quantitative goals, new school buildings and increasing the share of Greenlandic speaking teachers were given the highest priority in the first years. However, access to education applies only to the population group who can speak Danish. Given that education system was based on the Danish, and with limited opportunities in Greenland, many students still had to continue their education in Denmark (or enroll in educations in Greenland based on the Danish structure and language) after lower secondary school. That is still the case today; in order to continue in the education system after Grade 10, students must master Danish and English.

The education system has had an impressive growth, statistics show that more people continue after lower secondary school and get a qualifying education. If the purpose of the last 50 years of Greenlandic education policy has been to expand the education system and get more through the education system - then you can call it a success. However, in 2015, 71 per cent of graduating students

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<sup>2</sup> An analysis of education policy in post-colonial Greenland can be read in full in (Brincker & Lennert, 2019)

(Grade 10) did not achieve qualifying grades in all their subjects (Greenland Ministry of Education, 2015). The quality of education in the Greenland primary and lower secondary school is a recurring theme in both media and political debates. The latest external evaluation of the current framework legislation (adopted in 2002) was published in March 2015 (Brochmann, 2015). The main conclusion was that the weak, academic results of recent years from the primary and lower secondary school are not due to the content of the legislation, but the lack of implementation and capacity in the municipalities<sup>3</sup>.

Annual standardized testing measures the students' professional skills in Mathematics, Greenlandic and Danish in Grade 3. From Grade 7 the students' skills in English are also tested. Annual school leaving exams for the graduating class (Grade 10) are also monitored. The results for last year's graduating classes can be seen in the table below.

**Table 4. National results on final examinations**

Grade 10 school leaving exams average <sup>4</sup> (rounded up) 2018	Written	Oral	Proficiency
Greenlandic	5	6	6
Danish	4	4	5
English	4	4	5
Mathematics	2	5	5

Source: Statistics Greenland

But one thing is to measure, another thing is to do something about it. According to the World Bank (2018), for learning metrics to be effective, they must overcome two important challenges: ensuring that information leads to action, and minimizing the potential perverse impacts of measurement. To date, there is no nationwide target over the level of the standardized tests and graduating class exams in the primary and lower secondary school nor are there a sanctions or rewards system behind the performance measurement and management system.

<sup>3</sup> The methods of the evaluation have since its publication been critiques, including the Teacher's Union IMAK (2015) and Boolsen (2017b)

<sup>4</sup> The Greenlandic Grading System (GGS) is used everywhere in the Greenlandic education system in combination with the Danish Grading System. The scale uses the internationally recognized and used European Credit Transfer System, the so-called ECTS points. The GGS scale consists of seven characters. If there is a pass requirement, the student is passed when the student receives the grade A (12), B (10), C (7), D (4) or E (2). The student has not passed, when the student receives the grade Fx (0) or F (-3).

### **Learning and evaluative thinking based on the legislation/Education Act – intentions on policy level**

This section looks at how learning and evaluative thinking are articulated at the policy level and what assessment and evaluative tools are used, from the classroom to the Ministry of Education.

The educational system in Greenland is, like many other countries, characterized by a multi-level governance system (e.g. Burns & Köster, 2016; Wilkoszewski & Sundby, 2014), making the relationship and power structures complex. The primary and lower secondary school (Grades 1-10, ages 6-16, hereinafter the 'school') is a municipal school, divided into three stages, all of which must be completed with tests (standardized testing). At the center, *Inatsisartut* (the Parliament of Greenland) set the framework for the activities of the school, e.g. the overall purpose of the school, the minimum teaching hours and the length of the school year, while the detailed provisions and the supreme supervisory responsibility of the quality of education are laid down by *Naalakkersuisut* (the national government). General rules are laid down for the planning and organization of teaching, compulsory education and the rights and duties of parents, teachers, school administration, municipal government, and rules of appeal and financing, while the daily operation of the schools is run by the five municipalities in cooperation with the school leaders and parent school boards. A detailed description and analysis of responsibilities, roles and how these are distributed between primary stakeholders can be read in Lennert (2018).

The 2002 reform<sup>5</sup> (hereinafter the Education Act) went in and fundamentally changed the way the teachers had evaluated earlier. Students should not only be involved in the goal setting and planning work on their own learning and schooling, but they must also be key players in assessments and evaluations of their own learning, development and performance (Inerisaavik, 2009). Testing and evaluation based on learning outcomes is therefore very new in the Greenland school culture. Key elements of the school reform introduced new principles for the students' learning and teaching, tools for planning and assessing the teaching; such as learning objectives, action plans, and assessment of educational achievements.

#### **School and classroom level**

At each school, there are school boards, consisting of parent representatives which, within the goals and limits set by the municipal council, lay down principles for the activities of the school. The learning

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<sup>5</sup> A full background and history on the 2002 reform, the cultural compatibleness, how support was sought and the initial implementation efforts can be read in Wyatt (Wyatt, 2012).

perspective, based on the fact that each student is an entirely unique person, implies that the teaching is to be based on the individual student, in recognition that all children learn in different ways; the Education Act states in §18: ” *The teaching must be varied to match the needs and prerequisites of each student*”, and ”*is the responsibility of the school leader to ensure that the teaching is planned and organized in such a way it presents challenges for all students.*” In order to do this, the teacher has to know the prerequisites and progression of the individual student, and therefore, §19 of the Act specifies that the student ”*in consultation with his/her teachers are to develop an action plan that forms part of the on-going evaluation (... ) And form the basis for the student's further education and training.*”

In practice, these requirements are to be built into the tailored teaching plan’s mandatory learning objectives, and in the indicative teaching and assessment plans. National learning objectives, objectives of the subjects and teaching objectives are stated in an executive order, putting on black and white that the purpose of the school is learning. Each student in collaboration with the teachers are to at least twice a year prepare an action plan on how they are planning to meet these learning outcomes. Here, the student, in collaboration with his teachers, must write new individual goals in relation to the learning goals. In a separate executive order on evaluation and documentation, the assessment requirements laid out in the Education Act, are further specified and laid out.

#### **Regional government and Municipal Council level**

In the municipalities, the municipal council determines the goals and frameworks for the school's activities with by-laws. The administrative and pedagogical management of the municipal school system is regulated locally by the individual municipality. Supervision practice on the whether the schools are living up to the expectations set by the legislation varies from municipality to municipality, but follows the same form (vertical accountability). Data and information are collected by the submission of annual quality reports and school board reports of every school. A single model for the form the quality report is to take has not been introduced, and therefore differs among municipalities. The quality report is a requirement in the Education Act (cf. Section 49). It is the head of the individual school that is responsible for preparing the annual quality report (cf. §48 paragraphs 2, 3). The purpose of the quality report is to focus on the development at the individual school. The quality report is a tool that must ensure systematic documentation and collaboration between the municipal council, the municipal administration and the schools on the evaluation and development of the quality of the individual school. It is then further stated that the quality report gives the municipal council the opportunity to supervise how the Education Act and local political goals are fulfilled at the

individual school and in the school system as a whole, as “*the quality report is an essential tool for Qeqqata Kommunia's municipal council to take political responsibility for the development of the municipal schools.*” (Qeqqata Municipality, 2013), by-laws, author’s translation). The report must finally contribute to openness about the quality of the school system, which is a prerequisite for quality improvements, according to the Qeqqata Municipality.

#### **Ministry and National government level**

*Naalakkersuisut* are according to the Education Act obligated to supervise the municipalities' administration of the school, carry out evaluations, collect and disseminate knowledge in order to strengthen the efforts of the municipal council in the field of primary and lower secondary school and to maximize resource utilization. In practice, this obligation is fulfilled by the submission of reports by the schools and municipalities and annual standardized testing.

The Ministry of Education publishes an annual Education Plan, which is an action plan based off the National Education Strategy (The Ministry of Education, Culture, 2015), that contains the initiatives that are to be commenced over the next few years. The Education Plan follows the structure of the Education Strategy and lists the objectives of each education area followed by initiatives to help meet the goals. The purpose of the Education Strategy and the associated Education Plans is to present *Naalakkersuisut's* visions, goals and initiatives that will contribute to meeting the objectives of the education area. There are two monitored goals for the primary and lower secondary school; the transition rate from the graduating class to further education and the share of professionals (trained teachers). The Education Strategy also forms the basis for *Naalakkersuisut's* cooperation with the EU via the Partnership Agreement (European Commission, 2014). The indicative amount for the implementation of the Greenland Decision the period of 2014 to 2020 is EUR 217.8 million. The annual disbursement contains a fixed tranche of 80 pct. and a variable tranche of up to 20 pct., conditional on the performance of the program.

*At the same time, the Partnership Agreement gives us a responsibility to ensure that we raise our level of education, that this is done efficiently, that the effort is continuously evaluated, and that the results are carefully analyzed.* (Greenland Ministry of Education, 2018)

As a part of the Partnership Agreement, the Government submit an Annual Work Plan and an Annual Implementation Report to the European Commission. The Annual Implementation Report is *a tool for those responsible for the program to diagnose gaps, challenges, and progress as well as identify measures needed to improve*

*progress.* The Partnership Agreement has a reporting obligation on a set of indicators defined in the Performance Assessment Framework<sup>6</sup>. An example of the indicators is shown in Table 5.

**Table 5. Greenland/EU Partnership Agreement indicators**

Variable tranche indicators							
No.	Indicator	Weight 2017	Baseline 2013	Target 2017	Result 2017	Target Achievement*	Contribution**
EU3	7th grade test	0.20	56.25	58.25	59.25	1.0000***	0.2000
EU4	Transition rate to education 1 year after elementary school	0.20	35.4%	42.0%	40,0%	0.697	0.1394
EU8	Number of completions	0.20	968	996	999	1.5244	0.2000
EU11 <sup>3</sup>	Transition rate to education 2 years after drop-out	0.20	41.5%	45%	39.6%	-0.500	0.0000
EU13	Expenditure on education as percentage of total public expenditure****	0.20	25.8%	25 %	25.3 %	1.0000	0.2000
Tranche							73.94

Notes:

\* Target achievement is defined as  $TA = (R-B) / (T-B)$ .

\*\* Contribution is defined as  $CT = \text{MIN}(W, TA \times W)$ .

\*\*\* TA is not defined as  $T = B$ . As  $R > B$ , TA is set to 1.0000.

\*\*\*\* As  $T < B$  in 2013, the baseline value is not used in the calculation of TA.

### Is learning a priority on system-level? Summary of policy context and intentions

In Greenland, it is often politically stated that education is a very high priority. One must also say that is the case when the total public expenditure for the education sector in 2017 was EUR 330.9 million, which accounts for 25.35 % of the total expenditure of the public sector. However, prioritizing education is not the same as prioritizing learning. The fact of the matter is, that greater national spending on educational services does not seem to have improved desired educational outcomes much (Pritchett, 2018).

It's already evident on policy level that there is a shift away from 'the student at the center' and measuring learning the further you get away from the classroom, in terms of the nature of indicators and evaluation tools. On the national and system level, there is much focus on external accountability, where the Education Act, Strategy and EU partnership agreement indicators shape the accountability and monitoring form. The regulation and supervision structure of the Greenland education system reflects the traditional forms of education regulation elsewhere, known as the bureaucratic-professional

<sup>6</sup> A full description of the Partnership Agreement and monitored indicators can be read in the annual planning and implementation reports conducted by the Ministry of Education: <http://naalakkersuisut.gl/~media/Nanoq/Files/Attached%20Files/Uddannelse/Engelsk/Annual%20Work%20Plan%202017.pdf>

model<sup>7</sup>, which is based on arrangements such as control of conformity to rules, the socialization and autonomy of the education professionals and the joint regulation regarding questions of employment or curriculum. A vertical and external accountability form is practiced in Greenland, in the form of *regulatory school* and *school performance accountability*, where the primary aim and focus of the supervision is based on arrangements such as control of conformity to rules. Diving deeper into the terminology, a *regulatory school accountability* and ‘two thirds’ of a *school performance accountability* are practiced, as there is standardized testing and public reporting of school performance, but no sanctions, rewards or consequence, resulting in an expensive performance management system, where a lot of resources are spent on measuring.

### **Learning and evaluative thinking in practice – Evaluation and monitoring with different purposes**

This section looks at how the policy has been put to practice, in a context where “*testing and evaluation is not a part of the Greenlandic school culture*” (Greenland Agency of Education, in (Petersen, 2010). With a focus on what evaluation tools are used for what purpose, and what type of information is gathered to inform the decision-making processes.

The basic purpose of the 2002 Education Act is that all evaluation, whether internal or external, must be carried out in order to support the individual student's learning and development. It should also help the teachers to make appropriate choices regarding the planning and implementation of the teaching and thereby target the teaching so that it supports the different needs of individual students (Inerisaavik, 2009). The evaluation is furthermore to be targeted and support each student's learning competencies, so *that all students can experience an exciting, challenging and meaningful schooling*. The question then becomes how this (evaluation) purpose of the school is understood, and whether this understanding is powerfully normative, or whether the system is so fragmented that the intentions did not gain traction.

### **What is measured and monitored?**

Some things are easier to monitor, school building and programs for example, are highly visible and easily monitored investments, aimed at expanding access to education. By contrast, investments to raise teacher competence, or to improve the curriculum are less visible, and monitoring their impact

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<sup>7</sup>The model brings “state, bureaucratic, administrative” regulation and a “professional, corporative, pedagogical” regulation together (Maroy, 2008).

on student learning is even more difficult. Such challenges can, according to the World Bank (2018:176), sometimes prompt education systems to emphasize improvements in access over improvements in quality. In Greenland, this is exemplified by below quote;

*We must ask ourselves whether the existing legislation provides sufficient protection that there is a necessary framework and conditions to ensure proper education for all children in the Greenlandic school. We must note that it does not. Unfortunately, the results testify to that.* (Chairman of the Teachers' Union IMAK, (Dorph, 2015), author's translation)

There are several paradoxes, in that, according to the Education Act, all teaching and other activities must be based on the individual student. The resource allocation models, for example, in the municipal budgets do not seem to take this into account, as most of the resources are distributed according to number of students or other input measures. By only monitoring thin data, the *learning crisis* can become invisible, as monitored data is focused on other things than learning, and therefore a lack of systematic data on who is learning and who is not, and what can be done to improve the situation. An example of this, and the absence of evaluative thinking and coherence for schooling, is a practice, due to low results in a subject, a municipal council scheduled more teaching hours in the subject, without questioning the quality of the content or teaching.

The content of the national supervision report and municipal quality reports<sup>8</sup> are quantitative key statistics and indicators, such as results, number of students, planned, cancelled and completed teaching hours, and size of teaching staff. There is a great focus on the output in terms of standardized testing results, while there is less focus on learning and quality in the planning and evaluation processes. A focus, while at times “statistically significant”—explain very little of the observed variation in learning outcomes at any level (Glewwe & Muralidharan, 2015). In other words, success as determined by credentials is strongly prized, classroom activities that are not directly determined by these credentials receive low priority. Evaluation instruments at the classroom level can be divided into internal and external instruments;

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<sup>8</sup> These differ among municipalities. In some, in addition to the quantitative part, there is a focus on the schools having to account for their efforts within the topics "the students' subject knowledge", "the students' well-being", "the students' continuing education" and "the teacher's well-being and professionalism". In addition, schools have been asked to set goals for the coming school year, within the above topics.

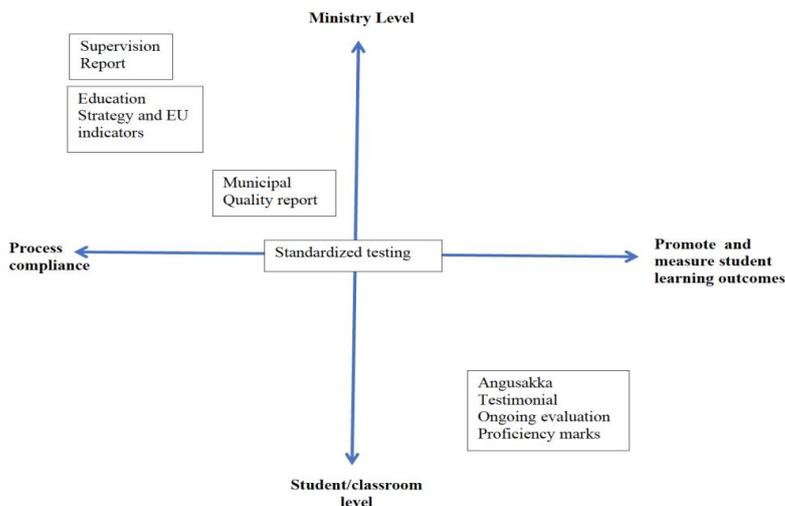
**Table 6. Evaluation instruments at classroom and student level**

Internal	External (Standardized testing)
a. the student's goals and action plans, b. ongoing evaluation, c. presentations of own work in 3rd grade and d. subject-oriented assignment in 7th grade e. Documentation for students and parents ( <i>Angusakka</i> ), including proficiency marks (Grades 8-10)	Grade 3: Greenlandic, Danish, Mathematics Grade 7: Greenlandic, Danish, Mathematics, English Grade 10 (Final evaluations): written proficiency tests and written tests in Greenlandic, Danish, English and mathematics. Three oral or oral-practical tests.

Source: Home Rule Executive Order no. 2 and 3 of 9 January 2009 (On evaluation and documentation in the primary and lower secondary school, and on the final evaluation)

Figure 1 show the evaluation instruments used in the governance and practice of the Greenland primary and lower secondary school system. The figure illustrates that while there are instruments and tools to measure learning based on the student, these instruments do not feed into the quality assurance and accountability instruments by the municipal and national governments. The further you go away from the classroom, the evaluation instruments change in nature and purpose away from having learning in the center, and instead simple indicators, characteristic of systems coherent for schooling, prevail.

**Figure 1. Evaluation instruments in the Greenland primary and lower secondary school system**



Sources: (Greenland Agency of Education, 2018; Inerisaavik, 2009; Qeqqata Municipality, 2013)

The purpose of the supervision is *to see if schools comply with legislation* (Interview, Agency of Education 2019). With the type of data that is collected, the supervision is reduced to focus on input measures, that have very little correlation with the quality of teaching or learning. Looking at the way the system works and is structured, access to, and expansion of, schooling is a very high priority. The compulsory education commences from the beginning of the school year in the calendar year in which the child reaches the age of 6, and ceases after the child has received regular education for 10 years. However, local contexts and conditions often mean, that being in school means being in a building that looks like a school with adults that look like teachers, as the smaller communities struggle to attract trained teachers. These schools have to follow the principles of the Education Act and the specified learning outcomes on a par with all other schools in the country. However, there is no systemic, scheduled or standardized follow-up, or consequences if level of quality is not met, as it is not even defined. This practice means that the purpose of the supervision is reduced to reporting, not to promote learning or develop the system. The process compliance culture is exemplified by the quote below, where a municipal director reflects on the drivers behind how their municipality is working with schools and children:

*“We are working for the system .. not looking at how the child is doing. As long as we work like this we are not seeing the well-being and learning of the children as a priority” (Interview 2019, Municipal Director of Education, author’s translation)*

This supervision practice, a technical and political construction and constraint for development, can be explained by many factors, however, external pressures and demands, capacity and turnover challenges of employees and teachers result in a focus on things where data is available and things that are easy to measure, such as enrollment, results, and budget allocations. This unfortunate practice continues, in spite of a wish from virtually all representatives from all levels of administration for qualitative, ‘thick’ data and ongoing evaluation (Observation notes, 2017-19), resulting in a *low-learning, low-accountability, high-inequality equilibrium* (World Bank, 2018).

### **Different interpretations on key evaluation and monitoring tools**

Key components of policy and evaluation tools, based on the interviews and document analysis, are interpreted differently across governance levels. There are different purposes for teachers, school leaders, administrators and policy makers in terms of goals, approaches, indicators and utilization related to evaluation instruments. According to the Teacher’s Union, the focus is too narrow:

*A prerequisite for developing the academic skills of all children in Greenland is, according to IMAK’s opinion, that you have to stop only evaluating the conditions from an economic perspective in relation to the resources used and the results*

of the standardized testing or to focus on whether some specific teaching principles are applied, as was the case with the Danish Evaluation Institute's evaluation of the school reform. (Danielsen, 2017)(Karl Frederik Danielsen, Chairman of the Greenland Teachers' Union IMAK, 2017)

*The purpose of the standardized testing is to see the status of the students in terms of learning outcomes so that the teacher can use the knowledge in the planning of the teaching. With that purpose in mind, one should be careful to use the standardized tests as a national benchmark parameter. (Interview, Agency of Education, 2019, author's translation)*

The above quotes illustrate how the same evaluation instrument is being used with different purposes, mainly for benchmarking, and not as stated in policy.

Table 7 illustrates different interpretations of the same evaluation instrument, the standardized testing in Grades 3 and 7.

**Table 7. Purpose, application and interview excerpts on standardized testing**

Purpose as stated in policy	Application and role in monitoring	Interview and document quotes on standardized testing
<p>The tests should provide students, parents, nursing parents or others who actually take care of the child and teachers with a controlled assessment of the extent to which students have reached the relevant learning objectives.<sup>9</sup></p> <p>The purpose of the testing is to support the students' learning and development and give both the teachers and the schools better opportunities to plan and prioritize the teaching to the individual student and create a basis for choosing special focus areas and putting extra resources into the places where the tests show that there is a need for it.</p> <p>The result of the tests must form the basis for new action plans and new learning goals for the pupil's further schooling.</p>	<p>Used to compare results across schools, however, standardized testing does not take social background into account.</p> <p>Overall learning outcomes for 'stages'<sup>10</sup> are centrally set, but it is up to the municipalities how to structure these over a 3-year period, while the testing period is set to the end of a stage.</p> <p>The same test is used year after year. Up to 10% of the tasks can be changed from year to year, however, the level of difficulty remains at the same level.</p> <p>Key measure of quality in the municipal quality report.</p> <p>Key indicator in EU Partnership Agreement</p> <p>Can also be used as statistical documentation for research and evaluation of the school.</p>	<p>The test is an evaluation tool that is forward-looking. Students should know how they are doing. (Agency of Education, 2017)</p> <p>It measures what the child can do that day. It is a snapshot, I think that you should never see the tests as nothing more than a snapshot. (Parent School Board Chair, 2017)</p> <p>I think the tests and the final skill tests measure far too little in terms of the subject's learning goals. (School teacher, 2017)</p> <p>The tests only measure the skills and I lack other things before I can use the results as formative evaluation. (School teacher, 2017)</p> <p>I can see that the way students are evaluated with standardized tests does not fit with the way we teach students. (School principal, 2017)</p> <p>So, for me to see, the tests are only for the sake of politicians, and not for the sake of teaching. (Greenland Teachers' Union, 2017)</p> <p>Standardized tests measure skills and general knowledge. How the children can answer specific questions. And, in my opinion it's a bit like an old-fashioned way of thinking about learning. (School Principal, 2017)</p>

<sup>9</sup> Home Rule Executive Order no. 2 of 9 January 2009 on evaluation and documentation in the primary and lower secondary school

<sup>10</sup> Grades 1-3, 4-7, 8-10

### **Conclusions - A perfect storm of dysfunction**

The situation in Greenland mimics the theories of action that produce administrative systems in many developing countries, that look like those of modern states, but that do not, and cannot, perform like them (Matt Andrews, Pritchett, & Woolcock, 2017), meaning it not only becomes a matter of policy that fits context, but how the institutions where policy is to be implemented fits in with the local labor force.

Many countries are inspired by foreign education reforms, and to varying degrees import ideas and tools in their own reform efforts. This case study of Greenland shows, if supervision and monitoring processes do not consider the country specific contexts, needs, capacity building, the education system can *get trapped in a low-accountability and low-learning equilibrium* (World Bank, 2018). When the modern Greenlandic education system was developed in the 1980s, it was both closed and coherent around expansion of schooling, and was not focused around learning. The school legislation on paper puts the learning of the child and differentiated teaching in the center, embedding evaluative thinking at the policy level. Practice, however, is very different, as capacity building and evaluative thinking is not embedded, or embraced, on the administrative and system level.

In 2002 a new legislative framework introduced elements of coherence for learning, in terms of self-evaluation and tools for assessments of learning, but without evaluative thinking embedded in the system and accountability relationships, learning is de facto not prioritized. Resulting in the learning assessment tools not manifested in practice, in the development work, in the supervision and monitoring processes, or when developing new policies. Supervision and accountability practice can instead be characterized at being focused on process compliance, as learning becomes strangely disarticulated from the internal legitimation of the system itself, as organizational legitimacy is obtained by only collecting *thin* data, meaning that the quality assurance mechanisms do not reflect on practice, as practice is simplified to numbers, resulting in a practice where planning and operation is not centered around learning. Evaluation instruments at the classroom level, and even the standardized testing, are based on learning outcomes, where the purpose is to put the child's learning at the center - but they are not used systematically or as intended. The responsibility of quality learning on school level is tossed around and there is very little collective accountability. The result is a practice, where schools and classrooms are like small islands where there is extremely little monitoring or follow up. In sum, although policies on paper provide opportunities for measuring learning systematically, monitored

indicators do not directly measure learning or quality, instead they measure process compliance in terms of input and output.

Part of the explanation could be that the Greenland education system is built on governance and administration structures that does not always make sense, as they require a steady pool of skilled labor, and due to geography, high turnover rates result in capacity challenges. The situation can also be attributed to a clash between traditional modes of evaluation and developmental evaluation. The data shows that there is a wish to do complexity-based evaluations to develop the education system, as evaluative thinking and development are key words in documents and interviews. However, due to much time being spent on process compliance and focus on operation, there is no time, means or capacity to think out of the box and incorporate a problem-driven, ongoing evaluation approach.

#### **Context shapes (evaluation) culture and conditions for development**

In Greenland, the school legislation is flexible and has delegated decision-making power to local governments and schools in order to best accommodate local needs and requirements. However, it requires a school with a competent management, motivated and capable teachers to create development and to live up to the policy intentions. While policies were developed with the best of intentions, it happened in the absence of a strategic institutional and political architecture that could have enabled key stakeholders to better plan for, and respond to the myriad of challenges these policies would bring about.

Local opportunities in terms of capacity, motivation, culture, prioritization, and knowledge are crucial for whether evaluation tools are used as intended. In Greenland as there is extremely little to none assistance when a school cannot meet the expectations set in the legislation, then there is a risk of evaluation instruments not being used for what they were designed for. Resulting in a system where a process of compliance is dominating, and where you go further and further away from the purpose of the evaluation - to improve learning for children.

Classroom practice is what matters, so in practice it becomes a matter of what is possible and realistic to do with the resources at hand locally. In rural Greenland, where a permanent trained teacher shortage is a challenge in most places, local resources are often sparse. There are good intentions of evaluative thinking and placing learning in the center – policies, documents and interviews document it – the challenge is in the capacity; both in terms of employees, implementation, but also knowledge of what it means to embed evaluative thinking in all processes. Learning is measured with standardized

testing, but the majority of the schools are unable to use results for what they were intended for. Other challenges (some technically simple, but that take a lot of time) take up much of the work day and overshadow strategic thinking. This results in the evaluation tools not being used as intended, and in practice half a performance management system. The question becomes whether the challenges, the reasons behind low learning levels, can be solved by measuring. Without addressing the underlying systemic causes of failure, a performance measuring or management system won't do much good. The Greenland education governance system is a system trapped in a process of compliance culture, where a lot of statistics and thin information is collected, which cannot really be used for development work.

Evaluative thinking is a terrestrial issue that should be imbedded in the educational system and school management in every place or country to develop a system coherent for learning. The Greenland case show how an (uncritical) import of accountability form, absence of evaluative thinking, result in an organizational legitimacy based on thin information. There is major political fragmentation among primary stakeholders in the primary and lower secondary school system, and a strong need for dialogue and cooperation to counteract the top down feeling. The argument is that to achieve coherence (for learning) in any education system, it is imperative that evaluative thinking is embedded in the system, as in order to systematically improve learning outcomes for students, the system must be oriented towards learning and development. However, even if learning is measured, which is the case in Greenland, it does not necessarily lead to action, as the results and the data collected are ultimately not contributing to the improvement of education policies and curriculum for an enhanced learning of students. It seems then, that evaluative thinking could be major foundation for developing an education system coherent for learning, and necessarily needs to be embedded in the working processes within the system as a whole. The Greenland case study point to several research directions with global relevance, as to uncover the main facilitators and barriers for the efficient use of learning data in the ongoing monitoring and development processes of education systems.

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## PART V: CONCLUSION

### CHAPTER 6: Discussion and synthesis

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This concluding chapter serves to synthesise the covering paper of this dissertation. My inquiry has been guided by the overall question: *How does the current Greenlandic administrative context focusing on the primary and lower secondary school, shape and structure the accountability relationships among principal actors in the quest to raise the overall education level of the population?*

The short answer to this is: *The governance form affects the current accountability structure, the forms and functions evaluations take in such a way that processes are centred on process compliance, legitimisation and not on learning and improvement of quality. The conclusion is that the root causes of Greenland's low educational outcomes generally fall into one of two categories: a lack of accountability, and a lack of capacity.*

Below, I provide a longer and more detailed answer by summarising and discussing the findings from the component papers. Following this, I reflect on the relevance and generalisability of these findings. Finally, I discuss the contributions and implications of the study.

#### **6.1 Summary and discussion of main findings**

I have broken down my summary and discussion of my main findings in following themes; (1) coherence-making - governance form and capacity building, (2) administrative contexts and policy coalitions - schooling versus learning, and (3) evaluative and systems thinking.

The papers approach the research area from different angles and each paper feeds into discussions related to one or more topics, as described in section 4.1. The findings presented here are chosen with a focus on extracting the most interesting and the critical results.

The findings give insights on the administrative context and how the expectation that 'one size fits all' can be harmful, when the context is not considered. Paper I on coherence

show the importance of cooperation and coordination between governance levels in terms of implementing and monitoring education reforms. Paper II on e-learning and iPads show that there is no quick technical fix to raise the quality of education, as the context matter to how the iPads can be used. If there is limited Wi-Fi connection, if the iPads are not brought to school or if the learning materials to be used with the iPads are not well developed, then the causal mechanism (technology) will not trigger to better education in that particular context. Paper III digs into the context of a young nation where there is a need to build a nation by speaking Greenlandic in the classroom, and how this is important to how the level of education can be raised. If there is a shortage of teachers with the particular language skills this is a contextual factor, which is important to why mechanisms expected to create better education do not trigger in that particular context. Paper IV is yet another example; here performance-management is a script on how educational systems should be redirected in accordance with new public management. However, as policy and evaluation instruments are not used as intended, it again does not trigger the mechanisms that lead to better education.

The conventional wisdom acts as if governmental education systems already have learning as a priority objective and assumes that bureaucratic processes are capable of implementing whatever policy adopted. If these assumptions were so, then there would be no need for systemic reforms as (1) more resources into the existing system would automatically produce better learning outcomes, as the working assumption is that lack of resources is an important and binding constraint to better performance; and (2) adopting better policies, particularly ones based on evidence (from abroad), would lead to better learning outcomes.

The gap between the government's aims and the realities facing most Greenlandic students are apparent. Given the set of infrastructural conditions, political economy, and local contexts, it is debatable to what extent the approach used in Greenland is accurate. The identified governance gaps in Paper I point to a system where there is a perpetual state of process compliance and reaction, instead of action towards development. While policies were arguably made with the best of intentions it happened in the absence of a strategic architecture that could have enabled key stakeholders to better plan for and respond to the challenges these policies would bring about. Consequently, in Greenland

today, many children and families, especially those who live in smaller settlements and only speak Greenlandic, find themselves in an unenviable position: on paper included in the country's development project vis-a`-vis the education system, but in reality excluded from meaningful opportunity given the poor quality of that system.

### **6.1.1 Coherence making - governance form and capacity building**

This section synthesises and discusses the results from the following research question:

*(2) What are the theories of actions and change among the principal actors and are they coherent?*

Further details regarding the different analyses and their outcomes can be found in the papers.

Underpinning the work across the governance levels is a central condition, which appear to permeate primary stakeholders' understanding of their work; a shared understanding that the problems facing the public-school system are socially constructed and 'wicked' in nature. There is no doubt that the education system as a whole, and the primary and lower secondary school area, are facing wicked problems and that there are many things that come into play and together when it comes to management. However, data from interviews shows that in fact many of the challenges that the various administrations face and spend a lot of time on are simple in nature, and there is agreement on how to solve them. Challenges seem to move up to the complicated or complex zone, due to, among other things, a lack of agreement on the practical processes and capacity.

The findings illustrate what seems to be a historical lack of coordination in connection with the implementation processes in respect to educational reform, where there has been no tradition of extensive cooperation and planning across municipalities and central government, or a solid tradition for monitoring and conducting utilisation focused evaluations.

The governance form is fragile due to limited staff on all levels with great responsibilities not limited to education (administrative and capacity gap), with close links to the small and scattered populations in the municipalities that puts pressure on the funding of the school system (fiscal gap). The purpose of national education strategies and plans is

unclear due to the simple and positivistic nature of monitored indicators. Existing strategies are not constructed to guide change, and there is no alignment between governance levels. At system level, no theory of action or plan has been formulated on how to raise the quality of the primary and lower secondary school. Stakeholders with responsibilities in the quality of primary and lower secondary school area formulate their own strategies and objectives, which are not held up on a major theory of action or strategy. This causes mismatches and lack of coherence in the objectives, and resulting priorities, formulated from the central level with the rest of the system (e.g., the Teacher Training College, the municipalities, and the schools). The lack of alignment across a multilevel governance system therefore makes negotiation, cooperation, and coordination a necessary and important tool.

The challenges in the Greenlandic education governance system touches upon all seven multi-level governance gaps (see Table 7 above). The Greenlandic education system is an example of a complex dynamic system, whose elements are isolated from one another, resulting in a practice where policy making is not aligned to its governance structure and the respective responsibilities of different actors are not considered. The multilevel governance structure seems to complicate the constructive planning and steering of the primary and lower secondary school system due to a lack of clarity (and possibly a lack of agreement) about roles and tasks, as strategies are not consistent nor guiding (administrative and objective gap).

Whether the planning of education reform rely on an evidence-based understanding of the characteristics of the Greenlandic school system and is constructed in such a way that reform contribute significantly to improved student achievement and well-being, can be questioned (policy gap). As, apart from the centrally set curriculum learning outcomes, no standard or objective is set on the level of quality of the standardised tests or final examinations (Greenland Ministry of Education, 2019). There is therefore a lack of clarity in what is meant by the quality of the primary and lower secondary school, how to raise or increase quality and by what means. The nationally monitored objectives say nothing about quality. Whether students continue directly from lower secondary schooling in the education system is often influenced by the limited capacity of education programmes, number of available apprenticeships, and ultimately not the results of the final

examinations. To use the proportion of trained teachers as a quality indicator is unfortunate, as practice is more complex, and the quality of schooling is influenced by a variety of factors that cannot be reduced to one indicator - trained teachers.

The fact that some schools are doing better point towards the conclusion that politics, students and context matter. The current legal and accountability framework in place enables some schools to operate as relative 'islands of effectiveness' within a broader sea of dysfunction. The legislation is flexible enough, in terms of having delegated enough decision-making power to regional municipal and local school boards. However, in order to take advantage of the flexibility there are prerequisites, such as competent leadership, motivated and capable teachers that need to be in place. In contexts, where the prerequisites are not present, the flexibility possibly does more damage than good.

Part of the explanation could be that the Greenlandic education system is built on governance and administration structures that does not always make sense, as they require a steady pool of skilled labour - and due to a vast geography, high turnover rates result in capacity challenges. So, it becomes not just a question of whether policy fits context, but how the institutions where policy is to be implemented fit in with the local workforce. If the education system is to live up to its purpose, and the children's right to learn, it is necessary to restructure the system.

### **6.1.2 Administrative contexts and policy coalitions - schooling versus learning**

This section synthesises and discusses the results from the following research questions:

- (1) What are the education policy goals and practices in Greenland?*
- (3) What quality inscriptions and infrastructure are used in education policy monitoring and making?*

Further details regarding the different analyses and their outcomes can be found in the papers.

According to complexity theory, schools and education systems are structure-determined, as they adapt to changes within social, economic, and political contexts while internalising, learning from, and evolving from systemic memory inherent in the system. However, this way of explaining the trajectory of the primary education system is incomplete, as it assumes that the development of an education system follows an

apolitical template for how one should go about developing a system of education based on the needs of the people. Greenland has ever since assuming the responsibility of the education sector in the 1980s tried to develop and adapt the education system to the needs of the population. The education sector has been in the forefront of the *greenlandisation*<sup>16</sup> policies, post-colonial development policies, and thus highly prioritised both in terms of resources and political will.

A political economy perspective can help explain why after almost four decades, despite billions of funds and political will, the primary school has been unable to live up to the ambition of society and politicians. An analysis of Greenland's political settlements provides tools to analyse policymaking decisions. But also, a critical view of the architecture of the system - how the governance and institutions are structured - and how well they fit the context in which they are to function.

I do not think it is a stretch to say that the objective in post-colonial Greenland was to deliver development as fast as possible. Access to schooling was a priority in the 1980s, as it was seen as important by the Greenlandic government to provide the population with the opportunity to study in their own country. Thus, it can be argued that the Greenlandic education system never actually was designed (or emerged) as a system coherent to the purpose of producing uniformly high learning outcomes. The system has had other, often desirable, objectives, like expansion of access. When the Greenlandic education system was created, it was both closed and coherent only around schooling, not around learning, and in these systems low performance on all other dimensions besides the expansion of schooling can emerge and persist in spite of efforts to improve learning. The Greenlandic education system has been spectacularly successful at its purpose. But that purpose was not providing quality and learning. The purpose was expanding the education system.

The research argues that implementing policies in general, and specifically 1:1 iPad learning in all primary and secondary schools in a whole country is a complex system change, and therefore demands a corresponding implementation, evaluation and

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<sup>16</sup> The very concept of Greenlandisation (*Kalaalinnngorsaaneq*) points towards a process that is running to make something more Greenlandic. In practice, it was a series of structural and cultural policies after the introduction of Home Rule in 1979.

monitoring approach. The findings from the thematic analysis (Paper II) conclude that most ICT policy areas are either established or emerging.

Several years after the beginning stages of the Greenland iPad project, the conclusion is that the education system has not been ready to take full advantage of the potential of technology. A lack of cooperation and coherence on strategies across the various policy actors, institutions and schools, has made it difficult to create the wanted impact on classroom practices. The paradox lies in the ambitions of a country wanting to introduce a 1:1 iPad learning for all pupils, but having no plans for curriculum or the professional development of teachers in advance has made it difficult to meaningfully include technology into lessons and curricula. The two municipalities have paved much of the way forward, and in their own words, gone through bumps in the road and made rookie mistakes. As a result, the basic ICT infrastructure has improved, there is a greater focus on technology nationally, digitised learning materials are being developed and there is a better platform for cooperation between the central and decentral levels of administrations.

The education system, based on the way information is collected and monitored, funding mechanisms, and how decisions are made, has a different emergent purpose than the political purpose. The current system is coherent around other objectives that do not produce a system in which universal attainment of high levels of learning becomes the driving force of key actors' (organisations and individuals) behaviours. Even though politically it is an objective to provide quality education, the emerged objectives of the education system are coherent around schooling, and thus in a monitoring practice where there is little focus on content and quality, nor requirements or follow-ups. Instead, it is on process compliance. Improving quality is less visible, takes much longer time, and therefore perhaps carries less political cache than new classrooms and schools. The key constraint in the system therefore becomes the fact that accountability systems are more concerned with process compliance due to the typical management accountability, than it is with student learning.

Organisational legitimacy is obtained by monitoring 'thin' information, by largely focusing on budgets, statistics, whether planned teaching hours were carried out as

planned. All of this though, the *Atuarfitsialak* legislation puts the child, and thus learning, at the centre. The situation can be attributed to a clash between traditional modes of evaluation and developmental evaluation. The data shows that there is a wish to do complexity-based evaluations to develop the education system, as evaluative thinking and development are key words in documents and interviews. However, due to much time being spent on process compliance and focus on daily operation, there is no time, means or capacity to think out of the box and incorporate a problem-driven, ongoing evaluation approach.

As discussed in the previous section, the current accountability processes focus on narrow quantitative measures, and not on content, practice or quality. The purpose of the supervision is *to see if schools comply with legislation*. As with the type of data that is collected, the supervision is reduced to focus on input measures that have very little correlation with the quality of teaching or learning. Looking at the way the system works and is structured, access to, and expansion of, schooling is a very high priority. The compulsory education commences from the beginning of the school year in the calendar year, in which the child reaches the age of 6 and ceases after the child has received regular education for 10 years. However, local contexts and conditions often mean that being in school mean being in a building that looks like a school with adults that look like teachers. These schools have to follow the principles of the Education Act and the specified learning outcomes on a par with all other schools in the country. However, there is no systemic, scheduled or standardised follow-up, or consequences if level of quality is not met, as it is not even defined. This practice means that the purpose of the supervision is reduced to reporting - not to promote learning or develop the system.

In sum, the resulting practice is a situation where Greenland has half a performance management system, where many resources are used on standardised testing, but follow-up is lacking. While the school legislation is child and learning centred, the administrative processes are in contrast heavily focused on simple models, day to day operations and not on improvement of the school system. A lot of time and resources are spent collecting information that show that something is not right, however this information does not explain why. This combined with no systematic follow-up in relation to the information collected, results in what can be described as half a performance management system. In

other words, an expensive and time-consuming practice and system that adds little value in terms of school improvement.

This monitoring practice, a technical and political construction and constraint for development, can be explained by many factors, however, external pressures and demands, capacity and turnover challenges of employees and teachers result in a focus on things where data is available and things that are easy to measure, such as enrolment, results, and budget allocations. This unfortunate practice continues, in spite of a wish from virtually all representatives from all levels of administration for qualitative, ‘thick’ description (Geertz, 1973) and ongoing evaluation (Observation notes, 2017-19), resulting in a *low-learning, low-accountability, high-inequality equilibrium* (World Bank, 2018).

### **6.1.3 Evaluative and systems thinking**

This section synthesises and discusses the results from the following research questions:

*(3) What quality inscriptions and infrastructure are used in education policy making?*

*(4) Are evaluation policy instruments used the way they were designed?*

In this section I will conclude whether evaluation tools and policy instruments are used as intended, how well they fit the problem they need to solve, and the purposes of evaluations. Further details regarding the different analyses and their outcomes can be found in the papers.

In 2002, a new legislative framework introduced elements of coherence for learning, in terms of self-evaluation and tools for assessments of learning, but without evaluative thinking embedded in the system and accountability relationships, learning is de facto not prioritised. Resulting in the learning assessment tools not manifested in practice, in the development work, in the supervision and monitoring processes, or when developing new policies. Supervision and accountability practice can instead be characterised at being focused on process compliance, as learning becomes strangely disarticulated from the internal legitimation of the system itself, as organisational legitimacy is obtained by only collecting *thin* data, meaning that the quality assurance mechanisms do not reflect on practice, as practice is simplified to numbers, resulting in a practice where planning and operation is not centred around learning. Evaluation instruments at the classroom level,

and even the standardised testing, are based on learning outcomes, where the purpose is to put the child's learning at the centre - but they are not used systematically or as intended. The responsibility of quality learning on school level is tossed around and there is very little collective accountability. The result is a practice, where schools and classrooms are like small islands where there is extremely little monitoring or follow-up. In sum, although policies on paper provide opportunities for measuring learning systematically, monitored indicators do not directly measure learning or quality, instead they measure process compliance in terms of input and output.

The current situation in Greenlandic education policy is characterised by the lack of basic analyses, studies of developments in the field, the effects of different actions, and on the other hand, a considerable amount of positivistic information is gathered in the form of statistics (information gap). This total reliance on statistics is most likely linked to lack of evaluation capacity and evaluation culture. The formulated objectives, and the monitored indicators, are output goals that assume that the foundation is well functioning. However, Greenland has an education and school system in strong need of development and quality improvement. A blind focus on desired output goals is therefore not sufficient in driving the change forward. Without evaluations that look at contexts and other variables such as day-to-day teaching, it is difficult to see which initiatives lead to what results. Supervision and monitoring only looks at intended consequences. What are some unintended consequences of policy?

Whether the current supervision structure serves its purpose should be questioned (accountability gap). Following the international shift toward a post-bureaucratic 'governance by results' model (Maroy, 2008), Greenland has the past 10 - 15 years been increasingly focused on results in the monitoring of the system. The research suggests that developments in Greenlandic policies demonstrate the difficulties of navigating the tensions between promoting two key aspects of accountability - internal and external and the challenges of building capacity for both. There is a great focus on external accountability and results. Without a foundation on internal accountability, external accountability drivers have limited effects (Abelmann et al., 2004). There is a strong need for a focus on internal and collective accountability and an incorporation of qualitative evaluation initiatives in individual institutions to get indicators of what works. A dual

focus on both performance and impacts will allow for a critical assessment of the extent to which and whether goals are met.

A performance scale for the standardised tests has not been developed, and it is therefore difficult to conclude anything from the level of, for example, the solution security in mathematics, including whether the test results are satisfactory in relation to the learning objectives at the different grade levels.

Policy and evaluation instruments are not used as intended, as key components of policy and evaluation tools, based on the interviews and document analysis, are interpreted differently across governance levels. There are different purposes for teachers, school leaders, administrators and policy makers in terms of goals, approaches, indicators and utilisation related to evaluation instruments. Evaluative thinking and development thinking are not built into the procedures and forms of collaboration across administrations.

Local opportunities in terms of capacity, motivation, culture, prioritisation, and knowledge are crucial for whether evaluation tools are used as intended. In conclusion, context therefore shapes (evaluation) culture and conditions for development. In Greenland, as there is extremely little to no assistance when a school cannot meet the expectations set in the legislation, there is a risk of evaluation instruments not being used for what they were designed for. This practice results in a system where a process of compliance is dominating, and where you go further and further away from the purpose of the evaluation - to improve learning for children.

Classroom practice is what matters, so in practice it becomes a matter of what is possible and realistic to do with the resources at hand locally. In rural Greenland, where a permanent trained teacher shortage is a challenge in most places, local resources are often sparse. There are good intentions of evaluative thinking and placing learning in the centre - policies, documents and interviews document it - the challenge is in the capacity; both in terms of employees, implementation, but also knowledge of what it means to embed evaluative thinking in all processes. Learning is measured with standardised testing, but the majority of the schools are unable to use results for what they were intended for. Other challenges (some technically simple, but that take a lot of time) take up much of the workday and overshadow strategic thinking. This results in the evaluation tools not being

used as intended, and in practice half a performance management system. The question becomes whether the challenges, the reasons behind low learning levels, can be solved by measuring. Without addressing the underlying systemic causes of failure, a performance measuring or management system will not do much good. The Greenlandic education governance system is a system trapped in a process of compliance culture, where a lot of statistics and thin information is collected, which cannot really be used for development work.

## **6.2. Relevance and implications for practice**

Keeping the choices and limitations outlined above in mind, I will now consider the relevance of my findings to the overall Greenlandic education governance and accountability system, and to evaluation practices in post-colonial societies. I will do this by drawing out some similarities and differences between the specific sites and organisational, national and local contexts, in which I have conducted my study, and other sites and contexts where the findings and, perhaps more importantly, the analytical developments I have presented here could potentially aid our understanding of what is going on.

In terms of implications for practice in Greenland, the conclusions of this dissertation point to a need to critically look at the way accountability mechanisms are structured. There are three important technical design issues with school-based accountability. The characteristics of students, their peers, and their families are far and away the largest determinants of variation in performance. Any attempt to judge schools on their level of performance will therefore be judging the socioeconomic composition of the school - a 'good' school might simply have wealthier students. Important suggestions were made by local level actors for improving the education system. This included making sure that those who make decisions about what happens within the system are aware of what is happening at the school level. It was also recommended that to improve education quality, we should move away from the narrow focus on access and numbers to understand how the education system functions as a whole and ensure that children learn while they are in school. A major critique of the accountability system that is currently in place is that it does not set quality objective on the level of the standardised testing. A national quality

objective will make it necessary for the Ministry of Education to address the problem. But it would also narrow the opportunities for municipalities and schools, if goals are defined too narrowly.

Even though this dissertation is an analysis of the policy domain of education and specifically in the primary and lower secondary school system in Greenland, there are several arguments that the findings can apply to other policy domains in Greenland in terms of how the governance form and institutions are structured. I begin with the analytical implications: firstly, the overall governance form is the same for other policy domains in Greenland, with the same implications for how it will affect how evaluations and accountability processes are carried out. Secondly, in terms of prerequisites needed to carry out evaluations and policy instruments as intended, the education policy domain have arguably the same characteristics as most other policy domains, as the pool of available labour force is the same.

In terms of relevance and implications more broadly on education governance and accountability, the research gives insights to how organisational scripts (such as e-learning / iPads covered in Paper II and performance management covered in Paper IV) which universally are thought to be mechanisms which increase the quality of education are not working as intended in Greenland partly due to the context of culture, language and coherence of education governance described in Paper III and I. These findings point to a need to be particularly critical when an import of ideas, policies and evaluation methods take place in a post-colonial context.

One important contribution of this dissertation is that context matters. I argue that the post-colonial context shapes the use of policy instruments and evaluative thinking as it is imported uncritically and without taking the specific context into account. This dissertation investigates why mechanisms which are thought to trigger better education in a one size fits all manner, may not trigger in the particular context in Greenland. This is also on a wider scale an important understanding and tool in order to be able to treat the organisational scripts which travel internationally critically before adopting them in Greenland.

## **6.3 Contributions and implications**

Based on the discussions above, I will close this chapter by outlining what I perceive as the main contributions of this dissertation and implications for research and practice. I focus on three issues: (1) the function of evaluations, (2) evaluative thinking as a vital and necessary component of public education systems, and (3) the interplay between governance form and functions of evaluation.

### **6.3.1 The function of evaluation - matching evaluation design with context**

Boolsen (2013), after years of working with evaluations of the education sector in Greenland, recommended in a paper about evaluation traditions and methods applied in Greenland, a revised evaluation approach, in which a paradigmatic shift from a positivist to the hermeneutic would be necessary in order to change the education picture.

In 21<sup>st</sup> century complex systems there is a need for continuous innovation, assessed through co-learning (within and across classrooms, schools and municipalities; and school to municipality to ministry). Structures and networks to do so in Greenland are limited, as discussed in the previous section in terms of governance form, policy coalitions and the different layers of administration. There is therefore a strong need for a type of data management that can track emergent and changing realities and feeding back meaningful findings in real time to the practitioners. A way of thinking that is characteristic of complexity thinking and developmental evaluation (Patton, 2011).

Systems thinking, complexity and developmental evaluation together offer an interpretive framework for engaging in sense making (Patton, 2011). Sense making across governance levels and classrooms is identified by Fullan and Quinn (2016) as an imperative factor for successful implementation of education reform. One thing is the coordination and cooperation between governance levels, institutions and key stakeholders to secure a coherent framework and infrastructure - another is implementing the wanted change in the classroom and working towards the desired outcomes. To create conditions for system wide development there is a need for a discussion between the governance levels and all relevant stakeholders on the root causes of the current conditions of the system and how to address them. A discussion centred on how to raise the bar for all and what success and

quality look like in practice - on national, municipal, school and classroom level. General principles, guidelines and frameworks to clarify roles, tasks and expectations should then be formulated in cooperation and consensus.

If the complexity of a project is considered when designing the implementation and evaluation processes, the self-organisation and nested characters of complex systems can be a good thing and a strength, not a weakness, as a surprising aspect of the phenomenon of self-organisation is that it can happen without the assistance of a central organiser (Davis and Summara, 2006:84). Creating co-developmental processes, rather than top-down procedures, according to the principles of complexity theory, will create better conditions for the dynamic and emergent context in which the implementation takes place. The facilitation and support systems of the implementation process will therefore be crucial for the project's success, and close cooperation between the project manager, the municipalities and the steering committee of the iPad project will be necessary, as ownership and inclusion at local and school level will be absolutely crucial in order to come about a change at the proposed level.

### **6.3.2 Evaluative thinking as a vital and necessary component of public education systems**

With evaluators, inspectors, NGOs, the media, and other reviewers monitoring and evaluating education systems and policies, we have arrived at a situation of overlapping evaluations and an abundance of evaluative information. The question then becomes how to use this evaluative information in the work of improving learning conditions for kids.

According to Patton (2011), enhancing the quality and accuracy of evaluation data through better methods and measures will add little value unless those using the data have the capacity to think evaluative and critically, and be able to appropriately interpret findings to reach reasonable and supportable conclusions. Evaluative thinking is a terrestrial issue that should be imbedded in the educational system and school management in every place or country to develop a system coherent for learning. The Greenland case show how an (uncritical) import of accountability form, absence of evaluative thinking, result in an organisational legitimacy based on thin information. This absence of evaluative thinking has resulted in a practice where, instead of working to

improve conditions, administrators have ended up working for the system where process compliance dominates.

There is major political fragmentation among primary stakeholders in the primary and lower secondary school system, and a strong need for dialogue and cooperation to counteract the top-down feeling. The argument is that to achieve coherence (for learning) in any education system, it is imperative that evaluative thinking is embedded in the system, as in order to systematically improve learning outcomes for students, the system must be oriented towards learning and development. However, even if learning is measured, which is the case in Greenland, it does not necessarily lead to action, as the results and the data collected are ultimately not contributing to the improvement of education policies and curriculum for an enhanced learning of students. It seems then that evaluative thinking could be major foundation for developing an education system coherent for learning, and necessarily needs to be embedded in the working processes within the system as a whole. The Greenland case study point to several research directions with global relevance, as to uncover the main facilitators and barriers for the efficient use of learning data in the ongoing monitoring and development processes of education systems.

### **6.3.3 The interplay between governance form and the function of evaluation**

How evaluation works in the real world of governance is still a scarcely explored domain. One thing is to try to match an evaluation to the context of a single project or policy area, another thing is to look at the interplay between an entire governance structure and evaluations as a whole.

Building on the works of Duit and Galaz (2010) in terms of governance, and Patton (2013) in terms of evaluation, combined with the literature on accountability systems, I argue that governance form, whether it is rigid, robust, fragile, flexible, have implications for what type of evaluations are carried out and what functions they take. My conceptual framework implies that the governance structure in which public policy and evaluation are embedded affects the function of evaluation (Figure 5 above). The concepts describe in terms of capacity and rigidity of the governance form the degree of how well governments are able to implement increasingly complex and contentious tasks - under

pressure and at a scale. Flexible and robust governance forms are thus more likely to handle and exploit conditions with uncertainty and complexity. Conversely, even if there is a fragile or rigid governance form to start with, the evaluation form can help change and develop the governance form to make it more flexible.

Therefore, the type of governance form adopted has a great theoretical influence on the flexibility in the possibilities for action and the degree to which the management system is adaptable as a function of the quality of feedback mechanisms and adaptive capacity.

#### **6.4 What can be done - suggestions for possible ways forward**

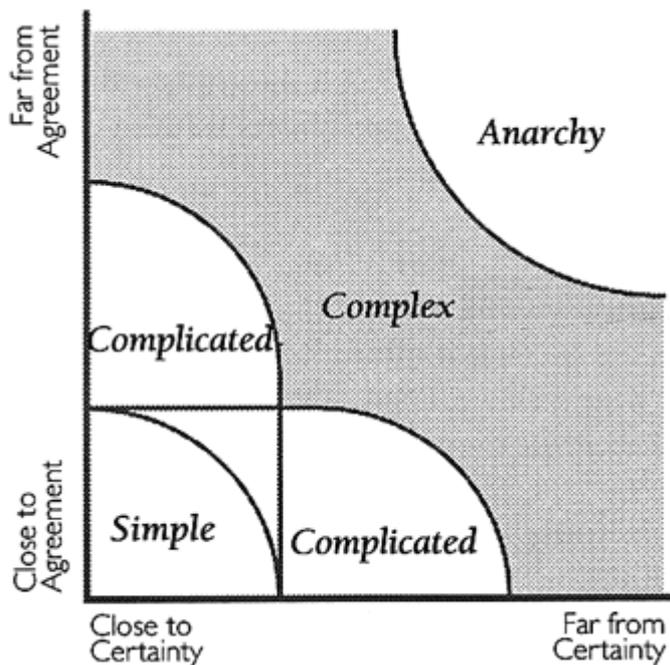
This section presents a discussion on how to improve on the core critical points to benefit the school system. Throughout this dissertation I have critiqued the administrative system and the way the school system is being monitored. I have argued that the current governance structure in place and the policy instruments do not work to systematically improve and develop status quo in the school system. My conclusions point to a need to critically look at the purpose behind why accountability mechanisms are structured the way they are, as policy and evaluation instruments are not used as intended, e.g., to develop the school system.

Ever since the Home Rule Act assumed the responsibility of the education sector, the saying has been that the three most important issues have been: education, education and education. It illustrates how education politically has been agenda-setting and seen as the most central issue in terms of developing the Greenlandic society. The question is then how the education sector has been treated and prioritised. There is no doubt that education has been high in the agenda in both the political and public forum. The question is why the political and administrative system have not, and does not, keep a better eye on how the education system is running. Grand strategic goals and visions have been formulated throughout the years, but there seem to be no checks and balances. In evaluation language there is no theory of change or follow-up mechanisms, systems thinking and coherence across education policies and other sectors affecting the education system.

In the theme of this dissertation, one can ask whether a better evaluation, accountability and monitoring scheme can fix the challenges? And what should it look like? The primary and lower secondary school is a complex system with many actors and agendas. Creating a system that works and develops the status quo is therefore a wicked and complex problem – meaning: there is no easy fix or one solution that fits all.

In section 2.2.3, I outlined simple, complicated and complex problems based on the terminology of Glouberman & Zimmerman (2004). In order to better illustrate the possible steps to improve the school system, I take this terminology further with the work of Ralph Stacey and his agreement and certainty matrix (Figure 15 below). Stacey (1999) has developed a method to select the appropriate management actions in a complex adaptive system based on the *degree of certainty* and *level of agreement* on the issue in question. Issues or decisions are close to certainty when cause and effect linkages can be determined. At the other end of the certainty continuum are decisions that are far from certainty. These situations are often unique or at least new to the decision makers, making the cause-and-effect linkages unclear. The vertical axis measures the level of agreement about an issue or decision within the group, team or organisation.

Figure 15. Agreement and certainty matrix



According to Stacey, in the zone of simple issues, we use techniques which gather data from the past and use that to predict the future. We plan specific paths of action to achieve outcomes and monitor the actual behaviour by comparing it against these plans. The goal is to repeat what works to improve efficiency and effectiveness. Some issues have a great deal of certainty about how outcomes are created but high levels of disagreement about which outcomes are desirable. Neither plans nor shared mission are likely to work in this context. Instead, politics become more important. Coalition building, negotiation, and compromise are used to create the organisation's agenda and direction. Other issues have a high level of agreement but not much certainty as to the cause-and-effect linkages to create the desired outcomes. In these cases, monitoring against a pre-set plan will not work.

As stated, multiple times, education governance in general is a complex issue. However, my analysis point to several points where some simple issues are moved up to the complex or complicated zones partly due to politics and disagreement:

- Paper I showed a lack of coherence in education goals across administration levels and schools.
- Paper II showed disagreements and discussions as to what extent iPads should be implemented in the school system.
- Paper IV showed that evaluation instruments are not being used as intended.

Practice and research indicate that there is (technical and practical) certainty on how to solve them. It is important to note that the challenges outlined in the papers will not be solved by solely agreeing on what to do. The answer to whether or not a better evaluation scheme can improve status quo is not a simple yes or no answer. Work must be done 'backwards' to bring issues down to the zones of complicated and simple issues - right now we are in the complexity zone, where there is disagreement and uncertainty about in which direction and how the school system should be developed and improved. A first step will necessarily be to find common ground between the different actors and a compromise. In order to bring down the uncertainty, information on cause and effect is needed - a different evaluation and monitoring theme can assist - but of course in a

complex system, it is impossible to map everything, and must be done along other initiatives in order to fix the challenges.

While policies must make sense and be relevant, I will not be making any recommendations as to which pedagogical content or policies should be pursued. Instead, as I have done throughout this dissertation, I will focus on the processes behind the decisions that shape the education system. The following six steps are my suggestions to possible approaches to improve the school system by embedding evaluative thinking<sup>17</sup> into the administrative processes.

### **Step 1: Establish practical, legal and structural considerations**

There is a saying that we need to know where we are in order to get to where we want. A first step is to establish what is possible within the current framework in terms of legislation, administrative structure, capacity and finances. I could list a number of ways of how things ideally should be. However, if I do not take the context of Greenland and the prerequisites into account, I would not stay true to my conclusion that context matters. Therefore, my recommendations are based on the following conditions:

- There is a great teacher shortage - both in terms of numbers, and skills in terms of the subjects teachers are qualified to teach. The fact is that the Teacher Training College cannot produce enough graduates compared to the rate that teachers are retiring.
- There is a geographical challenge in terms of attracting and retaining qualified teachers in the smaller towns and settlements.
- This means that in many places it is not possible to provide the level of quality teaching that is required by law.

It is therefore critical to start a discussion on the current way the school system is running. Right now, the school is run based on old (and dysfunctional) agreements and practices. A discussion grounded in what the purpose should be behind the way things are done is highly necessary to get away from a culture of process compliance and to having learning

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<sup>17</sup> Evaluative thinking is systematic, intentional and ongoing attention to expected results. It focuses on how results are achieved; what evidence is needed to inform future actions and how to improve future results (Patton, 2013).

and the children in the centre. What should be the minimum level of quality teaching that we as a society accept? Is it acceptable that we have schools with no qualified teachers?

Another major precondition is the lack of will to take responsibility across all levels of administration and society. It is a paradox that Greenland is said to be collectivistic society that centres around social values that revolve around what is best for a community and society, and yet no one wants to be accountable for the way the school system is running. It is always someone else's fault. One thing is to politically shout education - another is to actually prioritise the sector in terms of both finances and taking accountability. It is disrespectful to shout education when the education system does not provide a primary school that live up to the expectations set forth in the legislation. A starting point to create ownership and a sense of accountability is to start a discussion on roles and responsibilities across the different levels of administration.

To facilitate this process, I propose the following evaluative steps to get an overview of the starting point:

- 1) **Needs assessment and problem definition:** what is the problem we are trying to solve; map cause and effect where it is possible, critically examine processes and practices - what works, what does not? What is needed? Identify (time-consuming) processes that do not develop, change or develop status quo - what is the purpose behind the administrative processes?
- 2) **Outcomes logic:** what are the outcomes we are trying to achieve, clarify roles and responsibilities across administrative levels and sectors.
- 3) **Options assessment:** what is the best option and why, resources allocation, risk and performance (how will risks be managed and performance monitored).
- 4) **Implementation:** how to make policies a reality.
- 5) **Evaluation:** to what extent is the current programme achieving its outcomes?

## **Step 2: Capacity building**

The primary and lower secondary school is affected by many sectors that need capacity building. The focus of step 2 is on the evaluation and accountability practices. I will therefore not go into the teacher shortage challenge. In order to do something about the systemic challenges of the education system, my suggestions are twofold:

- 1) A capable and committed leadership on all levels. There is a great need for capacity development in order to build a unified front of committed leaders to drive the change forward and take responsibility. This part also involves a recognition of teachers as leaders, and in such in need of leadership skills.
- 2) The ability to evaluate on both pedagogical and strategic goals needs major capacity building. The current evaluation practice is ad hoc, and not a natural part of the processes. It should be clarified how policy and evaluation instruments are intended to be used and practitioners should be trained properly in how to use them.

The above steps are good starting points in building ministry and municipality capacity for the use of evidence to inform decisions and implementation and ultimately on becoming a learning organisation.

**Step 3: Formulate a joint theory of change  
- a strategy that state principles to guide action**

Based on what is possible (step 1), a joint vision and strategy should be formulated to create coherence across the administrative levels of the school system. The strategy should be child and learning centred and state principles that are adaptable to different contexts. The purpose of the strategy is to formulate objectives that drive the wanted change in the school system. The objectives should be incorporated in municipal and school documents; be revisited any time new initiatives are initiated; and be a natural part of the evaluation process.

The formulation of a strategy and vision for the school system should be done in cooperation with key actors in the school system. I identify key actors as the following:

- 1) Representatives from all administrative levels: ministry, municipalities, school leadership.
- 2) Representatives of key users of the school system: students and parents.
- 3) Representatives from the Teacher Training College.
- 4) Representatives of teachers and business community: IMAK (the Teachers' Union) and GE (Greenland Business Association).

Actors should be involved in a way they feel heard to create sense of co-ownership / shared responsibility.

#### **Step 4: Develop best practices adapted for local context and forums for sharing them**

There is a critical need for a discussion on what quality is and how it should be measured. The *Atuarfitsialak* legal framework and its executive orders define in a broad sense what is expected. This framework should be further operationalised to define what quality looks like across the different administrative levels and classrooms. This operationalisation should be based on principles to make space for the different contexts across the municipalities and schools.

Forums for professional discussions where practitioners share and reflect on best practices should be established - both on teaching practice and administrative practice.

#### **Step 5: Develop evaluation and monitoring routines**

Evaluation and evaluative thinking should be a natural part of all processes in the school system. Becoming a learning organisation and embracing *learning as we go* begins with understanding the context, rationale and linkages in programme goals and activities. There are a number of accountability mechanisms set in place by the current *Atuarfitsialak* framework. These mechanisms, however, are not defined sufficiently, making the evaluation practice largely based on statistics and process compliance. Based on step 3, a monitoring and evaluation practice that is the same across all municipalities should be developed.

The purpose behind a new evaluation practice should be development, not solely process compliance or control:

- Indicators based on the theory of change and focused on internal accountability should be developed and incorporated in evaluation and accountability processes. Indicators should be broken down into different levels so they can be used to monitor progress and help inform ways forward to improve (department, municipality, school, classroom).
- Templates for evaluation and accountability processes should be developed, where the purpose of the evaluation is clearly stated and the content and focus of any report is clearly defined to avoid skewed numbers and data.
- The purpose of municipal supervision school visits should also be clarified.

- Follow-up routines should be developed and clearly state what is to happen when expectations are not met.
- Student tracking and monitoring systems should be set up to be able to identify at-risk students.
- Internal change / evaluation agents should be prioritised and established. Their purpose would be to assess and evaluate local practices, create coherence, help implement policies and help information flow across administrative levels, so decisions and policies are informed by practitioners.

### **Step 6: An independent education council**

The final suggestion is to establish an education council. More should be done to promote a process that develops the education system in order to separate solutions and proposals in a professional and a political process, and that both are transparent. The first part of the process could take place in a council where a decision is made based on a professional account of the education problems and where other considerations are kept out. An education council should be independent of authorities and politics and act as a body that speaks out on what is best for developing the education system regardless of political agendas and strategies. An education council should in the first instance have the task of raising the level of discussion and laying the foundation for a factual debate on content and method in e.g. the primary and lower secondary school. It is important that the council is based on professionalism and advise on the basis of insight. In the second part of the process, more can be done to promote transparency in the political process leading up to proposals and decisions. The professionals and practitioners who have to implement decisions from the political process should know the intention and purpose of the laws and executive orders they are to work from.

The council should be politically independent and provide independent analyses on the Greenlandic education system and development of policies. The appointed members of the council should have an array of expertise and practical knowledge within following areas: pedagogy, school administration, reform processes, and evaluation. The task and purpose of the council should be to closely track the issues and policies affecting education in Greenland.

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## APPENDICES

### Appendix A. Interview guide 1 (in Danish)

#### INTERVIEW guide – lærere/skoleledere

##### Emnet er succesfulde praksisser i folkeskolen

Generelle spørgsmål om baggrund, kontekst, kommunen og skolen til at starte med

- Hvor mange års erfaring har du indenfor dit felt?
- Kan du fortælle lidt om hvorfor du valgte at blive folkeskolelærer?
- Har du arbejdet i andre skoler eller kommuner? Hvis ja, kan du fortælle lidt om forskelle eller ligheder? Hvad har fungeret godt?
- Kan du fortælle mig hvordan en typisk (arbejds)dag udfolder sig?
- Hvad er en god skole i dine øjne?
- Hvad er dine forventninger når du træder ind i skolen? I klasseværelset?
- Hvad har været dine bedste oplevelser i dit arbejde med ..
- Hvad har været nogle overraskelser?
- Hvad er nogle forudsætninger for at du kan udføre dit arbejde
- Hvad værdsætter du specielt ved ... (dig selv, dine kollegaer, din arbejdsplads)
- Hvad tror du, er kernen/princippet/værdierne der er grunden til Jeres kommunes/skoles/barns (gode) resultater?
- Hvis du havde tre ønsker for din organisation, hvad ville de være? Hvad ville du gerne se mere af?
- Hvilke resultater er du (og/eller dit hold) særligt stolt af?
- Hvad motiverer dig til at komme på arbejde hver dag?
- Planlægning
  - hvad er jeres vigtigste prioriteter?
- Forestil dig din organisation ti år fra nu, når alt er lige som du altid har ønsket det kunne være. Hvad er anderledes? Hvordan har du bidraget til denne ”drømme organisation?”

##### Emnet er gode oplevelser med forskellige evalueringsmetoder

- Kunne du tænke dig at dele en bestemt praksis som du synes fungerer godt i forhold til at måle/holde styr på dine elevers faglige udvikling?
- Synes du at trintest/afgangsprøver tegner et reelt billede af dine/dit barns kundskaber?
- Hvad har været dine bedste oplevelser med Angusakka? Læringscirklen? Trintest? Kvalitetsrapporten? Andre evalueringsmetoder?
- Kan du fortælle lidt om arbejdsgangene omkring Angusakka? Kvalitetsrapporten? Trintest?
- Hvad værdsætter du specielt ved
  - Den løbende evaluering?
  - Angusakka?
  - Trintest?
- På hvilke måder hjælper



- Angusakka/den løbende evaluering
- Trintest til at opnå bedre resultater for dine elever/barn
- Efter din ekspertise og faglighed, har du nogle forslag til hvordan Angusakka/den løbende evaluering kunne optimeres/forbedres?
  - Tilgængeligheden af data

## Appendix B. Interview guide 2 (in Danish)

# Interviewguide

1. Formålet med (folke)skolen/uddannelse
  - I dine øjne, hvad er formålet med folkeskolen? Uddannelse generelt?
  - Hvad er en god skole i dine øjne?
  - Hvordan ser en ideel læringsituation ud for dig? (Hvad er læring)
2. Formål med instans og initiativer
  - Hvilket overordnet formål har din [organisation] i forhold til forvaltningen af folkeskolen? Hvad er du ansvarlig for?
  - Hvad er det for en forandring i ønsker skal ske med de initiativer i har sat i gang? (Hvorfor netop de ting, hvordan tror i at disse initiativer vil løse udfordringerne?)
  - Hvad er nogle forudsætninger for at du/[organisation] kan udføre dit arbejde?
  - Er disse forudsætninger til stede?
  - Hvad sker der når disse forudsætninger/forventninger ikke (kan) opfyldes?
3. Den nuværende rammelovgivning indenfor folkeskoleområdet
  - Kan du nævne tre styrker?
  - Kan du nævne tre udfordringer?
    - Hvilke udfordringer har størst betydning for dit arbejde?
  - Hvad vurderer du som den største udfordring, der ikke er relateret til lovgivningen?
4. Folkeskolens dårlige kvalitet er noget der jævnligt bringes op af presse og politikere. Men begrebet sættes ikke op i forhold til noget.
  - Hvordan forstår du begrebet kvalitet i folkeskolen?
  - Hvornår er kvaliteten god eller dårlig?
  - Med hvilke værktøjer, og på hvilke parametre, vurderer I [organisation] kvaliteten i folkeskolen?
  - Kan du beskrive jeres arbejdsgange for arbejdet med tilsyn og evaluering?
  - Hvad sker der, når en [dep/styrelse/kommune/skole/lærer] ikke lever op til de forventninger og krav der stilles i folkeskoleloven?
5. Forvaltningssystemet på folkeskoleområdet
  - Hvordan vurderer du nuværende forvaltningssystem og ansvarsdeling mellem Selvstyret og kommunerne?

- i. Hvordan vil du vurdere Jeres handlerum, ift det i skal løfte?
  - Hvad ser du som styrken i den måde uddannelsessystemet er bygget op på? Ser du nogle svagheder?
  - Hvordan vil du beskrive samarbejdet med andre centrale aktører i forvaltningen af folkeskolen
- 6. Internationalt diskuteres der i disse år en læringskrise på skoleområdet. Børn går længere og længere i skole, men statistikker viser, at alt for mange ikke får læringsudbyttet med. Altså en skolegang uden læring.
  - Hvordan vil du beskrive situationen i Grønland?
  - I hvor høj grad vil du mene at barnets læring prioriteres
    - i. Baseret på lovgivningen
    - ii. Baseret på praksis

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