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IMPLEMENTING EDUCATION REFORMS:

A MULTIPLE CASE STUDY OF VIETNAMESE PRIMARY SCHOOLS

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ABSTRACT

This study investigates the implementation of Vietnam's Fundamental and Comprehensive Education Reform (FCER) through the theoretical lens of Complex Adaptive System Theory (CAST). While focusing on the Vietnamese context, it touches on a significant global issue in education: the challenge of implementing change. The study examines how the FCER's centralised-decentralisation approach in whole-system reforms which attempts to balance national educational goals with local autonomy might offer useful insights for reform implementation efforts worldwide.

Using a qualitative, multiple-case study approach, the study investigates three primary public schools in Central and Southern Vietnam. The schools are selected to represent diverse contexts in geography, socioeconomic background, and school size. This variety allows for an understanding of how different educational contexts respond to system-level reform policies. Research methods include interviews with school leaders and teachers, observations, and analysis of documents, including national policies, textbooks, and school-level documents.

The findings in selected schools indicate widespread compliance among educators with higher authorities' decisions to enact innovative practices. This system-level adoption brought some benefits, such as creating an initial momentum for change and reducing costs associated with change. However, as the FCER policies were gradually implemented, educators displayed more complex nuances in their interpretations and responses. While there were attempts to implement innovative practices, such as learner-centred pedagogy, formative assessments, the lesson-study model, and school councils, there was a tendency for these practices to be oversimplified and not fully integrated into schools' routines. The gaps between reality and the ideal were more significant in disadvantaged settings where aspects of schooling such as class size, facilities, teaching materials, students' backgrounds, and parents' collaboration were more challenging to address.

Empirical evidence from this study supports the usefulness of CAST as an analytical framework for studying reform efforts. Additionally, the study proposes original concepts, namely, *Zone of Feasible Practices* (ZFP), *Zone of Expected Practices* (ZEP) and *Buffering Zone* (BZ). These concepts contribute to the development of CAST, enabling more accessible and actionable implications of the theory in the field of educational change and reform.

In conclusion, the study highlights that the centralised-decentralisation approach in whole-system reforms could be an effective way to achieve consistency while allowing schools to develop ownership

of the reforms and adapt to their local contexts. However, the effectiveness of this approach diminishes if schools are not adequately supported to develop their capacity for local adaptations. Without timely, concrete and context-sensitive guidance and support, schools and educators could be overwhelmed with additional responsibilities, causing frustration and limited transformations. The study advocates for an *Adaptive Implementation Approach* to complement the centralised-decentralisation strategy in whole-system reforms. This approach encourages collaboration between schools, higher authorities and other stakeholders in the community in tailoring reform objectives and pathways, taking account of the diverse and evolving contexts of schools.

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LIST OF ABBREVIATIONS

AI	Adaptive Implementation
BOET	Bureau of Education and Training
CAS	Complex Adaptive systems
CAST	Complex Adaptive system Theory
CBE	Competency-based Education
CPV	Communist Party of Vietnam
C2006	Curriculum 2006
C2018	Curriculum 2018
DOET	Department of Education and Training
ETEP	Enhancing Teacher Education Programme
FCER	Fundamental and Comprehensive Education Reform
LCE	Learner-centred Education
LftM	Leadership from the Middle
MOET	Ministry of Education and Training
OECD	Organisation for Economic Co-operation and Development
PISA	Program for International Student Assessment
PLC	Professional Learning Communities
PPC	Provincial People's Committees
UNESCO	United Nations Educational Scientific and Cultural Organisation
SFI	Santa Fe Institute
TCE	Teacher-centred Education
TIMSS	Trends in International Mathematics and Science Study
VNEN	Vietnam Escuela Nueva

ACKNOWLEDGEMENT

DECLARATION

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Linh Hong Ho

CHAPTER 1: INTRODUCTION

1.1. Statement of the problem

1.1.1. Implementing whole-system education reforms

As the world becomes more interconnected, diverse and uncertain, countries around the world are under growing pressures to enable people to keep up with the pace of change (Senge *et al.*, 2012). The imperative for countries to improve their school systems is significant. There appears to be no choice between change and non-change or reform and non-reform (Fullan, 1993). However, while change is necessary, generating sufficient motivation for change and ensuring its effective implementation at the school level is a complex endeavour. It is common that innovations fail to penetrate deep into classroom practices even when their values are apparent to the designers. Effective changes and reforms appear to require much more than having a set of good ideas (Verspoor, 1989; Fullan, 1993, 2000; Elmore, 2005; Harris, 2013; Hall and Hord, 2020). The presumed strong and direct links between the innovations and their outcomes do not guarantee successful translations into reality (McLaughlin, 1985).

The growing recognition is that although we need theories of education, i.e., the pedagogical assumptions of what may improve learning, we also need theories of change or action, i.e., strategies to support change and reform implementation. As Fullan aptly warns, a "theory of education in the absence of a theory of action" may drive us down "a path of self-destruction" (Fullan, 1999, p.67). We need to know what works, why it works, and under what circumstances.

In the quest for an effective theory of change, many educational systems have introduced market mechanisms (such as magnet schools, charter schools, vouchers, and open enrollment) to increase parental choice and school competition. The expectation is that these mechanisms will create pressure and incentives for schools to foster efficiency, embrace innovation, and improve overall quality. However, this solution comes with the risk of creating school segregation, increasing inequities, and leading to the decline of public education systems. Furthermore, there is limited empirical evidence to support the effectiveness of these mechanisms in truly enhancing educational quality (Waslander, Pater and Van Der Weide, 2010; OECD, 2012; Campbell, Hankey and Seiden, 2017). While competition may spur motivation for change, motivation alone is only part of what is needed for genuine innovation. Schools might possess the drive to change, but a crucial aspect is whether educators have the necessary competencies and resources to implement the desired changes effectively (Fullan, 2006). The feasibility

of achieving substantial and sustainable transformation is questionable when schools are driven to change as isolated competitive entities rather than through systemic, collaborative efforts. This is particularly concerning for schools that lack the competitive edge for quality improvement. Accepting the closure of such schools or neglecting their status raises ethical concerns, especially when families, particularly those in disadvantaged contexts, may be unable to opt out of these schools due to limited access to information and financial constraints in relocating. As Campbell, Hankey and Seiden (2017) point out, using market mechanisms based on a conventional rational actor model may fail to consider how people behave in reality and, thus, may not yield the expected results.

Alternatively, a new wave of whole system reforms is emerging across countries, addressing the challenge of improving educational quality through a different approach. Dimmock *et al*. (2021) characterise these reforms as "multiple, connected, simultaneous, and continuous reforms" (p.2). Unlike previous isolated, school-based, scattered efforts, these reforms are often government-led efforts, aiming to bring about systemic changes that elevate the quality of education across the entire system. They cover various connected aspects of school life, such as curriculum, assessment, pedagogy, management, professional development and parent/community involvement. The changes in these areas are often introduced at the same time throughout the system and with the expectation of continuous improvement and modification.

Empirical evidence suggests that comprehensive reforms overhauling multiple connected aspects of schooling bring more positive outcomes than discrete, piecemeal change initiatives (Desimone, 2002; Borman *et al*., 2003). Research findings and discussions have given grounds for the importance of collaboration and connections between different stakeholders within and outside schools to make radical changes (Shaeffer, 1992; Spillane, Reiser and Reimer, 2002; Jeynes, 2007; Muijs, 2015; Pietarinen, Pyhältö and Soini, 2017; Tikkanen *et al*., 2020). A culture of continuous improvement and experimentation during reform implementation is considered to be essential for effective and enduring change (Fullan, 1993; Stoll, 2013). This whole-system approach generally promises a more equitable, inclusive and sustainable transformation in education.

The Fundamental and Comprehensive Education Reform (FCER) initiated in Vietnam in 2013 is one attempt at such whole-system reforms. This reform initiative aims to bring about substantial and multifaceted changes to the entire Vietnamese educational system. Central to the FCER is the introduction of a competency-based curriculum known as Curriculum 2018 (C2018). This curriculum emphasises a shift away from traditional knowledge-based and teacher-centred approaches towards

learner-centred practices. The intent is to foster active student engagement and the ability to use transversal competencies, such as problem-solving or collaboration, in real-world contexts. In addition to changes in curriculum and instructional practices, the FCER recognises the importance of professional development, school governance, leadership, and community involvement in driving successful reform implementation. Reform policies have been in place since early 2014, and specific policies, such as those related to assessment, have undergone several rounds of modifications. A similar whole-system reform approach can be seen in other Asian countries' school systems, such as China, Kazakhstan and Malaysia (Nurul-Awanis *et al.*, 2011; Li, Zheng and Yu, 2018; McLaughlin *et al.*, 2021).

1.1.2. Using Complex Adaptive Systems Theory to study educational changes and reforms

Despite the potential positive outcomes of a whole-system approach, its theoretical foundation has yet to fully develop. Multiple, connected, simultaneous and continuous reforms may work, but the complexity of these reforms inevitably puts the whole system and their agents under significant challenges to implement (Dimmock *et al*., 2021). Such interconnected reforms require careful coordination and alignment among various stakeholders of different entities. Additionally, they demand substantial resources. This leads to critical questions: In the absence of competitive market forces, what alternative methods exist to initiate consistent change across a nation's educational system? Is it feasible that all schools, regardless of their context, simultaneously embark and progress on their journeys of change? Developing a higher-order theory of change is essential to provide a framework for understanding these reforms' complex nature and propose effective strategies for their implementation.

In the last few decades, scholars have seen the wisdom of using implications of complexity theory or complexity thinking to generate a view of schools as complex adaptive systems (CAS) (Morrison, 2002; Fullan, 2003; Davis and Sumara, 2006; Snyder, 2013; Hawkins and James, 2016; Mason, 2016; Dimmock *et al*., 2021). Concepts mainly borrowed from the work of complexity scientists in natural sciences, such as *emergence*, *self-organisation*, *co-evolution*, *critical mass* and *inertial momentum*, have been applied to suggest an alternative perspective to think and act about education reforms. These notions, which will be more fully explained in Chapter Four, generally require us to see people and entities in the educational system not as unrelated or isolated but as interdependent parts. Therefore, it is important to take account of individuals' and groups' interactions when designing and implementing reform policies.

Viewing schools as CAS, which includes multiple actors/agents interacting with each other and their environment, allows us to understand why making reforms work is so difficult. Actors within the system,

such as school leaders, teachers, students, parents, and community members, have their goals and beliefs, but they are also bound by their contextual factors. They are considered *semi-autonomous* participants (Dooley, 1996) who can shape but are also shaped by their surroundings. The interconnectedness among these actors and their environment implies that even when actors recognise the need for change according to their agendas or prescribed policies, their actions may unfold differently than intended. They must adapt to the evolving circumstances around them. This can lead to unpredictable results, which may or may not align with the original plans, thereby, creating diverse responses to reform efforts.

However, complexity thinking is not just about chaos but also the emergence of patterns and orders (Rogers *et al.*, 2005). It suggests the possibility of establishing coherence to guide the reform process more strategically, even amidst these dynamic and unpredictable interactions. For researchers interested in CAS, the challenge lies in how policymakers and practitioners can influence, rather than control, the reform implementation process. That means finding a balance between the unpredictable and predictable aspects of change.

While the theory of Complex adaptive system (CAST) holds great promise as a theoretical lens, its practical applications in the field of educational change and reform are still in the early stages. The linkages between the abstract concepts of CAST and the actual practices on the ground remain limited and tenuous at best. It appears to be oversimplistic to assume that the process could be left to itself, as if complexity is something that, once injected into the system, will tend to take a normal course of its own until complete and yield positive outcomes (James, Goldstein and Benyamin, 2007; Stacey and Mowles, 2016) further unrealistic response is to make dramatic, abrupt changes to every aspect and level of the system - which would be too overwhelming for most educational systems (Snyder, 2013). These interpretations, as Stacey and Mowles (2016) call them, "loose interpretations of what complexity theory means" (p.279), may do more harm than good. They contribute to the resistance to thinking through the lens of complexity. They add to the feeling that complexity "is too difficult to understand; to the extent we understand it, we do not want to believe it; it doesn't seem to be very usable, and so on." (Fullan, 2003, p.21).

Therefore, this study was conducted to explore and uncover more accessible and actionable insights and implications of CAST in the context of educational change and reform. Empirical evidence is also needed to examine the fit of these theoretical concepts and ideas to practice.

In the case of Vietnam, despite the assumption that Vietnam's communist/socialist state would tightly control the implementation of national reforms, recent studies have uncovered a surprising level of

variation among local authorities, schools, and teachers in interpreting and translating the FCER policies into practice (McAleavy, Ha and Fitzpatrick, 2018; Nguyen, 2020; Dimmock *et al*., 2021; Duong and Dao, 2022). This variation reflects the characteristics of CAS, demonstrating adaptations of schools to their local contexts.

This diversity in the implementation of schools in Vietnam is not necessarily unintended. As Chapters 2 and 3 of this study show, under the FCER, Vietnam appears to adopt a *'centralised-decentralisation'* approach, where schools are expected to adhere to the national curriculum framework and key policies but are also given more autonomy in their practices compared to the previously strict centralised system. This alternative approach is designed to enable schools to tailor policies to their local needs and contexts while maintaining a degree of coherence within the system. Such an approach may bring the promise of balancing fidelity and flexibility in implementing reform that aligns with the essence of complexity thinking. However, while autonomy can lead to contextually relevant practices without adequate interventions, it also carries the risk of diverging too far from the national objectives, which raises concerns about equity, especially for schools in under-resourced or rural areas. The existing literature is limited in suggesting how Vietnam is executing this approach to ensure that the overall goals and standards of the FCER are consistently met across different regions and schools.

In summary, the research problem can be conceptualised as follows: The Vietnamese government is undertaking a significant effort to improve its public education system through system-level reform efforts. A notable aspect of the FCER initiative, especially of the most recent component, C2018, which has yet to be extensively studied, is its implementation within an adaptive and 'centralised decentralisation' framework. This approach aims to offer flexibility and autonomy to local schools while maintaining consistency in educational standards across different regions. This research examines how Vietnam's education reform strategy is actualised in practice. It delves into the realities in which schools in diverse contexts interpret and apply the policies of the FCER. The study evaluated whether the decentralised autonomy granted to schools leads to changes that align with the national reform objectives and examined the role of existing policies and government support in this process.

Through this investigation and the application of CAST as the theoretical lens, the research provided a deeper understanding of the *'centralised-decentralisation'* approach, exploring how it can be managed to fulfil the objectives of whole-system education reform to offer more effective and equitable changes. This study yielded insights and recommendations that could benefit Vietnam's ongoing education

reforms and potentially serve as valuable guidance for other countries with similar ambitions to enhance their educational systems through systemic reforms.

1.2. Personal motivation

This study emerged from my strong desire to contribute to the education reforms that are taking place in Vietnam, my home country, and also the recognition of my naivety about what makes a reform successful.

During my school life, I could be considered "a good student" as I was continuously ranked in the top five students in my classes. I was often the class monitor, vice-class monitor, and one of the teachers' favourite students. I earned several prizes in academic competitions for students and was quite active in extracurricular activities. However, I could not say I was a happy student or enjoyed my learning. I was constantly under pressure to achieve higher scores. At primary school, the aim was to get into a good lower-secondary school. When this was completed, the next aim was to enter a good higher-secondary school. And after that, naturally, a good university.

I remember shedding tears numerous times in my primary school classrooms upon receiving poor grades, fearing that I would lose the title of "the best student." I recall spending countless hours in private tutoring sessions, trying to solve advanced math, chemistry, and physics problems, ensuring I could compete with other students in academic competitions. I also remember my confidence was shattered when my Literature teacher read my essay out loud in front of the class and fiercely criticised it as being too creative for the final exam. She emphasised that I must use the structure, ideas, and vocabulary she provided. At best, I should learn her writing by heart, word by word, to get good grades.

I was not alone in this experience. I was indeed more fortunate than many of my friends, who were unfit for this high-stakes, rote-learning education. While I managed to navigate the system to some extent, some of them did not. I saw them shuddering at the thought of being called to the teacher's podium to answer a question or solve a problem. I saw them being yelled at, mocked, given negative nicknames, and even physically punished by our teachers. I heard my friends sighing and crying, yet I did not know how to help them. But did they deserve any help? My teachers claimed they were punished because they were lazy and did not pay enough attention to the lessons and assignments. I cannot help but wonder if my friends ever realised that they should have received more help, not more punishment.

There is a Vietnamese saying: "Only when the rats face a dead end should they go to the education schools". It is a metaphor for the message that teaching is the last career option because it is a low-paying

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and demanding job without clear career progression. This belief, which reflects quite accurately the reality in Vietnam then, prevented me from applying to the University of Education despite my childhood dream of becoming a teacher. Instead, I applied to a business administration programme, considered a more popular choice. I could not deny that the knowledge and experience I had gained in the field of business were helpful. However, my questions, concerns and desires for education remained strong. I continuously searched for alternative approaches to education in which the students could understand the meanings of learning and enjoy learning. This quest led me to pursue a Master's in Educational Studies at the University of Glasgow, where I discovered the progressive ideas of Piaget, Dewey, Freire and Vygotsky. I eagerly anticipated bringing this new knowledge back to Vietnam and finding ways to contribute to system improvement.

During my time in Glasgow for my Master's degree, Vietnam was implementing the Vietnam Escuela Nueva (VNEN) program, which was inspired by the renowned Escuela Nueva model in Columbia. The VNEN program was funded by the World Bank to transform primary classrooms in Vietnam into places where the students can become the actual centre of their learning. The model's core ideas are respecting for student autonomy, collaborative learning, and linking learning with real-life and community-based problems. Not only me but many Vietnamese people had high hopes for this programme. "Finally, the government did the right thing", I thought.

But suddenly, VNEN was all over the news because schools nationwide decided to cease the program due to strong resistance from teachers and parents. It surprised many people that the way VNEN was enacted in Vietnamese classrooms was different from the government's promises or the stories we heard about the original model in Columbia.

For the first time, I was struck by the disappointing truth that having good ideas about education alone is insufficient. This realisation prompted me to delve deeper into the reasons behind this challenge and explore potential solutions. The early conversations with my supervisors about the similar challenges of countries worldwide further fueled my determination to focus my PhD study on implementing system reforms.

It felt natural to me to study the next education reform attempt of Vietnam, the FCER, because the desire to help my country and people has always motivated my study and work. This study was closely connected with my Master's dissertation, which compared curriculum frameworks of countries that employ the competency-based approach to reform their general education, including Vietnam. This prior work has given me a better grasp of the direction that Vietnam is taking and how it relates to the global

context. However, in comparison to the Master's dissertation, my PhD work was a step forward in the quest for a complete understanding of how reforms are carried out, particularly the gaps between policy and practice and the possible solutions to bridge these gaps.

An analysis of the possible impacts of my values, background, professional work and life experiences on data collection and analysis of this study (researcher positioning) are explained in more depth in Chapter Five – Methodology.

1.3. Research aims and questions

In light of the foregoing discussion, this study aimed to contribute to the knowledge of how system-level reform policies affect schools and how schools respond to these policies. The study investigated the implementation of the FCER in a small number of case schools in Vietnam, focusing on public primary schools. The study used Complex Adaptive System Theory (CAST) as the theoretical lens to analyse the implementation realities and explain the contextual factors and mechanisms that give rise to such realities.

The main research question is: How do schools manage the implementation of system-level education reform policies, with special reference to the FCER policies?

This main Research Question is broken down into three sub-questions (SRQs):

SRQ1. How do school leaders and teachers perceive the intentions and expectations of the FCER policies?

SRQ 2. How do schools attempt, if at all, to incorporate the FCER policies into their practice?

SRQ 3. Which facilitators and constraints have affected the FCER implementation, to what extent, in what ways and under what conditions?

1.4. Scope of the study

Educational change and reform is a wide field of research, and there are numerous ways to contribute to the field. Thus, this study needed to define its boundaries to make it manageable and scientifically sound. Firstly, in terms of the research topic, the study primarily examined the process of how the reforms have been enacted rather than measuring the effectiveness of the reform on student outcomes (Desimone, 2002).

Secondly, a qualitative multiple case study design involving three public primary schools in Central and Southern Vietnam was adopted for the research. The selection of these schools and the rationale behind the chosen design are elaborated upon in Chapter Four - Methodology.

Thirdly, the study's participants were teachers and school leaders (principals and vice-principals), who were the key actors in implementing the reforms at the school level. The views of local authorities, students and families may add valuable insights to the topic but are beyond the scope of this study.

Lastly, the study narrowed its focus to general education, particularly Grade 1 and Grade 2, considering the sequential approach in disseminating the C2018 - a key element of the FCER. This decision was based on the fact that, at the time of the study, only Grades 1 and 2 were actively implementing the C2018.

By defining these boundaries, the study ensured a focused exploration of the reform implementation process, allowing for in-depth insights within specific contexts and target grade levels.

1.5. Significance of the study

This study made contributions to the knowledge base in several ways:

Firstly, by applying and elaborating the complex adaptive system theory (CAST) as the theoretical foundation, the study used CAST as a heuristic tool and further developed it as a robust conceptual and analytical framework.

Secondly, through CAST, the study provided new perspectives on the dynamics of schools as they respond to the challenges of implementing reform policies. It offered an explanatory description of the processes that schools experience both as parts of national systems and as agentic entities in their own right. Through adopting CAST as a theoretical framework, the study emphasised the dynamic interconnectedness of schools with their environments and the complexity of the reform implementation process within schools.

Thirdly, this study enhanced the understanding of the challenges and opportunities faced by schools in Vietnam and other systems undergoing whole-system reform. Additionally, the study highlighted and examined Vietnam's 'centralised decentralisation' approach in executing whole-system reform, which strives to balance central guidance and local autonomy and adaptation.

Fourthly, as Vietnam policymakers would claim, the FCER comprises what might be considered currently in-vogue "good practices" in education, such as a competency-based curriculum, learner-centred pedagogy, hybrid teacher training ETEP (an integration between online courses with face-to-face training sessions), and the Lesson Study model to build professional communities. This study not only shed light on implementing these specific practices but also confronted the generic issue of whether such practices, mostly originating in Western education systems, can successfully be borrowed and transferred to other cultures.

Overall, the present study enriched the knowledge base by expanding CAST as a theoretical framework, providing insights into the complexities of reform implementation, contributing to understanding challenges and opportunities in whole-system reforms, and examining the transferability of a number of educational initiatives to diverse contexts.

1.6. Organisation of the study

The structure of the thesis is outlined as follows:

Chapter 1: Introduction

The present chapter provides a brief background to this study by giving an overview of 1) the long-standing problem of implementing education reforms and changes, 2) the trend towards whole-system reforms, 3) the Fundamental and Comprehensive Education reform (FCER) of Vietnam and 4) the potential use of the Complex Adaptive System Theory (CAST) to understand and take action on education reforms issues. The chapter also discusses the researcher's motives, the aims and research questions, and the scope and significance of the study.

Chapter 2: Education reforms and their implementation in Vietnam

This chapter delves into the historical context of education reform in Vietnam. It briefly introduces Vietnam and its educational system, followed by a review of past reform efforts leading up to the FCER. The chapter also examines the key policies under the FCER and reviews the current literature on their implementation.

Chapter 3: Review of the literature: Key issues of Education Reform

Chapter 3 gives an overview of the critical issues, debates and trends in the field of educational change and reform to position the FCER within a broader context and identify theoretical and empirical gaps that need addressing.

Chapter 4: Theoretical framework: Complex adaptive system theory

Chapter 4 explains why complexity thinking, particularly CAST, can serve as a powerful theoretical basis to strengthen the current knowledge base and guide future research. The chapter also outlines the present gaps in the application and development of CAST and explains how this study can contribute to filling these gaps.

Chapter 5: Methodology

Chapter 5 discusses the methodology of the study in detail. The chapter describes and justifies the use of the multiple-case study design, data collection methods, school and participant selection, data management and analysis. The chapter also covers researcher positioning, the study's trustworthiness, limitations, and ethical considerations.

Chapter 6-8: Findings in Schools A, B and C

Chapters 6, 7 and 8 introduce the three case schools and present the findings that address the research questions to understand how the case schools and their actors perceive and incorporate the FCER policies in their practices and the contextual factors that contribute to their implementation.

Chapter 9: Cross-case analysis and discussion

Chapter 9 integrates findings from individual case studies to address the research questions, providing a broader perspective on the patterns observed in the implementation of FCER. This synthesis, grounded in CAST's theoretical concepts and insights, is also contrasted with existing literature to highlight new understandings in the field of educational change and reform.

Chapter 10: Conclusions, implications and recommendations

Chapter 10 summarises the key findings and discusses their implications and contributions to theory, practice and future research. The chapter ends with my reflections on my PhD journey.

CHAPTER 2: VIETNAM EDUCATION REFORMS AND THEIR IMPLEMENTATION

2.1. Overview

Vietnam has a captivating history, a rich culture and is a diverse and rapidly developing society. Understanding the various aspects that shape Vietnam's identity is crucial for gaining insights into its educational system. This chapter offers an overview of Vietnam's geographical, historical, economic, political, cultural and social contexts, enabling an overview of the systems' features, aspirations, achievements and challenges.

The chapter captures the country's education reform progress since its reunification in 1975. It highlights four major education reform efforts: the 1979 Reform, the 2000 Curriculum Reform, the 2011/2012 Pedagogical Reform, and the recent 2013 FCER reform. Drawing on policy texts and existing research data, the chapter sheds light on the commitment of Vietnamese leadership to transform their system and the enduring gaps and challenges when implementing these reforms. It concludes by underscoring the importance of gaining more in-depth insights into the present state of the FCER and the dynamics that emerge from its implementation.

2.2. The Vietnam Educational System in Context

2.2.1. An Introduction to Vietnam

Geographically, Vietnam is situated in Southeast Asia, serving as an important crossroads between East Asia and the Middle Eastern Mediterranean world. It shares the borders with several countries, including Laos, Cambodia and China. The country is approximately 1000 miles north-south and varies between 50 and 400 miles wide, making it comparable in size to Malaysia or Germany.
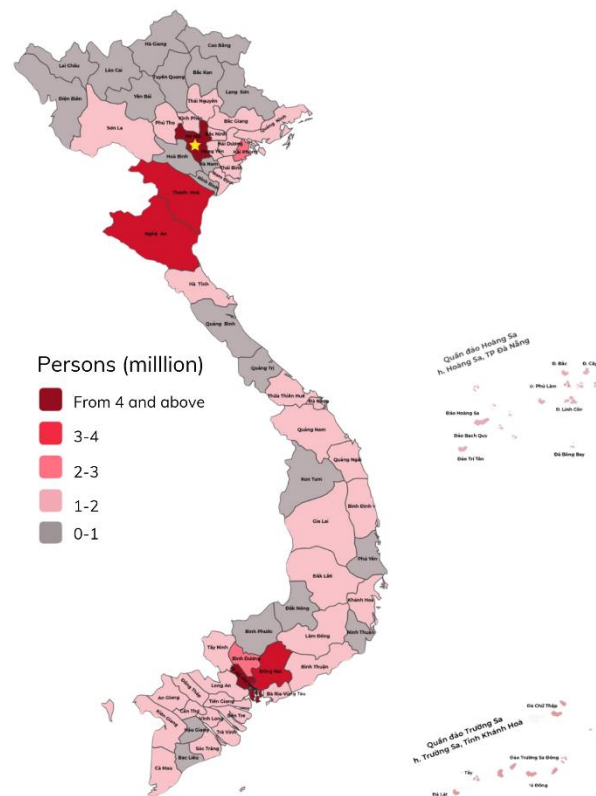
Figure 2.1: Vietnam population map (General Statistics Office of Vietnam, 2019)

The Vietnamese landscape comprises mountainous regions in the north, highlands areas in the centre, and two major river deltas—the Red River Delta in the northeast and the Mekong River Delta in the southwest (Tran and Nguyen, 2022). Due to the country's long shape from north to south, its climate is also diverse. Southern and central regions have tropical and humid climates year-round, while the northern areas experience more temperature fluctuations (Arkadie and Mallon, 2004).

Vietnam is the fifteenth most populous country, with a population of nearly 100 million (General Statistics Office of Vietnam, 2022a). The majority of the population belongs to the Kinh ethnic group, accounting for over 85% of the total population. However, there are 53 ethnic minority communities residing throughout the nation, such as *Tày*, *Thái*, *Mường* and *Khmer*. Each community has its unique language, traditions, and cultural practices. The population density is highest in Hanoi, the capital, in the northern part of the country, and in Ho Chi Minh City, in the southern region. Notably, the country has a relatively youthful population, with approximately 24.3% of the people under 14 in 2019 (Tran and Nguyen, 2022).

Historically, Vietnam's past was a fascinating journey of struggle and resilience against formidable external forces. For over a thousand years, the Chinese empire ruled over Vietnam, viewing the country

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as a gateway to trade with Southeast Asia and the Indian Ocean markets (Goscha, 2016). Although the Vietnamese have adopted some elements of Chinese culture, they managed to maintain their own language and cultural identity. Then came the French colonisation - lasting over one hundred years. The Vietnamese forces led by influential figures such as Ho Chi Minh defeated the French colonial authority and gained independence in 1945. As the United States intervened to prevent the spread of communism in the 20th century, Vietnam became embroiled in the Vietnam War, resulting in the separation of North and South Vietnam. Despite facing such a powerful opponent, the determination of the Vietnamese people ultimately led to the reunification of Vietnam and the establishment of a unified socialist state in 1975.

The long-standing conflicts have caused widespread damage to the country, leaving a massive challenge of rebuilding a war-torn nation. Vietnam experienced a period of economic stagnation after reunification. The annual economic growth was only 0.4% in the five years to 1980. Approximately 90% of the population lived on less than one dollar daily (Rama, 2023). At the end of 1986, the annual inflation rate was over 700% (Arkadie and Mallon, 2004). Recognising that the prevalent economic model, which was primarily influenced by the Soviet Union's central economic planning, had failed to alleviate Vietnam's extreme poverty, the Communist Party of Vietnam (CPV) made a historic decision in 1986 to conduct a comprehensive economic reform, known as *Đổi mới*.

Đổi mới comprises various reform policies to replace the Soviet-style command economy with a socialist market model, particularly restoring private ownership of essential economic resources, promoting foreign direct investment, reforming state-owned enterprises and encouraging a more market-oriented approach to economic decision-making (Goscha, 2016; Tran and Nguyen, 2022). The impact of these economic reform policies was profound. Since the 1990s, Vietnam has maintained an average annual growth rate of roughly 6%-7%, making it one of the fastest-growing economies in the world (London and Pincus, 2023). By 2016, the poverty rate had dropped remarkably to less than 6% (Rama, 2023). The country has become an attractive destination for foreign companies. Private enterprises have flourished, contributing immensely to employment creation and innovation. Within a single generation, Vietnam has undergone a remarkable transformation. It has moved from a country of widespread poverty to a middle-income nation (Hayton, 2010; Pincus, 2023).

Politically, Vietnam is among the few remaining communist/socialist countries, alongside China, Cuba, Laos, and North Korea. While the country has embraced market-oriented policies, multiparty democracy

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has not been part of the reform agenda. The CPV maintains tight control over political power and key institutions through its Marxism-Leninism and Ho Chi Minh Thought ideology.

The CPV exercises its authority through various mechanisms at different levels, from the central government to grassroots organisations. At the top, the Politburo and the Central Committee shape the country's direction. The National Assembly, Vietnam's legislative body, is predominantly composed of CPV members who approve laws and major policy decisions. The CPV's influence extends to local governments as well, with party committees present at all administrative levels.

However, it is essential to note that Vietnam's version of socialism has evolved and adapted to the changing circumstances. There seems to be no political will towards reintroducing strict Stalinist measures. The Party recognises the importance of establishing a "law-based state" with a certain degree of freedom for the people to maintain control and foster economic growth (Hayton, 2010; London, 2023). Efforts have been made to devolve decision-making authority to the local level and increase representation and participation in decision-making through grassroots democracy strategies (Hayton, 2010).

Indeed, international observers suggest that despite the appearance of centralisation, the party-state's ability to enforce rigid control over the entire country is limited. The leadership must navigate the political landscape carefully. They often need to seek support from lower-level leaders and various interest groups within Vietnamese society to achieve consensus. Local dynamics and relationships are considered to hold more influence than central policies. The CPV and the central government generally face significant challenges in implementing decisions on the ground (Arkadie and Mallon, 2004; Hayton, 2010; Pincus, 2023).

Additionally, the CPV seems to adopt a cautious approach in formulating and executing policies, recognising that high-profile law enforcement campaigns carrying the risk of failure could undermine its credibility and reputation. The Party tends to position itself as the guiding force behind the government's policies, often attributing any shortcomings to the government's implementation rather than questioning the policies themselves (Hayton, 2010). This approach allows the Party to maintain a sense of infallibility and avoids direct criticism of its policy decisions. Consequently, it is not uncommon for CPV policies to lack specificity and detailed prescriptions.

However, it is worth noting that the CPV has demonstrated its capacity and determination to implement policies when sufficiently motivated. Examples of such instances include the successful implementation of laws mandating motorcycle riders to wear helmets (Hayton, 2010), Vietnam's commendable response

to the COVID-19 pandemic (Willoughby, 2021), and recent anti-corruption campaigns that resulted in the resignation and removal of senior government officials (Morrison Foerster, 2023). The question arises whether this same determination and efficiency can be translated into other societal issues, such as environmental sustainability, social equity and education.

In the socio-cultural sphere, Vietnam is undergoing a dynamic and rapid transformation driven by urbanisation and globalisation. At its core, Vietnam remains deeply rooted in its traditional values and norms, shaped by centuries of history, cultural heritage, and especially Confucian principles introduced to Vietnam since the Chinese rule period. Strong bonds, respect for elders and authorities and maintaining harmonious relationships within communities are the values that continue to hold a central place in Vietnamese society (Thanh, 2008; Hayton, 2010).

However, apart from these enduring traditions, emerging trends and the aspirations of a young population are reshaping the social fabric of Vietnam. Economic growth and rapid urbanisation have led to the rise of cosmopolitan cities and provinces such as Hanoi, Ho Chi Minh City, Da Nang and Binh Duong. Bustling commercial centres and modern infrastructures are commonplace throughout the country. Additionally, access to the Internet and up-to-date technologies enables and encourages the younger generation to embrace new ideas, beliefs and lifestyles (Hayton, 2010). This fusion between the old and new cultures creates a complex social landscape in which traditional values coexist with the demands of a rapidly changing world, contributing to the richness and uniqueness of Vietnamese society.

Overall, the above account of Vietnam's journey highlights its diversity, resilience and ongoing transformation in various aspects. Understanding these contexts is crucial for recognising the demands and challenges of its educational system. The diverse landscape, climatic variations and ethnic diversity require special attention to issues of equity and inclusion. The large and youthful population puts high pressure on schools and class sizes. Vietnam's emphasis on economic growth and market-oriented policies indicates the importance of equipping young people with practical skills and knowledge in high-demand, competitive industries. The tendency towards decentralisation and fragmentation of the party-state can create inconsistency in implementing educational policies across different regions. The Vietnamese educational system also faces the task of balancing between preserving the political and cultural identity and preparing students for the challenges of the modern world.

The next sections delve into the key hallmarks of the Vietnamese educational system and explore further how the various aspects of the country in terms of geography, history, politics, economics and culture shape the past, the present and the future of the system.

2.2.2. Key features of Vietnam's educational system

The Vietnamese educational system comprises four main sectors: early childhood education, general education, vocational education and training, and higher education. Early childhood education, including nurseries and kindergartens, educates children aged three months to five years. General education is structured into three levels: primary education (5 years starting at age 6, lower secondary education (4 years starting at age 11), and upper secondary education (3 years beginning at age 15). Students who complete upper secondary education, typically at 18, can choose to continue their education at universities, colleges, or vocational training institutions (Tran and Nguyen, 2022).

The general education system, which is the focus of this research, comprises 9.2 million primary students in 12,693 schools, 5.9 million students in 8,846 lower secondary schools, and 2.7 million students enrolled in 2,373 upper secondary schools. There are also 2000 mixed schools, resulting in a total of approximately 26,000 schools (General Statistics Office of Vietnam, 2022b).

While most of these schools are public, there is a small but growing number of non-public schools, including private and people-founded schools. Both public and non-public schools are generally supervised by the Ministry of Education and Training (MOET) via local authorities, including the Department of Education and Training (DOET) which governs primary and lower-secondary education and the Bureau of Education and Training (BOET), which governs the upper secondary education. The schools are also accountable to the Provincial People's Committees (PPC) and the local representatives of the Communist Party.

The following sections delve into the notable achievements and challenges of the Vietnamese educational system. Achievements of the Vietnamese educational system include significant progress in expanding access to education, outstanding performance in international assessments, and gender equality in education. However, the system faces challenges such as educational inequities, a curriculum emphasising rote memorisation, intense academic pressure, a preference for quantity over quality in teaching practices, low teacher salaries, and limited autonomy for school leaders and teachers.

Achievements of the system

In recent decades, Vietnam has made significant progress in expanding access to education for its people. While in the middle of the 20th century, up to 95% of the population was illiterate (MOET, 2014c), to date, universalisation in primary education has been achieved and has nearly been reached at the lower secondary level (MOET, 2014; Dang and Glewwe, 2017).

Additionally, Vietnam performed remarkably well in the OECD's Program for International Student Assessment (PISA) in 2012 and 2015, surpassing the average scores of the OECD countries in Science, Math and Reading. Vietnam's scores were also surprisingly higher than in several developed countries, such as the United Kingdom and the United States (OECD, 2014, 2018). As highlighted by Dang *et al*. (2020)'s study, the PISA 2012 results might not fully represent the entire population of 15-year-olds in Vietnam, given that around 44% of them, primarily those not in 10th grade, did not participate in the test as they have left school. However, despite making adjustments to account for these factors, the revised outcome from the study for Vietnam still remained exceptional when compared to other countries at similar GDP levels. The recently released PISA 2022 results show a decline in Vietnam's ranking, but Vietnam remains an outlier in the correlation between results and GDP (OECD, 2023). Other assessments and investigations, such as the Trends in International Mathematics and Science Study (TIMSS) and Young Lives' studies, independently confirmed the encouraging results of Vietnam's general education system, even in disadvantaged settings (Singh, 2014; Parandeka and Sedmik, 2016; McAleavy, Ha and Fitzpatrick, 2018).

Vietnam has also established an outstanding reputation for gender equality in education (Nethercott, Nguyen and Hunt, 2010; London and Duong, 2023). Particularly within the ethnic (Kinh) majority population, there has been no substantial difference between the net enrolment rate (NER) for male and female students (MOET, 2014c). PISA results throughout the years also show that girls have equal or higher results than boys, especially in Reading (Ha, 2016; Azubuike and Little, 2019).

Multiple factors have been identified as the causes of these notable achievements of the Vietnamese educational system. For instance, Vietnamese culture, influenced by Confucian values and the Communist Party's ideology, views education as a critical pathway to personal growth and the betterment of the family, the community and the nation. Consequently, parents often strive to provide their children with better educational opportunities and are involved actively in their children's academic pursuits. Students generally work hard and assume great responsibility for their learning (Parandeka and Sedmik, 2016). Similar to other East Asian countries, Vietnam's reliance on rote memorisation, rigorous standards and regular assessments could also be a contributing factor to its success in international tests like PISA (Dimmock and Walker, 2002; Jerrim, 2015).

Additionally, education is also central to the CPV and the government's agenda. This is evident in the level of spending on education, which is equivalent to 4.06% of the country's gross domestic product (GDP) and higher than other countries in Southeast Asia, such as Singapore (2.74%) and Laos (2.3%)

(Hai and Kendall, 2023). Improvements in school facilities nationwide are visible as a result (McAleavy, Ha and Fitzpatrick, 2018). There is also little doubt that the educational system has significantly benefited from the three decades of sustained rapid economic expansion and political stability that Vietnam has experienced since the 1990s (London and Duong, 2023).

The strong and consistent commitment of the government to improving gender equality in education is also noticeable through various policies targeting issues such as gender stereotypes and gender-based violence in education (UNESCO, 2018). Closing the opportunities–outcomes gap between the Kinh majority and other ethnic minority groups also receives significant attention from the CPV and government (McAleavy, Ha and Fitzpatrick, 2018).

The effectiveness of the system in helping students from low-income backgrounds catch up may be attributable, in part, to the fact that teachers spend the majority of their time in the early grades on ensuring that all students in the class reach a minimum acceptable level of academic performance, rather than focusing on the needs of the most academically gifted students. There is also no significant difference between the qualification levels of teachers in poorer areas and more advantaged areas (Woodhead, Dornan and Murray, 2014). Alongside this, Vietnamese schools generally have low rates of teacher absenteeism (Parandeka and Sedmik, 2016)

Overall, a combination of cultural values, economic progress, teaching traditions, government commitment, policy intent to improve equality and a disciplined teachers' working environment has enabled Vietnam's educational system to achieve impressive outcomes. However, the system also faces significant weaknesses and challenges that must be addressed for continued improvement.

Enduring weaknesses and challenges

First, in terms of equity, although the attainment gap between students of the Kinh majority and the ethnic minority may be narrow in the early grades, this gap appears to be widened at later ages. Minority children, especially in the mountainous areas of North Vietnam, drop out of school at far higher rates than others. Disparities in enrolment rates and years of education between boys and girls are also more severe in these ethnic minority communities (Phan and Coxhead, 2023). Furthermore, the limited availability of full-day schooling and private tutoring for students from disadvantaged backgrounds further contributes to educational inequities (Dang and Glewwe, 2017).

Another factor that can aggravate the equity issues is Vietnam's unique policy of socialisation/societalisation *(xã hội hóa)* to reduce the fiscal burden of education expenses on the state's

budget. Generally, public primary and secondary education in Vietnam is either free or requires a very low tuition fee. However, guided by the socialisation/societalisation approach, schools are allowed and expected to generate off-budget revenue to cover their expenses via, for example, seeking donations from businesses and organisations, collecting supplement fees for school operations, and providing extra services for those who can pay for them. On the one hand, this form of co-payments between the government and other stakeholders to finance education could be considered an apt and necessary strategy to help prevent the collapse of the public education system, given the limited financial ability of the state in the aftermath of wars (London, 2021). On the other hand, when inappropriately used, the policy risks widening the gaps among students with different backgrounds and placing unnecessary financial burdens on families. Recently, a tendency to abuse and over-rely on this socialisation policy has been identified (Tran and Nguyen, 2022).

Another critical issue confronting the Vietnamese educational system is its approach to curriculum, pedagogy and assessment, which relies heavily on rote memorisation, teacher-centred instructions and high-stakes exams. While such an educational approach may result in the country's outstanding performance in international assessments such as PISA, there is a widespread belief that the system falls short of equipping young people with the necessary knowledge and skills for the modern world, such as critical thinking, intellectual curiosity, problem-solving, collaboration and communication skills.

However, addressing this issue is a demanding task for Vietnam. Long-held beliefs and practices rooted in cultural and political heritages remain profoundly influential. Teachers in Vietnamese classrooms are primarily expected to seek knowledge from authoritative sources such as books and classics and transmit it to students. Teachers are considered authority figures to be admired, respected and obeyed. Students are accustomed to passively receiving and memorising information rather than questioning, evaluating, or generating new knowledge. Questioning and challenging the teacher's knowledge may be interpreted as undermining the teacher's position, causing a loss of face, therefore contradicting Vietnamese (Confucius) cultural expectations (Thanh, 2008).

Alongside this, given the Communist Party's influence and the importance of ideological alignment for its survival, there is a tension between fostering a more democratic approach to education and the need for normative conformity. Balancing the promotion of critical thinking, creativity, and individuality with political expectations can be a challenging task (London, 2019).

Similar to other Asian countries like China, Korea, and Singapore, academic pressure in Vietnam is intense. The primary emphasis lies on achieving outstanding grades and securing places at prestigious

universities, leading to a highly competitive and demanding educational environment. This academic pressure places significant psychological and emotional strain on students, often resulting in high levels of stress and anxiety (Nguyet, Hanh and Linh, 2018; Phuong, 2019).

Another consequence is the tendency to focus on quantity over quality and exaggerate the results to meet unrealistically ambitious goals, which is often referred to as the "achievement disease" *(bệnh thành tích)* or "superficiality disease*" (bệnh hình thức).* For instance, teachers may resort to various techniques to enable students to obtain sufficient grades to progress to higher levels, even if it means allowing copying from peers or textbooks without comprehension. This practice has led to the phenomenon known as 'sitting in the wrong classrooms' *(ngồi nhầm lớp)*, where students are not appropriately placed according to their actual level of knowledge and abilities (Duc and Tam, 2013).

It is noteworthy that while education is central to Vietnamese society and teachers are generally respected, they are poorly paid. Research data shows that most teachers claim their salaries are insufficient for living costs. They must earn extra money from other employment or by organising private classes. Some may pressure their students to attend these classes due to their poor pay. Salaries of the school principals are also low even though they are experienced teachers, and their jobs are highly demanding (Dang, 2013; Duc and Tam, 2013; McAleavy, Ha and Fitzpatrick, 2018). This situation poses challenges in recruiting and retaining talented individuals in the education sector.

Finally, the hierarchical structure within the system and the top-down decision-making processes have traditionally left little room for school leaders and teachers to voice their concerns, as well as limited autonomy to adjust their school strategies and teaching approaches. This lack of autonomy, coupled with cultural aspects such as respect for authority, seniority and harmony, further hinders the formation of an open environment for exchanging knowledge and experiences within schools (Saito, Tsukui and Tanaka, 2008; Truong, Hallinger and Sanga, 2017; McAleavy, Ha and Fitzpatrick, 2018).

2.3. Vietnam's education reform efforts

2.3.1. Major education reforms during the period of 1979-2012

Arkadie and Mallon (2004) note that "one interesting characteristic of the Vietnamese system was its pragmatic flexibility—when it was evident that the system was not working, there was a willingness to experiment with changes" (p.76). Such flexibility and pragmatism of Vietnam's leadership are evident not only in military tactics during wars, politics and economics when undertaking the *Đổi mới* reform in

the 1980s but also in education via a series of significant reforms since the 1970s. There is no doubt that the CPV and the government recognise the drawbacks of their educational system. The 1979 Reform, the 2000 Curriculum Reform, and the 2011/2012 Pedagogical Reform, on the whole, show the continuous commitment of the party-state to improving the quality of schooling by moving towards a more holistic and learner-centred education. However, in general, none of the reforms have been able to significantly improve the problematic conditions for which they were introduced.

The 1979 Reform

Resolution 14-NQ/TW, issued in 1979 by the CPV, initiated a need for education reform after reunifying the two separate educational systems in North and South Vietnam. A uniform 12-year general education system was established, followed by a new set of textbooks used nationwide. Resolution 14-NQ/TW also showed the intention of the CPV towards a more practical and learner-centred education. The 1979 reform aimed to move away from the traditional chalk-and-talk teaching approach and emphasised the integration of learning and doing (Political Bureau, 1979). However, the CPV later acknowledged the limited outcomes of this reform, given the country's challenging conditions after decades of war (Communist Party of Vietnam, 1993).

The 2000 Curriculum Reform

The second major reform period, known as the 2000 Curriculum Reform, began in 2000 with a new plan to renovate the curriculum, replace the textbooks, and modernise pedagogical practices. Primary and lower-secondary education curricula were published in 2001 and 2002, while the national curriculum framework for students aged 6 to 18 was officially announced in 2006, indicating a delayed effort to establish consistency throughout the system.

The introduction of this national curriculum framework, known as the Curriculum 2006 (C2006), was significant in several ways. First, it was the first overall guideline for teaching and learning in Vietnam. Previously, the textbooks served as the *de facto* curriculum, and teachers were trained to strictly deliver the content of these textbooks, lesson by lesson (Duggan, 2001). Second, the philosophy of balancing knowledge acquisition and real-life applications was realised by categorising the educational goals in terms of knowledge, skills and attitudes, emphasising that students needed to develop practical skills and positive attitudes apart from having a solid foundation of disciplinary knowledge. Additionally, detailed suggestions were provided to transform the pedagogical approach, such as using role-playing, games,

discussions, field trips, and experiments to promote students' active and creative participation in learning (MOET, 2006).

Despite the government's intention to overhaul the system, evidence suggests that the status quo persisted during the 2000 Curriculum Reform. Lecture-style teaching and rote learning remained prevalent in classrooms. Teachers still wielded authoritative control, resulting in students maintaining silence for long periods, obediently following orders, and pleasing teachers by providing expected answers. While active learning techniques were used occasionally, the focus remained on covering textbook content rather than fostering deep understanding and relevance to students' daily lives (Saito, Tsukui and Tanaka, 2008; Shadoian-Gersing, 2015; Kataoka *et al.*, 2020; Tanaka, 2020).

The 2011/2012 Pedagogical Reform

The pedagogical reforms in 2011/2012, including the LAMAP method and the Vietnam Escuela Nueva Programme (VNEN), further exemplified the CPV and the government's dedication to change by learning from successful practices in other countries.

The LAMAP method, also known as La main à la pâte (*Bàn tay nặn bột*, derived from the French phrase 'putting the hand in the dough'), is an educational model formulated by Georges Charpak, a renowned Nobel Prize Laureate from France. This model promotes learning through hands-on experiences and provokes students' curiosity, critical thinking and autonomy, especially in math and natural sciences. Since 2011, it has been widely implemented in primary and lower-secondary schools. However, to date, there has been limited evaluation of its effectiveness.

Another initiative worth mentioning is the VNEN Programme, based on the Escuela Nueva model initially implemented in Columbia in the 1970s. The Vietnamese MOET was impressed by the model's success in transforming classrooms in challenging conditions into more engaging and practical learning environments through self-paced learning guides, student government, formative assessments and school-community partnerships. After conducting a pilot programme in disadvantaged areas of Vietnam, which showed initial positive results, the MOET decided to scale up the implementation (Parandekar et al., 2017).

The implementation of the VNEN programme, financially supported by the World Bank, is also referred to as the New Schools Project *(Trường học mới).* As its name implies, the project aimed to significantly renovate many aspects of Vietnamese schools and promised to promote progressive learning at a low cost. The project attracted a large number of primary and lower-secondary schools to opt-in, including

those that voluntarily participated despite not receiving funding from the World Bank. However, as the project unfolded, the initial enthusiasm gave way to a sense of disappointment and frustration.

Le's study presents qualitative evidence that exposes the discouraging reality of VNEN implementation. The original model's sophisticated philosophy was reduced to a standardised 10-step learning process when translated into classroom practices. Students had limited control over their learning as they mechanically followed these steps and the instructions in the learning guides. Parents reported that their children often returned home with little understanding of the lessons, and some teachers felt the need to supplement the VNEN methods with traditional teaching techniques to ensure compliance with the curriculum standards (Le, 2018). The resistance from both teachers and parents was so strong that numerous schools had no choice but to discontinue the programme (Minh Duc, 2016).

In summary, the education reforms during the period of 1979-2012 appear to result from a genuine desire to improve the educational landscape in Vietnam. However, the reality of implementation revealed a discrepancy between the ideal and the actual classroom practices. The difficulties that Vietnam has experienced reinforce the idea that changes on the ground require not only policy changes but also a holistic understanding and a strategy for actions that target multiple underlying factors within the politico-cultural and institutional contexts that enable and inhibit reform.

2.3.2. The Fundamental and Comprehensive Education Reform (FCER)

The CPV and the Vietnamese government have again shown their willingness to learn from past failures. In November 2013, the CPV released Resolution No. 29-NQ/TW, underlying the current weaknesses of the educational system and emphasised the necessity of a fundamental and comprehensive reform (Communist Party of Vietnam, 2013). The Resolution states that:

> The quality of education and training continues to be inadequate, especially in higher education and vocational training. The educational system lacks cohesion between different levels and educational approaches, favouring theoretical knowledge over practical skills. The system is not adequately linked to research, production, business, and labour market demands. It does not sufficiently emphasise moral education, lifestyle development, and work-related skills. Teaching methods, examination and assessment approaches are outdated and lack substance (Communist Party of Vietnam, 2013, p.1).

It defines the nature of the FCER:

The fundamental and comprehensive education reform involves significant and essential changes, encompassing ideologies, goals, content, methods, mechanisms, policies, and conditions for implementation. It includes changes in Party leadership, State management, governance of educational institutions, and the participation of families, communities, society, and learners. The reform covers all educational levels and all fields of study (Communist Party of Vietnam, 2013, p.2).

Subsequently, a series of policies covering various aspects of education were implemented to achieve the intent of the CPV. The following paragraphs briefly outline the notable policies in general education.

Assessment and examination

The reform began by addressing the area of assessment and examination. In 2014, Circular No.30/2014/TT-BGDĐT issued by the MOET for primary schools garnered considerable attention. The Circular highlights replacing the traditional grade-based evaluation system with an alternative system which categorises students' outcomes based on whether the students meet the specific requirements of the subjects. Teachers are required to offer students oral and written feedback rather than giving concrete grades and ranking (MOET, 2014b). The policy's aim, arguably inspired by the success of the Finnish educational system, is to promote formative assessment methods and reduce academic pressures for students.

In the same year, another attempt to reduce exam pressure was the merger of the National High School Graduation Exam and the National University Entrance Exam, allowing students to use their results for both purposes simultaneously (MOET, 2014a). Additionally, homework for primary students is banned in full-day schooling. Primary schools are also not allowed to organise academic competitions among students (MOET, 2014a).

These bold policies sparked intense discussions and debates within the education community and the wider public. Notably, various gaps and incompatibilities were recognised during the initial implementation of No.30/2014/TT-BGDĐT regarding classroom assessments. Critics claimed that the policy created an unnecessarily heavy workload for teachers and could not match classroom realities. In response to the criticisms in 2016, the MOET issued a new Circular No.20/2016/TT-BGDĐT, revising several aspects of the previous policy. The revised Circular introduced a more flexible and hybrid approach, with a continued emphasis on formative assessment while also allowing a limited amount of summative assessment, particularly at the end of academic semesters (MOET, 2016).

Another critical aspect of transformation is the curriculum. In 2017, the MOET released the draft of the new National Curriculum Framework for General Education to gather feedback from experts, the education community and the general public. Draft curricula for specific subjects were also published in early 2018. Alongside this, the MOET conducted a trial implementation of the new curriculum in a select group of schools from six provinces and cities, representing the major socio-economic regions of the country. In late 2018, based on the feedback received and the outcomes of the trial implementation, the official National Curriculum Framework for General Education was introduced, known as the Curriculum 2018 (C2018). However, it was not until 2020 that the new curriculum was officially implemented, starting with Grade 1.

The C2018 holds significant importance for two primary reasons. First, it redefines the educational aims of Vietnamese general education. Previously, the educational aims in the C2006 were stated in terms of knowledge, skills, and attitudes. However, the MOET found this structure inadequate in moving away from the tradition of knowledge transmission. Drawing inspiration from the competency-based education approach (CBE) supported by the OECD, the MOET redesigned the educational aims and objectives around the concepts of competencies and qualities (Duong and Dao, 2022). In the C2018, "competencies" *(năng lực)* are defined as:

> the individual attributes developed based on natural potential and educational experiences, enabling one to utilise knowledge, skills and other elements, such as interests, beliefs, and motivation, to carry out tasks and meet demands in specific circumstances (MOET, 2018a, p.37).

Meanwhile, 'Qualities' *(phẩm chất)* are "the positive characteristics of individuals evidenced in the forms of attitudes and behaviours" (MOET, 2018a, p.37). The unique addition of "qualities" to the competency-based education (CBE) model is to fit with the traditional Vietnamese philosophy of balancing capability and morality (MOET, 2017).

The C2018 outlines five key qualities (patriotism, compassion, diligence, honesty, and responsibility) and three general competencies (autonomy and self-learning, communication and collaboration, and problem-solving and creativity) as the overall aims for general education. This design aligns with the global trend of using the Outcome-based approach to ensure the consistency of the system. Predefined expected learning outcomes are utilised as a roadmap for developing content, textbooks, teaching methods, and assessment (European Centre for the Development of Vocational Training (CEDEFOP), 2008). In addition, putting the notion of competencies and qualities at the heart of teaching and learning

delivers a stronger message that knowledge is no longer the focus and should be taught in collaboration with practical applications.

Another highlight of the C2018 is its intention to offer schools and teachers more autonomy in designing their school plans and educational approaches. Instead of strictly adhering to prescribed schedules, content and methods, schools and teachers are encouraged to select and utilise different sources of materials and customise their teaching strategies to meet the needs and interests of their students and the local contexts. This flexibility enables educators to place students at the centre of the learning process, viewing them as active participants who can take ownership of their learning.

The C2018 is coupled with a new policy to accept multiple sets of textbooks that align with the overall requirements and goals of the C2018, ending the previous practice of relying on a single set of textbooks throughout the country. This shift is expected to promote a localised approach to education, diverse pedagogical practices and healthy competition among textbook publishers.

Professional development

The Vietnamese government acknowledges that changes in other areas are necessary to support the implementation of the C2018. Regarding teachers' quality, under the Education Law 2019, primary school teachers are now required to hold at least a bachelor's degree (four-year training) instead of an associate degree (two-year training) (National Assembly, 2019). Existing teachers who do not meet this requirement need to participate in additional programmes to update their qualifications.

Additionally, a national project named Enhancing Teacher Education Programme (ETEP) was launched to deliver continuous professional development for teachers and school leaders. The programme applies an alternative model to replace the traditional face-to-face, train-the-trainer, or cascade model of the past. The new model follows training formulas known as "Five- Three – Seven" or "Seven – Two – Seven". Teachers and principals spend five or seven days to self-study on the learning management system designed by the MOET to have a fundamental understanding of the C2018. Educators then participate in a three-day or two-day course of face-to-face training in their local areas instructed by trainers who are university lecturers or core teachers (i.e., experienced teachers nominated or selected by the schools and local authorities). The remaining seven days are for completing the assignments and projects under the support of the trainers.

There are nine modules covering a wide range of topics, including curriculum principles, pedagogy and assessment practices, student counselling, school culture and school environment development, technology integration and fostering collaboration between schools, families, and communities.

By utilising a blended learning approach that combines e-learning, face-to-face instruction, and practical assignments, the program aims to ensure that educators genuinely understand C2018's principles and can translate them into actual practices. Apart from the ETEP, teachers also participate in workshops organised by their local DOETs or BOETs and training from the textbook publishers.

A further initiative to enhance school-based in-service training is implementing the Lesson study model – a Japanese-inspired approach to promote professional learning communities within schools. In this model, teachers work together to plan, perform, observe and reflect on lessons, focusing on improving students' learning. The model is widely encouraged as an integral part of implementing the C2018.

School governance

Acknowledging the increasing emphasis on granting schools more financial autonomy through the socialisation/societalisation policy, the MOET has taken steps to address transparency and equity concerns.

One attempt is Circular 16/2018/TT-BGDĐT, which requires fundraising within schools to be based on willing participation. Schools cannot impose or compel contributions from families by setting standard supplementary fees for all students. In addition, fundraising information must be publicly announced to ensure transparency (MOET, 2018b).

Another important policy as schools gain increased academic and financial autonomy is establishing School Governing boards/School Council *(Hội đồng trường)*. A governing board comprises the secretary of the CPV cell in the school, the principal, the chairman of the school's Labour Union, the secretary of the Ho Chi Minh Communist Youth Union, representatives of teachers and administrative staff and representatives of local authorities, parents and students. The responsibilities of the boards include setting the school's strategic direction, drafting the school's policies and overseeing the school's academic and financial performance (MOET, 2020a).

Overall, numerous transformations are occurring within Vietnam's educational landscape. However, as with past reforms, the same questions arise whether these changes can sufficiently address the system's entrenched traditional beliefs and practices.

The implementation of the FCER

Existing research data on implementing FCER policies suggests that schools and teachers are generally accepting the policies and open to changing their practices. However, acceptance does not necessarily equate to full commitment and effective implementation.

Nguyen's study (2020) on policy changes regarding the National High School Graduation Exam finds that despite the desire of the government to establish uniformity across the system, the vagueness, hurried implementation and inconsistency of the policies along with the diverse school contexts, result in discrepancies among how school leaders in Hanoi (the capital city of Vietnam) interpreted and managed the implementation of policies in their schools.

McAleavy, Ha and Fitzpatrick's data (2018) from interviews with teachers and school leaders in the Northern provinces suggests a prevailing mixed approach to pedagogy – a combination between the traditional knowledge-transmission method with more student-centred methods, commonly known as "the active teaching methods" (*dạy học tích cực*) in Vietnam. While the MOET does not officially approve of the mixed approach, given the level of autonomy teachers have, they choose to adopt this hybrid model, claiming that it combines the best of traditional and modern methods. And as long as the curriculum standards are met, the MOET seems to tolerate this approach. However, local educational experts question the effectiveness of this hybrid approach as they view the use of student-centred practices in Vietnamese classrooms as generally superficial.

Dimmock *et al*. (2021)'s study on Central and South Vietnam schools confirms the findings of previous studies. It highlights the loose coupling or disconnect between the central government and schools. The study concludes that the guidance provided by the MOET lacks specific contextualised information, leaving schools to interpret, select and adapt the reforms based on their capacities and resources.

Duong and Dao (2022)'s longitudinal qualitative data suggests an understanding-action gap in developing student competencies. While teachers show their awareness of giving students more opportunities to connect learning with real-life situations, the focus on subject-specific skills and knowledge seems to persist. If offered, transferable skills are often taught separately from academic knowledge and skills.

These research findings align with the insights presented in the previous section regarding the contemporary political, cultural and social contexts of Vietnam. Despite being a country governed by a dominant communist party and a bureaucratic system, implementing central policies in Vietnam is far

from straightforward. There is a relatively high level of decentralisation and discrepancy within the educational system, which could result from both intentional and unintentional practices.

This circumstance raises a series of intriguing questions: How are schools receiving and translating the reform policies initiated by the central government? What factors, especially in the local contexts, shape their decisions? Given that under the FCER and C2018, the central government appears to be withdrawing their strict control over school and teachers' practices, how much power and in what ways is a centralised system prepared to share? What alternative mechanisms, if any, are being used to ensure the reform objectives are met? How do the schools and educators respond to this given autonomy?

The existing research on the FCER is generally insufficient to answer the above questions. There needs to be more evidence from classroom observations, especially during the implementation of C2018 - the recent and arguably the central policy of the FCER, to evaluate the current status of the reform. Additionally, important aspects such as classroom assessment, continuous professional development, school governance, working environment and school-family partnership should be more adequately explored. This study assumes great significance as it provides a timely, more comprehensive and penetrating understanding of the reform implementation processes through in-depth investigations into the contexts of schools. The study is based on the key notion that a school's policy implementation can only be fully understood by carefully analysing its specific and unique contexts.

2.4. Summary

Chapter 2 provides an overview of Vietnam's educational system by exploring the implications of geographical, historical, economic, political, cultural, social and institutional contexts on its features, achievements, desires and challenges. Through a careful analysis of these contexts, it is clear that despite the great achievement of the country in expanding educational opportunities for its people, Vietnam is now facing the issue of improving the quality of schooling experiences while many aspects of the society seem not to be in line with the planned changes. The gaps between the policy intent and implementation reality in the 1979 Reform, 2000 Curriculum Reform and 2011/2012 Pedagogical reform show that there is much more work to do to overcome the entrenched traditions of the system.

The FCER, which encompasses multiple areas of schooling and utilises a wide range of practices learned from effective systems, promises to build a better foundation for more radical and sustainable changes. However, the existing research data is insufficient to understand whether this promise can be fulfilled, leaving important questions unanswered.

Although Vietnam's status as a communist/socialist country may suggest that what happens within the system is unique and there is little implication for the wider international context, the analysis in this chapter reveals that the challenges that Vietnam is facing might not be so much different from those encountered by other countries, especially neighbouring countries in South-East Asia. Vietnam's attempt to balance centralisation and decentralisation is not unique; thereby, it is worthwhile to investigate.

The next chapter, Chapter 3, provides an overview of the critical issues and approaches in implementing education reforms to situate the FCER's intent in a broader context and highlights theoretical and empirical areas that require further exploration and attention.

CHAPTER 3: REVIEW OF THE LITERATURE: KEY ISSUES IN IMPLEMENTING EDUCATION REFORMS

3.1. Overview

The previous chapter provides an understanding of Vietnam's education system and the context in which the FCER is taking place. Building upon this groundwork, the current chapter reviews the relevant and important concepts and issues in the field of educational change and reform to gain a deeper understanding of the FCER's characteristics.

The chapter explains various models that conceptualise the process of change, the multiple criteria to evaluate the effectiveness of reform, and the persistent challenge of bridging the gap between policy and reality. It delves deeper into the implementation phase of reform, offering an analysis of four key tensions (i.e., Fidelity-Adaptation, Authority-Autonomy, Rationality-Psychology, and Piecemeal-Comprehensive system) that show different perspectives to navigate the complexities of reform implementation. This analysis allows the study to position the FCER within a broader context and recognise theoretical and empirical gaps that could be filled.

3.2. The problem of making change happen in education

This section outlines various change models proposed by scholars such as Guskey (2002), Rogers (2003), Kotter (2012), and Nguyen and Ng (2020) in conceptualising the phases of change. It discusses a three-phase model as the shared logical structure across these models: initiation, implementation, and institutionalisation. Furthermore, the section explores different criteria for evaluating the success of change initiatives, extending the focus beyond end outcomes to include examining the process itself. Building on this foundational knowledge, the study highlights the challenges in the processes of making change in the three phases, with a particular emphasis on the implementation and institutionalisation phases. It underscores the importance of capacity building, which encompasses enhancing motivation, competencies, and resources in making change happen. Finally, this research utilises the discussions to set the focus for the study: examining the implementation phase of Vietnam's FCER. It aims not only to explore the spread or breadth of policy adoption among schools but also to assess how FCER policies

have impacted the deeper aspects of teaching and learning and the critical role of capacity building in this reform process.

3.2.1. The phases of change

Several efforts have been made to conceptualise the process of change in organisations, including educational institutions such as schools. These models vary in focus and the phases they consider critical for successful change. For example, Rogers (2003) considers change from the perspective of an individual making decisions towards an innovation, starting from gaining knowledge about the innovation, to forming an attitude toward the innovation, making a choice to adopt or reject it, implementing the innovative idea (putting the innovation into use), and finally confirming the decision (seeking reinforcement or possibly reversing the decision if exposed to conflicting results). Kotter (2012) proposes a model from the viewpoint of a leader who wants to create change, including eight steps ranging from creating urgency, forming a coalition, and developing a vision for change, to communicating the vision, removing obstacles, creating short-term wins, building on the change, and anchoring the changes. Guskey (2002) suggests a model of change in a school context that begins with professional development activities, leads to changes in teachers' knowledge and practices, and ultimately results in improved student learning outcomes. Nguyen and Ng (2022) develop a model of establishing changes led by teachers, including experimentation, persuasion, and behavioural modelling (i.e., teachers working together in sharing, exchanging ideas, and demonstrating performance). These models are complementary, based on a similar classic sequence that posits change as involving three major phases: initiation, implementation, and institutionalisation.

In the first phase - *initiation*, mobilisation or developing - stakeholders typically recognise the need for change, establish an image of the desired change, gather support and resources, test out prototypes and develop the overall plan for implementation (Berman and McLaughlin, 1976; Fullan, 2007; Anderson, 2010; Hall and Hord, 2020).

The *implementation* phase refers to the attempt to put the change into action. It involves translating the goals and strategies identified in the first phase into detailed plans of what and how change should be made and then executing those plans (Fullan, 2007; Anderson, 2010; Hall and Hord, 2020).

The final phase, known as *institutionalisation,* continuation, sustaining or incorporation, focuses on deeply integrating the implemented change into the structure, culture and routines of the organisations. If the process is effective, the new practices become embedded parts of the organisational behaviours,

and ultimately, they are no longer considered 'new', 'temporary' or 'add-on' but ongoing and prevalent practices (Berman and McLaughlin, 1976; Anderson, 2010).

This three-phase model of change arguably has its roots in the understanding of change as three steps: unfreezing, moving, (re)freezing, often attributed to the work of Kurt Lewin in the 1940s. The three-step model links the process of making changes to the act of moulding the ice cube into a new shape by first, heating it so that it melts and loses its solid form. Once the ice has transformed into water, it is easier to be reshaped into new forms and structures. Then, the water must be frozen again to make the new forms permanent. The water becomes solid once more; however, it is now in a new solid state.

The model delivers a simple but powerful message that changing involves breaking down the existing structures, reshaping and solidifying the new ones. While this classic model has been greatly influential in the field of change management, it is not without criticism. Critics argue that the model oversimplifies the complex nature of change. Change is rarely a linear process that neatly fits into these three distinct stages (Cummings, Bridgman and Brown, 2016). The same criticism could also be applied to the three-phase model of change, including initiation, implementation and institutionalisation. Although Fullan (2007) applies this model in his work in the field of education, he cautions against viewing it as a linear process. He emphasises that "events at one phase can feedback to alter decisions made at previous stages, which then proceed to work their way through in a continuous interactive way" (Fullan, 2007, p.67). In the same vein, Verspoor (1989) highlights that the beginning and end of each phase often cannot be precisely identified, and the depicted sequence does not apply to all types of change in education.

This research takes the stance that although the three-phase model serves as a useful starting point for thinking and discussing change, it is possibly inadequate to capture the intricacies of change fully. The model may inadvertently create the impression that change is a rigid process with clear boundaries, leading to the risk of neglecting the fluidity and integration between phases. This is not to say the model should be abandoned entirely, but it is vital to interpret it with a more nuanced and dynamic perspective.

3.2.2. Criteria to evaluate a change process

Another critical aspect of understanding change is determining when a change initiative is considered successful. It is commonly assumed that the success of change is measured by the extent to which the goals and objectives of the change effort are achieved, for example, improvements in students' outcomes (Desimone, 2002). However, the existing literature suggests evaluating the change process itself is important rather than focusing solely on the ending outcomes (Pietarinen, Pyhältö and Soini, 2017).

Over 40 years ago, Berman and McLaughlin (1976) proposed three measures of the effectiveness of innovation implementation, including *perceived success*, *change in behaviour* and *fidelity of implementation*. *Perceived success* refers to the extent to which participants of the implementation project believe the project's goals were met. *Change in behaviour* focuses on the actual changes in the behaviours of the people expected to change. *Fidelity of implementation* examines whether the project was implemented as originally planned. The authors argue that it is impossible to draw conclusions regarding the effectiveness of an innovation until one understands how that innovation was implemented in practice. Simply put, evaluators need to be sure what they are evaluating, given that the design and the actual implementation of change may not always align.

Scaling up is a further concept often associated with evaluating change and reform. The term is traditionally linked to the expansion of educational practices and innovations to a more significant number of adopters, which could be districts/cities, schools, or teachers. Scaling up is considered not only a measure to retrospectively investigate a reform attempt but also an important goal and a strategy for action that many policymakers increasingly adhere to. Coburn (2003) emphasises that a narrow focus on increasing the number of adopters risks overlooking other necessary qualitative measures that contribute to a reform's long-term, meaningful impacts. She proposes a multi-dimensional framework to define the act of scaling up which comprises depth, sustainability, spread and shift.

By *depth*, Coburn (2003) argues that what happens at the classroom level should be the centre of reform efforts. It is inadequate to merely assess change using surface-level indicators, such as the presence or absence of materials or activity structures. Evaluators should dig deeper, investigating the extent to which the reform has penetrated deeply into the core aspects of teaching and learning. This involves challenging and influencing teachers' beliefs, reshaping norms of teacher-student interaction and transforming pedagogical principles. Coburn (2003) also introduces an expanded perspective on the notion of *spread*, which suggests going beyond spreading the change to more and more schools, and focusing on spreading the deep changes in norms and principles within each school.

In discussing *sustainability*, Coburn (2003) highlights the importance of assessing whether changes persist over time. It is not common that evidence of change can be found in the presence of the "short-term influx" of external resources, professional development and assistance offered to the schools during the early period of reform (p.6). However, the true testament to any reform lies in the ability of schools to sustain the changes when the initial funding, personnel and energy are no longer available. Building upon this notion, Coburn (2003) also suggests the fourth dimension, *shift*, which centres on the ownership

of schools and teachers for reform over time. This dimension delves into the transition from external control to internal authority and responsibility, exploring the mechanisms and structures that enable schools and teachers to self-generate the changes.

In a similar attempt to develop a more comprehensive perspective, Hargreaves and Fink (2000) highlight three dimensions – depth, length, and breadth – in assessing reforms. They raise three key questions: Does the reform improve important rather than superficial aspects of student learning? Can the reform overcome obstacles and be sustained over time? And can the reform integrate effectively within the diverse surrounding environment of schools, extending its reach beyond a few schools, networks, or showcase initiatives?

Fullan and Quinn (2015) suggest a further framework to measure the quality of change, encompassing four types of engagement in the change process. *Inertia* characterises a state in which support for change is not part of the school's agenda; teachers are isolated and get little guidance or help to improve their teaching. *Resistance* represents a situation in which there are clear expectations for change, but teachers lack ownership and capacities. Thus, there is pushback and resistance. *Superficiality* is a situation in which the strategy for change is vague, and teachers feel comfortable with change; however, as a result, improvements are visible but only on surface levels. Finally, *depth* refers to an optimal environment that achieves a balance between clear strategies targeting deep, meaningful aspects of change and a strong climate that nurtures the motivation and capabilities of teachers to innovate and take risks.

3.2.3. The gaps between the ideal and the real

The preceding frameworks generally imply that there are numerous aspects to take into account when designing, making and assessing change. Empirical research evidence worldwide points to the fact that when considering indicators beyond short-term and superficial implementation, successful reforms are the exception rather than the norm. Many reform efforts in the United States since the 1960s have been reported to yield only modest or superficial outcomes (Verspoor, 1989; Fullan, 1993, 2000; Elmore, 2005; Harris, 2013; Hall and Hord, 2020). Recent attempts to transform educational systems from teacher-centred education to learner-centred in many countries, such as Mexico, India, Sub-Saharan Africa and China, present significant challenges in making radical changes (Chisholm and Leyendecker, 2009; Schweisfurth, 2013; Tabulawa, 2013; Bremner, 2019; Brinkmann, 2019). Stoll (2013) succinctly captures the reality by stating, "Let's face it: Improving practice is extremely hard" (p.33).

Why is making change happen challenging?

Numerous endeavours have been made to explain why making changes happen poses such immense difficulty. Fullan and Quinn (2016) suggest two key components of an effective change: the quality of the idea and the quality of the change process. The authors state, "Neglect one or the other and you will fail" (Fullan and Quinn, 2016, p.14).

Delaney (2017) offers a valuable perspective to understand the notion of policy in education. He explains that a policy is generally designed based on a theory of cause and effect, in other words, a hypothesis that outlines the initial conditions and predicted consequences: An action X is done at time t(1) will lead to an outcome Y at time t(2). The success of a policy depends significantly on the purpose and validity of this theory. However, not all theories underlying educational policies are reliable and accurate. Additionally, given multiple concerns, interests, and factors that shape the process of designing educational policies, not all theories prioritise genuine improvements in teaching and learning as the expected outcomes (Delany, 2017). Therefore, regarding the three-phase change model in education, policies may be ineffective not because they are badly implemented or institutionalised but because they are poorly developed in the first phase – initiation.

However, a considerable body of literature highlights the utmost importance of the implementation phase, in which the actual execution of policies takes place. This phase is often considered the most challenging part of the reform process because it is both technically and socially complex. There are so many aspects that need to be done, to learn, to unlearn, to relearn, and there are so many people involved, and so many things, which often seem beyond control, can go wrong during the course (Verspoor, 1989; Stoll, 2013; Delany, 2017; Pietarinen *et al*., 2017). Yet, policymakers have a long record of neglecting the actions that can be taken to support this challenging process (Hall and Hord, 2020). Fullan (1993) asserts that "The term implementation was not even used in the 1960s, not even contemplated as a problem" (p.12).

The problem of institutionalisation or continuation has also gained more attention recently. Fullan (2015) suggests that this problem should be considered equally important, if not more so, than the implementation problem itself. Hall and Hord (2020) offer a compelling metaphor, viewing the process of making change as the act of crossing a bridge. The bridge represents the implementing phase. However, the ultimate goal is to reach the other side – the sustaining phase, where the changes are maintained on a consistent and regular basis. The authors state, "Getting across the implementation bridge takes time. However, spending time on the bridge does not necessarily lead to continuing use"

(Hall and Hord, 2020, p.14). Sustaining change appears to require significant additional commitment and effort.

Capacity building

Three issues appear to be key in discussions about the challenges during implementation and institutionalisation: motivation, competencies and resources. Fullan (2006) emphasises the importance of developing these three components, referring to the effort as capacity building.

First, regarding motivation, Fullan (2007) states that understanding the conditions under which individuals are motivated to change is a key part of change endeavours. Similarly, Elmore (2005) underscores the significance of establishing an incentive structure that can bridge the prevalent gaps between the minority of teachers who are open to change and the majority who find it intimidating and threatening.

Second, a crucial aspect of the change process is learning. Implementing and continuing change requires individuals, particularly teachers, to acquire new knowledge, develop new skills and refine existing ones (Hall and Hord, 2020). However, Elmore (2005) posits that teachers are often expected to undertake tasks when they have not been prepared with adequate knowledge, skills, beliefs and values, and many may not believe in the feasibility of the changes. A lack of effective strategies to assist teachers' learning during the process of change is a significant pitfall of many reform efforts.

Finally, there is a widespread consensus that resources such as funding, staffing, technology, and infrastructure are important to the change process. The match between the available resources and the expected change not only sets the conditions for implementation but also serves as a sign of stability that instils confidence and encourages individuals to invest their efforts in achieving long-term success. Nonetheless, a perception that successful transformation can only occur with ideal resources may also be a barrier to change, hindering the exploration of alternative approaches to work with the existing resources more efficiently (Elmore, 2005).

Taking stock

The above literature review of pivotal issues in understanding and analysing educational change helps shape the focus of this research in four ways. Firstly, given that the C2018 – the central part of the FCER - has only been introduced to general education in Vietnam for two years, and recognising the role of understanding the process of change in the overall impact of the reform, a study that examines how the

FCER has been executed before measuring its effects on student outcomes appears to be timely and significant.

Secondly, this research primarily focuses on the implementation phase of the three phases of change, namely initiation, implementation and institutionalisation. By studying this phase, the study aims to provide insights into the processes, strategies, and factors that influence the translation of FCER policies into practice. However, considering the interrelation between the three phases, the study also pays attention to the extent to which the implementation process provides feedback to the policy-making process and how it establishes the foundation for continuing policies in the future.

Thirdly, this study aims to take a multidimensional approach in investigating the implementation of the FCER, not only examining the spread or breadth of policy adoption among schools and within schools but also how the FCER policies have affected the key and deeper aspects of teaching and learning including the pedagogical practices, teachers' beliefs and values, and teacher-student interactions.

Fourthly, the study delves into the process of capacity building, aiming to shed light on how issues of motivation, competencies and resources have been addressed during the FCER implementation. It also seeks to understand how the actors within schools respond to the strategies in place and how their responses influence the progress and status of the implementation.

The following sections further review the existing literature to understand different approaches and strategies for implementing reforms and capacity building. This understanding is crucial in characterising the approach that Vietnam is taking and providing the rationale for selecting CAST as the theoretical perspective for the present research.

3.3. Tensions in the reform implementation strategies

This section discusses the tensions that run through the literature on educational change and reform, providing insight into the diverse perspectives and schools of thought shaping the reform implementation landscape. The discussion revolves around four tensions, including the contrasting views between the fidelity and adaptative approaches, the struggle between central authority and local autonomy, the dichotomy between the rationality and the psychological perspectives of reform implementation, and the choice between piecemeal and comprehensive reform.

3.3.1. Fidelity versus Adaptation

The distinction between the fidelity and adaptive approaches to implementing change has been well captured in the literature (see Fullan, 2007; Anderson, 2010). The fidelity approach generally emphasises implementing policies and innovations as originally designed. The main aim of implementation under this perspective is to ensure that individuals and groups maintain adherence to the already-developed practices, which are often practices that have been proven to be effective in other contexts. Implementing practices with fidelity is a conventional approach as it seems logical to scale up what has shown positive results, even if it is often in different systems and environments. It reduces the possibilities of ineffective alterations and provides a clear basis for assessing the impact of the change (Fullan, 2007; Quinn and Kim, 2017).

Meanwhile, proponents of the adaptive approach suggest that change is a complex and dynamic process which requires ongoing adjustments and adaptations throughout implementation (Fullan, 2007). Adaptation is considered not a possibility but an undeniable reality that must be acknowledged and embraced for reforms to occur. In their work, Berman and McLaughlin (1976) discuss the fidelity approach, using the concept of "technological learning", and argue that while it is logically feasible, precise implementation is rarely observed in practice. They highlight another situation, non-implementation, in which the implementers resist making changes to their practices while the designers refuse to modify their innovations, resulting in no change. Alternatively, cooptation occurs when policy adjustments are made in response to the resistance of implementers or the implementers distort the policy to maintain their established practices. This one-sided adaptation also leads to failed implementation or superficial changes.

Berman and McLaughlin (1976) propose the concept of mutual adaptation, wherein both innovations and implementers' practices undergo modifications to align with each other's needs and requirements – a reciprocal process of adaptation. These authors recognise that this two-way adaptation may pose great difficulties and may not help fully achieve all reform goals. However, they consider it the most feasible approach to enable genuine implementation.

More recent work in the field of educational change acknowledges the significance of mutual adaptation, recognising that both the design and practice sides need to adapt to facilitate implementation in diverse school settings (Fullan, 2007; Anderson, 2010). Scholars have also made efforts to address the tension between fidelity and adaptive approaches by proposing terms such as flexibility within fidelity (Wedell, 2009) or scaffolding fidelity (Quinn and Kim, 2017). These authors suggest a staged model that combines

both approaches, which initially introduces the change that is true to the spirit of the design to help teachers understand the core principles of the reform while allowing and encouraging contextual adaptation and flexibility in a later stage.

The discussion of the discrepancy between the fidelity and adaptive approaches in this section sheds light on the challenges in decision-making for reforms in Vietnam and elsewhere, in which ideas are often borrowed from successful models in other contexts, especially Western countries. This researcher's review of the FCER policies, particularly concerning C2018, suggests that Vietnam is transitioning from a fidelity approach to a more adaptive approach in introducing innovations to its educational system. C2018 explicitly encourages flexibility in organising instructional practices to adapt to local conditions and students' needs. Initially inspired by Finnish education, the recent assessment policies implemented by the MOET underwent modifications in response to teachers' reactions. This adjustment reflects the MOET's recognition of the importance of adapting policies to local contexts and their responsiveness to the needs and concerns of educators. However, there has been limited research to evaluate how these adaptations affect the actual practices in Vietnamese classrooms. This study aims to explore this aspect further and provide insights into the process and its impact on the ground.

3.3.2. Central authority versus Local autonomy

The issues of motivation, competency, and resource development, or in other words, capacity building, as discussed in the previous section, are central to the process of implementing change. While policymakers and leaders may agree on the importance of capacity building, differing views on the specific processes involved may exist. One key question is: Who should be responsible for capacity building to enable change?

In the past, teachers traditionally worked as isolated professionals in their classrooms. The old professionalism, as Evers and Kneyber (2016) call it, assumes individual responsibilities and, together with it, the freedom of teachers to prepare themselves for their jobs. Teachers were not subjected to external accountability. They taught with nobody telling them what to do. However, the drawbacks of teachers' isolation have been widely recognised. Isolation frequently leads to conservatism and resistance to innovative teaching ideas. Effective teaching cannot solely rely on the experiences of the individual teacher (Fullan, 1993).

In response to social and political pressures, many governments feel the need to establish an accountability system using authority to maintain educational standards and ensure compliance and

consistency when implementing regulations and policies (Delany, 2017). Under this approach, often referred to as the top-down approach, reforms are something that happens to teachers rather than something they actively participate in. The decision-making power rests primarily with policymakers and administrators. Schools and teachers are seldom involved in shaping the policies that they later need to comply with (Malone, 2013). Professional development is brought to the school level through the cascade model, in which a small number of core teachers are trained to master and then disseminate a predefined package of knowledge to another group of teachers, who continue to train another group, and so on. As a result, teachers have limited influence in shaping their own professional development (Verspoor, 1989). Schools and teachers also have little or no voice in setting the conditions in which the reform takes place regarding financial, human resources, and facility aspects. Decision-making and resource allocation in these areas are typically centralised and controlled by higher levels of administration or government authorities. In places, high-stakes teacher evaluations are used to encourage compliance and adherence to predetermined standards (Fullan and Quinn, 2016).

A large body of literature acknowledges the limitations of the top-down approach. For instance, Fullan (1993) states that we cannot mandate what matters and is complex. Teaching is a highly complex and sophisticated work that cannot be changed by simply forcing teachers, even in the presence of rewards and punishments. The top-down approach often results in a lack of ownership and a thorough understanding of the reform (Tikkanen *et al*., 2003). The cascade model of professional development risks diluting the original message as the training moves down to the levels of schools and classrooms. The significant challenge also lies in bridging the knowledge received from the short-term, sporadic training sessions with the ongoing, diverse context of schools once the trainers have left (Verspoor, 1989).

Recognising these issues, there has been increasing support for greater decentralisation, school-based decision-making or a bottom-up approach to education reform. The key argument for this approach is the belief that those who are closest to the action, such as teachers, school leaders, and local communities, possess more appropriate, context-specific insights and ideas on how to effectively initiate and bring about change. Some advocates go as far as suggesting that policies should be removed altogether and replaced by market controls, giving schools the responsibilities and freedom to improve themselves (Delany, 2017). Therefore, market mechanisms (such as magnet schools, charter schools, vouchers, and open enrollment) to increase parental choice and school competition have been employed to tap into the potential of localised decision-making. The underlying theory is that market forces can act as a catalyst for improvement, encouraging efficiency, innovation, and responsiveness to the needs and preferences of students and parents (Waslander *et al*., 2010; OECD, 2012; Campbell, Hankey, and Seiden, 2017).

However, from experiences working with and within schools, scholars such as Fullan (1993; 2003) and Hall and Hord (2020) acknowledge that relying solely on bottom-up strategies is also insufficient. Without support and commitment from the higher-level authorities, the sustainability and scalability of school-based initiatives would seem to be even more limited than they are. Moreover, relying on market-based competition could create school segregation, increase inequities, and lead to the decline of public education systems (OECD, 2012; Waslander *et al.*, 2010; Campbell, Hankey, and Seiden, 2017).

Wedell (2009) and Zhao (2013) point out an interesting global phenomenon in which developed countries such as the United States and England are experiencing a shift towards greater centralisation. Meanwhile, developing countries, notably China, are moving in the opposite direction by embracing more decentralised policies. Zhao (2013) cautions that while trying to draw lessons from one another's achievements, countries may also unintentionally replicate each other's failures.

As systems are moving from opposite polarities, there is a tendency towards the middle ground. Recent attempts have been made to explore alternative approaches to address the tension between the top-down and bottom-up strategies. One such alternative is the notion of "centralised-decentralisation", as employed in Singapore, in which central authorities maintain strategic control while tactical autonomy is given to schools for implementation (Ng, 2016). In a similar vein, the "top-down-bottom-up implementation strategy" seeks to strike a balance between the role of the administrative level in determining general goals and support and the active participation of schools and teachers in developing local policies based on national ones (Tikkanen *et al.*, 2020).

Fullan (1993, 2000) suggests the influential concept of "pressure and support", claiming that an appropriate combination of both is necessary. However, the type of pressure that should be exerted, according to Fullan (2007), should be positive pressure that arises from the act of giving support. Schools feel pressure to change because they receive the government's necessary resources and other capacities. Similarly, teachers feel pressure to change when they are adequately supported by their collaborative community. With the essential support in place, they can no longer use the lack of resources as an excuse for not implementing the desired changes. This means pressure comes from capacity building. Or in the words of Elmore (2005), "Accountability systems cannot mobilise resources what schools do not have…. The capacity to improve precedes and shapes schools' responses to the external demands of accountability systems" (p.117).

A recent theme that emerges from the literature is the notion of collective autonomy or internal accountability. Hargreaves (2016) argues that no autonomy or absolute autonomy are both troubling

states of human existence. Without professional autonomy, teachers are unable to make decisions that are in the best interest of their students. On the other hand, having excess autonomy means giving them the freedom to exercise what might turn out to be - poor judgement. The alternative is collective autonomy, which grants teachers more autonomy from the external bureaucracies but less autonomy from each other. Collective autonomy requires teachers to be responsible to one another and their students. Teachers are encouraged and supported to work together towards a common vision, share responsibilities, and maintain transparency. In a similar vein, Fullan and Quinn (2016) advocate for the significance of internal accountability. They define it as the willingness of individuals and groups to take on personal, professional, and collective responsibility for continuous improvement and success for all students.

Fullan and Quinn (2016) further emphasise that to establish an effective accountability system, both internal and external accountability are important. However, internal accountability should precede external accountability. Policymakers and leaders should establish conditions for developing internal accountability so teachers can collaborate effectively before establishing external accountability. The authors argue that a strong internal accountability system is the condition for introducing external accountability measures.

Fullan and Quinn (2016) also highlight that external accountability systems should focus on guiding and supporting rather than punishing schools and teachers. Such measures include establishing and promoting professional standards and practices, monitoring the performance and health of the system, and insisting on reciprocal accountability at all levels to ensure that adequate and timely resources and support are given to schools and teachers.

Professional learning communities (PLCs) have gained recognition as a significant initiative to enhance internal accountability by fostering collaborative capacity-building for continuous improvement. This approach has been widely appreciated worldwide. However, Fullan (2006) warns that schools and teachers should view the concept and idea of PLCs as a critical solution to establish a new culture within schools, not just another program innovation.

Another direction to consider is the role of the middle level, such as districts or regions, in bridging the gaps between the educational system's top and bottom levels. Fullan calls this approach "Leadership from the Middle" (LftM). LftM calls for strengthening the capacity of the middle stakeholders so that they can work with schools more effectively to address local needs and become better and more influential partners to the central authorities (Fullan, 2015).

In summary, this section introduces different approaches to the issues of autonomy and accountability in education reform. Countries may choose between the top-down approach, the bottom-up approach, a focus on collective autonomy and internal accountability, or middle leadership. Alternatively, policymakers may integrate multiple measures to achieve a more holistic approach.

The initial review of the FCER policies of this study suggests that Vietnam's education system is moving away from the traditional top-down approach by giving provincial governments and schools more autonomy in implementing the reform while maintaining some control over the essential aspects, particularly the curriculum framework and professional development. This transition suggests a centralised-decentralisation approach. The implementation of the Lesson Study Model also indicates the MOET's effort to establish PLCs in Vietnamese schools, which could improve schools' internal accountability.

However, since there are few evaluations of how effective these alternative strategies are when put into practice, we need more evidence. Several important questions related to the issues raised by Fullan and Quinn (2016) need to be answered. For example, which external and internal accountability measures are being used to implement the FCER? Furthermore, there needs to be more research data on the role of the middle level in implementing the FCER. This study, therefore, also aims to gain some insights into the extent to which Vietnam pays attention to middle-level leadership and its impact on the reform implementation process.

3.3.3. Rational versus Psychological perspectives

Spillane (2004) highlights an important aspect of the conventional approach to education reform, which assumes that rational choice, in its traditional sense, governs the decision-making of the implementers. In this conventional approach, rationality is predominantly viewed in terms of logic and reason, often contrasting these elements with emotional or intuitive aspects. Therefore, when a policy fails during implementation, policymakers often attribute it to intentional resistance from local stakeholders who do not agree with or do not align their interests and agenda with the policies. This perspective posits that decisions are primarily driven by objective analysis and logical deduction.

However, recent research in this area suggests that implementing policy involves more than just rational aspects but also cognitive and emotional aspects. Scholars begin to switch to a micro perspective in understanding education reforms, paying attention to more sophisticated and down-to-earth issues of individuals and their cognitive and emotional behaviours towards implementing change (Delany, 2017).

Spillane (2004) explains that teachers and other local implementers may struggle to effectively implement the policies not because they disagree with them or lack dedication but because they may misinterpret the policies. To implement a policy, people need to construct an understanding of the policy message, and during this process, unintentional misunderstandings can occur, especially when the policy messages are not well communicated.

Huy (1999), Spillane (2002), Fullan (2003) and Hall and Hord (2020) all recognise that changes, particularly radical ones, often evoke strong emotional responses. Teachers become emotionally invested in these practices as they become accustomed to the old ways of doing things. These practices contribute to shaping their identity and how they make sense of the world around them. Thus, changes that require significant adjustments in perceptions and behaviours challenge teachers' values, beliefs, and habits, leading to feelings of anxiety, grief, uncertainty, disloyalty and incompetence. As a result, teachers may resist the new ideas as a defence mechanism to protect their emotional states.

Huy (1999) introduces the concept of emotional capability, which means the ability of an organisation to acknowledge, recognise, monitor, discriminate and attend to its members' emotions, claiming that this is a necessary condition for radical change.

The existing literature on education reforms in Vietnam seems to focus solely on the rational aspect. Researchers have examined policy designs and the alignment of reforms with teachers' interests and agendas. While studying the rational dimension is essential, as the only approach, it neglects the equally important cognitive and emotional dimensions that influence the implementation process. Exploring how teachers construct their understanding of policies and examining the emotional responses that arise during implementation would provide valuable insights and inform the development of strategies to build emotional capability in schools. This study will seek data to shed light on the cognitive and emotional factors at play, offering a more thorough understanding of the complexities involved in education reforms in Vietnam.

3.3.4. Piecemeal versus Comprehensive reforms

Desimone (2002) distinguishes between the one-at-a-time reforms and comprehensive reforms. This author argues that one-at-a-time reforms, such as focusing on individual teachers, single schools, or isolated systems, may yield positive results but are insufficient to spread and sustain the changes across a broader scale. In contrast, comprehensive reforms that strengthen and utilise the power of networks

among teachers, schools, and systems in a coordinated effort bring a more widespread and consistent impact (Desimon, 2002; Borman *et al*., 2023).

Hall and Hord (2020) state that individuals often fail to see themselves and their immediate organisations as integral parts of a larger system and the interdependence between the system's component parts. As a result, they tend to think primarily about themselves and are not able to understand and empathise with the work of others. Teachers may perceive their workload as overwhelming, while policymakers' jobs involve only passing laws and attending meetings that are not connected to what happens in the classroom. Similarly, government officials may view their jobs as difficult and complex while downplaying the demands of teachers working directly with students. This lack of mutual understanding and appreciation among the stakeholders can hinder effective communication and collaboration. Hall and Hord (2020) propose that large-scale change requires all parts of the system to fulfil their roles and respect the work of others.

Fullan and Quinn (2016) introduce the notion of coherence-making, which involves developing a shared understanding among the individuals and groups within the system about the purpose and nature of the desired change. When coherence is achieved, people know they are engaged in something beyond their individual roles. They are motivated to change as they recognise that they are meaningful parts of a more significant effort to address meaningful problems.

Another dimension of the distinction between piecemeal versus comprehensive reform relates to the decision of whether to target one aspect of schooling at a time or multiple aspects simultaneously. Mason (2008) advocates for an approach that tackles all factors of the schools at the same time, in the same direction, including curriculum, human and financial resources, and relationships with parents and communities, among others. Mason (2008) recognises the interconnectedness and equal importance of these factors. He also acknowledges that such an approach requires substantial resources. If resources are limited, while many schools need help, then a decision should be made to concentrate efforts on a select number of schools rather than spreading the resources thinly across all the schools. This decision may lead to inequity concerns, but Mason (2008) admits that such a trade-off seems unavoidable.

The discussion in this section once again highlights the growing trend in education reform research to move away from a dichotomous view that requires choosing among opposing approaches towards more balanced and holistic solutions as researchers recognise the complexities and interconnectedness of different parts within the educational systems. This tendency helps explain the increasing popularity of whole-system reforms, which involve continuous and simultaneous changes at all levels, aspects and

systems, or in the words of Dimmock et al. (2021), "multiple, connected, simultaneous, and continuous reforms" (p.2).

However, the issue raised by Mason (2008) cannot be overlooked. The challenge lies in how countries conduct whole-system reforms when resources appear insufficient. In such cases, strategic choices seem to be necessary. Should resources be focused on transforming all aspects of a small number of schools and then later transferring to other schools (Mason, 2008)? Or should the governments select a few key areas to be leverage points that can automatically trigger systemic changes and allow resources to be shared across the entire system (Synder, 2013)? Or, is there an alternative approach that enables genuinely whole-system reforms in every school without compromising equity or making inequity greater?

The FCER, as implied by its name, is intended to be a whole-system reform. The overall aim of the reform is to transform the entire system. This study seeks to investigate how the Vietnamese government, in its efforts to implement these reforms on a nationwide scale, is addressing the challenge Mason (2008) identifies. It examines the strategies adopted by governments for implementing large-scale reforms, considering the balance between resource allocation, equity, and the effectiveness of these reforms in achieving systemic transformation.

3.4. Summary

This chapter lays out some critical foundations for the present study, providing an overview of salient concepts, themes and discussion points in the research literature. The chapter also justifies the significance of the study, which goes beyond the Vietnam context.

The chapter highlights the long-standing problem of making change happen in education. It sheds light on the multifaceted nature of education reforms, the diverse factors influencing reform effectiveness, and the interconnectedness of different phases in the change process. The discussion highlights the need for informed choices and decision-making to focus on the implementation phase while paying attention to how this phase connects to the other phases of policy development and institutionalisation.

The literature review then continues to provide an insightful understanding of the four key dimensions (i.e., Fidelity-Adaptation, Authority-Autonomy, Rationality-Psychology, and Piecemeal-Comprehensive) and different schools of thought within each dimension to think, plan, act, and research about reform implementation. This understanding allows the present study to situate the implementation

of FCER within a larger context and, therefore, unravels significant questions that have yet to be asked and answered in Vietnam's education reform.

This study's relevance extends beyond the Vietnam context, as scholars worldwide are seeking alternative approaches to conduct more comprehensive, balanced and sustainable reform. By studying the approach that the FCER is undertaking in-depth, guided by new and more relevant questions, this research has the potential to generate valuable knowledge about the alternative ways of making change that can inform and shape educational reform efforts globally.

The next chapter introduces the perspectives of Complexity thinking, with a particular focus on Complex adaptive system theory (CAST), as a promising framework to guide the research in addressing the important but complex questions that have been raised.

CHAPTER 4: THEORETICAL FRAMEWORK: COMPLEX ADAPTIVE SYSTEM THEORY

4.1. Overview

This study employs complexity thinking as a theoretical lens to understand the dynamics of schools and their responses to change. Section 4.2 provides a brief historical backdrop, tracing the evolution of complexity thinking, which has its roots in various academic domains. Section 4.3 delves into Complex Adaptive Systems Theory (CAST), a prominent branch of complexity thinking that appears valuable for solving the research problem. This section (4.3) introduces the fundamental concepts of CAST and discusses their implications for implementing changes. By recognising organisations as complex adaptive systems (CAS), CAST acknowledges that change is not a straightforward, top-down process but a dynamic interplay of agents/actors and influences.

Within educational contexts, the understanding that schools are CAS, as detailed in section 4.4, opens up alternative ways to think about implementing change at this level. Section 4.4 illustrates how CAST can serve as the theoretical foundation for the ongoing discourse surrounding system reform implementation. In section 4.5, the study points out aspects of CAST that require further development, especially in its application to educational system reform. The study suggests a fusion of CAST with relevant literature on human decision-making, policy enactment in schools and path-dependency theory to enrich the analytical and explanatory power of CAST.

4.2. A brief history of Complexity thinking

Complexity thinking, also known as Complexity theory or Complexity science, has evolved in various disciplines through the centuries. It emerged as a response to the limitations of the conventional belief in a linear, reducible, rationalistic and deterministic world. Complexity thinking argues that many natural and social phenomena cannot be fully understood by breaking the system into its constituent parts and generalising the static cause-and-effect relationships of these parts to the whole system. Instead, the perspective recognises that the interactions and interdependence between the individual parts can give rise to new and unexpected properties, behaviours and patterns, demanding a different approach to study and act upon. Complexity thinking calls for a profound shift in perspective, acknowledging and

embracing the inherent non-linearity, emergence and uncertainty of our world (Davis and Sumara, 2006; Morrison, 2008; Stacey and Mowles, 2016).

The following subsections present the evolution of Complexity thinking through discussions of key thinkers and theories across multiple disciplines that have shaped its development.

Ancient philosophy

The roots of Complexity thinking can be traced back to ancient philosophical traditions. Philosophers such as Heraclitus, known for his statement, "No man ever steps in the same river twice, for it is not the same river and he is not the same man," or Lao Tzu, the ancient Chinese philosopher who developed the philosophy of Daoism, recognised that the world is one of constant becoming, characterised by ever-evolving forms that emerge from the relationships between many elements (Boulton, Allen and Bowman, 2015). These philosophers emphasise the importance of change and fluidity. They invite individuals to continuously observe and understand the patterns and relationships of reality, going in harmony with the flow of change rather than resisting or imposing rigid structures upon it.

Evolutionary theory

In the mid-19th century, the development of evolutionary theory by Charles Darwin took this worldview further, offering detailed insights into how living organisms change and evolve. Darwin's theory highlights the importance of variation and adaptation to local circumstances as the mechanisms for evolution. New emergent patterns and characteristics that enhance an organism's fitness and survival in their particular and local contexts are more likely to be passed on to subsequent generations through the process of natural selection (Boulton, Allen and Bowman, 2015; Thurner, Hanel and Klimek, 2018)

Systems thinking

In the early 20th century, the emergence of systems thinking made a significant contribution to the field of Complexity science. In his discussion of General Systems Theory, Ludwig von Bertalanffy emphasises the study of systems in their "wholeness". This means not trying to understand systems by investigating their constituent parts in isolation but looking for patterns that act at a higher configuration. He makes a distinction between closed and open systems. Bertalanffy (1968) recognises that while general laws of thermodynamics and other physics laws may apply to closed systems which operate in isolation from their environment, open systems constantly interact with the environment and are not necessarily subject

to the same laws. Additionally, a closed system's final state is uniquely determined by its initial conditions; for example, a planetary position at a time t0 unequivocally determines its position at a time t. Meanwhile, in an open system, the same final state may be reached from different initial conditions and in different ways, referred to as *equifinality* (Bertalanffy, 1968; Mason, 2008).

In the same period, Norbert Wiener's cybernetics work examines the flow of information and feedback processes within open systems. He introduces concepts such as positive and negative feedback, self-organisation and emergence, which also become foundational in Complexity thinking (Mason, 2008).

Kurt Lewin

Kurt Lewin's work from the 1930s to 1940s on human systems, including his three-step model of change (unfreezing, moving, and (re)freezing), contributes to Complexity thinking from the angle of social sciences by exploring the interplay between individuals and their environment. Lewin's field theory and his research on group dynamics challenge the simplistic view of individuals as isolated actors and emphasise the influences of social contexts and group norms on individuals' behaviours (Eoyang, 2016).

While some critics argue that Lewin's three-step model of change is oversimplistic and rigid, scholars such as Burnes (2004) contend that when the model is considered along with the other parts of Lewin's work, it represents a sophisticated and fluid perspective which aligns with the ideas of complexity science. The three-step model shows Lewin's recognition of human systems as quasi-stationary, moving between states of stability and instability. To create change, the existing stability of a system needs to be disrupted, creating a state of instability that allows for new patterns and behaviours to emerge.

Warren Weaver

In 1948, Warren Weaver, a physicist and information scientist, published a paper titled "Science and Complexity," which significantly contributed to the notion of complexity as it is currently understood (Davis and Sumara, 2006). Weaver (1948) identifies three problems that science must address: simplicity, disorganised complexity, and organised complexity. The problems of simplicity, according to the author, have been the main focus of science, especially physics, in the eighteenth and nineteenth centuries. The problems of simplicity pertain to the study of relationships between a few elements, usually involving just two elements. For example, a scientist may predict the trajectory of a ball on a billiard table by examining the correlations between its positions and the corresponding times at which it reaches those positions.

Meanwhile, the problems of disorganised complexity concern those that grapple with a large number of elements, ranging in the thousands or millions, each exhibiting erratic and unpredictable behaviour, such as the study of molecular interactions. The First and Second Law of Thermodynamics (i.e., the conversation of energy and the thermodynamic equilibrium) are fundamental findings of classical physics that represent the understanding of disorganised complexity (Reed and Harvey, 1992). When dealing with these problems, while the specific characteristics and movements of individual elements may remain unknown, their average values, such as molecules' temperature, pressure, volume, and density, can be calculated to analyse and predict the overall governing rules that exhibit order and stability. As the number of objects and elements increases, the precision of predictive calculations also improves. This logic forms the foundation of statistical methods, which have played a fundamental role in the development of modern sciences during the twentieth century (Weaver, 1948; Reed and Harvey, 1992).

Weaver (1948) argues that the transition of science methodology from one extreme of two-variable problems to another extreme of astronomical phenomena continues to leave an important middle region untouched, which he refers to as the problems of organised complexity. These problems deal with systems that involve a moderate number of elements, such as the evolution of living organisms or the dynamics of human organisations. This type of problem covers a wide range of issues in our world and requires the recognition that the rules governing a system can vary dramatically when the system itself evolves. Using reductionist thinking or statistical methods is insufficient to address problems arising within these systems, which are not simple or complicated but complex (Weaver, 1948; Davis and Sumara, 2006).

Chaos Theory

In the early 1970s, Edward Lorenz - a mathematician and meteorologist - posed the question: "Does the flap of a butterfly's wings in Brazil set off a tornado in Texas?". This question, later called the butterfly effect, is foundational in developing chaos theory. Lorenz's work on weather patterns reveals human beings' limitations in predicting natural world phenomena. The idea behind the metaphorical question is that a slight change in the initial conditions of open systems can cause significant changes in the end, which makes judgments of even the most powerful computer stimulation inaccurate (Lorenz, 2000). This sensitivity of the initial conditions adds another critical dimension to Complexity thinking (Reed and Harvey, 1992; Thurner, Hanel and Klimek, 2018).

Ilya Prigogine

In the 1970s and 1980s, Nobel-prize winner Ilya Prigogine challenged the assumptions of the First and Second Laws of thermodynamics. He explained that, unlike closed systems, which tend to reach a state of thermal equilibrium over time, open systems have the ability to dissipate entropy, a measure of disorder, into the environment faster than they produce it internally. Through this process, dissipative structures can counteract the tendency towards increasing entropy and maintain a state of far-from-equilibrium dynamics. In this far-from-equilibrium state, novel behaviours and patterns can emerge from the internal structure of the systems. In other words, the systems can self-organise into orders not predetermined by external blueprints, allowing for continuous growth, adaptation and evolution. Prigogine's groundbreaking work on dissipative structures and non-equilibrium thermodynamics provides concrete evidence for conceptual ideas developed by earlier authors (Reed and Harvey, 1992; MacIntosh and MacLean, 1999; Harvey, 2009).

Santa Fe Institute

A further important milestone is the establishment of the Santa Fe Institute (SFI) in 1984. The Institute brought together scientists from diverse fields, such as physics, biology, mathematics, computer science, and economics, to exchange ideas and foster the growth of complexity science. One of SFI's primary objectives was to develop the theory of complex adaptive systems, which has become a distinctive and influential branch of complexity science.

Complex adaptive systems theory (CAST) focuses on understanding the behaviours of systems composed of interacting agents that can adapt and learn from their environment. Central to the work of SFI's on CAST are agent-based models based on computer simulation. These models simulate individual agents' behaviour and interactions within a system, allowing researchers to study how individual agents' actions and decisions give rise to emergent behaviours and patterns at the system level. Agent-based models have been used to study a wide range of complex systems, from the dynamics of financial markets and ecosystems to the spread of infectious diseases and the behaviour of social networks (Alhadeff-Jones, 2008; Stacey and Mowles, 2016; Thurner, Hanel and Klimek, 2018).

The above brief introduction to the development of Complexity thinking shows that the perspective has roots in multiple disciplines, from physics to biology to social sciences, and has been influenced by advancements in computational techniques. It builds on concepts and ideas from various theories, including evolutionary theory, general system theory, field theory, chaos theory and non-equilibrium

thermodynamics theory. As Thurner, Hanel and Klimek (2018) argue, the study of complex systems has gone well beyond these earlier theories and evolved into an independent theory and a field of science. However, the foundational framework of this emerging science is still not yet complete as the field continues to evolve and grow. The researcher of this study agrees with Thurner, Hanel and Klimek (2018) that such a framework is essential and will eventually be fully developed.

Taking stock

The current status of Complexity thinking presents both opportunities for research and challenges for those who wish to develop it and apply it to a specific research problem. On the one hand, Complexity thinking brings promises of improving the power of science in understanding and influencing a large number of issues in our world. These issues cannot be adequately addressed by the classical methods of the eighteenth and nineteenth centuries or the statistical methods of the twentieth century (Weaver, 1948). Complexity thinking opens pathways to study novel problems and revisit age-old ones that have not been adequately solved. This expansion of scientific scope creates vast room for scientific contributions and breakthroughs. Examples of the application of Complexity thinking in diverse scientific fields are abundant. Some notable examples include network theory, Boolean networks, genetic algorithms, the theory of increasing returns, mosaic vaccines, and the study of systematic risk in financial markets, to name a few (Thurner, Hanel and Klimek, 2018).

On the other hand, the interdisciplinary nature of Complexity thinking requires researchers to understand and work with concepts and ideas across various fields, and this can be demanding due to the specialised language and methodologies of each discipline. This challenge is particularly evident for scholars in the field of education, where the application of Complexity thinking is still in its embryonic stages.

The present study argues that for education researchers, embracing Complexity thinking demands not only a radical shift in perspective but also finding ways to translate the abstract ideas of this science into understandable language and actionable strategies for various stakeholders. Complexity thinking encourages researchers to move beyond studying isolated variables or linear cause-and-effect relationships and to explore the interconnectedness and interdependence of factors within educational systems. However, communicating this idea to government officials, school leaders, teachers, parents, and students requires dedicated and thoughtful efforts. The present study attempts to contribute to this exciting but challenging endeavour.

Section 4.3 will delve into the applications of Complex adaptive system theory (CAST), a specific branch of Complexity thinking that focuses on understanding how complex systems, including schools, adapt and evolve. Applying CAST to education allows us to understand better why educational reforms may succeed or fail when implemented. It examines the role of adaptability in making changes happen and explains how educators can harness the power of adaptability to create positive transformations.

4.3. Complex adaptive system theory (CAST)

Chapter 3 of this study has reviewed the relevant literature on a notable shift in how educational change and reform are approached, from adhering to fidelity, top-down approaches, rationality-based and piecemeal measures, to strategies that embrace flexibility, co-adaptation, connection and psychology-based interventions. This study argues that this ongoing transformation in the field of education resonates with the broader shift from a mechanical worldview to a complexity worldview observed in other disciplines, as explained in section 4.2.

While some early efforts, such as the work of Fullan (2003), Mason (2008), Morrison (2008), Snyder (2013), and Hawkins and James (2018) have acknowledged and explored the connection between Complexity thinking and educational change, this study argues that these attempts have fallen short in providing an in-depth understanding of this relationship. Although key concepts and ideas of complexity thinking are mentioned, they are not organised systematically nor thoroughly explained, leaving significant gaps in our understanding.

In order to address these limitations, this study delves into the hallmarks of Complexity thinking, especially one of its branches, the Complex Adaptive System theory (CAST), to offer a more complete, structured and understandable framework. The study sheds light on the potential of Complexity thinking to understand and drive meaningful and effective educational changes.

This study chooses CAST as the theoretical foundation because it aligns closely with the dynamic and evolving nature of educational systems. CAST places significant emphasis on understanding how interactions between individuals and their environment can give rise to behaviours and patterns at the system level and how the collective behaviours of the systems, in turn, shape the experiences of individuals within them. It helps explain the dual aspects of rigidity and flexibility often observed in educational settings, shedding light on why schools may resist or adapt to system-level change.

The following sections explain in detail the key concepts and ideas of CAST and discuss its general implications for addressing the challenges of implementing reform and change in organisations. This basic understanding sets the stage for a more in-depth discussion of CAST's applications in educational change and reform.

4.3.1. Defining complex adaptive systems

What are complex adaptive systems (CAS)? This question is fundamental in using CAST as the theoretical lens for the present study. To answer this, the researcher of this study distinguishes CAS from related concepts such as systems, complicated systems and complex systems.

In his influential work "General System Theory", published in 1968, Bertalanffy provides a simple and general definition of a system. According to Bertalanffy (1968), a system is an entity "consisting of parts in interaction." (p.19). In other words, a system is a combination of its elements and their relationships. While all systems consist of these two dimensions, the specific nature of the elements and the types of relationships they form can vary significantly from one system to another (Schwandt and Szabla, 2007).

In everyday language, the terms "complicated" and "complex" are used interchangeably to describe things that involve many different parts and are difficult to understand. However, the technical meaning of "complex" in the notion of "complex systems" is not the same as "complicated". While a complicated system may consist of multiple components or parts with intricate relationships and interactions, it may not necessarily be considered complex if its components operate independently or in a linear fashion, similar to engineering systems. On the other hand, complexity refers to a high level of interdependence among components or parts of a system. This interdependence creates an interconnected and non-linear network of interactions within the system. As a result, complex systems may exhibit emergent and surprising properties that cannot be observed in complicated systems (Hazy, Goldstein and Lichtenstein, 2007).

Complexity thinking or complexity science generally takes complex systems as the central focus of inquiry. The notion of "complex adaptive systems" has emerged and become influential from the research conducted at the Santa Fe Institute (SFI), which emphasises complex systems' capacity to adjust their behaviours to a changing environment. Complex systems and complex adaptive systems are often used interchangeably in the literature, and their meanings are not necessarily different. However, some authors, such as Hazy, Goldstein and Lichtenstein (2007), prefer the term "complex systems" to avoid delving deeply into the use of agent-based simulation models similar to those used at the SFI.

Nevertheless, many non-computational complexity studies still embrace the notion of CAS (e.g., (Dooley, 1996, 1997; Fullan, 2003; Byrne and Callaghan, 2013; Eoyang, 2016). This present study also takes a non-computational approach to apply Complexity thinking, and the researcher adopts the notion of CAS to emphasise that the adaptability of complex systems holds the key to understanding and addressing the issues in educational change and reform.

Several authors have attempted to define CAS. Notably, Fullan (2003) suggests that "A complex system consists high degrees of internal interaction, and interaction externally (with other systems) in a way that constitute continuous learning" (p.22). Eoyang (2016) defines "CAS as a collection of semi-autonomous agents whose interactions generate system-wide pattens." (p.3). Stacey and Mowles (2016) provide an extended definition of CAS. They state that:

> A complex adaptive system consists of a large number, a population, of entities called agents, each of which behaves according to some set of rules. These rules require each individual agent to adjust its action to that of other agents. In other words, individual agents interact with and adapt to each other and, in doing so, form a system which could also be thought of as a population-wide pattern. (p.248)

Meanwhile, Thurner, Hanel and Limek (2018) define CAS as "dynamical systems that are able to change their structure, their interactions, and consequently, their dynamics as they evolve in time" (p.v). A more comprehensive summary of definitions of CAS can be found in a paper authored by Turner and Baker (2019).

Synthesising the existing discussion on defining CAS, this present study suggests two crucial elements in defining CAS: *interaction* and mutual *adaptation*. Firstly, a CAS comprises agents, which can be individuals or groups, being able to actively engage in interactions with their local (immediate) environment. These interactions involve exchanging knowledge, information, and materials among agents and other entities within or outside the system. Secondly, agents adapt their behaviours in response to the conditions presented during their interactions with the local environment. As agents make adaptations, they do not only make changes to themselves but also shape and reshape their environment. This mutual influence between agents and their environment results in reciprocal interactions, possibly leading to the emergence of novel patterns, structures, norms, and practices within the system. Based on these key aspects of CAS as synthesised from various discussions in the literature, this study suggests that ***a CAS is a system comprising agents/actors who are able to interact and mutually adapt to their local environment***.

The terms "are able to" and "local environment" in this study's definition should be noted. The term "are able to" implies that agents within CAS have the inherent ability to interact and adapt. However, it acknowledges that these abilities may not always be activated or fully utilised. Consequently, not all CAS exhibit the same level of complexity.

The term "local environment" emphasises the distinct approach of CAS in studying systems, where the focus is on explaining system-wide patterns that emerge from the agents' interactions at their local level (Stacey and Mowles, 2016). The approach challenges the assumption that CAS are governed by static, pre-determined or externally controlled patterns and rules. It recognises that the local interactions of all the system agents collectively determine the systems' patterns and behaviours.

Examples of CAS include a flock of birds, the human body, the brain, an ecology or a social organisation. Each of these examples showcases the co-evolution and adaptability that emerges from the interactions among individual agents.

Organisations are also considered to be CAS. They consist of individuals, teams, and departments that interact and collaborate through various means of communication, establishing practices and norms (i.e., rules that govern the practices) (Stacey and Mowles, 2016). Educational organisations, in particular schools, are deemed to be CAS and exhibit CAS characteristics (Morrison, 2002; Davis and Sumara, 2006; Hawkins and James, 2018; Dimmock *et al.*, 2021).

The following section discusses in more detail the characteristics of CAS and the mechanisms in which they interact and mutually adapt to the environment.

4.3.2. A summary of CAST's key concepts and ideas

Turner and Baker (2019) identify about 70 concepts used to characterise CAS in their paper reviewing the literature. These concepts have their roots in various disciplines and apparently present a challenge for those who want to understand CAS thoroughly. It is not feasible to delve into the details of each one within the scope of this study. Additionally, addressing these concepts without a structure may lead to confusion and make the review less helpful. Based on the definition of CAS proposed in the previous section, this study selects and organises the key concepts of CAST into two interrelated themes: *interaction* and *mutual adaptation*.

Interaction

Interaction is a fundamental aspect of CAS. It involves the relationships and exchanges among agents within the system and with their external environment. Within the theme of "interaction", this section discusses concepts such as *openness*, *boundary*, *nestedness*, *diversity* and *redundancy*.

The openness of CAS has been a central idea discussed in several previous sections. CAS are open systems in which their agents exchange information, resources and energy with the external environment. In contrast, closed systems are self-contained and retain these products for their own use (Turner and Baker, 2019).

One related notion to openness is "*boundary*". Davis and Sumara (2006) argue that due to the openness of CAS, it is difficult to determine the boundaries where the systems end and the external environments begin. For example, in education, should parents and the local community be considered integral parts of a school's system if the relationships and exchanges among these stakeholders are frequent and strong? Davis and Sumara (2006) suggest that distinguishing between the system and its backdrop is a contingent decision based on the intention and criteria that researchers set for themselves.

Eoyang (2016) presents a perspective on boundaries, calling them "containers". According to the author, boundaries or containers can take various forms, coexist, and intertwine. These forms include physical spaces, membership in organisations, as well as more abstract 'fences' like gender and cultural identities or influential leaders, goals, or issues acting as magnetic forces. While a CAS maintains a certain degree of openness to the external environment, it also needs to maintain a level of closure to preserve the system's intactness and integrity. These boundaries allow agents within the system to maintain such closure.

A further characteristic of CAS is *nestedness*. Nestedness refers to the hierarchical arrangement of systems within larger systems. A complex adaptive system is composed of smaller subsystems. However, it can also be part of a larger system, which in turn belongs to a larger system, altogether forming a nested structure. For example, consider an educational system that encompasses multiple schools as subsystems. Each school, in turn, consists of classrooms and students, and classrooms may have smaller groups or teams of students. However, the educational system itself is also a part of a more extensive socio-economic system of a nation or a region.

This study provides a simplified diagram to visually represent this nested structure of CAS (Figure 4.1). In this diagram, each node represents a complex adaptive system. As we zoom in, each node comprises

component elements connected with each other. These nodes, representing micro-level CAS, connect with other nodes, clustering into larger systems that make up the meso-level CAS. Zooming out reveals that these meso-level CAS also connect, possibly forming even larger systems at the macro level.
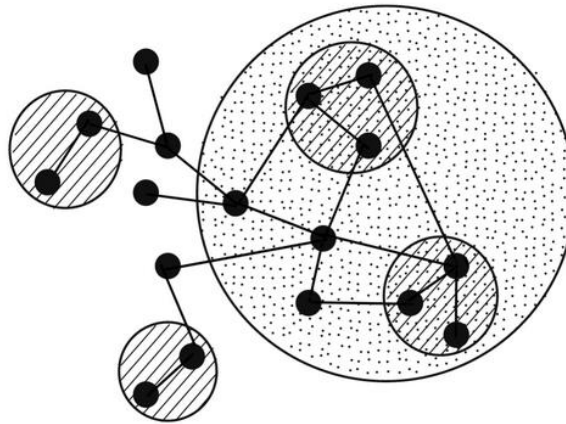
Figure 4.1: A simplified diagram of nested complex adaptive systems

In CAST, it is understood that the patterns and behaviours of the lower levels of this nested structure of CAS are not necessarily similar to the patterns at the higher levels and vice versa. Each level of CAS often exhibits distinct characteristics; therefore, reductionist thinking may not be helpful in studying these systems (Boulton, Allen and Bowman, 2015). However, it should also be noticed that as different system levels are connected, they can influence each other. Novel patterns at a lower system level may lead to new patterns at a higher level. The rigidity and stability of the higher level may also suppress the changes made at the lower level and vice versa (Eoyang, 2016). In short, multi-level similarities may emerge, but they are not guaranteed.

Internal diversity is also a hallmark of CAS. Internal diversity refers to the variety of components or agents within the system, each with unique characteristics, behaviours, and rules of interactions. In CAS, the presence of diverse elements or agents plays a vital role in creating novelty and enabling the system to adapt and evolve (Goldstein, Hazy and Lichtenstein, 2010).

Stacey and Mowles (2016) notably criticise viewing human organisations as comprising homogeneous agents who follow similar simple rules, as seen in some simulation models. Instead, they state that people are heterogeneous. Agents rarely follow rules in the same ways as they need to respond to rules in ways specific to their particular situations. As situations change, their interpretations and responses evolve accordingly, leading to a continuous adaptation of the rules. This diversity of agents allows the systems to evolve and adapt. When agents are heterogeneous, possessing varied characteristics and behaviours,

the system benefits from a wealth of possibilities and potential. In contrast, if agents are identical, the system is confined to predetermined outcomes, limiting its capacity for change and growth.

Applying this understanding to an educational context, consider a scenario where teachers with different expertise, teaching styles, and cultural backgrounds come together in a team. The implication is that the diversity of perspectives within this team may enrich and foster the development of innovative teaching approaches.

However, CAS are not only full of differences; they also rely on agents sharing similarities and commonalities. Davis and Sumara (2006) refer to this notion as *internal redundancy.* Internal redundancy relates to the concept of "boundary" in the sense that when agents share similarities in terms of physical locations or identities, it helps maintain a sense of closure, allowing interactions to happen. Similarities in roles or functions also foster interactions among agents. For example, when two people have similar interests and backgrounds, they find it easier to talk and are more likely to engage in meaningful collaborations.

Additionally, Davis and Sumara (2006) point out that redundancy is essential to CAS because agents who perform similar functions can compensate for each other in times of stress, sudden injury or other unpredictable events. An example is how different brain areas can perform similar functions, allowing the brain to adapt and recover from injuries or damage. In educational systems, teachers who possess overlapping skills and abilities can support one another during challenging situations. Therefore, paying attention to the common ground of individuals within an organisation is necessary.

Davis and Sumara (2016) argue that internal redundancy can complement internal diversity. While redundancy provides stability and coping mechanisms, diversity provides opportunities for change and growth. However, too much redundancy may result in a rigid and inflexible system. On the other hand, excessive diversity can lead to instability and lack of coordination. The question then becomes how to balance these two characteristics—finding the right redundancy level that supports the system's diversity and vice versa.

In short, a CAS is embedded within networks of multi-level systems. Agents within a system interact internally with other agents and externally with agents and entities in the broader environment. These multi-directional interactions shape the behaviours and patterns of both the agents, their systems and the higher-level systems. Additionally, the agents in one system share similarities that contribute to the system's structure, identity and stability, but they also possess different characteristics that create opportunities for novelty.

Mutual Adaptation

Mutual adaptation is a further key pillar of CAS. *Mutual adaptation* refers to the processes by which agents within CAS adjust and evolve in response to their environment while influencing and shaping that environment through their actions. Within this theme, the study explores concepts such as *local adaptation, emergence, self-organisation, feedback loops, critical mass, snowball effect/inertial momentum* and *lock-in*.

To understand how systems and their elements function, the conventional scientific approach typically involves two interrelated strategies. One approach seeks to identify the governing laws of the individual elements and generalise them to the system level. The other approach studies these general laws and applies these laws to the other individual elements within the investigated system and other systems. However, as mentioned in the previous section, these conventional approaches may not be practical when thinking of CAS (Goldstein, Hazy and Lichtenstein, 2010; Byrne and Callaghan, 2013; Stacey and Mowles, 2016).

In CAS, the laws or behaviours at the system level may differ significantly from those at the individual level. The reason for this lies in the nature of CAS agents. During interactions, agents may not be aware of or do not adhere to an overall blueprint for the entire system. Instead, they operate based on local rules and strategies within their immediate network. This notion is known as *local adaptation*. For instance, a bird in a flock flying together adapts its movements based on the birds flying right next to them, their immediate neighbours, without any centralised control (The Health Foundation, 2010; Stacey and Mowles, 2016).

Closely related notions to local adaptation are *self-organisation* and *emergence*. As agents adapt locally, new patterns that are not designed externally and imposed on the system may emerge. The systems change due to their internal interactions. This ability to change from internal processes is a key characteristic of CAS and is referred to as *self-organisation* (Goldstein, Hazy, and Lichtenstein, 2010).

Imagine that no matter how sophisticated an aircraft is designed, it is unrealistic to expect its components to reconfigure themselves to operate more efficiently. Reconfigurations, in this case, require external instructions and engineering. Meanwhile, CAS can adapt themselves (Goldstein, Hazy and Lichtenstein, 2010).

It should be noted that this inherent adaptability can also pose challenges. When dealing with complex systems, if we expect a CAS to behave in a specific way, it may not always meet those expectations. The

emergence of CAS is often unpredictable, which brings challenges to predicting, managing, or controlling these systems (Hawkins and James, 2018).

In the educational context, the notions of local adaptation, self-organisation and emergence imply that what primarily determines teachers' practices is their interactions with stakeholders in their schools and local communities (e.g., students, parents, colleagues, school leaders, school inspectors) rather than top-down policies and expectations imposed from external authorities. As teachers respond to the unique needs and contexts of their classrooms and school environments, emergent patterns of teaching and learning practices may emerge.

Boulton *et al*. (2015) state that "there is nothing intrinsically 'good' about the outcomes of self-organisation". While self-organisation and emergence allow for adaptability and innovation, they also open the door to unintended consequences that are not necessarily beneficial or aligned with the goals and values of the system's stakeholders. This raises a challenging question in working with CAS: How can we effectively navigate and influence systems that cannot be controlled or managed in a traditional sense?

To answer this question, it is vital to know the specific mechanisms by which agents of CAS interact with each other and collectively give rise to emergent system patterns. Concepts such as *feedback loops*, *critical mass*, *snowball effect/inertial momentum* and *lock-in* are key for understanding these mechanisms.

In CAS, it is suggested that two types of interactions significantly contribute to their unique characteristics: negative feedback loops and positive feedback loops.

Negative feedback loops act as stabilising forces within CAS. When an agent's actions or changes in the system lead to deviations from the current status, negative feedback loops bring the system back to its initial state; for example, in an ecological system, negative feedback loops may regulate population growth. As a population increases, resources such as food become scarcer, leading to decreased reproduction rates and population decline, restoring equilibrium (Boulton *et al*., 2015).

Positive feedback loops, on the other hand, are amplifying mechanisms that drive system change and can lead to self-reinforcing patterns. When an agent's actions or changes in the system increase certain aspects, positive feedback loops intensify and reinforce those changes, causing the system to move away from its initial state. For instance, in the context of technology adoption, positive feedback loops can

drive network effects, where the more users a technology has, the more valuable it becomes, attracting even more users and thus accelerating its adoption (Arthur, 1994)

Figure 4.2 below offers simplified illustrations of how negative and positive feedback loops affect the behaviours of CAS. In system A, agents fluctuate around the existing pattern, and any excessive movement is stabilised and pushed toward the acceptable range through negative feedback loops. Meanwhile, in system B, positive feedback loops amplify and reinforce the deviations, leading to movements that deviate from the initial pattern in a non-linear manner.

A	B
Negative feedback loop	Positive feedback loop
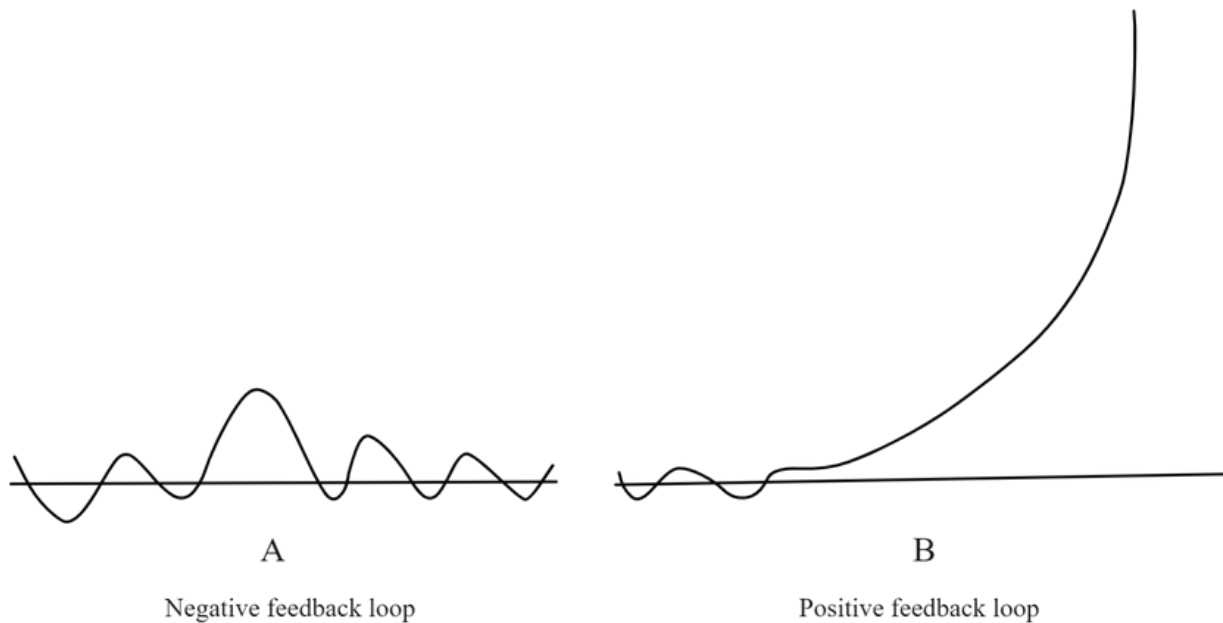
Figure 4.2*: Negative and Positive feedback loops*

These two types of feedback loops may seem contradictory, but they are both necessary for the survival and development of CAS. Negative feedback provides stability, while positive feedback offers opportunities for growth and evolution (Horn, 2008). However, positive feedback is more significant in encouraging change and innovation. It serves as the driver for breaking the current status of the systems, allowing new ideas and practices to emerge and spread. Positive feedback is the underlying mechanism that enables self-organisation and emergence. By understanding and utilising positive feedback loops, we are more likely to foster adaptive behaviours of CAS towards desirable outcomes.

Critical mass is a further key concept linked with CAS. Complexity theorists propose that an essential condition for the system to evolve and transform is reaching a critical mass of interactions that can trigger positive feedback loops and gradually lead to a significant shift in the system's state. Hall and Hord (2020), Fullan and Quinn (2016) and Dannemiller Tyson Associates (2000) define critical mass as the

number of people engaged in innovative practices. The point when a system reaches critical mass is believed to be contingent and unique to a particular system and context. It could range from 10% to 40% of the system's population or even more (Dannemiller Tyson Associates, 2000; Mason, 2008)

Another related concept is *the snowball effect* or *inertial momentum*. The snowball effect occurs when an initial change or innovation gains momentum and spreads rapidly, attracting more agents or individuals to adopt the new behaviour or idea. Like a snowball rolling downhill, the more it grows, the faster it gains mass and momentum. Similarly, in a complex system, the snowball effect can accelerate the adoption of new practices or behaviours once critical mass is achieved. The positive feedback loops become more powerful, leading to broader and more systemic changes (Mason, 2008; Fullan and Quinn, 2016; Hall and Hord, 2020).

Imagine a scenario where a group of teachers is considering adopting a new teaching approach in a school. Initially, only a few teachers were interested in experimenting with this new method, and their attempts may not have a noticeable impact on the overall teaching practices in the school. However, as more teachers begin experimenting with the new approach, the critical mass of teachers embracing the change is reached. At this point, the momentum of change accelerates, and the new teaching approach becomes more widespread, attracting more and more teachers to opt in.

A final related concept is *lock-in*, which was initially proposed by Arthur (1994) in his research on economics and integrated into Complexity thinking by authors such as Mason (2008) and Dimmock *et al*. (2021). Lock-in refers to the situation in which the new pattern has been reinforced to the point that it becomes the dominant pattern at the system and/or subsystem levels and becomes entrenched. In other words, once a particular behaviour or pattern gains significant momentum and becomes widespread, it can become difficult to change or replace (it may then be embedded or institutionalised), even if it is not the most optimal or efficient solution. Negative feedback loops are triggered to maintain this stability.

An example of lock-in is the use of the QWERTY keyboard layout. The QWERTY layout was initially designed to address a mechanical issue with early typewriters where adjacent keys could jam if pressed quickly. In other words, it was designed to slow down the typing speed. However, over time, it became apparent that the QWERTY layout was not necessary or efficient with the advent of computer keyboards. Despite evidence suggesting that alternative layouts could improve typing speed, the widespread use and familiarity with the QWERTY layout have made it difficult for other layouts to gain traction (Mason, 2008).

This study argues that this lock-in state is significant in explaining the resistance to reforms in education. An educational system can become entrenched in certain practices and traditions, which may have been effective or necessary at some point in history. As times change and new research and evidence emerge, these practices may no longer be effective. However, it may be challenging for educators to abandon these practices and accept new ones.

Theoretically, this lock-in state can be broken naturally over time without intentional interventions. However, scholars suggest that human organisations are unique CAS in which agents can influence, direct and speed up the system's dynamics to escape from the lock-in state. This is not done through designing a long-term strategy and imposing specific rules for agents to follow but by engaging in the short-term interactions of the system as parts of it (Mason, 2008; Stacey and Mowles, 2016). This idea will be explained further in the following sections.

In summary, this section has introduced the mechanisms by which CAS exhibit their abilities to adapt and self-organise. Briefly, agents within CAS locally interact with their immediate environment and adapt their strategies and behaviours to fit their specific circumstances. As agents adapt, deviations from standard behavioural patterns can occur. Under appropriate conditions, a critical mass of agents adopting particular novel patterns is reached, triggering positive feedback loops. The system then begins to gain momentum towards the new patterns. It attracts more and more adopters until the patterns become population-wide and the system reaches a level of coherence around the new patterns.

The following sections delve into the implications of CAST in the literature on change and reform in organisations, with a specific focus on educational institutions.

4.3.3. Implications for implementing change and reform in organisations

Complexity thinking, notably CAST, garners increasing attention and applications in organisational change. It is being embraced as an alternative perspective and framework that offers new insights into the dynamics of change.

The central implication of CAST for organisational change lies in achieving the delicate balance between stability and instability. Authors call this notion "the edge of chaos" (Fullan, 1999; Morrison, 2008). It is believed to be a state that nurtures and enables the emergence of innovations, allowing organisations to change and adapt to their evolving environments.

Traditional organisational management models are characterised as focusing on achieving stability. In this context, a manager's role is to keep their organisation's daily operations under control. This control mindset also applies to designing and implementing changes, where the goals and strategies to change are chosen by the managers/leaders. Those responsible for implementing change are expected to follow these predefined pathways (Goldstein, Hazy and Lichtenstein, 2010).

Complexity thinking challenges this approach. Stability may bring a sense of certainty and comfort, which helps organisations maintain what has been established. However, an appropriate level of instability or disruption that triggers tensions among different ideas and practices is necessary for organisations to change effectively. Being at the edge of chaos means an environment that is not too fixed or fluid. At this stage, there is enough structure to move the organisations forward but also enough space for flexibility and creativity. Strategies can be present but are "semi-coherent" to accommodate unforeseen and unpredictable changes (Fullan, 1999; Plowman and Duchon, 2007; Stacey and Mowles, 2016).

This perspective also requires a redefinition of leadership in organisations. Conventionally, leadership is understood as the influence exerted to align organisational members towards a common goal. Leadership is often practised only by one person or a group with formal organisational positions. Leaders have been seen as elites, and thus, not everyone can be a leader. However, the image of leaders as heroes who bring success and certainty to organisations has gradually dissolved. Concepts such as shared leadership, distributed leadership, and collective leadership have been promoted to reshape the traditional hierarchical leadership model. These new perspectives emphasise that leadership is not confined to a select few; it can emerge from various levels and corners of the organisation. Complexity thinking, especially as applied in CAST, aligns with these evolving leadership paradigms. Indeed, it can provide a more complete framework to integrate and strengthen these ideas (Lichtenstein *et al*., 2007; Plowman and Duchon, 2007; Schwandt and Szabla, 2007).

Scholars applying Complexity thinking to leadership in organisations view leadership not merely as defined roles held by specific individuals but rather as a dynamic process that emerges from the organisation's interactions. Almost anyone or everyone can become involved in leadership interactions. In addition, while these interactions can be guided by a set of values and beliefs (often referred to as attractors), the essence of complexity-based leadership lies in the absence of predetermined or specific outcomes (Plowman and Duchon, 2007). The outcomes of these interactions are determined at each step

by the interplay of agents within the complex adaptive system – the interplay of desires and intentions, as Stacey and Mowles (2016) call it.

This is not to say that the hierarchical structure should be eliminated. However, those who are at the top of a system increasingly realise that no matter how powerful they are in motivating, persuading and forcing others to follow their desires, "people will still only be able to respond according to their own local capacities to respond, and the most powerful will find that they have to respond to the responses that they have evoked and provoked" (Stacey and Mowles, 2016, p. 385). Individuals are still able to intentionally influence organisations, but less so through directive leadership and more so through participative, adaptive or responsive leadership (Jennings and Dooley, 2007; Marion and Uhl-Bien, 2007; Stacey and Mowles, 2016). The leader's role in leading change, then, is to be an active part of the change effort, to engage deeply, to recognise the emerging patterns and use their networks and resources to foster, constrain or shape the patterns while keeping an open mind to embrace the novelty in responses of others (Fullan, 1993; Plowman and Duchon, 2007; Stacey and Mowles, 2016).

This approach stands in contrast to conventional command-and-control leadership. It also differs from laissez-faire leadership, in which leaders tend to take a more hands-off approach, often resulting in minimal intervention or guidance (McKelvey and Lichtenstein, 2007). Authors such as Stacey and Mowles (2016) strongly criticise applying the idea of "self-organisation" of CAS by giving ultimate autonomy to organisational members and expecting that positive emergence will naturally occur. They argue that human organisations are not similar to natural CAS in the sense that human agents "are capable of perceiving and articulating something about the population-wide patterns they are implicated in and even of desiring population-wide patterns" (p.298). Given that emergence only occurs under the right conditions and their outcomes are not always beneficial, individuals possess the ability and should strive for a certain level of intentional influence over emergent patterns. This means that while Complexity thinking emphasises the unpredictability and self-organisation inherent in CAS, it also recognises the capacity of human agents to navigate and guide these emergent processes to a certain extent.

One specific solution is to focus on the identities of the people within the organisation – understanding and contributing to who they are, what they think they are doing together, and who they want to be and can achieve individually and collectively – instead of attempting to directly dictate their behaviours at every juncture (Stacey and Mowles, 2016). This approach aligns with the concept of capacity building. Implementing change in this sense is not about forcing people but enabling people.

A further implication for organisational change is shifting from an episodic/periodic view of change to seeing change as continuous and incremental. Eoyang (2016) and Boulton *et al*. (2015) caution against understanding the transitions between different states in CAS as sudden shifts. On the surface, systems may remain stable for long periods and suddenly switch to new states. Transformations seem to happen abruptly, overnight. However, a thorough understanding of complexity theory suggests that the seemingly sudden shifts are often the result of a gradual accumulation of small changes and adjustments within the system over time. Thus, when applied to organisational change, Complexity thinking encourages a focus on fostering continuous learning and refining rather than expecting grand, discrete transformations.

In conclusion, Complexity thinking, especially through the lens of CAST, offers a transformative perspective on organisational change. It challenges conventional notions of stability-focused, bureaucratic and hasty leadership, favouring adaptive, participatory, continuous approaches that acknowledge the role of instability and interconnectedness in the pursuit of organisational evolution.

4.4. System-level education reform through the lens of CAST

In Chapter 3, this study discussed the issues, challenges and tensions in making reform happen in education. Education reforms often encounter resistance from implementers, face the problem of superficial implementation, lack resources to sustain the reforms, and fail to spread effective practices across diverse contexts. A diverse range of approaches can be considered in response to these challenges, some of which appear contradictory. However, contemporary literature on educational change is progressively underscoring the significance of approaches that harmonise contrasting pathways. These include achieving a balance between elements like fidelity and adaptation, consistency and autonomy, rationality and psychological aspects, and embracing more comprehensive and holistic strategies that simultaneously tackle different levels and aspects of the educational systems.

This study argues that what is currently missing to move these approaches forward is a theoretical foundation capable of explaining why such balances are necessary and how to achieve them. Complexity thinking, particularly CAST, appears to be a potential perspective to fill this theoretical gap.

Several authors have initiated the use of CAST's concepts and ideas in understanding and navigating educational change, including Fullan (1993, 1999; 2003; 2007); Davis and Sumara (2006); Morrison (2008), Mason (2008, 2016); Senge *et al*. (2012); Snyder (2013); Hawkins and James (2018) and

Dimmock *et al*. (2021). This section will discuss key implications in the work of these authors to shed light on the values of CAST in implementing changes in education.

4.4.1. Schools as complex adaptive systems

A foundational argument for applying CAST in educational reform is viewing schools as complex adaptive systems (Morrison, 2008; Hawkins and James, 2018; Dimmock *et al*., 2021). This means that schools are key units of change and possess CAS characteristics and abilities.

As Hoyle (1969) points out, schools were not considered key targets of change in the past – rather, the focus was on individual teachers. However, the growing recognition in recent decades is that schools are social systems which contain and connect their members. Within the boundary of a school, the school's elements and stakeholders are interdependent. As a system, a school can "make or break" any change effort. Students are linked to teachers and their peers; teachers are linked to their students, other teachers, staff and school leaders. It is not the individual in a school who decides whether an initiative succeeds or not, but rather the school as a whole, including the interactions, pressures, and demands that different parties exert on each other. Therefore, schools should be the primary organisational units for change due to their significant power in shaping the implementation processes (Hoyle, 1969; Hall and Hord, 2020).

Schools are also deemed CAS because they are open systems that connect to the external environment. Schools are not isolated islands but parts of larger systems (Hall and Hord, 2020). School leaders need to report to and implement decisions of policy-making bodies, administrative bodies, funding bodies, and parents (Morrison, 2008).

An argument of Horn (2008) that is important to note is that schools appear to be different from other complex adaptive systems due to the observation that they are often externally controlled rather than being controlled from within. Horn (2008) states that this is not because schools do not possess the inherent abilities to self-organise and adapt like other CAS, but because governments and other authorities often do not allow them to do so. The study partly agrees with Horn (2008), but it argues that while state schools are under the control of their governments, schools can resist external policies, demonstrating that they have the capacity to self-organise. Choosing not to comply with something is also a choice that a CAS can make during their operations, regardless of whether this decision proves beneficial.

This study proposes that CAST is useful as a theoretical lens not only when schools are given the conditions to self-organise but also when these conditions are limited. The theory applies not only to the

analysis of successful reform cases but also to cases facing challenges and failures. This approach makes this current study more realistic and valuable as the researcher does not need to find schools that perfectly exemplify CAS in positive ways to study CAS. Schools often demonstrate CAS's characteristics and capacities, even when part of top-down government state systems. The question lies in the manner and extent to which they do so. This is important as it may help address the evidence gap currently hindering CAST's application in education.

4.4.2. Using CAST in solving the tensions in education reform

This section continues to discuss how CAST helps navigate the tensions between different perspectives in education reform as introduced in section 3.3; in other words, how CAST can aid our understanding of and contribute to system reform implementation.

CAST and the tension between fidelity and adaptation

The first tension is between fidelity and adaptation. The traditional approach to education reform often emphasises fidelity as it ensures it stays true to its objectives. Meanwhile, authors who advocate for adaptation claim that it is essential to accommodate diverse contexts, needs, and circumstances of different educational settings to achieve meaningful and sustainable implementation.

In discussing this aspect, CAST theorists encourage considering the contexts of each school when implementing reforms. For instance, Morrison (2008) questions the relevance of experimental and positivist research methodologies in education. He argues that schools function as open systems within the real-world context, unlike the controlled environments of laboratories. As a result, the outcomes derived from experiments might not adequately address the diverse and ever-evolving situations in actual educational practice. Davis and Sumara (2006) challenge the contemporary desire for learning from the "best practices" and the underlying assumption that what works in one context can work in others due to the non-linearity of CAS. Anderson (2010) and Senge *et al*. (2012) suggest that the school's history, the social-cultural relationships, the people within the school, and the ways they think and interact are all influential in shaping the implementation of initiatives. Therefore, adaptation seems to be inevitable.

However, it is important to note that within CAST, adaptations or fluctuations are not without boundaries. One important concept here is the "attractor", which is an abstract representation of the core structures that define the landscape of a system's possible states – a space of the possible. Attractors can be considered basins of attraction, pulling the system towards particular states. When being in the state space

defined by one or a group of attractors, a system can move between different locations as if its movement is unpredictable and chaotic; however, the boundary of the state space gives an underlying pattern of order that can be recognisable.

To make a radical change, the system must move far away enough from the current attractors and towards new ones. The process is referred to as "swap attractors". After swapping, the system remains relatively stable within the state space created by this new attractor until it swaps attractors again (Byrne and Callaghan, 2013).

Figure 4.3 offers simplified illustrations of the above concepts, including attractors, state spaces and attractor swapping. In State Space 1, created by Attractor/Group of Attractor 1, the system can be at different states at different points of time within the boundary of State Space 1, such as S1, S2, S3 or S4. The same principles apply to State Space 2, created by Attractor/Group of Attractor 2.
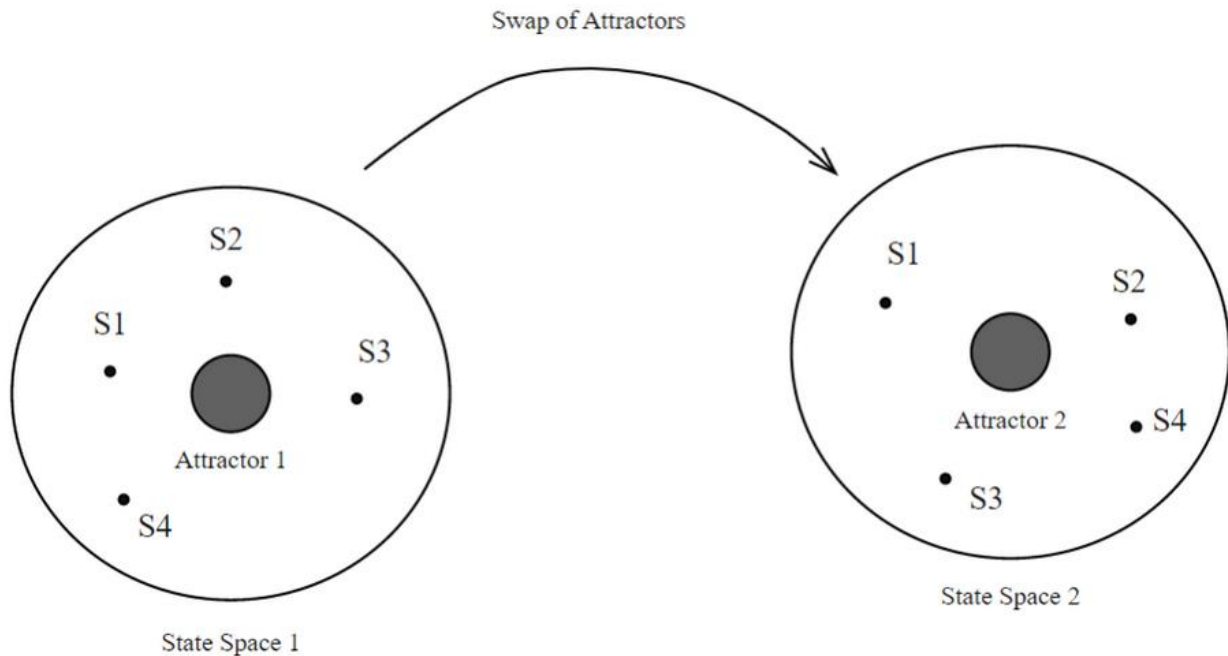
Figure 4.3: Attractor swapping in Complex adaptive systems

In the context of organisations, attractors are understood as core values, assumptions, beliefs, visions or conditions that govern the operations of the organisations. They provide dominant rationales, standards and resources for what should be done. They create a level of consistency and stability within the organisations despite differences among the system's agents and the variations in how they make their everyday decisions (Fullan, 2007; Goldstein, Hazy, Lichtenstein, 2010).

When system reforms are introduced to schools, in some cases, the new ideas or interventions may align with the system's existing attractors, making it relatively easy for the system to adapt and incorporate them. Changes in these cases are only fluctuations around the current attractors. The system moves to another state but is still within the boundary of the current state space. However, in other cases, the new ideas may significantly conflict with the established attractor and, therefore, may encounter strong resistance as they are beyond the boundary of the current state space. In such cases, as Byrne and Callaghan (2013) argue, it becomes necessary to consider changing the attractors themselves.

This study argues that this distinction between system fluctuations around the attractors and swaps of attractors may help resolve the tension between fidelity and adaptation in education reform. Fidelity and adaptation are not necessarily opposing forces; they can play different roles in supporting the implementation of change. Ideas from policies or external interventions may provide a shared understanding of goals, beliefs and values to establish a new attractor, pushing the system away from its current attractors.

However, within the state space created by the new attractors, adaptations are possible. Educators can make necessary modifications and be creative in their practices as long as these changes align with the interventions' general ideas. Thus, schools can exist at the edge of chaos, maintaining stability while being open to change and flexibility. This understanding helps strengthen the theoretical foundation for approaches such as mutual adaptation (Berman and McLaughlin, 1976), flexibility within fidelity (Wedell, 2009), and scaffolding fidelity (Quinn and Kim, 2017).

CAST and the tension between authority and autonomy

Secondly, CAST also provides a deeper understanding of the tension between central authority and local autonomy by viewing it as the interplay between the internal and external environment of the system. From a CAST perspective, a system is capable of self-organisation to varying degrees, which entails change initiated from internal processes without or despite external blueprints. However, it does not mean that the external environment does not play a role in shaping the system. Fullan (1993) and Hall and Hord (2020) highlight the importance of viewing the external environment's expectations, demands and tensions as seeds for future development and enabling resources. As Fullan (1993) puts it, "There are far more ideas out there than in here" (p.39). For a CAS to reach the state of edge of the chaos for evolution, a CAS needs to embrace the diversity that the environment offers.

In traditional educational settings such as in Vietnam, characterised by centralised authority, the emphasis is often on external control, with specific guidelines and regulations dictating how schools and educators should operate. Policies are typically perceived as blueprints for change. However, this study argues that using the CAST perspective, policies should be regarded as information and resources that the government, as an element of the external environment, seeks to exchange with schools. Policies constitute an agenda within which interactions between the government, other bodies in the external environment and schools take place. The school may take the information and resources from the policies, but how they are processed depends on the interactions among the agents within the school and its local environment.

Overall, the government's aspirations and support are important for enhancing the internal diversity of the systems by introducing ideas and opportunities for reform. They may also serve as a valuable tool for navigating the influences of other stakeholders within the environment to ensure that these influences align with the desired changes. However, these external inputs, while significant, are invariably insufficient to drive deep change within schools. The responsibility for actualising these changes ultimately rests with the schools themselves.

This understanding suggests an approach in which the central government assumes the role of guiding and supporting – even in top-down, centralised systems - but not attempting to force all schools and educators to follow a rigid plan. The government's aim may default to providing schools with ideas, guidance, knowledge and competencies, empowering them to create their own mechanisms and agendas for implementing reform. This not only fosters a sense of ownership but also harnesses the capabilities of human organisations in actively navigating their own future. Such an understanding helps shed light on efforts to balance the role of the administrative level and the active participation of schools, such as "centralised decentralisation" (Ng, 2016), "top-down-bottom-up implementation strategy" (Tikkanen *et al*., 2023), and "pressure and support" (Fullan, 1993) as mentioned in section 3.3.2.

CAST and the tension between rational and psychological perspectives

Thirdly, CAST theorists also acknowledge the psychological aspects of being involved in change. Facing change often means encountering uncertainties and stepping into the unknown. Individuals are not simply rational actors but are also influenced by their emotional responses to change. Preparing people with an alternative mindset that embraces mistakes and difficulties becomes important. When people understand that facing the unknown is an inevitable part of life, especially systems at the edge of chaos, it is likely

more manageable for them to handle anxiety and allow themselves and others to experiment with novelty (Fullan, 1993; Fullan, 1999; Goldstein, Hazy, Lichtenstein, 2010).

CAST and the tension between piecemeal and comprehensive reforms

Finally, CAST helps explain why comprehensive reforms that link different levels and areas of the educational system may be more effective than piecemeal and isolated efforts. Applying CAST's perspective, Mason (2008) and Anderson (2010) see change as a multi-directional phenomenon in which it is difficult to pinpoint one specific factor, whether the cultural, political, economic or organisational context, solely enabling or hindering the change. In CAS, individuals and elements are interconnected, creating an interlocking network that changing one aspect may require changing others. Fighting the momentum built up by multiple and connected factors is highly challenging. Mason (2008) sees the most feasible way to do so is gathering critical mass through effective interventions at all possible levels and areas until an alternative momentum toward the new direction has been generated sufficiently to trigger positive feedback loops. These feedback loops allow the system to self-reinforce the new patterns and move closer to the desired state. This understanding implies an approach that focuses on both the depth and breadth of change. It is not adequate to implement change in just one area, no matter how impactful that change might be. Likewise, it's insufficient to attempt to cover every area without dedicating sufficient effort.

In summary, this section has explained how CAST contributes to the field of educational change and reform as a theoretical framework that can strengthen and connect important discussions taking place in recent years. CAST provides a foundational perspective that enables us to understand more deeply how stability (fidelity) and instability (adaptation) can complement each other, how central government can work with schools, how reforms should address not only rational but also emotional aspects of implementers, and why unified and quality efforts are important in making effective and sustainable change.

CAST urges researchers, policymakers and educators to see the world as connected and collaborative. The theory does not necessarily alter what we have already strived for or been given as direct advice on what to do (Morrison, 2008). However, it offers a coherent understanding that allows people to have a shared perspective and a common set of vocabularies so that collective efforts can be gathered more effectively. Thereby, a critical mass for changing how we implement reforms can be reached.

However, some areas in the current CAST literature still lack details and clarity, thereby reducing the value of the theory. The following section identifies these gaps and discusses how this study can contribute to a more substantial theoretical and empirical framework of CAST.

4.5. Possibilities to elaborate and develop CAST

As highlighted in section 4.2, a weakness of applying Complexity thinking in education is its interdisciplinary nature, which requires working with abstract and complex concepts from various fields. Concepts such as positive feedback loops, lock-in, state-space, or attractors may not be easily understood and actionable for educators.

Up to this point, this study has attempted to select and explain the key concepts and their implications in the context of education reforms in a more accessible way. However, there are aspects of applying Complexity thinking and CAST to social sciences and education that remain underexplored and underdeveloped. Notably, the current theory does not provide detailed fine-grained explanations of the local adaptation process and the mechanisms by which systems generate and self-reinforce patterns. This lack of understanding makes it challenging to understand why emergence and lock-in occur, why it is so difficult to break free from the current state space, and, importantly, how to build such momentum for new and desired patterns deliberately. While it has been suggested that self-reinforcement or positive feedback loops happen when a critical mass, a sufficient number of adopters, has been reached, the precise mechanisms are not discussed in the CAST literature.

In its current state, CAST can appear puzzling with pieces that have not yet been assembled fully. From the perspective of a teacher or a school leader, it can still be somewhat unclear how CAST is applicable and meaningful in explaining what happens when change is introduced into their settings. How do the processes inside a school actually work to form momentum, critical mass and path lock-in? This study aims to move the theory forward by proposing concrete models and ideas that make CAST more relatable to theoreticians and practitioners. These ideas and models are based on integrating CAST literature and relevant references that have not been incorporated into understanding and developing CAST.

The following sections first explain how the understanding of human decision-making (e.g., Blumer, 1969; March, 1994; Dooley, 1996; Simon, 1997) and the policy enactment model proposed by Ball, Maguire and Braun (2012) add insights into how individuals in schools think and act when encountering changes. Then, drawing from ideas in Path-dependency theory (e.g., Thelen, 2003; Sydow, Schreyögg and Koch, 2020), the study elaborates on how individuals' behaviours interact with each other and

collectively shape the system-level behaviours, which subsequently feedback to define the behaviours of individuals. Based on this understanding, the study proposes tentative concepts and models to conceptualise the processes and phases that schools may undergo when implementing reform, offering more concrete frameworks for analysing school realities.

4.5.1. Human decision making

Complexity thinking encourages the understanding of systems not by studying the behavioural rules of constituent parts separately but rather by examining the rules that govern systems as wholes. However, this does not imply that understanding the "part" or agents of the systems individually is unnecessary. CAST, as an influential branch of Complexity thinking, places a strong focus on individuals within the system, recognising how individual behaviours, when interconnected, can give rise to surprising system-level behaviours.

This study adopts this approach for studying reform implementation because individuals are at the heart of education reform, especially teachers and school leaders. Studying reforms at this micro-level allows for a deeper understanding of how individuals perceive and respond to change, considering their motivations, perceptions and beliefs, barriers that individuals encounter and the factors that enable their participation in change. CAST recognises that the realities at this level have a significant impact throughout the system. Only by understanding how individuals think and act can we understand and integrate other pieces of the bigger puzzle. Moreover, only by understanding the people directly involved in the reforms can we develop plans, strategies and solutions to respond to their unique circumstances and make the reforms happen.

Therefore, this study highlights the benefits of establishing an explicit and coherent comprehension of how individuals make decisions in their daily lives. While it is beyond the scope of the study to delve into detailed knowledge of this dimension, it is essential to outline general assumptions and introduce some key concepts that will be used in the subsequent models.

Humans in CAS are semi-autonomous agents (Dooley, 1996; Eoyang, 2016). They make decisions by selecting a behavioural option among several alternative options. Their decisions are guided by the demands, constraints and opportunities arising from their interactions with the environment (Coburn, 2003; Dooley, 1996; Stacey and Mowles, 2016). As agents interact, collaborate, and communicate with other individuals and elements in the environment, they understand what they are expected to do, what they should avoid, and what actions are within their capability or beyond it.

However, demands, constraints, and opportunities from the environment are not automatically translated to action decisions. Information arising from interactions with the environment goes through complex processes of sense-making. Information is interpreted, modified, grouped and translated into behavioural options, and actors select a course of action among a pool of possibilities (Blumer,1969; Dooley, 1996; Spillane *et al*., 2002). As a result, two agents who experience similar circumstances may perceive the requirements of interactions differently, generate different behavioural possibilities and make different final decisions.

However, the process of generating and selecting effective options is not totally controlled by the agents but is bounded by other factors. These include the limits of information, the time available to make decisions and cognitive capabilities (March, 1994; Dooley, 1996b; Simon, 1997; Torfing, 2001; McCarthy, 2004; Furneaux, Tywoniak and Gudmundsson, 2010). For example, short-term and local-level outcomes of their behaviours, which are more accessible, may have more influence on their decision-making than long-term and system-level outcomes (Mahoney, 2000). Moreover, as mentioned in previous sections, emotions also play a role in decision-making (Nguyen, 1999; Spillane, 2002; Hall and Hord, 2020).

In summary, human decisions result from the interplay of their wills and the environment; while individuals have some control over their decisions, it is not absolute (*bounded autonomy*). They may try to be rational in their decisions, but they cannot always do so effectively (*bounded rationality*).

The above account of the nature of the human decision-making process fits well with the overall ideas of Complexity thinking and CAST. Explicitly presenting it in this manner strengthens the foundation of the theory by incorporating psychological aspects. It helps explain why local interactions are crucial in CAS and why predefined, external blueprints and rational-based solutions may not effectively influence such systems. Viewing the decision-making process as creating and selecting among a pool of possible behavioural options is also a key element to understanding more complex CAS processes, as shown in the next sections.

4.5.2. The implementation model

In section 3.2.1, this study discussed the commonly used three-phase model of educational change and reform: initiation, implementation and institutionalisation (Verspoor, 1989; Fullan, 2007; Hall and Hord, 2020). It also stated that the study would focus on the implementation phase, considering it the most problematic and complex phase. Despite its significance, the review of existing literature reveals a lack

of frameworks and models that describe in detail how implementation takes place in educational settings, especially from the perspectives of the people and processes involved in implementation. Merely understanding implementation as putting policies into action is inadequate. The framework proposed by Ball, Maguire and Braun (2012), which includes three processes of policy enactment (interpretation, translation, practice), appears to be one of the few existing frameworks that make an effort to shed light on this critical yet overlooked aspect of the research field. Ball, Maguire, and Braun (2012) propose that policy enactment involves creative processes of interpretation and the translation of the abstractions of policy ideas into contextualised practices. The authors recognise that policies rarely determine exactly what implementers should do. While some may limit the range of possible responses, in general, "policy texts cannot simply be implemented!" (p.3). Implementers (e.g., teachers) need to make sense of the reforms – a process that may involve several sub-processes before decisions on practice are taken.

In their framework, "interpretation" is an initial reading, a process of making sense of the policy. In this process, educators ask themselves questions such as: What does this mean to us? What do we have to do? Or sometimes, do we have to do anything at all? "Translation" serves as a space or a bridge between interpretation and practice. It is an iterative process of taking into account institutional texts and incorporating the understanding of both the policies and the contexts into specific plans for action (Ball, Maguire, and Braun, 2012).

This framework is helpful in conceptualising in greater detail how schools and their members respond to reform policies, and these can be integrated into the CAST framework to better capture the complexity of school realities. The study proposes three additional processes (i.e., Interaction, Selection, and Variation) to the original framework based on the discussion of CAST in previous sections. The six processes are represented in the model below (Figure 4.4).
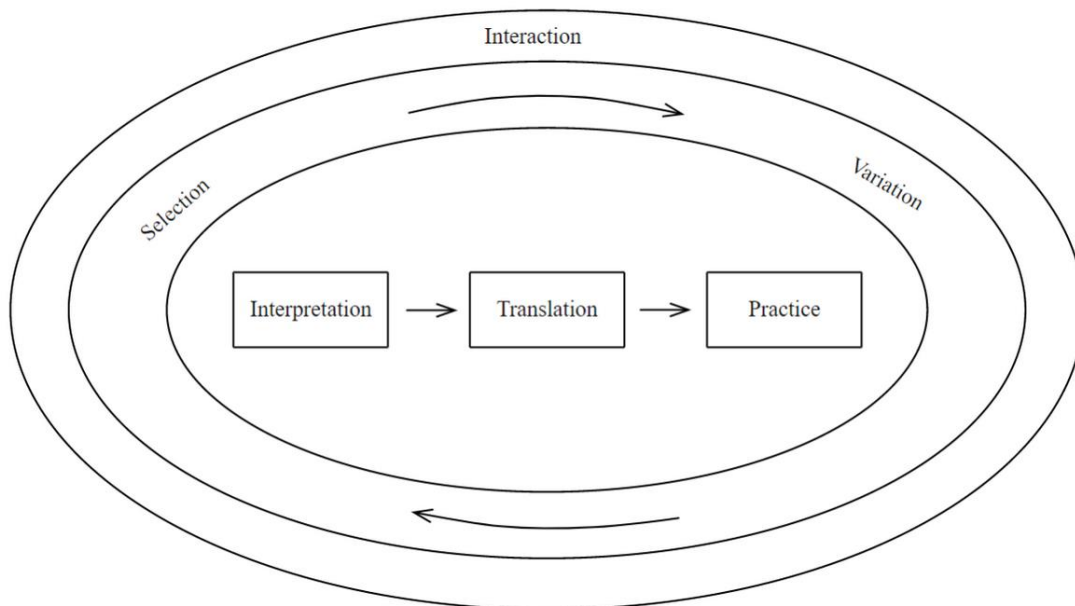
Figure 4.4: Six processes of policy implementation (modified from Ball, Maguire, and Braun, 2012)

In Figure 4, the centre represents three implementation processes, as Ball, Maguire, and Braun (2012) suggested. This study makes a few modifications to the definitions of these processes to integrate them into the CAST framework. *Interpretation* is the process in which school agents make sense of the policies they receive and establish general goals and plans for implementing the policies. *Translation* is the process by which agents translate their understanding and intentions into more concrete behavioural options while taking into account their specific contexts. In other words, they formulate the pool of possibilities for action and/or the repertoire of responses. *Practice* refers to the process in which agents enact the behavioural options in reality.

By applying CAST and the understanding of human decision-making, I argue that these three processes are insufficient to describe the nuances of the implementation phase. Implementation is more complex. Each agent within the system may generate different interpretations of the same policy and have different plans to put it into practice. Furthermore, agents revisit their interpretations, plans and actions in consideration of the results of their choices and the changing contexts. Moreover, within limited resources and constraints, agents cannot enact all the possible options but may need to select one or a few options to conduct at a time.

Thus, this study suggests adding two processes that continuously shape the implementation effort: *Selection* and *Variation*. *Selection* means agents choose among different options for thinking and acting. *Variation* refers to adding new options or making changes to the existing options, in other words, expanding the repertoire of responses.

A further process included in the model is *Interaction,* a key pillar in CAST. Agents do not create and make choices in isolation but through interactions with their environment, especially the local environment. In the context of schools, a teacher's local environment may include colleagues, leaders, students, parents and administrative officers.

These additions align with research data on how schools and teachers respond to change. For example, Coburn's study (2004) provides evidence that teachers combine both the elements in the environment, including the pressure of implementing the initiatives, and their own pre-existing beliefs in forming and selecting among a variety of responses rather than a single response as perceived conventionally. Another study by Coburn (2005) shows that social processes influence teachers' policy interpretations and enactment, particularly the interactions with school principals. Nguyen and Ng's (2020) work explains how teachers implement changes by collaboratively sharing resources and practices, revising the implementation strategies and communicating the results with their colleagues.

As a whole, the six processes of implementation suggest a more complex account of the implementation phase. They demonstrate that implementation is not solely the result of individual or collective efforts but a combination of both. Implementation is not a simple one-way process but often involves an underlying iterative cycle of selecting, reselecting, forming and revising practices. Using terms such as "*variation*" and "*selection*" adds elements of Evolutionary theory into CAST, thereby enriching it.

4.5.3. Phases of Emergence

The implementation model proposed in the previous section provides a more thorough understanding of key processes that shape the implementation phase. It is instrumental in explaining why major system-wide reform policies may generate multiple practices and responses in schools at the local level. From a CAST perspective, such variation and diversity may even benefit the system by enabling the system to adapt and evolve to local environments. However, CAST is an appealing theory because it is not only concerned with diversity and difference. CAST also seeks to understand how a system moves from divergence to convergence. When a government, for example, introduces new policies, it may generate diverse responses from sub-systems and agents within the system. However, CAST suggests that without a need for a policy reform blueprint, a single or a group of connected responses will dominate as agents are likely to adapt to their local environment. Policymakers need to pay attention to the emergence of this new, system-wide response as it is not necessarily desirable from their points of view.

CAST and Path-dependency theory

A promising approach to explain the mechanisms underpinning emergence is by connecting CAST and Path-dependency theory. Both are systems theories and show how initial conditions and decisions can build up inertia that is gradually difficult to deviate from. Path-dependency theory emerges primarily from economists such as Arthur (1994), and was later developed by others (e.g., Mahoney, 2000; Pierson, 2000; Thelen, 2003; Crouch and Farrell, 2004; Sydow, Schreyögg and Koch, 2009). Some key concepts of the theory are similar to CAST, such as positive feedback, critical mass, path dependence and lock-in. Thus, it is helpful to connect the two theories further, especially with the recent development of the Path-dependency theory (Mason, 2008; Dimmock *et al.*, 2021).

This study argues that Path-dependency theory can add clarity and details to CAST to explain how a system becomes committed to a particular practice or set of practices, making further deviation difficult – whether desirable or not. Meanwhile, CAST can extend the applications of the theory in broader contexts and add elements that help better explain how a system can escape from the dominant practices towards new reform practices. Traditionally, the Path-dependency theory focuses more on the stability and rigidity of organisations and contingency; however, the later work of authors such as Crouch and Farrell (2004) and Beyer (2010) have advocated a redirection of the theory to emphasise the agency of human being in searching and following alternative pathways. This recent adaptation of the theory makes it even more relatable to CAST.

Defining a path

"Path" is the key concept in Path Dependency Theory. Mahoney (2000) identifies two approaches to define the concept of path: reactive sequence and self-reinforcing sequence. Reactive sequence is a chain of events that are temporally ordered and causally connected. Each step in the chain is dependent on the preceding steps. Event A1 occurs instead of A2 or A3, which leads to event B1, which leads to event C1, which finally leads to D1. Each event only happens once.

A1 → B1 → C1 → D1

A2

A3

This approach to defining a path is popular in historical studies, where researchers seek to understand how a sequence of events leads to a particular outcome.

Self-reinforcing sequence is an action pattern (i.e., how an action is performed) that is repeated over time (Mahoney, 2000). For instance, from the available alternatives A1, A2, A3, option A1 is selected as the way of doing a specific task and is done numerous times.

A→ A →A→ A

B

C

This approach to defining a path is widely used to study the dominance of a particular type of technology or organisational practice.

In studying school reform, the notion of reactive sequence can be used to analyse and understand how changes in one area lead to changes in others. For example, in a particular school, an initial change in professional development might lead to changes in assessment, which later triggered changes in pedagogy. Meanwhile, the notion of self-reinforcing sequence can be used to study how a specific practice in one area is reproduced.

These two approaches to defining a path are not necessarily contrasting - they may even complement each other; however, as this section focuses more on the emergence of system-wide patterns, a path in the following discussion is understood in terms of repeated action patterns, not chains of events.

Three phases of path-dependency

Sydow, Schreyögg and Koch (2009) introduce a framework consisting of three phases (i.e., Preformation, Formation, Lock-in) to explain how a system becomes committed to a path. The below figure (Figure 4.5) represents the three phrases.
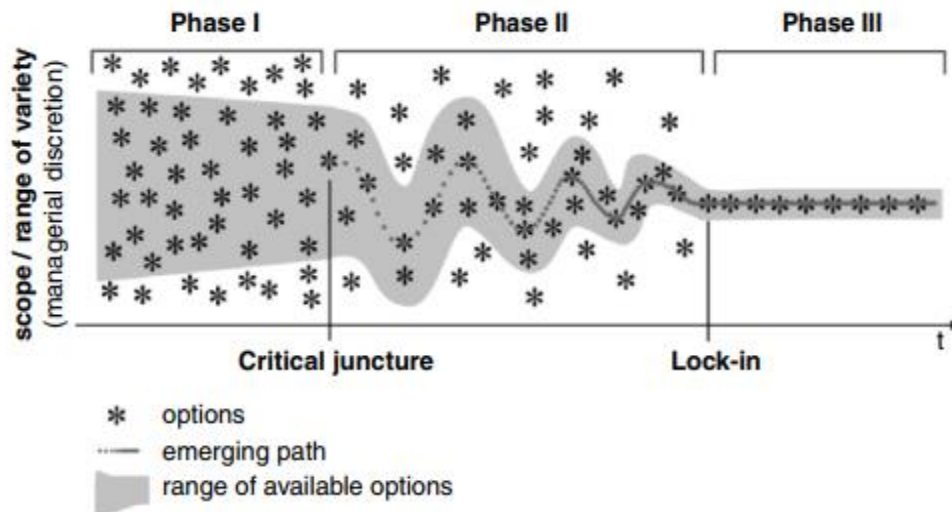
Figure 4.5: The constitution of a path (Sydow, Schreyögg and Koch, 2009)

In the Preformation phase, there are various options for action to choose from. One or a group of practices might attract relatively more agents than others, but the scope of action is still generally broad. However, when a critical mass of adoption around a particular practice or set of practices is reached, the system enters the second phase – The Formation phase. The range of options in this phase increasingly narrows, and it gradually and increasingly becomes challenging for organisational members to escape from the favoured set of practices. As a result, a path forms and develops. Self-reinforcing mechanisms or positive feedback loops begin to generate more and more adoption. Eventually, a dominant practice emerges. In the Lock-in phase, which does not necessarily occur all the time, the system's status is entirely bound to a particular practice. It becomes nearly impossible for agents, even newcomers and resisters, to choose other practices. Alternatives seem to be no longer possible.

However, Sydow, Schreyögg and Koch (2009) clarify that this does not mean all flexibility is lost. The grey corridor in the figure represents a degree of variation around the selected practice. The dominant practice is always subject to change and improvement, even when the system is already locked into it. Agents frequently modify the pattern to adapt to the changing environment, which is indeed necessary for the path to sustain. However, these modifications are believed to be minor and incremental. They are called "bounded changes", "on-path changes", or "first-order changes" (Pierson, 2000; Sydow, Schreyögg and Koch, 2020). New patterns can emerge but often fluctuate around the dominant practice.

Sydow, Schreyögg and Koch's (2009) account of the formation and development of a path offers a concrete representation of how emergence may take place in CAS. Connecting this model with the

implementation model presented in section 4.4.2, we can better understand what possibly happens when a new policy is introduced to the school system. Initially, the policy is implemented in various ways, or in partial ways, or in some cases, not at all, as agents and their contexts differ. Over time, however, these diverse practices may gradually converge into a single or multiple connected sets of practices that become the new norms.

The path-dependency model also helps conceptualise the challenge of changing a system already in the lock-in phase. For some agents (e.g., teachers), this phase may give the feeling of being unable to break away from the current dominant practice (though they may want to).

4.5.4. Self-reinforcing mechanisms

Path-dependency theory offers detailed insights into how the critical mass leads to self-reinforcing adoption. The theory focuses on this aspect because their original interest is contingency. It recognises the reality that some unmeaningful, small events in the history of a system can have significant impacts, creating a path that the system becomes dependent on and seemingly unable to escape. This understanding gives the theory the theoretical advantage in explaining phenomena that cannot be explained by other classical theories in economics, sociology and history, such as "unpredictability", "non-linearity", and "possible inefficiency" (Mahoney, 2000; Vergne and Durand, 2011).

At the core of this understanding is the recognition that causes responsible for the genesis of a path may not be the same as those that reinforce it over time (Mahoney, 2000; Thelen, 2003). An event may occur, or a decision is made contingently. However, it is reproduced and scaled up due to other causes, which Mahoney (2000) calls reproduction or self-reinforcing mechanisms (Sydow, Schreyögg and Koch, 2020). Mahoney (2000) suggests a framework of four major types of reproduction mechanisms, including utilitarian, functional, power, and legitimation explanations.

Utilitarian explanation refers to the act of agents making decisions by rationally weighing the costs and benefits of reproducing the practice or choosing alternatives to their self-interests. Even sub-optimal practices may be reproduced because the costs outweigh the potential benefits of changing them. Specific mechanisms of this kind are discussed in the literature, which could be categorised into five types: improvement, learning, complementary, coordination and emotional effects.

The improvement effect explains that as the practice is reproduced, it is more likely to be improved or elaborated (on-path changes), attracting more adoption due to the benefits it brings. Switching to another

practice will require time, effort and other resources to reach the same level of development as the existing practice, which agents might not have or might not want to scarify (Arthur, 1994).

The learning effect (also known as the *competency trap*) refers to the situation where agents reproduce a practice or more people adopt the practice and share their experiences or resources; agents become more competent in performing the practice. This effect makes selecting alternatives costly due to the risk of making mistakes and the need for additional resources to learn new things (Pierson, 2000).

Another effect to be considered is *the complementary effect*. When a practice is adopted for one task, related tasks are often developed in ways compatible with this practice (Petermann, Schreyögg and Fürstenau, 2019; Sydow, Schreyögg and Koch, 2020). This effect brings coherence and amplifies the power of the reinforcing process, making changing the practice of one task costly because it requires changes in the related tasks.

The coordination effect explains that when agents adopt a similar practice, their behaviours become expected of others, making coordination among these agents easier and more efficient. Adopting a practice that other agents do not share can create uncertainties, inconvenience and even conflicts (Petermann, Schreyögg and Fürstenau, 2019).

The emotional effect refers to agents becoming emotionally attached to the practice. For example, continuing with the practice improves complacency, while making a change after a long time of adoption can cause embarrassment (Crouch & Farrell, 2004; Kotter, 2012; Spillane, 2002). Agents experience a sense of confidence and belonging when following the decisions of a more significant number of agents and a fear of missing out and isolation if they go against the crowd (Pierson, 2000; Stacey & Mowles, 2016). The bigger the crowd, the harder it is to avoid following the norm.

These effects regarding reform implementation imply that the private interests of individuals responsible for implementing the reform practices should be taken into account. It is also important to note that the benefits or costs of reproducing a practice do not solely arise from the inherent features of the practice as designed. They also result from agents' collective and aggregate actions within the system. Merely persuading teachers to believe in the benefits of a practice is insufficient. It is important to realise (and intervene) how daily experiences create additional costs and benefits affecting teachers' decisions.

The second type of reproduction mechanism, according to Mahoney (2000), is the functional explanation. In his view, *functional explanation* explains how a practice is reproduced by the system not necessarily

due to the interests that the system receives but the consequences of the initial decision with the broader environment.

In the educational context, imagine a scenario in which school X adopts the A teaching approach instead of the B approach in implementing learner-centred education. The decision by the school to adopt the A approach may not be due to its superiority but could be influenced by the enthusiasm of a few educators, external consultants, or a particular school leader's vision. Over time, the approach chosen shows some positive outcomes, not necessarily optimal but enough to gain the media's and community's attention. As the school's reputation improves, talented teachers may seek employment, further strengthening its capacity to deliver high-quality education. The school's reputation also attracts more resources, grants, and partnerships, enhancing its ability to invest in professional development, technology, and learning resources. This continuous improvement reinforces the A approach as the norm. Over time, school X's success becomes a model for other schools. Policymakers, educators, and parents consider School X an example of effective educational practices. This can further influence curriculum development, teacher training programs, and educational policies on a larger scale. This particular example illustrates how other factors in the broader environment of a school contribute to reinforcing educational practices that are not necessarily the most effective options.

The third type of reproduction mechanism is *power explanation*. This mechanism refers to the situation in which the initial decision to adopt a practice may empower a particular group of individuals while disadvantaging other groups. The group that gains the advantage uses its additional power to expand the practice. As the practice continues to grow, it also increases the power of the advantaged group, and the advantaged group further expands the practice (Mahoney, 2000). In the educational context, a group of teachers who advocate for a specific teaching practice may hold positions of influence within the school and local administration due to their past successes in using this approach. When a new, more progressive teaching approach is proposed, this group perceives it as threatening their established position. They use their collective influence to resist the adoption of the new practice. Over time, as the practice remains dominant, it continues to bolster the authority and influence of this group of teachers. They, in turn, further champion the approach, promoting its expansion.

Finally, the *legitimation explanation* focuses on agents' subjective beliefs about what is appropriate or morally correct. The initial adoption of a practice forms a basis for what is appropriate and legitimate for future decisions. In other words, the initially favoured practice sets a standard for legitimacy; this practice is reproduced because it is perceived as legitimate, and this ongoing replication of the practice further

reinforces its legitimacy (Mahoney, 2000). For example, the initial belief in the benefits of a particular practice leads to its adoption, establishing foundational values and assumptions that reinforce its wider acceptance and making other practices the wrong way to do things.

Overall, the four mechanisms illustrate how the early advantage can perpetuate a practice, even if it may not be the most effective or innovative option. Decisions are not solely driven by the practice's inherent values or a single individual's choices. Instead, they emerge from the intricate interplay of various factors, individuals and groups. This multifaceted perspective helps shed light on why certain practices persist, making reforms challenging.

In summary, drawing from relevant literature, section 4.5 has shed light on four critical areas that are relatively underdeveloped and receive less attention in CAST. Firstly, the study views agents' decision-making in CAS as creating and selecting from among a pool of behavioural options. These options are not solely constructed by individual agents' rationality but are also shaped by their interactions with the local environment. Secondly, this understanding is employed to propose a policy implementation model involving six processes (interpretation, translation, practice, variation, selection and interaction). These processes reveal a more complex trajectory of implementing policies in schools, potentially resulting in a diversity of practices that extend beyond the original policy design.

Thirdly, this study suggests using the path-dependency framework proposed by Sydow, Schreyögg and Koch (2009) to conceptualise the emergence phases (i.e., preformation, formation, lock-in) in which a system gradually converges towards a dominant practice. Finally, the discussion of self-reinforcing mechanisms, including utilitarian, functional, power, and legitimation explanations, offers a detailed understanding of how agents' collective and aggregate behaviours can lead to the scaling-up and lock-in of a particular practice throughout the system, in other words, the mechanisms underlying the snowball effect in CAS.

4.6. Using CAST in studying the FCER

This study's primary research question is to investigate the implementation of the FCER in the Vietnamese school context. This central question is broken down into sub-questions investigating how schools perceive the intentions and expectations of the FCER policies, how schools incorporate the FCER policies into their practice, and which facilitators and constraints have affected the FCER implementation.

These research questions show the study's intention to not only describe the current status of FCER implementation in Vietnamese schools but also to trace back the implementation processes, providing explanations for the observed phenomena. Complexity thinking, particularly CAST, provides useful concepts, ideas and frameworks to serve this purpose. It urges the researcher to consider the personal experiences of teachers and school leaders, however, not considering these experiences in isolation but in relation to other stakeholders' experiences and influences.

The proposed framework for policy implementation, the phases of emergence, the self-reinforcing mechanisms and the concept of attractor swapping altogether provide guidelines for collecting and analysing data in much greater depth. These frameworks reveal many factors that can shape how the reform policies are implemented, moving beyond the conventional belief that implementing policies are simply enacting faithfully what has been designed.

Discussions in sections 3.3 and 4.4.2 regarding different implementation strategies show that the choice of strategy also impacts the implementation processes and outcomes. Currently, CAST authors appear to advocate for some particular strategies more than others and provide theoretical explanations for their perspectives. On the surface, Vietnam seems to be taking approaches that align with these perspectives. This involves employing a comprehensive, whole system reform which seeks to balance the consistency and flexibility of the educational system, maintaining a certain degree of central control and encouraging local autonomy through professional learning communities to build up capacity. The theoretical discussions in this chapter are valuable for investigating how these strategies function in practice and whether they bring advantages to the implementation processes.

In summary, the application of CAST in studying FCER enables the study to gather more insightful data and analyse it meaningfully. It also contributes to the elaboration and development of the theory, potentially providing empirical evidence for theoretical propositions or refining and expanding details in areas that have not been thoroughly explored. The CAST model outlined may not only act as a heuristic tool to aid our understanding of how schools approach the implementation process in response to system reform but may also reveal where the challenges lie, where the processes break down, and how schools might engineer more successful reform implementation. It should be noted that the frameworks and models presented in section 4.5 are preliminary ideas and may evolve based on the data collected from the field.

4.7. Summary

Chapter 4 serves as the theoretical foundation underpinning this study, explaining concepts and ideas that play vital roles in shaping the research design. The chapter makes a theoretical contribution to the application of Complexity thinking, particularly CAS, in education. It provides a historical overview of this emerging perspective, offering a structured summary of CAST's key concepts and highlighting its relevance and implications for implementing educational changes and reforms. Moreover, the chapter also identifies theoretical gaps and suggests further avenues to develop the theory.

In essence, CAST offers a unique lens that challenges some of the conventional assumptions and beliefs in making change happen in education. It sees educational institutions, such as schools, as complex systems comprised of agents – individually and collectively - who frequently act based on their day-to-day interactions with multiple factors and stakeholders in their local environment. It underscores that commanding change overnight is insufficient. While interactions arise from individual actions, the outcomes of these interactions give rise to powerful effects that mould behaviours in ways they cannot independently control. This understanding is vital for the researcher of this study as it suggests an approach to data collection and analysis that appreciates individuals' stories and experiences but also seeks to uncover connections between their stories. These connections and their interpretation in meaningful ways can facilitate a deeper understanding of and more effective navigation through the challenges of education reforms.

The next chapter, Chapter 5, discusses the methodology of the study. It provides a detailed explanation of how Complexity thinking has contributed to shaping the research design of this study.

CHAPTER 5: METHODOLOGY

5.1. Overview

This study poses a central research question and three sub-questions to investigate the FCER's implementation.

The main research question is:

> How do schools manage the implementation of system-level education reform policies, with special reference to the FCER policies?

This main Research Question is broken down into sub-questions (SRQs):

> SRQ1. How do school leaders and teachers perceive the intentions and expectations of the FCER policies?

> SRQ 2. How do schools attempt, if at all, to incorporate the FCER policies into their practice?

> SRQ 3. Which facilitators and constraints have affected the FCER implementation, to what extent, in what ways and under what conditions?

This chapter, Chapter 5, describes the methodology of the study in detail. The chapter includes 10 sections which discuss the research paradigm, the use of multiple-case study design, the selection of schools and participants, the data collection methods, management and analysis processes, the reflexivity of the researcher, the limitations of the methodology and ethical considerations.

5.2. Research Paradigm

It is widely agreed that there are two major paradigms in social sciences research: Positivism and Interpretivism. The two paradigms are distinct regarding the assumptions about the nature of the social world, the nature of human behaviour, and the principles by which social research should be conducted. Positivists share a view that the social world, like the natural world, is governed by laws and orders that are beyond human influence. People are continuously inhibited by these static social orders, and therefore, their behaviours are predictable and can be objectively studied using experiments or large-scale comparative studies. The aim of studies that adopt a positivist paradigm is typically to explore

cause-and-effect relationships that can be generalised to explain and predict social phenomena (Bryman, 2016; Bartlett and Burton, 2020).

In contrast to Positivism, Interpretivism asserts that the subjects of social sciences - people and organisations - have unique characteristics and cannot be studied in the same manner as entities in the natural world. Interpretivists emphasise the active roles of humans in interpreting and shaping the social orders that constrain them, rejecting the notion that individuals are 'puppets' blindly following predetermined rules and laws. Instead, people construct their meanings of the world around them, resulting in multiple views of reality that are equally valid. Although influenced by social orders, culture, rules, and regulations, individuals also possess the agency to terminate, negotiate, remake, and revise these structures on the basis of their interpretations. Consequently, social orders are not inert. They serve as points of reference and are continuously subject to change. Such a philosophical stance calls for studies that aim to investigate and explain human behaviours in the light of their individual experiences, taking into account the contexts they are placed in, how they interpret their contexts and act in response, instead of focusing solely on the external forces that they have no control over. Research within this approach often "aims for detail and understanding rather than statistical representativeness", commonly employing methods such as interviews and observations (Bartlett and Burton, 2020, p.42).

Complexity thinking shares considerable similarities with the Interpretivist paradigm. It challenges the belief that the world is linear, deterministic, predictable, reducible and replicable. It recognises the non-linearity and uncertainty of both the natural and social world, which consists of systems continuously adapting to the changing environment in which they operate. Within these systems, as elements and agents interact with other parts within and outside the systems for the purpose of adaptation, they can collectively bring about the emergence of new and unpredictable orders (Reed and Harvey, 1992; Morrison, 2002; Boulton, Allen and Bowman, 2015).

Complexity thinking, like Interpretivism, acknowledges the influence of social structures on human behaviour while also emphasising the active role of individuals in shaping these social orders. It considers the impact of context and individual experiences in the study of social phenomena. This present study, which is theoretically guided by Complexity thinking, thus aligns well with Interpretivism's tenets – more so than those of Positivism. It posits that there is no singular, simplistic explanation for the success or failure of a reform effort. An examination of reform implementation should, therefore, provide a detailed description of the contexts in which these reforms are enacted and an analysis of how individuals or groups make decisions based on these contexts.

5.3. A multiple-case study design

A combination of Complexity thinking as the theoretical foundation and interpretivism as the methodological foundation informed the choice of the research design adopted for this study. In the context of the study, schools are deemed to be complex adaptive systems and are the units of analysis. The focus was not on identifying a set of specific variables that determine the effectiveness of school reforms for generalisation. Instead, it examined how each school in its entirety evolves in response to system-level reform policies.

Although section 4.5 sets out some general concepts and ideas inspired by CAST as the tools for investigating the implementation process (e.g., the implementation model, phases of emergence, and self-reinforcing processes), these frameworks are broad and flexible enough to investigate and explain schools' different trajectories, results and challenges. Indeed, the uniqueness of each school in terms of its context and how its members manage the reform policies makes the study interesting and worthwhile.

Additionally, following the interpretivist paradigm, the study respected the voices of participants and found it crucial to see the contexts and events from their points of view to understand their decisions and behaviours (Bryman, 2016). Different interpretations of a similar situation and conflicts between viewpoints were foreseen, and it was among the aims of this study that these variations are explained by careful investigation of the contexts within and outside the case schools.

Such approaches in this study lend themselves naturally to a case study design. Although definitions of a case study may vary, its core characteristic is the in-depth investigation of cases in real-world contexts (Hitchcock and Hughes, 2002; Woodside, 2010; Denscombe, 2014; Yin, 2017; Creswell and Creswell, 2018). Additionally, case studies are characterised by their interest in the entirety and uniqueness of cases, their capacity to capture complexity, and their focus on individual perspectives (Hamilton and Corbett-Whittier, 2014), making them a suitable approach for this study.

Other advantages of case studies were also considered. For example, it is noted that the case study approach is beneficial for policy studies due to its flexibility in choosing the matters of investigation and the detailedness of data collected, which may enable policy development in areas that were not originally planned by the researchers (Timmons and Cairns, 2010). Furthermore, case study reports are descriptive and accessible, offering vivid narratives about real organisations, people, and situations. Their format is often suitable for a wide range of readers, enabling them to understand the findings, assess the relevance

of implications and recommendations, and apply them to their own contexts, thereby enhancing the study's practical contributions (Cohen, Manion and Morrison, 2018).

A case study can include single or multiple cases. This study adopted a multiple-case design where investigations are made in several cases with a similar general purpose (Hamilton and Corbett-Whittier, 2014). The rationale for this decision was that such a design provides a fuller and more reliable portrait of the FCER and allows for a greater understanding of the interplay between the schools' contexts and their responses to reform policies.

Despite all of its advantages, Yin (2017) puts it clearly that "doing case study research remains one of the most challenging of all social science endeavours" (p.1). Denscombe (2014) points out some of the most prominent challenges of the case study approach, including difficulties in terms of defining clear-cut boundaries of cases, leading to difficulties in choosing sources of data to collect and analyse; the problems of gaining access to the research settings; and the risks of facing the observer effect because the participants may behave differently when being observed. The approach also may require researchers to spend an extended period of time to gain in-depth data (Hancock and Algozzine, 2017). Bias from the participants and the researchers due to selective memory may be another problem (Cohen, Manion and Morrison, 2018). The following sections detail how the study was designed to minimise and overcome some of these challenges.

5.4. School and participant selection

The sampling process for this study comprised two stages, first selecting schools and then identifying participants within the schools.

5.4.1. Selection of schools

Unlike large-scale research that uses randomisation for case selection, studies that investigate a small number of cases, like the present study, often employ purposive sampling. This means that cases are deliberately chosen on the basis of specific known attributes (Denscombe, 2014). According to Gerring (2017), there are different purposive sampling techniques, such as typical, extreme, deviant, and diverse, which fit different research purposes. After carefully considering the nature of this present study, I decided to adopt a diverse strategy or, equivalently termed, maximum/maximal variation sampling in selecting case schools. This sampling technique requires the researcher to define a set of characteristics and then seek out cases that exhibit variations in these characteristics (Creswell, 2015).

In this study, three characteristics were selected to maximise the diversity of the schools under investigation: the school's geographical location, socioeconomic catchment and school size. The purpose of the study was to capture at least some of the diverse characteristics of the schools implementing the FCER. The aim was to capture how schools in different contexts respond to a similar set of system-level reform policies. Including a diversity of case-study schools enabled cross-case comparisons to be drawn.

However, as Denscombe (2014) points out, it would be naïve not to take account of practical considerations such as time, costs, and access. Convenience plays a role in determining the number of cases, the locations of the selected schools, and the rationale behind choosing a particular school over others.

Thus, a combination of maximum variation sampling and considerations of practicalities helped map out the following criteria for selecting schools:

1) Public primary schools that are implementing the FCER policies.

2) Schools capture the diversity of schools in Vietnam to some extent, particularly in terms of geographical location, school size, and socioeconomic status.

3) Schools are located in areas that are accessible to the researcher, given the realities of COVID-19, and that are within reach in terms of transportation and accommodation.

4) School leaders who gave permission to access staff and were supportive of the research process.

The first decision made was about the areas for investigation. Based on the second and the third criterion (diversity, accessibility) as noted above, I decided to study schools in Province X, Y and Z. To maintain the anonymity of the case schools, their names were altered. Province X is in Central Vietnam, while Province Y and Z are in Southern Vietnam. Although Province Y and Z are both situated in the South, the two provinces are significantly different in their socioeconomic backgrounds. While Province Z is considered a financial centre and an economic hub of Vietnam, Province Y is less developed and has a strong focus on the industrial sector.

After identifying these three provinces, I reached out to local officials or experts who have knowledge of the local educational landscape and connections with school leaders. A combination of convenience and snowball sampling techniques was used to locate these local officials/experts.

Then, I presented the details of my research to the local officials/experts, seeking their assistance in identifying schools that fit the selection criteria. Through their introductions, I identified three schools, contacted the school principals, and requested permission to conduct research in their schools. The principals in all three schools showed their willingness to cooperate, and permission letters were duly signed as evidence of their approval.

Summaries of the profiles of the three case schools (School A, School B, School C) are presented in the following tables. Detailed descriptions of each case school are given in the Findings chapters (Chapter 6,7,8) of this thesis.

Characteristics	Details
Location	Province X, Central Vietnam
Number of students	321
Number of teachers	16
Number of classes	10 (Grade 1 – Grade 5)
Social-economic background	In rural areas, agriculture activities represent the main occupation of low-income families.

Table 5.1: Profile of School A

Characteristics	Details
Location	Province Y, Southern Vietnam
Number of students	1935
Number of teachers	59
Number of classes	50 (Grade 1 – Grade 5)
Social-economic background	Urban areas and industrial activities represent the main occupations of middle-income families.

Table 5.2: Profile of School B

Characteristics	Details
Location	Province Z, Southern Vietnam
Number of students	848
Number of teachers	45
Number of classes	30 (Grade 1 – Grade 5)

Social-economic background	Urban area; trade and commerce, financial services, tourism, and manufacturing are the key economic activities; middle to high-income families.

Table 5.3 Profile of School C

5.4.2. Recruitment of participants

The study involved 25 participants in total, consisting of school leaders - 4 principals/vice principals and 21 teachers. Out of these, 7 teachers took part in both formal interviews and classroom observations, 4 teachers participated only in classroom observations and 10 teachers participated only in interviews. The recruitment process for participants was designed to ensure diversity in terms of teachers' years of experience, subjects taught, and the grade levels they were responsible for, with a particular focus on Grades 1 and 2. Convenience in terms of time of the researchers and the participants was also taken into consideration.

The school leaders in all three schools served as gatekeepers, assisting in the recruitment of participants. The methods employed by the school leaders to recommend participants varied among the schools.

School A

In school A, the Vice-Principal asked me for a convenient time to visit the school and then identified teachers available on those days with sufficient time to engage. Then, he contacted the teachers, provided an overview of my research, and asked for their willingness to participate. For those teachers who agreed to participate in the interviews, the Vice-Principal gave me their contact information and suggested that I initiate communication with them. This advance contact allowed for a brief explanation of the interview topics and assured teachers that the interviews would be conducted as conversations, thereby relieving any apprehension and unnecessary preparation. Furthermore, ethical considerations, such as voluntariness and confidentiality, were explained, allowing the teachers to make an informed decision regarding their participation in the study.

School B

In school B, the Principal played a key role in the participant recruitment process. She initially introduced me to teachers who held managerial roles, such as subject or grade heads, as they possessed more

extensive experience with the reform implementation. She contacted these teachers on my behalf and encouraged their participation. After conducting interviews and observations with an initial group of teachers, I identified further participants to enhance sample diversity. I consulted with the Principal to seek suggestions to engage with or observe lessons taught by teachers meeting specific criteria, such as younger or more experienced teachers, teachers from different grades, or those teaching a specific subject. In most instances, the school leaders were supportive and recommended teachers who matched my descriptions. This sequential approach to participant recruitment allowed flexibility in identifying participants and accessing a range of perspectives rather than solely relying on the leaders' recommendations.

School C

In school C, the Principal introduced me to the Head of Grade 1. Then, the Head used the Zalo Group, a popular social network app in Vietnam, to introduce my research to Grade 1 teachers. She also contacted the Head of Grade 2, and to the best of my knowledge, the Head of Grade 2 likewise posted messages in her Zalo Group to ask for teachers' participation. Then, based on the teachers' willingness, their availability on the dates I visited the school and my suggestions to maximise diversity, the interviews and observations were organised. Unlike in schools A and B, where the schedules were predetermined before the interview and observation dates, the agenda for interviews and observations in school C was more improvised and was decided on the days of my visits to the school.

The process of recruiting participants in the three schools suggested two important lessons. First, the consent and support of the school leaders was crucial. The hierarchical school structures make it difficult to approach teachers without the endorsement of the school leaders. Most teachers were preoccupied with their responsibilities and were not accustomed to participating in research. Moreover, they often felt they could not independently decide to participate due to potential consequences for their employment and their school. However, if the researcher had already obtained the consent of the leaders and received their assistance in encouraging teachers to participate, the process became less challenging.

Nonetheless, to ensure that teachers participated willingly and were not pressured by their leaders, I made it clear that teachers were free to decline participation with no adverse impact on their work. Although it was challenging to entirely eliminate the influence of school leaders on the teachers' decisions, it was apparent that the teachers were comfortable allocating their time for interviews and permitting me into their classrooms. I also remained attentive to their verbal and non-verbal cues, offered reassurance when necessary, and avoided pressuring them into anything against their will.

Secondly, flexibility and adaptability were necessary. A single strategy may not be universally effective. The approach adopted should be contingent on the school's culture, the individual with whom the researcher is engaging, and the specific circumstances at that moment. For instance, the principal in school B found it more effective to discuss teachers' participation in person rather than through phone calls or messages. However, in school A, I contacted participants by phone in advance to provide direct explanations about the interviews. In school C, the school leader asked for a list of general interview questions to send to the teachers in advance via the Zalo app. Striking a delicate balance between the researcher's intentions and what the gatekeepers deemed suitable was crucial. I also acknowledged the necessity for flexibility in terms of interview timing, location, and the approach taken when conversing with teachers, adjusting based on their availability, preferences, and individual characteristics such as age and personality.

A summary of participants' key characteristics is given below in Table 5.4.

School	Name (Pseudonym)	Gender	Age range	Role	Methods of participation
School A	Mr. Nghi	Male	51-65	Principal	Interview
	Mr. Nhan	Male	40-50	Vice-Principal	Interview
	Ms. Minh	Female	31-40	Arts Teacher	Interview
	Ms. Ngoc	Female	51-65	Classroom Teacher - Grade 3/ Head of Grade 1-3	Interview
	Ms. Thuy	Female	22-40	Classroom Teacher – Grade 1	Interview
	Ms. Hue	Female	41-50	Classroom Teacher – Grade 2	Interview and Classroom observation
	Ms. Sen	Female	22-30	Classroom Teacher – Grade 1	Interview and Classroom observation
	Ms. Hang	Female	31-40	Music Teacher	Classroom observation
School B	Ms. Han	Female	40-50	Principal	Interview

	Ms. Binh	Female	31-40	Classroom Teacher- Grade 3/ Head of Grade 3	Interview
	Mr. Tuan	Male	22-30	Classroom Teacher- Grade 3	Interview
	Ms. Bich	Female	31-40	English Teacher	Interview
	Ms. Lan	Female	31-40	Music Teacher	Interview
	Ms. Linh	Female	22-30	Classroom Teacher – Grade 2	Interview and Classroom observation
	Ms. Anh	Female	40-50	Classroom Teacher – Grade 2	Interview and Classroom observation
	Ms. Ngan	Female	31-40	Classroom Teacher – Grade 1	Interview and Classroom observation
	Ms. Tuyet	Female	40-50	Classroom Teacher – Grade 1/ Head of Grade 1	Interview and Classroom observation
	Ms. Hong	Female	40-50	Classroom Teacher – Grade 2	Classroom observation
School C	Mr. Tung	Male	30-40	Principal	Interview
	Ms. Mai	Female	22-30	Classroom Teacher – Grade 1	Interview
	Ms. Hoa	Female	22-30	Classroom Teacher – Grade 2	Interview
	Ms. Tram	Female	31-40	Classroom Teacher – Grade 2	Interview
	Ms. Yen	Female	22-30	Classroom Teacher – Grade 1	Interview and Classroom observation

| | Ms. Huong | Female | 31-40 | Classroom Teacher – Grade 1/ Head of Grade 1 | Classroom observation |
| | Ms. Tu | Female | 22-30 | Classroom Teacher – Grade 2 | Classroom observation |

Table 5.4: A summary of participants' key characteristics

5.5. Data collection methods

This study adopted three methods to collect data, namely semi-structured interviews, observations, and documentation. These methods were selected since they allowed the researcher to collect data with in-depth descriptions of the settings, events and individuals, thereby allowing the study to answer complex research questions that go beyond "what?" and "how many?" (Miles, Huberman and Saldaña, 2019).

The use and specific rationales for choosing each method are discussed in the following paragraphs.

5.5.1. Interview

The purpose of interviews in this study was to understand the implementation process of the FCER from the points of view of school leaders and teachers. Their perceptions of the proposed changes, the achievements they made, the support they received, and the challenges they encountered played key roles in explaining their decisions and behaviours regarding the reforms.

As defined by Cohen, Manion and Morrison (2018), an interview is "a conversation between two people which is designed to obtain research data to meet objectives of research" (p.508). It is distinct from an everyday conversation because it has a specific purpose to attain research data, and it is often question-based. The advantage of an interview is that it can offer detailed, in-depth information on individuals' thoughts, feelings, contexts, and intentions (Lichtman, 2012). It also provides historical information, in other words, details of events in the past that can no longer be observed (Creswell and Creswell, 2018).

Interviews were conducted with school leaders (i.e., principals, vice-principals) and teachers (i.e., grade heads, classroom/subject teachers). Each interview lasted between 20 – 90 minutes. All interviews were conducted in Vietnamese and audio-recorded with the consent of the participants.

A typical interview protocol included six parts:

1) A brief introduction about the research and the interview procedure.

2) Questions about basic information about the participants, their jobs and their schools.

3) Questions about their perceptions of the FCER policies.

4) Questions about how, if at all, the schools incorporated the policies in their practices.

5) Questions about factors that affected the implementation process.

6) Closing questions, reassurance and thanks.

Interviews took a semi-structured approach, meaning each interview had a similar general structure, whereas the specific questions, probes and prompts varied according to the flow of the conversations. This flexibility allowed the participants some control over what was discussed and enabled the interviewer to follow up on emerging issues (Curtis and Curtis, 2011).

Prior to the interviews in the three schools, I conducted pilot interviews with two teachers who did not work in the schools selected for investigation. The pilot interviews helped test the interview questions' relevance, clarity, and effectiveness. After conducting the pilot interviews, I made significant adjustments to the structure and content of the interview protocol. For example, I prioritised personal questions about the participants before delving into questions about their schools to establish rapport with them. Additionally, I recognised that my initial interview questions were generally lengthy and somewhat detached from the research questions and problem. Consequently, I revised these questions to focus more on the three sub-questions (SRQs) and enhanced the emphasis on exploring how school educators perceive, respond to, and manage the autonomy granted by the central government under the FCER policies. Pilot interviews were also opportunities for me to become familiar with the interview procedure and improve my interview skills, such as asking questions, paying attention, note-taking and probing.

The initial plan was to conduct all the interviews in face-to-face settings. However, due to social-distancing restrictions resulting from the COVID-19 pandemic, the study adopted a hybrid approach, including both face-to-face and online interviews via Google Meet and Zalo.

Each type of interview had its advantages and disadvantages. Face-to-face interviews helped establish rapport with the participants and enabled me to better understand non-verbal expressions, including body language and facial cues. However, face-to-face interviews were, on average, shorter than online interviews since they often took place during break times or in-between lessons when teachers had limited availability. Interviews conducted in schools were occasionally disrupted by background noise from student activities and unforeseen events, such as students seeking help from teachers or teachers being called for other duties. To mitigate these issues, I carefully structured these sessions to prioritise

key questions. Additionally, I chose quieter locations within the school premises and used software to reduce background noises in the recordings.

On the other hand, online interviews often occurred after working hours when teachers were at home. This allowed for more extended discussions, enabling a more in-depth exploration of their perspectives. However, I found it more challenging to maintain focus during online interviews, and prolonged screen time sometimes led to fatigue. Additionally, internet connectivity issues occasionally disrupted the flow of the conversations. To overcome these challenges, I limited myself to conducting only one interview session per day. I ensured that I had a stable internet connection on my end, and in case unexpected disruptions occurred and led to the loss of valuable information, I followed up for clarifications via email and messages.

5.5.2. Observation

Observations were adopted in this study to provide insights into processes and behaviours that were not recorded in the documents and could not be conveyed verbally in the interviews (Nicholls, Mills and Kotecha, 2014). Observations also helped to triangulate the interview data (Conger, 1998). In the context of this study, observations were important to investigate the extent to which actual practices aligned with the expectations and requirements outlined in the FCER policies and with what was self-reported by participants during the interviews.

Observations took place in classrooms and teachers' meetings with the approval of the school leaders and participating teachers. The researcher employed non-participant observations, meaning that participants were made aware of the research's objectives, but the researcher did not actively engage or intervene in the classroom or meetings' activities (Gold, 1969; Creswell, 2015).

The school leaders were informed of the researcher's preference for authentic lessons during observations. This meant that the observed lessons should genuinely reflect the everyday practices of both teachers and students, rather than being significantly altered or overly prepared for the presence of an observer. This preference was driven by the aim of obtaining an accurate understanding of FCER implementation and avoiding any disruptions to students' learning experiences that might result from overly rehearsed lessons. The school leaders agreed with this approach and informed teachers about the observations only one day or a few hours in advance. As far as I am aware, they also encouraged teachers to behave naturally and avoid overpreparing for these observations.

In total, I observed 3 lessons in school A, 5 lessons in school B and 4 lessons in school C. Each observed lesson was approximately 35 minutes. The lessons varied in subjects such as Mathematics, Vietnamese, Ethics, and Natural and Social Studies. After the lessons, I attempted to have informal conversations with teachers for 10-15 minutes to gain an in-depth understanding of teachers' views on the lessons and explore the rationales for their behaviours during the lessons. However, at times, these post-observation conversations could not be conducted because I needed to proceed with another scheduled observation, or teachers had to continue with their teaching duties. To address this challenge, I attempted to speak with some teachers later in the day or during break times.

A broad observational protocol was used to record all observations. The protocol included three parts (see Appendix B), as suggested by Creswell and Creswell (2018):

> 1) information about the setting where the observation takes place, such as date, time, and place

> 2) descriptive notes including a description of the physical setting, accounts of events or activities, a summary of the conversations, details of the participants

> 3) researcher's thoughts

As elaborated in section 3.2.2, the study aims to explore not just the presence of proposed FCER practices in classrooms or the technical aspect of changed practices but also the deeper dimensions of classroom interactions. Therefore, this study utilises Schweisfurth (2013)'s framework (Figure 5.1) to guide the analysis of classroom observation data. The framework conceptualises the transition from a more teacher-centred education (TCE) to a more learner-centred education (LCE) as a continuum encompassing four sub-continua: techniques, classroom relationships, motivation, and nature of knowledge/ knowledge construction.

Schweisfurth's (2013) framework is particularly insightful as it distinguishes between the technical level of LCE and other dimensions that constitute the LCE philosophy and practice. This approach underlines that a comprehensive understanding of LCE requires considering all these dimensions collectively. The first continuum, techniques, focuses on activities such as group work, inquiry-based learning, problem-based learning, and personalised learning, which contrast with traditional pedagogies such as lecturing and teacher-led, whole-class-based learning. However, equating LCE implementation solely with these techniques is overly simplistic. The framework identifies three additional continua. The second continuum revolves around classroom relationships, especially the dynamics between teachers and students. It ranges from teacher-dominated environments to more learner-centred settings where students

have greater choice and responsibility in their learning process. The third continuum addresses the source of learning motivation, asking whether it is intrinsic or extrinsic (Schweisfurth, 2013). This continuum spans from externally driven motivations, such as teacher evaluations or exam requirements, to interest-driven learning, where students engage due to intellectual stimulation or personal relevance. The fourth continuum pertains to epistemology – the nature of knowledge. It questions whether knowledge is a fixed body of information or a fluid, interpretive process (Schweisfurth, 2013). This spectrum ranges from one extreme, where knowledge is seen as a singular, unchallengeable source of truth, to the other, where it is viewed as a product of students' sense-making processes. Overall, Schweisfurth's model provides a comprehensive framework to guide research beyond the prevalent view and practice in Vietnamese classrooms in which moving towards LCE is equivalent to changes in techniques through the application of a pre-defined set of so-called LCE activities (Tanaka, 2020).
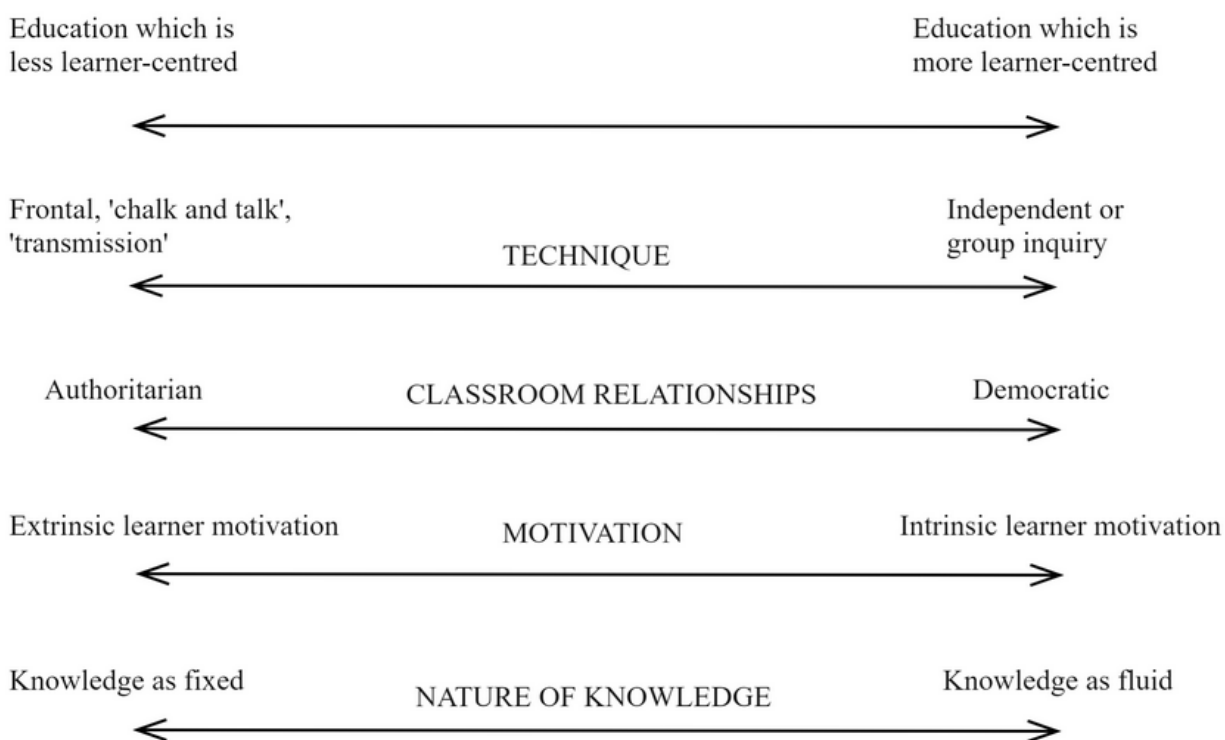
Figure 5.1 The transition from a more teacher-centred education to a more learner-centred education (Schweisfurth, 2013)

5.5.3. Documentation

Documents were an important source of information for this study. The documents collected and analysed can be categorised into four main types:

- National policies in investigated areas (curriculum, pedagogy, assessment, professional development, class management) that have been launched since the introduction of the FCER in 2011/2012.

- Textbooks designed for the C2018.

- Supporting materials developed by MOET or textbook publishers, such as training videos, demonstration lessons and samples of lesson plans.

- School-level documents, including lesson plans, samples of assessment, meeting minutes, and Teachers' classroom observation reports.

National policy texts, textbooks, and supporting materials were analysed to provide the researcher with a deep understanding of the expectations of the FCER. Moreover, an analysis of such documents also gives insights into the ways these expectations were communicated to schools, particularly to the teachers. As noted by Spillane, Reiser and Reimer (2002), policy signals may play important roles in the sense-making process of implementers.

School-level documents were also useful in building a comprehensive picture of each case school. They complemented other data collection methods since they covered past events and those that were not recalled in the interviews (Yin, 2017) and are unobtrusive sources of data that can be accessed at a time and place convenient to the researcher (Creswell and Creswell, 2018).

National policy texts, textbooks and most supporting materials were publicly available and can be accessed freely on the Internet. For school-level documents, I sought permission from the school leaders and teachers to access them. They either sent me the documents via email/messages, or I scanned the documents using my personal phone (see Appendix H for examples of school-level documents).

5.6. Data management

Interviews were audio-recorded with the consent of participants and transcribed into Microsoft Office Word files. Audio recording files were stored in MP4 format. Field note observations were handwritten, then scanned and exported into PDF files.

Policy documents downloaded from the Internet were stored in Microsoft Office Word format or PDF. Other types of documents were scanned using the researcher's phone and stored in PDF format.

I created Excel spreadsheets to manage and track the collected data. These spreadsheets included details of interviewees, collected documents, and observed events. Additionally, templates were designed to provide in-depth information about the context of the collected data. This information encompassed how participants and events were selected, the timing and location of interactions, agreements on confidentiality and follow-up actions between the researcher and participants, the tone of interactions, participants' emotions, and key takeaways from the information.

All electronic data was stored in password-protected files on my personal laptop and the personal OneDrive account provided by the University of Glasgow. Manuscripts or printed documents were stored in a locked cabinet. Personal data, including names, contacts, and any other data used to identify a person or a school, was kept in password-protected files, which were separate from the research data and will be erased using secure removal software at the end date of the project. Identifiers on manuscripts and printed documents were also shredded. Research data will be retained for ten years in accordance with the University of Glasgow's guidelines.

5.7. Data analysis

Recorded audio files from interviews were transcribed into texts. These texts, field notes from observations, and documents were all imported into MAXQDA, a computer-assisted qualitative data analysis software that helped the researcher store and code the data. The data were all collected in Vietnamese and were not translated into English. The decision to avoid translating the data into English was considered unnecessary as the researcher is fluent in Vietnamese, and the process can be time-consuming. Moreover, this approach helped minimise the risk of misinterpretation and allowed for a more authentic and accurate representation of the participants' perspectives (Nurjannah *et al.*, 2014). However, the codes created during the analysis were in English, as many concepts guiding this research are in English and do not have existing equivalent translations in Vietnamese.

This study employed two cycles of coding to analyse collected data (Miles, Huberman and Saldaña, 2019). The first cycle of coding is the act of giving labels to a piece of text to describe and categorise it in terms of its properties and dimensions. Four basic coding methods, as suggested by Miles, Huberman and Saldaña (2019), were mainly used in this coding stage: descriptive, In Vivo, process and concept coding. Descriptive coding gave labels to data to summarise the topic of a passage, most often a noun. In Vivo coding used words or short phrases from the participants' own language to form codes. Process coding was used to label observable and conceptual action in the data. Concept coding assigned meso-or

macro levels of meaning to data, often in the form of an idea rather than an object or an action. Other coding methods were occasionally used, such as emotion coding, values coding and evaluation coding. Below are some coding examples from interviews with participants:

In our school, the total number of staff members, including teachers and other employees, is twenty-five. Out of these, sixteen are teachers. Besides, there are two managerial positions and other employees, which include roles like accountant, library and equipment manager, and security and cleaner. We have four classroom teachers. Additionally, there is one computer science teacher who is on a contract basis.	Teachers and Staff (*Descriptive coding*)
Often, teachers rush through the lessons and the curriculum. Teaching something in a swift manner is faster. However, we need to discuss with them that there's a difference between quick teaching and teaching that has a long-lasting impact.	Rushing through the lessons (*In Vivo coding*)
During the school's professional development meetings, the school leaders disseminate the new regulations from the MOET. Most teachers go along with it without much feedback. For instance, if the change is to give comments rather than grades this year, the school leaders provide	Passive receptivity (*Concept coding*)

	guidance and some examples of comments, and then the teachers just do it. They just follow through without much feedback from the school leaders.

Memos were also made to capture the researcher's thoughts while transcribing and analysing the data. These reflections were used to suggest the gaps that should be filled by collecting more data. They also serve as the basis for writing the final report. As Creswell (2015) explains, "data collection and analysis are simultaneous activities" (p.237). The study did not separate the data collection process and the data analysis process. After each interview or observation, I jotted down my thoughts in the form of memos that fed into my decisions about when, where and how future data would be collected.

Table 5.5 below provides an excerpt of the first-cycle coding of a semi-structured interview with a teacher, alongside coding memos.

Interview transcript	First-cycle of Coding
(In this interview excerpt, the participant was explaining her perspectives on the constrained autonomy that teachers experience) Ms. Han: Autonomy, yes, but within limits. Look, I have ten fingers, right? The reality is that I can only arrange them in different orders, but I can't pick fewer. For example, I'm talking about the curriculum. The C2018 is just a guideline; it outlines goals and end results. That sounds totally fine; nothing wrong with that. But in practice, it's very heavy.	Constrained Autonomy
In the teaching process, it's far from peaceful. Teachers are teaching something, but there are many other activities. Here in our school, while teaching, the teacher who is responsible for the Young Ho Chi Minh's Pioneers Organisation calls the students to practice dancing in the schoolyard. Then, the school	Burden of non-teaching responsibilities

nurse calls for teeth brushing sessions. Many things do not make sense. We just do it because it's mandated, though we don't agree with many things.	Mandatory Compliance
Really. Suddenly, we lose several days because of some program from the Provincial Youth Union or something. Practising this or that for several days.	Burden of non-teaching responsibilities
Running like crazy. What can we do with those lost days? So, teachers have to rush. Rushing because of Covid, well, that's another matter; we'll leave that aside. Rushing from 19 weeks to 9-10 weeks because of Covid, that's necessary. But we are constantly being pulled from this to that. And then there's paperwork, a lot. Suddenly, teachers are called to do this and that. Teachers get entangled in many things.	Rushing through the lessons
	Burden of non-teaching responsibilities
Sometimes, there are contests, too, like the contest for classroom teachers. It's now somewhat reduced. In previous years, we had to teach classrooms at other schools to compete. The Ministry has been making changes. Now, teaching in one's own classroom is somewhat better. Then, we need to do the catch-up teaching. When to catch up? Catch-up teaching must be done quickly. The teachers then tell the students, "That lesson, it's in the textbook. Just study it that way. That much study is enough." Like that. I'm also a teacher. Sometimes, we just hope that from morning to noon, we can just teach and teach only. Just focus on teaching. If there are five periods, I will teach students from period 1 to period five and don't let anyone ask me to do anything. Don't let anyone ask me to collect any money. I hate collecting money the most. Money for drinking	Burden of non-teaching responsibilities
	Rushing through the lessons

water, for lunch, all kinds of money. And if I can collect enough money as required, it's troublesome. Yes, collecting money all day long. Thinking about money all day long	Burden of non-teaching responsibilities

Coding Memo:

- The teacher acknowledges autonomy but within restrictions due to a lack of time caused by mandatory disruptive and non-teaching responsibilities.
➔ Check if other teachers make similar comments.
  Explore whether teachers feel they have any ways to express their concerns about these disruptive activities.
  Examine any potential solutions or suggestions teachers might have to minimise the impact of these activities on their teaching time.

Table 5.5 Excerpt of the first cycle of coding and memo for interview transcript

In the second cycle of coding, codes produced in the first cycle were grouped into categories and higher-order concepts (Miles, Huberman and Saldaña, 2019). These categories and concepts were then organised into themes to address the research questions (Creswell, 2015).

The data analysis process included both within-case and cross-case analysis (Miles, Huberman and Saldaña, 2019). The goal of the within-case analysis is to provide an understanding of the implementation status in each case school, while the goal of the cross-case analysis is to develop more sophisticated descriptions and explanations across the cases.

Table 5.6 below provides an example of how the initial codes are linked to form categories and themes across each case school and between cases.

School	Codes	Categories	Themes	Relevance to Research Questions (RQs)
School A	Social-economic background of students (Agriculture activities,	School status	Variation in local contexts: FCER is implemented across	Gain a deeper understanding of the school

			public schools of varying backgrounds	contexts to address the RQs
	Challenging family contexts, Parental neglect of educational responsibilities; High percentage of Catholic students)		**Sub-themes:**	
	Minimal parents and community financial support		1. Socioeconomic background of students	
	A harmonious, tight-knit teacher community		2. School facilities	
School B	Social-economic background of students (Parents mainly work in manufacturing or small businesses with low income)	School status	3. School services 4. Parent's and community's engagement 5. School staff	
	Basic school facilities			
	Lack of capacity to provide full-day schooling			
	Principal promotes continuous professional development			
School C	Social-economic background of students (Medium to high-income families)	School status		
	Selective enrollment			
	Supplementary classes for internationally-recognised certifications			

	Large donations from engaged parents and the community → high-quality facilities			
	Predominantly young teaching staff			
	Principal motivated to provide alternative culture and learning spaces.			

Table 5.6: Example of the second cycle of coding for interview transcript

5.8. Researcher positioning

Olmos-Vega *et al*., (2023) suggest the definition of reflexivity in the researcher's position as the practice in which researchers "self-consciously critique, appraise, and evaluate how their subjectivity and context influence the research processes" (p.242). Reflexivity is important to qualitative research as it is not feasible to be entirely free from subjectivity. Instead, a qualitative researcher should be aware of and explicitly acknowledge how their subjectivity shapes the research process and findings.

When I started this study, I was a lecturer at the School of Education at a university in Vietnam for a few years, and I had no experience teaching at primary or secondary schools. My personal motivation and insights for this research mainly came from my experiences as a student in schools rather than those of a teacher or a school leader. I had not previously known any of the teachers and leaders who participated in this research. Thus, the processes of research design, data collection and data analysis were conducted from my perspective as an outsider rather than an insider.

This approach brought about significant challenges, especially in trying to understand the contexts of experiences that my participants shared and in building rapport and trust with them. My lack of teaching experience at the primary school level also made the process of interpreting data from observations and interviews overwhelming and challenging at times.

However, being an outsider allowed me not to be constrained by rigid preconceptions. I approached participants' sharing of perspectives with an open mind, not dismissing opinions that differed from my own thoughts and set aside my prior judgements to a large extent. When observing classes, I placed myself in the position of a student, perceiving and experiencing the lessons naturally. Furthermore, as I

was not a member of the school or their community, participants appeared to share their thoughts and experiences with me more openly.

Nonetheless, a potential bias that might have arisen is that I started this research with the purpose of applying CAST, an existing theory, into the educational context of Vietnam. This approach may have raised the risk of confirmation bias by focusing only on data related to pre-existing ideas. However, I addressed this issue by, as outlined in Chapter 4, first recognising that CAST itself is an emerging theory which has many unaddressed gaps and also that empirical data plays a crucial role in identifying and filling these gaps. During data collection and analysis, I continuously reminded myself to embrace new data and let the data guide me towards the research findings. I started with codes that emerged from the data rather than solely analysing based on pre-existing concepts and ideas. I also had no ambition for my data to prove all the propositions outlined in the theory. I was willing to adjust my framework and assumptions according to the data collected and only drew conclusions that my data supported.

In the next section, 5.9, other methods and strategies used to enhance the trustworthiness of this research are explained.

5.9. Trustworthiness of the study

The present study adopted the criteria for assessing and improving the trustworthiness of research, as suggested by Guba (1981). Four criteria include credibility, transferability, dependability and confirmability.

5.9.1. Credibility

Credibility refers to the question of how one can establish confidence in the truth of the findings of the study. Prolonged engagement, peer debriefing, triangulation and collection of referential adequacy materials (Guba, 1981) were the methods used to enhance credibility.

Prolonged engagements were an important aspect of this study. I invested a significant amount of time in each case school, with multiple visits that spanned about three weeks to a month. This extended interaction allowed the participants to become more accustomed to my presence and provided me with sufficient time to understand the context deeply.

Peer debriefing was a further strategy. I engaged in discussions and feedback sessions with my supervisors, colleagues and peers, who were knowledgeable in qualitative research and the subject matter. This process of peer debriefing helped in critically examining my interpretations.

Triangulation was employed to collect data from three participants and different sources, including interviews, observations, and document analysis. Multiple sources of data allowed me to ensure that the phenomena were investigated from various angles. Additionally, policy documents and textbooks were accessible data that my interpretations could later be tested against.

5.9.2. Transferability

Guba (1981) contends that findings of qualitative research are context-bound, do not have general applicability, and must be accompanied by a thick description of the context in which they were derived.

To address this point, thick descriptions have been provided within the present study through the detailed discussions of Vietnam's contexts (discussed in Chapter 2), the FCER's policies and C2018 (discussed in Chapter 2), the school contexts (discussed in Chapter 5,6,7,8), participant profiles and the data collection methods (discussed in Chapter 5).

Additionally, purposive sampling, particularly the adoption of maximal variation sampling in selecting schools and participants with contrasting profiles, helped maximise the range of information collected. Thus, the findings are not confined to a single, narrow context. While universal generalisation was not the aim but the diversity within the sample increased the likelihood that the research findings have relevance and transferability to a wider range of educational settings.

5.9.3. Dependability

Stability of data is also an important concern. However, Guba (1981) argues that some degree of instability is to be expected. Even within a similar context, different realities are often being investigated, and the role of the researcher in interpreting the realities cannot be entirely eliminated. Thus, instead of using the notion of reliability as in quantitative research, the notion of dependability is addressed in this study using triangulation and an audit trail.

The triangulation of multiple methods that complement each other (i.e., interviews, observations, and documentation) ensures that findings are consistent through different sources of data. Additionally, an audit trail was established. The audit trail is a detailed record of the research process, which includes documenting the steps taken in data collection, data analysis, and the decision-making process throughout

the study. This thorough documentation enables an external party, if necessary, to trace and review the research process Guba (1981). In the present study, a record of the interview and observation protocols (see Appendix F and G), audio recordings, transcripts, fieldnotes, and memos were kept. The context, details, and rationales for research design choices have been thoroughly presented in this chapter.

5.9.4. Confirmability

Confirmability concerns whether the interpretations of the study are grounded in the data and not solely the outcomes of researchers' biases, interests and perspectives (Guba, 1981). Triangulation is critical to address confirmability. Guba (1981) also suggests that any claim must be supported by data that can be evaluated by external agents. In the finding chapters of this study, direct quotes and detailed descriptions of observations are given to support the statements made to ensure confirmability.

In addition, reflexivity has been carefully practised. I have explained my theoretical perspective, personal motivation and background, along with my epistemological assumptions throughout this study. I have also continuously reminded myself to embrace and respect the data rather than impose my own ideas on it. This commitment to transparency and introspection serves to reinforce the confirmability of the study's findings.

5.10. Limitations

Firstly, a limitation of this study is the sample size. The study involved a relatively small number of schools in specific provinces, mainly in Central and Southern Vietnam. The scope of this study was primarily constrained by factors related to feasibility and resources. Limited time and funding restricted the ability to include a larger and more geographically diverse sample of schools. Moreover, logistical considerations, such as travel to distant locations and the need for potentially different research permits for other regions, especially during the COVID-19 pandemic, also influenced the decision to focus on a smaller, more manageable number of schools. Therefore, the findings may not generalise to schools in other regions or with significantly different characteristics.

Secondly, while efforts were made to minimise bias in data collection, there remains a possibility that participants, knowing the researcher's background (a university lecturer), may have provided responses that they believed were expected. The researcher's presence during observations may have also influenced classroom behaviours to some extent. To address these potential issues, several strategies were employed. Firstly, at the beginning of each interview session, I clearly communicated to participants that

there were no right or wrong answers and that their honest views, experiences, and perspectives were highly valued. Secondly, I assured all participants of the strict confidentiality of the data collected, emphasising that individual responses would not be identifiable in any reports or publications. Additionally, I adopted a non-judgmental and neutral manner during interviews and observations to further reduce the likelihood of participants altering their responses or behaviours.

Thirdly, the time allocated for data collection was constrained due to the limited project duration. This study mainly focused on the early phase of C2018 implementation in Grades 1 and 2. Interviews were used to ask participants to reflect on their experiences over the entire period of FCER implementation to compensate for the limited duration of the current data collection to some extent. However, acknowledging the limitation of the current study's timeframe, it is suggested that the findings should be supported by previous and future studies that track the implementation of FCER across different phases, providing a more in-depth understanding of its impact.

5.11. Ethical considerations

The data collected from interviews, observations and documents in this project contained sensitive information about participants and their schools as they revealed participants' thoughts, decisions, behaviours, schools' histories, and their pathways of reform progression. Sharing these pieces of information may not be welcomed by all potential participants and may cause harm to them if their identities are disclosed. All confidentiality and privacy steps were taken in compliance with the University of Glasgow's standards of ethics as laid down by the University Ethics Committee.

This study addressed these risks by providing all potential participants with participant information sheets, privacy notes and consent forms to ensure that they participated in the research with full information about the purpose of the study, what their participation would involve and how their privacy would be protected. Participants were informed that they would be free to give or withdraw their consent at any time without prejudice and without giving reasons and that the researcher would make all efforts to provide confidentiality by not disclosing the personal information of participants and names of their schools in any way (see Appendix E, F and G). Participants were identified by pseudonyms in this thesis and any publications arising from the research.

The study involved conducting face-to-face interviews and observations in schools, which posed health risks for the researcher and participants due to the global COVID-19 pandemic. However, face-to-face interviews took place after the researcher had recovered from COVID-19, had tested negative, and all

participants had received at least two vaccine doses, which lowered the health risks to participants. Additionally, the study adhered to the guidance of the Vietnamese government to mitigate any potential risks by following the below measures:

- The researcher consistently wore face masks during interviews and while observing classrooms, meetings, and events in the schools.

- The researcher maintained a safe distance from participants during all interviews and observations.

- The researcher washed hands frequently using soap and water or an alcohol-based hand sanitiser when soap and water were not available.

- The researcher travelled to school locations or interview locations only by private transportation.

5.12. Summary

This chapter has provided an overview of the methodology employed in the study, which focuses on the implementation of the Fundamental and Comprehensive Education Reform (FCER) in Vietnam. The primary objective of the study was to gain insights into the implementation processes, the contexts of implementation, and their impacts on school practices.

The methodology was rooted in qualitative research, which is suited for in-depth exploration and understanding. The chapter justifies the choice of multiple-case study design as it enabled a more nuanced understanding of how different schools respond to systemic reforms within their distinct contexts. Interviews, classroom observations, and documentation are justified and explained as the appropriate data collection methods to address the research questions.

Additionally, the chapter discusses the strategies used to manage and analyse data and ensure the trustworthiness and ethical conduct of the research. The limitations of this study and the potential impacts of the researcher's background on the research process have also been presented.

CHAPTER 6: FINDINGS IN SCHOOL A

Chapters 6, 7, and 8 present the findings from three case study schools, A, B, and C. Each chapter begins with an introduction to the schools' context. The subsequent sections are organised based on the research questions and the implementation model proposed in Chapter 4 to examine how school leaders and teachers in each school interpret, translate and put into action the reform policies across different areas, such as curriculum, pedagogy, assessment, professional development, and school governance.

Each chapter concludes with a narrative of a selected participant whose experiences provide deeper insight into the schools' reform implementation status. These personal stories shed light on the decisions and emotions of the participants, creating a more vivid and relatable representation of the research findings.

6.1. Overview

School A is a public primary school with 321 students located in the rural area of a province in the centre of Vietnam. Including School A in the study provides valuable insights into how FCER policies are implemented in less privileged contexts.

This chapter begins by describing the space, student background, and characteristics of the teacher community at School A, revealing it as a small school with a tight-knit teacher community and students facing significant hardships. Based on interview data, this chapter presents findings on how educators at School A perceived the FCER policies and C2018, showing a complex attitude among the teachers. While they were generally accepting their role as implementers of these policies, they were also compelled to re-evaluate their initial compliance in the face of the school's harsh realities. Classroom observation data and in-depth interviews about the implementation process highlighted the teachers' efforts but also showed that they were unable to progress further due to contextual factors. The chapter concludes with the story of Ms. Minh, a teacher who was genuinely supportive and strived to properly implement the spirit of reform but felt helpless against the constraints of her situation, to the point of deciding to quit her job.

6.2. The Context

6.2.1. Space

Although only about 15 kilometres from the central area of the province, School A is surrounded by a different landscape, characterised by rolling hills, rice fields, and simple houses instead of high-rise buildings and bustling marketplaces.

The school grounds are modest, with three main buildings presenting a basic and traditional Vietnamese design. The central building contains the school's administrative offices and the teachers' room. Classrooms are situated in the two side buildings, including a two-story building and a single-story building. In front of the two-story building, there is a banner that reads: "*Tiên học lễ, hậu học văn*" which is a popular Vietnamese educational philosophy that highlights the importance of moral values and etiquette before pursuing academic knowledge.

In the middle of the schoolyard stands the flagpole with the Vietnamese flag, where students gather for the flag-raising ceremony every Monday morning. The schoolyard is covered in concrete and shaded by several large banyan trees.

I was warmly welcomed by the Principal, Mr. Nghi, who has taught at the school for nearly 27 years and held the principal position for the past three years. He invited me into his office. The office was a small room with simple furnishings. There were piles of papers on the desk and several cabinets filled with documents.

6.2.2. Students

The first thing Mr. Nghi mentioned in our conversation was that most students 'parents in this school were farmers and workers in local factories. He talked about students with particularly challenging backgrounds. Some had parents who were divorced. Some had fathers in prison. Some arrived at class with empty stomachs, and teachers, out of compassion, occasionally bought bread for the child to have something to eat before class.

Other teachers confirmed the challenging circumstances of the students. Ms. Thuy, a Grade 1 teacher, shared that she was transferred from another school and was so surprised by the students' background and the limited support they received from their parents compared to her previous school. She talked about a particular case in which the student had lost both of her parents and was now living with her

grandmother. The student's family did not have enough money to buy textbooks and school supplies for the new school year, and Ms. Thuy was trying to help the student with her money.

Ms. Hue, a Grade 2 teacher, explained further that the school was implementing full-day schooling for students as required by the MOET. However, students could not stay and have lunch at school like in other schools because most parents could not afford the additional fees. This led some families with better financial conditions to move their children to other schools.

6.2.3. Teachers

In school A, there are 16 teachers. Classroom teachers teach nearly all subjects, such as Vietnamese, Mathematics, Ethics, and Natural and Social Studies. They are also responsible for monitoring student's progress in their assigned classes and serve as the primary point of contact for students and their parents. Additionally, there are subject teachers who teach, for example, Arts, Music, Computer Science, and Physical Education for multiple grades and classes.

Mr. Nhan, the Vice-Principal, described the teaching community in School A as tight-knit and harmonious. He shared that:

> For a school to effectively teach and fulfil its other responsibilities, a spirit of unity is the most crucial factor. I am very pleased with the sense of unity within this school. "*Anh em*" (a term used to refer to members of an organisation as brothers and sisters) spend their free time gathering, talking, and playing in a warm and open environment. They are not hesitant to share their thoughts. This is a very favourable condition for all of us to work here. "*Anh em*" even want to come to the school when it is not required, solely to chat with each other. (Mr. Nhan, Vice-Principal)

Ms. Ngoc, the leader of the Grade 1 to 3 teacher group, confirmed Mr. Nhan's observation. She stated that unity within the school was strong, and mutual support among the teachers was commonplace. If one teacher needed to attend to an urgent task, others who were available would step in to teach the class. She described teaching as a shared job. Having spent time with the teachers during their break and observing one of their professional development sessions, I could clearly sense this open and close-knit atmosphere within the school. Teachers were comfortable sharing not only work-related issues but also details of their personal lives.

6.3. Interpretation of FCER policies and C2018: *A complex mix of acceptance and scepticism*

School leaders and teachers at school A showed a general acceptance of the FCER policies and the C2018. They saw these policies as non-negotiable facets of their job, and implementing policies was a matter of course. For instance, Ms. Hue stated:

> Top-level people have conducted extensive research to develop this curriculum. We are only responsible for applying it. (Ms. Hue, Teacher)

Some educators expressed their enthusiasm and support for the changes being introduced. Ms. Minh, the Arts teacher, voiced her perspective:

> I support the reform because education, much like life, needs to evolve daily. It should grow and develop. We cannot keep following the same old path, so I welcome the changes. (Ms. Minh, Teacher)

Mr. Nhan enthusiastically shared his understanding of the C2018:

> Under the former curriculum, teachers transferred the knowledge via lectures, with students taking a passive role. Meanwhile, the new curriculum encourages students to construct knowledge actively, have hands-on experiences, participate in discussions and be involved in creating the learning content. Learners now play a critical role while teachers act as guides and supporters. (Mr. Nhan, Vice-Principal)

With a tone of approval, Ms. Thuy commented on the redefined educational aims of the C2018:

> Developing competencies and qualities is a good idea. For example, when students are learning a text in reading or solving a math problem, they should develop analytical skills by asking questions such as what information is provided and what they are being asked to find. This means that, when preparing lesson plans, I need to think about which competencies and qualities students can develop through the lessons. This was not a focus in the prior curriculum; the competencies and qualities were not explicitly defined. My district now requires us to clearly define these elements in lesson plans and evaluate the student's progress after the lessons. I think this is good. (Ms. Thuy, Teacher)

This overarching acceptance, however, masked more complex nuances of opinions that emerged when delving into the specifics of the policies and their practical application. Regarding the policy of utilising oral/written feedback instead of grades for assessment, Mr. Nhan and Ms. Thuy expressed some doubts

and disagreements when implementing the policy in practice. Ms. Thuy explained that she understood the intention behind not relying on grades was to reduce academic pressure since parents would not have grades to compare, thus alleviating the 'achievement disease' in education. However, in practice, she pointed out that parents often struggle to understand the comments. As a result, parents may not show interest or offer sufficient support for their children. Similarly, Mr. Nhan stated:

> *Nhập gia tùy tục* (When you move into someone's house, you must adapt to their rules). The policy tells us what to do; our task is to find ways to do it. We do not have the authority to alter it. But, if it were within my power, I would prefer using grades because they make things easier. For instance, when I evaluate an essay and assign a grade of 5, that number, coupled with my comments, tells you how good the essay is. Without assigning such a grade, providing comments alone is not enough for the parents to understand how well their child is doing. (Mr. Nhan, Vice-Principal)

Ms. Ngoc, the leader of the teacher group 1-3, and Ms. Minh presented their concerns regarding the multiple sets of textbooks policy:

> Now, there are multiple sets of textbooks, such as *Cánh Diều* and *Chân Trời Sáng Tạo*, and teachers were asked to choose between them. Why don't experts collaborate, with each group focusing on a single subject and writing textbooks for that subject from grade one to twelve? This way, there would be no need for selection. Top-level people could review the textbooks, and then everyone would use the same ones. Why is it necessary for teachers to select textbooks? (Ms. Ngoc, Teacher)

> I think we should not have too many sets of textbooks. If there are too many, it becomes confusing. It's better if higher-ups simply agree on one set. Why bother choosing? We can't really follow our own preferences anyway (Ms. Minh, Teacher)

Reflecting on the new textbooks, Ms. Thuy raised some concerns about the Vietnamese textbook she was teaching. She felt the reading materials were too challenging for the students and lacked the quality of those in the previous textbook. When I asked whether she had participated in selecting this textbook for her school, she affirmed that she had. Initially, she liked the textbook's structure as it seemed less complicated than the others. She also believed that by the time students reached this level, they would already be reading fluently. Given a short window of time to make a choice, she chose this set of textbooks. However, after actually teaching from the textbooks, she realised its shortcomings. When asked whether she would continue using them, Ms. Thuy replied:

Of course, I have to continue using them. Because a tiny sand grain like me cannot change anything. In general, teachers are very reluctant. For example, if they ask us how the textbooks are, enthusiastic people may want to say something, but if you say anything, you have to write it down officially, it's sensitive to touch things like that. So, in the end, few people give feedback, that's why. (Ms. Thuy, Teacher)

In summary, the teachers at School A exhibited a multifaceted response to the FCER policies and the C2018, characterised by a nuanced mix of acceptance and scepticism. At first glance, there appeared to be widespread acceptance among educators, with the policies viewed as integral, obligatory parts of their professional duties. However, beneath the facade of agreement, more critical perspectives have started to surface during the policy rollout. Teachers, while grasping and initially agreeing with the purpose of the policies, begin to alter their views, becoming doubtful and even disheartened when recognising a disconnect between the policies and their practical application in the classroom. Moreover, participants' responses also suggested an environment where open communication and constructive criticism appear to be limited.

To provide a more in-depth understanding of this dynamic, detailed findings from classroom observations and interviews with both teachers and school leaders are elaborated in sections 6.4 and 6.5. These sections explore how the FCER policies translate into actual classroom settings, as experienced by those at the forefront of its implementation.

6.4. Translation and Practice: *Navigating the implementation within a disadvantaged context*

6.4.1. The Lessons: A mix of traditional and innovative practices

Grade 2 – Vietnamese lesson

On a bright morning, I stepped into a Grade 2 classroom led by Ms. Sen – a teacher in the early stages of her career. As I entered, all the students stood and greeted me in unison with "*Chúng em chào cô ạ!"*— a respectful greeting Vietnamese students often offer their teachers. Ms. Sen introduced me to her students and encouraged them to engage and speak loudly during the lesson.

The classroom setup was a typical representation of a Vietnamese learning environment. The students' desks were arranged in orderly rows, all facing the chalkboard. Next to the chalkboard stood the teacher's

desk. There were no modern devices such as projectors or televisions in the classroom. The class consisted of 31 students.

On that day, the lesson was structured around the text "From the Pigeon to the Internet" from the student textbook, introducing students to a variety of means of communication. The text was to be explored across several periods, each lasting 35 minutes. I observed the first period, which primarily focused on reading the text.

The lesson started with a recap of the material covered in the previous session, which was about a text entitled "Thank You, Mr. Hippo". Ms. Sen selected a student to read the text aloud and then asked the rest of the class to share what they learned from that lesson.

Tuyet (pseudonym), the student who was called, immediately stood up, walked to the board, and read the text quite fluently. Afterwards, she expressed her thoughts. In a tone that felt like recitation more than a natural flow of spoken language, Tuyet said,

> "Through this lesson, I've learned that if we want someone to help us, we should ask politely, and once we receive their help, we should say thank you."

Ms. Sen then invited another student to give feedback on Tuyet's reading and response. The second student said,

> "*Dạ thưa cô* (equivalent to 'yes, teacher' in English, showing politeness and respect), Tuyet read very well, and she answered the question correctly."

Ms. Sen asked if any other students had additional feedback. As no students responded, Ms. Sen continued by sharing her feedback on Tuyet's performance. She noted that Tuyet had spoken loudly and answered the question accurately. There were a few mispronunciations and moments of hesitation; however, overall, Tuyet's performance was "pretty good". She then asked the class to "compliment" Tuyet. The class gave her a collective clap.

Pausing for a few seconds, Ms. Sen then asked:

> Do you have any family members that live far from you?

Several students raised their hands. Ms. Sen called on them, and as they stood up, they started their answers with "*Dạ thưa cô*" and mentioned, for example, their grandparents, aunts and uncles.

Ms. Sen then asked the students, "How do you feel when you live far away from them?" One student replied, "I felt sad," and another said, "I miss them", in a quiet voice. Ms. Sen asked him to speak louder, and the student repeated his answer more loudly.

Next, Ms. Sen asked the class, "So, how do you communicate with them?" The students suggested several methods, such as making phone calls, writing letters, and using calling apps.

Ms. Sen asked the students to turn to the textbook (see Figure 6.1) and introduced the new lesson:

"We are going to learn how people have communicated with each other from the old days up to the present through this text: 'From the Pigeon to the Internet'."

Figure 6.1: An excerpt from the student's Vietnamese textbook – Grade 2 – page 88

Ms. Sen asked a row of students to stand up and read the title of the text. She listed out a few difficult words for the class to pay attention to and then read through the text herself while the students were attentively listening. After that, Ms. Sen jotted down the challenging words on the board and pointed out the syllables that the students might find difficult to pronounce. She briefly explained the meanings of the words and asked the students to read the words individually first and then as a class. Ms. Sen revisited the meanings of these words by calling on students to explain. All of the students read the definitions of the words from the textbooks.

Ms. Sen asked the students to work in groups for about three minutes to read aloud the text to each other. She observed the groups' interactions and gave feedback on their collaboration, noting their good work in dividing the reading tasks and correcting one another. Afterwards, Ms. Sen selected two groups to take turns reading the text aloud. One more student was asked to read the text, and then the entire class read aloud together. Ms. Sen also read the text herself one more time before wrapping up the lesson by offering feedback to the class as a whole and praising some individual students for their accurate and loud reading.

Table 6.1 below summarises the classroom activities in this lesson:

Section	Activity	Conducted by
Reviewing the previous lesson	Reading aloud the previous text and sharing understanding	Student (One student)
	Feedback on reading	Students and Teacher
Introducing new lesson	Discussion	Students and Teacher
	Reading the text	Teacher
	Vocabulary focus	Teacher and Students
	Group reading	Students (Groups)
	Individual reading and Class reading	Students
Closing	Teacher modelling and final feedback	Teacher

Table 6.1: Summary of Classroom Activities during Observation 1 at School A (SA.O1)

In the light of four Schweisfurth's four-continua framework (2013) as an analytical tool, the observed lesson demonstrates a mix of traditional and learner-centred educational practices. In terms of technical dimension, the lesson appeared to apply more practices attributed to learner-centred education (LCE) compared to a traditional, lecture-based model in Vietnamese classrooms. For example, students were

asked to work in groups and give feedback on their peers' performance. However, in the second continuum of the framework, concerning classroom relationships, the teacher retained control over the learning process with minimal evidence of students being involved in decision-making. This suggests that, despite the incorporation of some LCE practices, the fundamental dynamic of teacher-student interaction remained traditional, with the teacher as the primary decision-maker and controller of the learning environment.

In terms of motivation for learning, it appeared that the lesson relied heavily on praise. This approach can be effective in boosting student morale and participation but may not foster intrinsic motivation. Regarding knowledge construction, the pace of the lesson was generally fast, leaving limited opportunities for authentic communication. Students' interactions primarily consisted of reciting answers directly from their textbooks rather than expressing personal thoughts. Follow-ups with questions to delve into the students' ideas were not asked, and the students did not raise any questions either.

Moreover, while Ms. Sen methodically followed all the steps in textbooks and the lesson plan, her teaching felt lacking in genuine emotions, as if she were performing the planned steps rather than fostering an interactive learning environment. Even when complimenting her students, her praises seemed routine and lacked warmth or sincere positive attitudes. Apparently, she was nervous and stressed.

The conversation I had with the teachers, including Ms. Sen, during break time provided some insights into her emotions. Initially, she asked me whether I was enjoying observing the classrooms. I affirmed that I did, as I loved spending time with the children. However, she seemed sceptical, suggesting that my feelings might change if I were to teach them for a long period of time. She then shared stories about students who were resistant to learning or those who bullied others, expressing a sense of helplessness and tiredness.

Grade 1 – Vietnamese lesson

I observed another Vietnamese lesson for Grade 1 taught by Ms. Hue, who has approximately 20 years of teaching experience. There were 36 students in her classroom. The lesson that I observed was about a poem in the student's textbook named "The Seven Colours of the Rainbow". This session, being the second period, concentrated on comprehension. Table 6.2 below summarises the classroom activities from this lesson.

Section	Activity	Conducted by
Reviewing the previous lesson	Reading the text aloud	Students (Selected individuals)
	Feedback on reading	Teacher
Introducing new lesson	Reading Comprehension Questions from the Textbook	Students (Selected individuals)
	Group work to answer questions	Students (Groups)
	Feedback on Group Work	Teacher and Students
	Rote Reading of Selected Poem Passages: Each group selects a portion of a poem for one member to memorise and recite at the board as a competition among the groups	Students (Selected individuals)
	Completing a textbook comprehension activity	Students (Selected individuals)
Closing	Final feedback, along with homework assignments and preparations for the next Lesson	Teacher

Table 6.2: Summary of Classroom activities during Observation 2 at School A (SA.O2)

Ms. Hue used a variety of strategies in her lesson, such as individual and group activities, feedback, and competitive elements. The classroom atmosphere was quite vibrant, and at times, the students demonstrated their enthusiasm for the lesson. Ms. Hue also seemed calm and relaxed.

However, although the lesson was aimed at comprehension, Ms. Hue's focus appeared to be more on reading aloud with fluency than on developing students' thorough understanding and deep connection with the text. When students responded to the comprehension questions, there was a lack of probing follow-up questions to explore why they provided those specific answers. Additionally, if a student responded incorrectly, Ms. Hue would quickly turn to another student for the correct answer instead of giving the student probes or support for self-correcting. During group activities, some students appeared unclear on the objectives and struggled to keep pace with the lesson. For example, the two boys seated beside me at the back of the classroom were confused, asking each other what they should do, but then chose to remain silent. In the end, they were not able to complete the task.

The C2018 curriculum aims to develop not only subject-related specific competencies but also general competencies. In the lesson plans of Ms. Sen and Ms. Hue (handed to me before the lessons), the objectives were divided into specific and general competencies. Specific competencies included abilities such as reading with clarity and accuracy and understanding the meanings of poems. General competencies comprised elements such as autonomy and self-learning, communication and collaboration, and problem-solving and creativity. The observed classroom activities demonstrated teachers' efforts to develop some of these general competencies through, for example, group work, peer feedback, or allowing students to select portions of the poem to read and learn. However, areas such as problem-solving and creativity, though listed in the lesson plan, were not actually practised. Additionally, while activities to develop some of the competencies were present, the lack of genuine and in-depth interactions meant that these activities risked being merely superficial. A long list of the general competencies in the lesson plans seemed to be about meeting administrative requirements rather than truly integrating all of them into the lessons.

I observed another Grade 3 Music lesson and, during interviews, I asked teachers—such as Ms. Thuy, Ms. Sen, Ms. Hue—to describe, for example, an Ethics lesson they would conduct. The common pattern was adherence to the textbooks, focusing on answering questions and completing activities that were either outlined in or similar to those found in the textbooks. When I inquired about implementing more long-term and challenging activities involving observations, interactions with parents, and making artefacts, the teachers acknowledged that such activities could enhance the quality of the lessons. However, they also noted that these activities would require preparation time and cooperation from parents, which is challenging.

In summary, the lessons observed in school A highlighted the complexities and challenges of integrating the C2018. While all teachers made efforts to incorporate learner-centred elements into their lessons, such as group work and peer feedback, the overall structure and dynamics of their classrooms remained largely traditional. The following sections (6.3.2 – 6.3.4) present additional findings from interview data to delve deeper into the challenges encountered in implementing the FCER at school A.

6.4.2. Pedagogy: The struggle for differentiation in fast-paced classrooms

One notable topic that emerged during interviews with educators at School A was tailoring teaching to meet students' needs. Teachers shared that some students in school A faced formidable challenges. They came from families that were financially disadvantaged with parental conflict, and/or families with domestic violence. As a result, there was a considerable difference in the abilities of students within the

same classroom. Ms. Thuy, Ms. Sen, and Ms. Hue mentioned students who read and wrote very slowly compared to their peers.

Ms. Thuy described two students in her class showing signs of what she considered "autism": they did not communicate, had poor memory retention, and were unable to follow the teacher's reading instructions. There was another student in her class who revealed signs of depression due to family conflicts. Since the learning content and reading materials became more complicated, requiring more skills and time for group activities and self-study, the gap between these struggling students and their more capable peers was increasing.

As observed, the fast pace of the lessons did not give space for differentiation strategies to support students with learning difficulties. In interviews, when asked about how teachers support these students, teachers mentioned giving these students extra reading practice or math problems in their spare time, such as the self-study period at the beginning of the day (15-30 minutes before classes start), break times (20 minutes) or after school hours. Ms. Sen acknowledged the dilemma of using this approach. She noted that using students' break time for learning was not typically encouraged, however, she felt the need to do so out of concern for students struggling to keep up. Ms. Sen also shared that parents might feel embarrassed when their children are being kept after school for additional help. She commented with a hint of bitterness:

> The rule is that we should not have students study during their breaks. We should not keep students back for extra lessons. However, what can you do when a child is really struggling? I try my best for the sake of the child, although I long for a break as well. (Ms. Sen, Teacher)

Ms. Thuy's insights shed light on why teachers often struggle to find time for activities they felt necessary. In my observations of Vietnamese language lessons, a significant amount of time was allocated for students to read the text aloud—first individually, then in groups, and finally as a whole class for several times. When I asked Ms. Thuy about this practice, she explained that following this protocol was mandatory, even though it risked boring the students. Deviating from this practice could invite criticism from the DOET officials during their classroom evaluations. Ms. Thuy stated:

> It's really difficult; wanting to change but not daring to. Any desire to innovate must be approved by superiors. For example, even if an innovative idea comes to me while teaching, I can't implement it without permission. Consequently, we stick to the standards and ensure basic knowledge acquisition, which ultimately limits teachers' creativity. (Ms. Thuy, Teacher)

Ms. Hue commented, highlighting how teachers might adjust their teaching due to time constraints:

> It really depends on us. It will be enough if we want it to be; if we see it as insufficient, it will remain so. If one teaches with dedication, then time seems to be insufficient. However, if one just skims through, then it is enough. That's how it is. (Ms. Hue, Teacher)

6.4.3. Assessment: The gap between policy intent and school realities

The implementation of replacing numerical grades with verbal or written comments also stirred noteworthy discussion. Educators at school A saw the benefits of reducing the use of grades to decrease pressure on students. However, as they considered the primary role of assessment is to inform parents about students' academic performance to provide support and apply pressure when students neglect their learning, they found that the new method did not effectively fulfil this role, especially with parents in this community. Mr. Nhan noted:

> I can see that this comment system has its benefits, but it also has drawbacks. It works with concerned parents, but for those who are not, they don't read anything at all. Commenting takes a lot of the teacher's time. For example, if they're all correct for a spelling test or a math problem, I give a score of ten, and that's it. Then parents say, "This score is good, that score is not good." But now, with comments, it's very time-consuming. I make detailed comments, but the parents don't read it. Then, on the last day of the semester, when parents came to the meeting, and I shared the results, they asked why I had not said anything all year. If they read the comments in their child's notebooks, it's all there, but if they don't, they blame the teachers for not saying anything. But the teacher's time is all spent teaching; where can they find time to call parents and explain? Besides, it's difficult for the teachers when some parents don't pick up the phone. Some parents cooperate with us, others don't. If you say their child is good, that's fine. But if you say something negative, they stop answering your calls. They won't pick up the phone if they recognise the teacher's number, so there's a lot of frustration for the teachers (Mr. Nhan, Vice-Principal).

Overall, while the intent of providing detailed comments was to offer nuanced insights into students' performance, the reality was that not all parents engaged with these comments. The teachers faced a significant challenge: while the policy, in theory, appeared beneficial, and they initially supported it, its application brought to light challenges that they were unprepared to address. Nevertheless, teachers felt compelled to continue with the implementation.

6.4.4. Professional Development: A need for quality and context-sensitive practices

Professional development was an area that underwent numerous changes under the FCER and in support of C2018. As explained in Chapter 2, the ETEP national project, aimed at delivering continuous professional development for teachers and school leaders, was crucial in preparing them to implement C2018. This project employed a hybrid approach, combining online and face-to-face training to familiarise teachers with the new curriculum and the competency-based approach to learning and teaching.

In the online portion of the training, teachers viewed videos of top experts explaining the aims and underlying philosophies of C2018 and the objectives and teaching methods for each subject. Following the video, teachers were required to take quizzes consisting of multiple-choice or open-ended questions. Their results were recorded as evidence of having completed the training. After finishing the online modules, teachers engaged in face-to-face sessions offered by their local DOETs or BOETs and completed tasks under the supervision of trainers. As shared by the teachers, some of these local training events were postponed or conducted virtually due to COVID-19.

Including an online component in the training was to ensure that the core message was not diluted as it disseminated to the school and classroom levels, avoiding the pitfalls of the traditional cascade model. Ms. Hue and Ms. Thuy affirmed that this objective was somewhat achieved:

> Online training is like hearing directly from the Ministry itself, from those who guide the textbooks, so it's like hearing directly from the source. Generally, it prevents the message from being distorted, which is good. (Ms. Hue)

> The online format is great. However, teachers have to be proficient in information technology. However, I think that format is great. Online materials are very comprehensive, and it's wonderful for teachers to read. The content is clearly written, including the methodologies and even sample lesson plans. (Ms. Thuy)

However, teachers experienced a tension between understanding the general ideas of the C2018 and translating them into practice. For them, the focus was on delivering the content and activities in the textbooks, which shaped their daily teaching more significantly than the curriculum framework. Ms. Sen shared her experience with the training provided by the textbook publisher:

> In one week, from Monday to Friday, morning to evening, I listened to the trainers, the professors, and PhDs who briefly explained the textbook. For instance, one session covered one subject. The

trainer discussed the subject and then showed us a teaching demonstration video. But the thing is, even though they showed us the teaching demonstrations, we cannot do things in the same way. I felt confused about some aspects, but it was difficult to raise questions in such a large group. There were so many people. Only after returning to school could I discuss it further with my colleagues or colleagues from other schools to see how to implement it. (Ms. Sen. Teacher)

Ms. Sen, Ms. Thuy and Ms. Minh pointed out that the training did not account for the unique context of their school, particularly concerning students' capabilities, the level of parental cooperation and the school's facilities. Mr. Nhan, the Vice-principal, observed that such confusion in designing the lessons for the C2018 was common among teachers, emphasising the need for more practical preparation and guidance.

Interestingly, although the C2018 was intended to offer more autonomy to teachers, those like Ms. Sen and Ms. Minh preferred more explicit instruction. From their perspective, too much autonomy may lead to ambiguity. Ms. Sen shared that in the absence of detailed instruction, she doubted whether her teaching methods were "correct". In the past, teachers received more detailed guidance, or they would get together with teachers from surrounding schools in meetings to create a unified approach to teaching. However, when there was no specific guidance and such gatherings were disrupted this year due to COVID-19, schools and teachers were left to implement the new curriculum and textbooks in isolation. Ms. Sen expressed her uncertainty about the expectations and whether her teaching aligns with the aspirations of the new curriculum or the requirements of the authorities.

A further change in professional development was the adoption of the Lesson Study model. This practice, which originated in Japan, involves the collaboration of teachers in developing a lesson plan, then teaching and observing the lesson to collect data on student learning and using their observations to refine the lesson (Stepanek *et al.*, 2006). The Lesson Study model has been implemented in Vietnamese primary schools since 2020 and is considered a crucial tool to implement the C2018 effectively. The model was outlined in Circular 1315-BGDĐT – GDTH and includes four main steps: 1) developing the lesson plan; 2) teaching and observing the lesson; 3) analysing the lesson; and 4) applying the discussion results to daily lessons (MOET, 2020b).

Classroom observations were already a common practice in Vietnamese schools; however, the Lesson Study model is significantly different as it focuses more on student learning, ensuring that all students are engaged in the lessons and that no students are left behind, as opposed to solely concentrating on whether teachers' methods align with the requirements. The model also incorporates a reflective process

in which teachers discuss the results of their observations - a component that was frequently overlooked previously. Additionally, the whole process is a collaborative effort to continuously improve teaching, while the conventional approach feels more like evaluating individual teachers' performance. If the model is well-established, it may serve as a powerful tool for building a professional learning community within schools, fostering collective autonomy, and transforming teachers' perceptions of the teacher-student relationship.

However, in school A, this approach's distinct features and its importance were not fully recognised. Mr. Nghi, the Principal, perceived it as merely "doing the three or four steps, like doing '*chuyên đề*' (translated as 'thematic focus'—a traditional type of professional development in which a teacher is selected to lead a model lesson for others to observe and discuss). It seemed to be just implementing another procedural requirement so that a file set, including documents recording all the steps conducted, could be completed for reporting purposes. From teachers' perspectives, they acknowledged the approach's practical values, such as coming together to agree on how to teach a particularly challenging lesson or learning from others' teaching (Ms. Hue, Ms. Thuy). However, the more profound implications of the approach for cultivating collective autonomy and shifting the teachers' perceptions were unmentioned.

This understanding gap may be attributed to inadequate training for educators at the school level, particularly for teachers. They received little guidance apart from the outlined four-step procedure in the policy text. Consequently, from my observations, it appeared that the teachers only fulfilled the minimum requirement number of lesson study sessions set by their DOET. During my visit to the school, which took place in the middle of the second semester, the lesson study sessions were no longer being conducted.

Teachers at School A also mentioned that they were asked to join a campaign for "reforming and innovating teaching and learning methods", which required them to document their innovative practices and conduct pedagogical research. However, the teachers shared that, in their experience, these activities seemed to be mere formalities – filling out predetermined templates to meet the authorities' requirements without participating in any proper training to equip them with a fundamental understanding of conducting genuine research (Ms. Minh).

6.5. The story of Ms. Minh: *Struggling to bridge the gap between theory and practice*

This section delves into the story of Ms. Minh, an Art teacher in school A who was considering quitting her job due to the increasing stress she faced in the teaching profession, which had a significant impact on her well-being. The story of Ms. Minh highlighted the paradox where an educator genuinely supports the reform's objectives but felt overwhelmed and constrained by its implementation.

Ms. Minh has been a teacher since 2005. Prior to joining this school, she had spent two years teaching in the mountainous region, where she offered volunteer services as a university student. After giving birth to her first child, she requested a transfer to her current school. At the time of our interview, she has been teaching at School A for 15 years.

Ms. Minh shared that changes had been implemented in her subject area starting in 2017, when she was required to adopt the Danish method of teaching arts. This method uses a thematic approach in which teachers use overarching themes to develop multiple art techniques and skills for students in an integrated manner. According to Ms. Minh, this method encouraged students' creativity and active participation by allowing them to analyse themes, conduct activities independently, and engage in self-evaluation as peer evaluations.

While becoming familiar with this Danish method, Ms. Minh also learned about the forthcoming implementation of the C2018. This created some uncertainty regarding how the Danish approach would align with the C2018 and its new textbooks. Consequently, she taught the method with a level of caution while waiting for the introduction of the new curriculum.

When Ms. Minh started teaching using the C2018, she noticed it was rather similar to the Danish method. She was enthusiastic about the reforms and found the new approach promising. However, she stressed that the practical application of these changes did not match the conditions required for effective implementation. She further explained:

> In order to bring about change, it is crucial to have coherence in the conditions such as mindset, facilities, content of education and management approaches. I've always been an advocate of innovation and was excited when I first learned about these reforms. However, putting these innovations into practice has been extremely difficult. (Ms. Minh, Teacher)

Ms. Minh provided specific examples. Concerning school facilities and learning environment, she explained that to truly foster the development of competencies as required by the curriculum, class sizes

need to be smaller. According to her research, there are often fewer than 20 students per class in foreign countries, with enough space for students to move around and with appropriate educational equipment and materials. In Vietnam, however, public school classes typically exceed 30 students; some even surpass 40. There is not enough space for students to move freely. In her case, Ms. Minh only wished for a dedicated functional room for art lessons. Due to the lack of space, she had to give up her room for subjects like music and computer science and taught in regular classrooms. She wanted a separate room to decorate so that her students could feel inspired. Additionally, since art activities like cutting paper and drawing can be messy, having a dedicated space would allow her and the students to work more freely. In a regular classroom, cleaning up quickly enough when switching to another subject was impossible. As a result, the activities had to be limited in scope and creativity to save time and minimise disruption. This compromise not only impacted the quality of art education but also dampened her enthusiasm and that of her students.

Getting art materials for students, such as clay, coloured paper, and crayons, to organise the art activities presented another challenge, as the school did not supply these. Ms. Minh noted that some students' families could not afford these materials, while others tended to undervalue the importance of her subject.

Regarding the teachers' mindsets, she shared:

> It's not that people don't want to change; it's more like the teachers are struggling to keep up with the changes. We haven't yet grasped the depth of the ideas to implement them correctly. We only get to attend training sessions a few times, and those are merely theoretical, you know. Even if we attended classroom observations to observe someone teaching one or two lessons, it was not sufficient to fully understand and teach effectively (Ms. Minh, Teacher).

Ms. Minh's reflections indicated a need for more practical, hands-on training opportunities that allow teachers to actively engage with and practice new teaching methods.

Moreover, Ms. Minh shared that the main reason for her decision to quit her job was that she could no longer endure the pressures associated with managing her classrooms under the new pedagogical approach. She cared a lot about her students, learned about each student's circumstances, and often helped with their personal lives. Close relationships have formed between her and her students. She aimed to switch to a non-authoritarian teaching style, striving to be neither overly strict nor unapproachable. However, this approach seemed to contribute to her classrooms becoming uncontrollably noisy. The accumulated stress from her profession, coupled with personal life pressures and a sense of helplessness

in managing her classroom, made her feel highly stressed. She shared that although she loved her job and her students, she was no longer able to cope mentally:

> If the students are too noisy and I can't get them to listen, then I have to step outside because I start to experience symptoms of stress.

> I'm afraid of being scolded by the school leaders. There were times when the students were too stubborn, I had to step outside, I had to, because if I stood there any longer, I felt like I might lose my temper (Ms. Minh, Teacher).

She mentioned that the current regulations from MOET under the FCER prohibit teachers from using corporal punishment or verbal reprimands; however, at times, she and her colleagues felt helpless in educating students. Beyond these prohibited methods, they were uncertain about alternative strategies for managing student behaviour.

Overall, Ms. Minh's experience highlighted the importance of providing teachers with practical tools, materials and techniques to assist them in the transition to new educational paradigms. Her story is a reminder that motivation alone is not sufficient for effective adaptation to these changes. While teachers like Ms. Minh may be deeply committed and motivated to embrace new teaching methods, the absence of concrete guidance and realistic strategies can leave them feeling overwhelmed and ineffective.

6.6. Summary

This chapter presents findings drawn from data collected at School A, a small-sized public school situated in a socially and economically disadvantaged area of Vietnam. Over the course of eight years, starting from 2014, multiple reform policies have been introduced to the school, covering changes in assessment, curriculum, textbooks, pedagogy and professional development. The data indicates that teachers generally saw the value of these policies. From their perspectives, policy implementation was generally non-negotiable. There was a notable disconnect between those the teachers refer to as "top-level" individuals - the decision-makers - and themselves, who are responsible for executing the policies. Thus, regardless of their feelings and perceptions towards the policies, they still made efforts to carry out the policies with the hope of bringing about meaningful changes.

However, while attempting to enact the changes, teachers at school A found themselves facing numerous challenges related to students' physical and mental health, financial circumstances, parental cooperation, school infrastructure, class sizes, time constraints, and strict control by the DOETs. Although the C2018

aims to provide teachers with greater freedom and autonomy, teachers in school A seemed unable to navigate these school realities to truly exercise this given autonomy. They felt incompetent and thus unable to adapt their teaching to support struggling students, manage student behaviour, communicate with parents, and design active learning activities within limited resources (including lack of time, equipment and space). The training teachers received, although enhanced by the incorporation of online learning, fell short of equipping them with the necessary tools to address the issues they faced. Textbooks remained the principal resource for curriculum translation. However, their content, especially on the subject of Vietnamese, was seen as overwhelming, contributing more to the problems than offering solutions.

As a result, although there were changes and some improvements in teaching practices (e.g., incorporating group work, giving feedback and compliments, and encouraging peer assessment), teachers felt somewhat exhausted and discouraged from pursuing the reform further. In the extreme case of Ms. Minh, the impact on her mental health was so severe that she felt incapable of continuing her teaching. The disparity between the aspirations set by the MOET and the C2018, which the teachers have tried to internalise as their own, versus the reality of implementation at School A, was significant.

CHAPTER 7: FINDINGS IN SCHOOL B

7.1. Overview

This chapter explores School B, the second case study, located in a city serving as Province Y's urban centre in Southern Vietnam. School B represents a middle ground in terms of urbanisation and economic development among the three case schools. The differences in geographical location (Southern versus Central), socio-economic contexts (urban versus rural), and the larger scale of School B compared to School A provide a distinct context for further investigation into the implementation of the FCER policies and C2018.

The chapter opens with a detailed exploration of the environment, school's history, student demographics, and the attributes of the teaching staff at School B. It then delves into how the educators at School B perceived the FCER policies and C2018. Similar to School A, the teachers at School B viewed the reform policies, especially the C2018, as obligatory mandates that they are responsible for implementing. However, teachers demonstrated a varying understanding of the new policies, often perceiving the C2018 changes as mere extensions of their existing practices rather than a fundamental shift in educational approach. Moreover, while issues related to students' backgrounds and parental neglect are not as significant in this school, teachers confronted other urban setting pressures, including large class sizes, teaching time disrupted by unplanned activities and tasks, excessive paperwork, and parental pressure regarding students' rankings and classifications. The chapter further details the case of Ms. Han, the school's Principal, offering insights into her challenges in navigating the balance between an alternative approach to leadership and the constraints of the current educational system.

7.2. The Context

7.2.1. Space

The first time I came to School B to present my research to the Principal, Ms. Han, I was surprised that right in the city centre, the school grounds are very spacious. The school yard is paved with patterned stones and surrounded by many colourful painted benches. In the schoolyard, a few flame trees are beginning to bloom red – a type of tree very typical of schools in Vietnam. Opposite the entrance is a peach-coloured building – the school's auditorium, a facility absent in School A.

To the right is a long two-story classroom building, which seems to have been painted a light yellow but shows signs of wear. To the left is a smaller two-story building, which is the administrative area. The school space is filled with banners displaying various slogans. Behind the school gate is the phrase, "Every day at school is a joyful day." In front of the auditorium is a large banner about the school's support for the MOET's movement to "Build a friendly school - proactive students." There is also an image of Ho Chi Minh and his famous quote about students' role in national development. Even the tree trunks are also utilised to hang slogans, such as reminders from the Provincial Traffic Safety Committee about wearing quality helmets when riding motorbikes – Vietnam's most popular mode of transportation.

I met Ms. Han in the principal's office and was struck by her youthful appearance, sporting sneakers and a mid-length skirt. Ms. Han's office was not very large, but it included a small private room for rest, and the office was equipped with an air conditioner.

Ms. Han revealed some details about the school's history. She mentioned that the school was established before 1975. However, it was previously located elsewhere and only moved to its current site in 2010. Compared to the old location, which was only a few hundred square meters, the new site is much more spacious, covering about 10,000 square meters. Additionally, the old location was in a lower area than the street level and would flood during the rainy season, earning it the unfortunate nickname of the "slum school". Thus, moving to this new site has been a blessing. However, Ms. Han noted that the current school's infrastructure condition is progressively worsening.

> Many things are broken, from the toilets to the auditorium and classrooms, and even the desks and chairs are worn out. It's an endless cycle of maintenance. We are always trying to repair something. So, someone built this school, but it's not quality work. The construction does not hold up well. It keeps breaking down. (Ms. Han, Principal)

When I asked about the funding for these maintenance works, Ms. Han shared that the state budget was insufficient, and they must seek additional funds from donors. However, even that was not enough to cover the costs required to fix severe damages, like the water and plumbing system, which could cost several hundred million VND (more than 10,000 pounds).

7.2.2. Students

School B is the largest school among the three case schools, with 1,935 students and 50 classrooms. Ms. Han has been teaching at School B for almost two decades, starting when the school was at its previous location. She shared that the social-economic condition of students' families at that time was challenging.

However, students' situations have improved after the school moved to this new location and started to accept students from the neighbouring district. Nevertheless, overcrowding has been a significant issue. The number of students and classrooms keeps increasing to cope with the demand. As a result, the school cannot meet the standard of 35 students per classroom. Class size often ranges from 37 to 40 students. Due to the lack of space, some classes are scheduled in the morning while others are in the afternoon. Thus, full-day schooling has not been implemented in school B, although the MOET requires it under the C2018.

7.2.3. Teachers

School B has 48 classroom teachers, 9 subject teachers, one teacher responsible for managing equipment, and one teacher in charge of the Ho Chi Minh's Young Pioneers Organisation - a children's organisation closely associated with the CPV. This organisation is present in almost all public primary schools in the country and plays a key role in organising extra-curricular activities for students.

During the data collection process, I interviewed and observed the classes of 10 teachers. The majority, 8 out of 10, were between the ages of 31 and 50, meaning they had at least ten years of teaching experience or more. Unlike school A, no teachers were nearing the end of their careers, and the Principal herself was also in her middle age.

My data collection period coincided with the severe development of the COVID-19 pandemic in Vietnam. Thus, I could only conduct individual interviews instead of attending teacher meetings at the school, making it challenging to obtain first-hand evidence of the faculty dynamics. However, the data from individual interviews indicated that, due to the larger size of the school, the teachers did not have a uniform level of closeness like at School A. The participants did not share significant conflicts among the teachers regarding work. However, their narratives revealed that the teachers formed close-knit groups based on compatibility in perspectives, age, teaching grades, and subjects. The strength of these group bonds also varied. For instance, Ms. Anh, a Grade 2 teacher, mentioned that everyone in her grade level was close to each other.

> It's strange, but there's always so much to talk about despite seeing each other a lot. Sometimes, even at eleven-thirty or midnight, we're still messaging back and forth. A single message in the group chat can trigger a lot of responses. There are always many things to talk about, even more than with blood siblings. (Ms. Anh, Teacher)

However, as Ms. Han, the principal, shared, the fourth-grade teachers seemed less connected. Teachers like Ms. Lan, the Art teacher, and Ms. Bich, the English teacher, felt their roles were more independent and engaged less in sharing thoughts and connecting with everyone.

7.3. Interpretation of FCER policies and C2018: *General acceptance, varied level of understanding and support*

The interview data suggested that, as with School A, the teachers at School B viewed MOET's reform policies as mandatory requirements, and their role was to fulfil these mandates. Ms. Minh, Head of Grade 3, described the recent years as a time of constant change, with new directives from the Ministry of Education coming annually. She detailed that the reception of new policies often involved official documents from the Ministry/Bureau/Department of Education being passed down to schools. These were then distributed among the whole school's teaching staff, often through Zalo groups (a popular free messaging app in Vietnam). She acknowledged that these documents were generally abstract but were made more tangible through guidance provided by the school's leaders, by conducting *chuyên đề* - thematic focus, and through discussions in the teachers' grade group to unify the approach for all teachers before implementation. This nature of policy rollout has become a familiar part of a teacher's job. Ms. Minh shared:

> During the school's professional development meetings, the school leaders disseminate the new regulations from the MOET. Most teachers go along with it without much feedback. For instance, if the change is to give comments rather than grades this year, the school leaders provide guidance and some examples of comments, and then the teachers just do it. They just follow through without much feedback from the school leaders. Only if there's a policy open for suggestions do teachers contribute their opinions. But, for example, regarding the policy of giving comments, even if we give suggestions, the feeling is that it won't change anything. So, teachers rarely give feedback. If it's from above, we have to do it. (Ms. Binh, Teacher)

Ms. Anh shared her perspective on her role in policy implementation:

> Changing from the old to the new, I think they (the policymakers) already considered the benefits and advantages of the changes for the students. Any change is initially more challenging than staying the same, but I think if these changes come from the research done by scholars and decided by a council, there must be a thorough consideration. Now, I am just the one implementing it. (Ms. Anh, Teacher)

When asked if there were any policies that teachers disagreed with, they admitted there were, but Mr. Tuan, a Grade 3 teacher, noted:

> Well, we learn how to accept them. We learn to accept those things. That's right. What I personally think it's just my own thoughts.

> We just have to accept it because of what the MOET or BOET sets out; I think the school leaders must also have thought about it very carefully, so we just follow the directions from above. The school leaders manage us, so someone will naturally manage them. Sometimes, we should also be a bit open-minded. I think that if there's a change, we just accept it (Mr. Tuan, Teacher).

Some teachers expressed more personal views on the reform policies:

> I think change is necessary because life today has changed a lot compared to before. Our students are now more exposed to technology and have developed more than previous generations. So, I think our curriculum needs to change to be more appropriate for them... Now, students are developing more holistically, not just learning knowledge. Besides academic knowledge, they also learn skills, and some subjects are integrated to help them develop their competencies and qualities, not just knowledge. This is the biggest change. (Ms. Linh, Teacher)

When asked about her understanding of the competencies and qualities outlined by the C2018, Ms. Linh described:

> From what I understand, competencies mean that from the knowledge students learn, they will apply it in life, becoming a competency, a skill for them to use in life. "Qualities" here are like the *hạnh kiểm* (conduct) we used to have before to evaluate students, which used to be a general thing, but now it's specified into many details, like qualities such as diligence, honesty, and responsibility (Ms. Linh, Teacher).

Ms. Linh's explanation revealed some confusion between competencies and skills, seeing them as being equal. However, according to the MOET's C2018 framework, skills are components that contribute to the development of competencies alongside other components such as knowledge, interests, beliefs, and motivation. The distinction between competencies and skills appeared to be a challenging idea that not many teachers could fully understand. It also seems that Ms. Linh perceives "competencies" and "qualities" as extensions of what she already practices— acquiring knowledge first and then applying that knowledge to real-life situations (which has already been encouraged since C2006, typically

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prioritising knowledge transmission, treating the application as an additional component), or viewing qualities as equivalent to "conduct", rather than rethinking the educational approach more radically.

The tendency to minimally interpret the curriculum changes was also observed in the words of Ms. Bich, an English teacher of school B who believed that the changes in the C2018 were not new to her as she had been implementing these new teaching techniques for a long time, for example organising games or asking students questions to introduce a new topic. Despite her initial confidence in her current teaching methods, when asked whether she organised activities like real-life projects for her students to develop their competencies, Ms. Bich responded in confusion. She admitted she had not facilitated such activities. Regarding the new aim of developing competencies and qualities, she said:

> Actually, I don't know much about these competencies and qualities. When we're trained on these, we just look at the slides and write down the answers. I still don't grasp what they are (Ms. Bich, Teacher).

When I asked Ms. Anh about the differences between defining the educational aims in terms of competencies and qualities, as opposed to knowledge, skills, and attitudes as in the previous curriculum, she also told me that, "There are not many differences."

The responses of Ms. Linh, Ms. Bich, and Ms. Anh suggested that some teachers did not fully understand the new expectations, potentially viewing the curriculum changes as peripheral to their established teaching methods.

Ms. Tuyet, a core teacher of Grade 1, Head of Grade 1, and responsible for training teachers at the school and occasionally for other schools, showed a deeper understanding of the C2018. She recognised that redefining the educational aims is not only about adding the element of application but changing the nature of teaching and learning significantly:

> In the C2018, in general, compared to the old curriculum, it means that in teaching, we will implement a student-centred approach. Previously, it was just the teacher lecturing, the student listening, the teacher asking questions, and the student answering. And now, starting from the C2018 and the latest updates to the present, the student is at the centre, and the teacher is just a guide. Or the teacher proposes an activity for the student to do. From these activities, they construct the lesson's new content and review the old knowledge they have learned. Then the teacher is just the person to summarise all the content that the students learn from what they have done. (Ms. Tuyet, Teacher)

Ms. Lan, the Music Teacher, also noted the significant difference between the C2018 and the previous one:

> Previously, teachers used to do everything themselves. I would introduce the song or talk about its composer and then demonstrate the rhythm themselves. I didn't delegate tasks to students either before or after the demonstration. I just did it all. But now, teachers assign tasks to students. Nowadays, students are more familiar with various devices, and many of them attend extracurricular classes in arts and other talents. So now, the students are given the chance to perform. Normally, I would sing the song as a model, but for example, I say to the students: "We'll listen to this student perform as a model", which is really a good idea.

In summary, while teachers at School B generally accepted the FCER policies and C2018, viewing these policies as mandatory, the depth of their understanding and support varies. Some teachers demonstrated a genuine interest and a more thorough understanding of the policies, while others expressed doubts and disagreements, or in some cases, they might simply ignore the subtleties and deeper intentions of these reforms. This diverse range of responses highlights how system-level educational policies can trigger a spectrum of reactions and adaptations among educators. The next section explores in more depth the translation and practice of these policies within School B's context to evaluate the alignment (or lack thereof) between the intent of the policies and their actual execution.

7.4. Translation and Practice: *Implementing change in an urban setting*

7.4.1. The Lessons: Progress with constraints

During my data collection at School B, I observed five classrooms, including four face-to-face classes and one that was conducted online due to the closure of schools caused by the COVID-19 pandemic. This section will outline the findings drawn from these observations.

Grade 1 - Natural and Social studies lesson

One face-to-face class I observed was a Grade 1 class with 38 students, led by Ms. Ngan, a teacher in her thirties. The classroom was noticeably more spacious and modern than those at School A. In the middle of the class, above the chalkboard, was a TV screen. To the right of the chalkboard was a large poster displaying the "Five Teachings of President Ho Chi Minh to Students" – a message very familiar to Vietnamese students, many of whom have memorised it from their early school years. To the left of the

board, above the teacher's desk, was a smaller board displaying the weekly theme: *"Gần mực thì đen gần đèn thì sáng"*. This is a traditional Vietnamese proverb describing the influence of one's environment, advising people to place themselves in positive relationships and environments.

The session I observed was a Natural and Social studies lesson focusing on personal safety. The lesson started with the students standing up, collectively singing, and dancing to a familiar children's song. Such a practice at the beginning of the lesson is typical in Vietnamese primary schools. After the singing part, Ms. Ngan introduced the next part of the lesson, a review of the previous lesson about private parts of the body that need protection. She asked the students to name these private parts. She invited a student to stand up and answer. The student responded: The mouth, chest, area between the thighs, and buttocks. Ms. Ngan invited another student, who provided a similar answer. She praised both for giving the correct answer and for reviewing their lessons at home. She then displayed images of a boy and a girl on the TV, circling the private areas, and repeated the information for emphasis.

Next, Ms. Ngan posed a question to the whole class: "If a stranger touches these private parts or makes you listen about other people's private parts, is that action right or wrong?". She said: "To see if the whole class knows the answer, please take out your mini chalkboards" (a small board each student could write on and show the teacher).

Ms. Ngan asked the students to look at the question on the TV screen, which had two answers A (Right), B (Wrong). Each student was to choose between A or B and write the answer on their mini chalkboards. After about 30 seconds, she tapped a ruler on the table, and all the students held up their boards. She looked around the class and tapped the ruler again for the students to put their boards down. She noted that she saw everyone chose answer B. She asked why they chose answer B and invited a student to stand up and answer. The student said: Nobody is allowed to touch, look at, or talk about private parts. Ms. Ngan commented that the student's answer was correct and asked the whole class to applaud.

Continuing the lesson, Ms. Ngan showed six pictures on the TV and asked the students to choose the images with unsafe touches and write the corresponding numbers on their boards. She tapped the ruler for the students to hold up their boards and selected one student to explain his choice. Ms. Ngan asked another student to comment and then confirmed the correct answers. She then asked which students had the same answers. All the students raised their hands, and she praised the whole class for the correct answers, asking them to applaud again.

Ms. Ngan introduced the next part of the lesson, which was practising three steps to protect oneself. She asked the students to put away their mini chalkboards and open their textbooks (see figure 7.1).

Figure 7.1: An excerpt from the student's Natural and Social textbook – Grade 1 – page 125

Next, Ms. Ngan showed a video for the students to learn about three behaviours to protect themselves. The video was a short-animated film with a character experiencing an unsafe touch. The video had lively and fun images that captured the students' attention. Afterwards, she asked the students to identify the three steps needed for self-protection: 1) Shout "No"; 2) Run away; 3) Tell a trustworthy adult. She continued with another exercise with three pictures corresponding to these three actions and asked students to put them in the correct order. Ms. Ngan asked the students to work in pairs to find the answer and write it on their boards.

After about three minutes of discussion, she tapped the ruler and asked for the boards to be held up. She chose one pair of students to come to the front of the class to show their answers. She asked them why they chose that order. The two students were silent and confused. Ms. Ngan decided to read the students' answers aloud, then showed the correct answers on the screen, acknowledging that the students' answers were correct and asked the whole class to applaud. She asked which groups had the same answer and had them hold up their boards. Once again, it appeared that all groups had the correct answer.

Ms. Ngan continued the lesson by showing another video of a scenario where one student observes another student being unsafely touched by a stranger. She then asked what the observing student should do to help. Students discussed in groups of four to answer the questions. After more than a minute of discussion, she called a few groups to the front to present their ideas. Some students suggested going to call another adult. Notably, one student proposed fighting back against the adult and running away quickly. Ms. Ngan seemed to be surprised for a few seconds and then asked the whole class: "Are we allowed to use violence?" Most students replied: No. She said, "That's right, we should not use violence, and moreover, we cannot win against an adult". Ms. Ngan told the students she would show another video to see what should be done instead. After showing the video, she concluded that the students should also perform the three steps of shouting, running, and telling a trustworthy adult. Ms. Ngan asked the students to discuss in pairs and repeat the three steps of personal safety. Afterwards, the whole class repeated the three steps together.

She continued to ask the students: Who is a trustworthy person?

The students listed parents, aunts, uncles, teachers, and police officers. She confirmed the students' answers, showing images of trustworthy people on the screen. She also introduced the phone number to call to report abuse, 111.

At the end of the lesson, she asked one student and the whole class to read the lesson's conclusion in the textbook. The conclusion was about "My body is my own; no one has the right to violate it" and listed the three steps to perform when abused. She showed a video again to remind the class of the three steps to protect themselves. Ms. Ngan thanked the class, praising them for learning very well. The lesson lasted precisely 35 minutes.

The table 7.1 below summarises the classroom activities in this lesson:

Section	Activity	Conducted by
Reviewing the previous lesson	Identifying private parts of the body that need protection	Students (Selected individuals)
	Deciding whether specific actions are right or wrong using mini chalkboards	Students (Individuals)
	Choosing images with unsafe touches and explaining choices	Students (Individuals)

Introducing new lesson	Watching a video and identify three steps to protect oneself	Students (Individuals)
	Ordering images to match the three steps of self-protection	Students (Groups)
	Discussing and presenting ideas on how to help in unsafe situations	Students (Groups)
	Watching a video to learn the correct response on how to help in unsafe situations	Students and Teacher
	Discussing and repeating the three steps of personal safety	Students (Groups)
	Identifying trustworthy individuals to report abuse	Students and Teacher
Closing	Reading the lesson's conclusion, watching a reminder video	Students
	Concluding the lesson and acknowledging the students' good learning	Teacher

Table 7.1: Summary of Classroom Activities during Observation 1 at School B (SB.O1)

Overall, Ms. Ngan employed a range of activities, such as short exercises, instructional videos, and group discussions to engage students in the lesson. One notable aspect of this lesson was the use of a TV screen to display images and animated videos as an alternative to lecturing or simply reading from textbooks. This practice, in addition to capturing students' attention and aiding better retention, aimed to allow students to construct knowledge more independently. Additionally, Ms. Ngan frequently posed "why" questions, encouraging students to explain their answers. Similar to School A's lessons, students collaborated in groups for discussions, and teachers often asked students to provide feedback on their peers' answers.

In light of Schweisfurth's (2013) framework of four continua to assess the shift from teacher-centred to learner-centred education (LCE), at the technique level, Ms. Ngan's lesson, like those at School A, has shifted towards LCE through practices such as group work and peer feedback —commonly associated with LCE. However, the shift was not necessarily significant when examining aspects such as classroom relationships, motivation for learning, and the construction of knowledge.

Regarding classroom relationships, although students were no longer passive listeners to teacher lectures, the teacher still maintained complete control over the learning process. There was no evidence of students being given choices or being able to exercise their autonomy. In terms of motivation for learning, despite the absence of grades in the lesson, the teacher's constant use of praise to encourage students and her control over the learning process provided little evidence for a significant shift from relying on extrinsic motivation to intrinsic motivation.

In terms of knowledge construction, using videos for students to observe and derive new knowledge and group discussions provided opportunities for students to construct and take ownership of their knowledge. However, details of these practices suggested that this aspect was not fully realised. For instance, although students used the video to identify the three steps of self-protection, they were previously instructed to open their textbooks where the information was already provided. The fact that students provided uniformly correct answers indicated that the questions posed might not be challenging enough to stimulate thinking but aimed at reinforcing predetermined messages. The only opportunity for authentic student response was when Ms. Ngan asked about actions taken upon witnessing abuse, a question that was not in the textbook. However, the unanticipated response from the student in which he suggested fighting back made Ms. Ngan's feel quite uncomfortable. She quickly moved on without seizing this as a teaching opportunity.

Furthermore, although this lesson aimed to practise strategies to protect oneself, students did not actively practice the steps of safety in any meaningful way rather than reading the steps aloud. Students were not given hypothetical scenarios to truly understand how to execute these steps and what real-life situations might look like. The animated video was fun and attractive for young children but it brought a sense of unreality. There was also no in-depth discussion explaining the purpose of each step in the three-step process. Why shout "No," why run, why report to an adult? What can the students expect to happen when they perform these actions? While these details could be obvious to adults, they might not be apparent to the students. Therefore, although the lesson used a greater variety of more interactive activities, it still tended towards helping students memorise a specific message – the three steps for personal safety – rather than genuinely understanding and practising them.

Grade 2 – Mathematics lesson

The next lesson I observed was a Mathematics class taught by Ms. Anh, a teacher in her forties. She had 36 second grade students in her class, and the lesson's main focus was practising addition and subtraction of numbers under 1000.

The class began with students singing and clapping along to a song. Then, the students were asked to use their mini chalkboards to perform math calculations from their textbooks. One student was invited to the board to solve a problem. The rest of the class was divided into four groups, each working on a different problem, such as 158 + 12. For each math problem, Ms. Anh asked one or two students to share their answers and explain their methods, followed by another student giving feedback on their classmates' answers.

The students then moved on to the exercise, which involved three other calculations from their textbooks. They worked individually on their mini chalkboards. Another student was chosen to solve one of these calculations on the board. Afterwards, the students exchanged notebooks with each other to check and comment on each other's answers. The teacher and the whole class reviewed the results of the student who had solved it on the board.

Next was an exercise where they were given six arithmetic calculations to solve. Some students did this on the board while others worked at their desks. Afterwards, the teacher asked students to comment on the answers of those who performed on the board. In most cases, if a student answered correctly and explained well, the teacher praised them and asked the whole class to applaud.

The final activity of the lesson was a game from the textbook, where each student was asked to write two three-digit numbers less than 500 and then calculate the sum. The student with the largest sum would win. Ms. Anh explained the task again and asked the students to write their numbers on their mini chalkboards. After about 30 seconds, she asked everyone to show their boards. She selected three students with the largest sums for the class to discuss their calculations and determine the student with the highest sum. She then asked the class to applaud the winner. Table 7.2 below summarises the classroom activities in this lesson.

Section	Activity	Conducted by
Math exercises	Performing math calculations on mini chalkboards; one student on the board	Students (Individuals)
	Swapping notebooks for reviewing and commenting on each other's work	Students (Entire class)
	Reviewing the solution of the student who worked at the board	Students and Teacher
Math game	Writing two three-digit numbers and calculating their sum	Students (Individuals)

	Discussing and determining the highest sum among students	Students and Teacher
Closing	Concluding the lesson	Teacher

Table 7.2. Summary of Classroom Activities during Observation 1 at School B (SB.O2)

Overall, Ms. Anh's lesson had a straightforward structure, focusing primarily on practising math problems. What stood out the most about this lesson was the genuine atmosphere and engagement between the teacher and students, which was quite rare in both Schools A and B. During the exercises, students made various mistakes, from incorrectly noting down the given problem to using the incorrect methods but arriving at the correct answer or even getting the answer completely wrong. In all these cases, Ms. Anh frequently pointed out students' errors but also clarified that it was acceptable to be incorrect at first, because adjustments and practice can lead to improvement. This class was also one of the few that I observed where students' laughter took place, for example, in response to the teacher's jokes. Additionally, the way students answered and asked the teacher to clarify the problems' requirements seemed quite natural, matching the conversational tone Ms. Anh used with the students.

However, despite being scheduled for 35 minutes, the lesson lasted 50 minutes. During the break, I had a brief exchange with Ms. Anh, and she explained that the extension in time was necessary to ensure students understanding by correcting their mistakes. She could not rush through the lesson to adhere to the time regulations without helping the students improve their understanding. She also wished she had time to make the final game more exciting and interactive by dividing students into groups. However, since the lesson was already too long, she had to simplify the activity. Ms. Anh emphasised that actual classroom sessions are often quite different from the model lessons provided by textbook publishers. It is never the case that students perfectly "act out" the teacher's instructions. She noted that spontaneous and unpredictable scenarios frequently occur in actual teaching situations and require time to address.

During Ms. Anh's math class, some unexpected moments did occur with a student whom Ms. Anh identified as particularly talented in math, having recently participated in a school math contest. This student appeared somewhat out of sync with the class's rhythm throughout the lesson. At times, while working on the exercises, the student abruptly commented, "This is too easy" to which Ms. Anh reminded, "Don't be overconfident". At another point, the student was not attentive to the assigned task, seeming distracted, leading Ms. Anh to remind him to concentrate. The student appears to be a highly capable individual who may not be fully engaged or challenged by the current activities. A notable observation from the class was the absence of differentiated tasks to suit different levels of student

abilities. Every student was required to perform tasks of equal difficulty as outlined in the textbook. Such an approach could impact the concentration and engagement of students, particularly those who find the exercises either too challenging or too easy.

Grade 1 – Vietnamese lesson

The third lesson I observed was taught by Ms. Tuyet, a Grade 1 teacher who is also the head of Grade 1 and has nearly 20 years of teaching experience. There were 41 students in her class.

At the beginning of the lesson, she introduced me to the students and encouraged them to be well-behaved and to read loudly. Afterwards, the whole class sang a song together, and she organised a short game to energise the classroom atmosphere. The lesson's focus was reading a poem from the textbook called "My Notebook". The activities of the lesson are summarised in Table 7.3 below.

Section	Activity	Conducted by
Reviewing the previous lesson	Reading the text aloud	Students (Selected individuals)
	Feedback on reading	Teacher
	Answering textbook's questions on the text	Students (Selected individuals)
	Writing on the mini chalkboard words that have the syllable "oc"	Students (Individuals)
	Reading the words	Students (Selected individuals)
Introducing new lesson	Reading the text aloud	Teacher
	Reading the text quietly	Students (Individuals)
	Answering teachers' questions on the structure of the poem	Students (Selected individuals)
	Reading the poem aloud	Students (Selected individuals)
	Feedback on reading	Students and Teacher
	Identifying, spelling and reading the challenging words.	Students (Selected individuals)
	Reading the poem aloud	Students (Individuals)

Closing	Final feedback and introducing the aim of the next period is understanding the content of the poem.	Teacher

Table 7.3: Summary of Classroom Activities during Observation 1 at School B (SB.O3)

Before observing Ms' Tuyet class, I was quite excited because Ms. Han, the principal, had informed me that Ms. Tuyet is an experienced teacher responsible for training other teachers on the C2018 implementations. As presented in Section 7.2, during the interview, Ms. Tuyet also demonstrated an understanding of the shift in teacher-student relationships in C2018 towards giving students more autonomy in their learning. Observing Ms. Tuyet's class, it was evident that she was confident in her teaching. Her voice was loud and clear, and she naturally expressed her emotions towards the students. However, compared to lessons with similar teaching objectives at School A, she did not use questions to stimulate students' interest before reading and did not include group activities. It could be described as a somewhat traditional lesson without any technical elements of LCE seen in other classes.

When I asked Ms. Tuyet about her lesson design, she explained that she closely followed the textbook and teacher's guide requirements. The lesson's objective was only to practice reading, with 35 minutes being insufficient for additional activities. Upon reviewing the textbook for this particular reading lesson, I found that it only presents the poem alongside an illustration without suggesting any activities for deeper engagement or practising reading (see Figure. 7.2).

Figure 7.2 An excerpt from the student's Vietnamese textbook – Grade 1 – page 122

Ms. Tuyet's lesson also differed significantly from other classes I observed in that she devoted a considerable part of the lesson to establishing discipline among the students. During the learning process, she frequently reminded the students, for example, to sit straight with their hands on the table, keep their legs inside the desk, avoid drinking water during the lesson, place water bottles under the chair, and avoid talking to each other.

In the remaining two lessons I observed, one Math lesson (online) and one Vietnamese lesson (face-to-face), although Ms. Linh and Ms. Hong thoroughly completed the main activities required in the textbooks and used games at the beginning to increase student interest, the students' active roles were also not evident in both lessons. The teachers posed questions found in the textbook, and the students responded. Generally, the lessons proceeded quite swiftly, leaving little room for more in-depth interactions.

7.4.2. Pedagogy: The burden of disruptive responsibilities

Classroom observations at school B pointed to a common issue - a sense of urgency in lessons, with teachers feeling pressed for time, limiting their ability to conduct more in-depth, interactive activities beyond traditional question-and-answer sessions. Insights from Ms. Han, the principal, and interviews with teachers help explain this tendency.

Theoretically, Ms. Ngan and Ms. Tuyet affirm that the C2018 and the new textbooks allow teachers more freedom to design teaching and learning activities.

> The textbooks offer the overall direction for teachers to follow. For example, if it's about the 3 steps of personal safety, we will focus on that content, but there's no requirement on how to design the lesson. The new textbooks differ from the old ones in this aspect. We can follow our own ways. We can design anything we want.... In the past, it was mandatory to follow the predefined steps; if it was step A, you had to follow exactly step A in the correct order. But now, you don't have to follow that order as long as you achieve the objective. (Ms. Ngan, Teacher)

> Even the teaching duration within a period can be flexible. The textbooks and resources are only for teacher reference. They're guidelines. If students haven't understood a topic well, we can extend the period by five or ten minutes, adjusting the following subjects and content accordingly. Each school day needs to adhere to the five-hour periods, but we can extend the time if a lesson feels too lengthy or the content is heavy. (Ms. Tuyet, Teacher)

However, this flexibility has been practically limited in school B due to time conflicts between academic learning activities and other activities that teachers were required to do. Ms. Han, the principal, spoke frankly about the reality of this new level of autonomy for teachers:

> Autonomy, yes, but within limits. Look, I have ten fingers, right? The reality is that I can only arrange them in different orders, but I can't pick fewer. For example, I'm talking about the curriculum. The C2018 is just a guideline; it outlines goals and end results. That sounds totally fine; nothing wrong with that. But in practice, it's very heavy.

> In the teaching process, it's far from peaceful. Teachers are teaching something, but there are many other activities. Here in our school, while teaching, the teacher who is responsible for the Young Ho Chi Minh's Pioneers Organisation calls the students to practice dancing in the schoolyard. Then, the school nurse calls for teeth brushing sessions. Many things do not make sense. We just do it because it's mandated, though we don't agree with many things. Really. Suddenly, we lose several days because of some program from the Provincial Youth Union or something. Practising this or that for several days. Running like crazy. What can we do with those lost days? So, teachers have to rush. Rushing because of Covid, well, that's another matter; we'll leave that aside. Rushing from 19 weeks to 9-10 weeks because of Covid, that's necessary. But we are constantly being pulled from this to that. And then there's paperwork, a lot. Suddenly, teachers are called to do this and that. Teachers get entangled in many things (Ms. Han, Principal).

> Sometimes, there are contests, too, like the contest for classroom teachers. It's now somewhat reduced. In previous years, we had to teach classrooms at other schools to compete. The Ministry has been making changes. Now, teaching in one's own classroom is somewhat better. Then, we need to do the catch-up teaching. When to catch up? Catch-up teaching must be done quickly. The teachers then tell the students, "That lesson, it's in the textbook. Just study it that way. That much study is enough." Like that. I'm also a teacher. Sometimes, we just hope that from morning to noon, we can just teach and teach only. Just focus on teaching. If there are five periods, I will teach students from period 1 to period five and don't let anyone ask me to do anything. Don't let anyone ask me to collect any money. I hate collecting money the most. Money for drinking water, for lunch, all kinds of money. And if I can collect enough money as required, it's troublesome. Yes, collecting money all day long. Thinking about money all day long (Ms. Han, Principal).

Ms. Han's insights regarding the disruptive activities in the learning process were observed during my visits to Schools A and B. During this period, the Ho Chi Minh Young Pioneer Organisation organised a

dance video competition for students in partnership with a dairy company. On my visits to schools A and B, several classes were taken to the yard for rehearsals and filming. Music played loudly, even during classes, for repeated dance practice. Some teachers were pulled from their teaching duties to help with the practice and filming. During my classroom observations, teachers often had to remind students to concentrate and speak up over the loud music.

Ms. Han added that one reason teachers tend to focus on quickly covering the material rather than creating deep and guiding activities is due to the extracurricular content imposed by higher authorities. For instance, teachers are tasked with conducting library reading sessions. Ms. Tuyet further explained these additional teaching responsibilities:

> To be honest, if teachers just had to implement the new curriculum and focus on their lesson plans, they would do just fine. However, the reality is that teachers are pressured to handle additional tasks. For example, teachers are now asked to teach traffic safety and integrate that knowledge into the lessons. In week twenty-three, the librarian requires teachers to teach an extra library reading session per week, which doesn't count as overtime. That's how it is. Teachers keep getting more tasks piled on them. For instance, dental health programmes requiring seven additional sessions per year are pushed onto teachers by dentists and doctors. They ask teachers to integrate them into lessons. In natural and social studies, we have a lesson on dental health, but it's not acceptable to integrate the program into this lesson; they want it to be a separate lesson. Therefore, the pressure on teachers is immense, constantly being overwhelmed. Traffic safety is mandatory. And now, we also need to teach national security and defence. The topic of being a good Ho Chi Minh's child also has to be incorporated. (Ms. Tuyet, Teacher)

Ms. Han noted that although all these additional contents are somewhat meaningful, their overwhelming number exerts significant pressure on teachers. Combining these tasks with the curriculum content is challenging and can feel more like an imposition than a meaningful integration.

7.4.3. Assessment: Progress and struggles in an urban setting

In contrast to School A, where teachers acknowledge the benefits of new assessment methods but seem overwhelmed by the drawbacks, teachers at School B demonstrated a deeper connection to and appreciation for the value of these changes. They have been gradually incorporating them into the school's daily practices and found the recent adjustments by MOET reasonable.

Ms. Han shared that there were tense reactions from parents in the first year of implementing these changes. Instead of traditional numerical grading for both continuous and periodic assessments, formative assessments were classified as either Excellent (T), Good (Đ), or Satisfactory (H) for subjects like Math, Literature, and Ethics. The classification for subjects like English, Art, Music, and Physical Education was either Satisfactory (H) or Unsatisfactory (C). Ms. Han recounted:

> There are two types of assessments: continuous and periodic. Throughout the year, everything was fine. But at the end of the year, when the results were announced and affected honours and rewards, parents began to react... They expected all continuous assessments to be T (excellent). To achieve the title of "excelling in academic duties", you needed T in all continuous assessments and periodic test scores of 9 or 10. The reaction was intense when they saw a H or Đ at the end of the year. Parents would bring up anything they could. It was completely chaotic. Despite our explanations at the beginning of the year, they didn't understand until it directly affected them. For example, how can a student who sings poorly be assessed as singing well? Just one Đ or two Hs, and the parents would start complaining. The first year was particularly tough. There were many parents asked to transfer their children out of the school. They blamed us for poor teaching. We explained in all possible ways. For example, in English. How can you rate it as excellent when it's just satisfactory? Continuous assessment is a process; if they don't participate or strive, they can't be rated as excellent. They'll just achieve satisfaction. We rarely give a C, but every time they see a Đ or H, they come in questioning, "Why did the teacher grade my child this way?" But if the teachers rate poorly, I can't tell them, "You must rate this child well." The following year, the number of parents complaining was reduced. This year, only one parent remained concerned.

> The children are happier now. They don't know their grades throughout the year. They just see T, H, Đ, and comments. They come home happy. In the past, just one score of 8 would upset them. I see that parents' attitudes have changed. Since this grading system, the children have benefited. But at the end of the year, parents complain. However, I think it's okay. It's better not to have too many grades, that's tiring for the students (Ms. Han, Principal).

On the one hand, more formative, qualitative assessments are designed to reduce academic pressures and recognise students' diverse strengths. On the other, classifying students into traditional types like "excellent" can send mixed messages about what is valued in education, potentially undermining the intent of the new policies. Ms. Han's insights also indicate the significance of effective and continuous

communication. Despite explanations at the beginning of the year, many parents did not fully grasp the implications until it directly affected their children's classifications.

Moreover, Ms. Bich explained the sudden increase in teachers' workloads in the first year of implementing the new assessment system. However, the situation improved after MOET adjusted the policy, no longer requiring continuous and detailed assessments for each student. She has recently found the current approach more manageable.

Other teachers also expressed their support for the new approach. Ms. Ngan emphasised that this current assessment approach evaluates the entire learning journey rather than solely relying on final exam results that may be affected by temporary circumstances. Ms. Linh highlighted a shift where students are now actively engaging in self-assessment as part of their learning process. Ms. Bich mentioned that reducing the emphasis on grading helps alleviate student and teacher pressure. However, a few teachers like Mr. Nam and Ms. Minh continued to believe that giving scores has advantages in motivating students more effectively, and the new system has not fully replaced this. Nonetheless, as it was a compulsory policy, these teachers accepted the changes, understood their values to some extent and saw them as feasible.

Overall, the implementation of assessment policies at School B encountered fewer difficulties compared to School A, and the teachers' responses were more positive, especially regarding the adjustments made by MOET. This positive response might be attributed to the context of School B, where parents are more are more engaged in their children's education and better receptive to verbal feedback. However, in an urban context where parents might be more concerned about their children's academic achievements and rankings, the conflicts between more qualitative assessments and traditional notions of academic success may become more pronounced. This tension suggested that while the new assessment methods were theoretically sound, their practical implementation necessitates thoughtful attention to potential inconsistencies in application. Additionally, a more effective, system-level communication strategy seemed to be essential to assist parents in recognising and valuing the significance of these changes. Such an approach would help minimise the escalation of conflicts and reduce the additional pressures placed on schools and teachers as they adopt the new practices.

7.4.4. Professional development: Advancements and ongoing challenges

When discussing the hybrid training programme (ETEP) for implementing the C2018, teachers in school B generally found the training content extensive and rich. However, some teachers expressed concerns

about the way knowledge was delivered and its practical application. Ms. Linh shared her thoughts on the online course modules:

> The instructors conveyed the material in an understandable manner and were helpful throughout the learning process. The lectures and lesson plans were scientifically sound and easy to comprehend. Engaging in these modules felt like going through university education again, with expert guidance and a wealth of knowledge to absorb. (Ms. Linh, Teacher)

Nevertheless, Ms. Linh acknowledged there could be a gap between knowing about effective teaching methods and applying them in her classroom.

> Honestly, some methods are quite challenging to implement. They seem intriguing and fascinating in theory, but students often struggle to perform as expected in practice. I think some techniques are challenging to apply for primary students. (Ms. Linh, Teacher)

Ms. Anh acknowledged that the modules provided much new information, but she was concerned about the limited time available for thorough understanding and retention:

> I've completed several modules so far, up to the fifth module. The content is highly detailed. I believe if given enough time for learning and application, one could truly appreciate and understand the values of these methods. The modules are very detailed, with many images and videos. But with our limited time for both learning and teaching, it becomes challenging to remember everything. Sometimes, I feel like I've already understood the content, but I might need to revisit it later. There isn't enough allocated time for proper learning. (Ms. Anh, Teacher)

Ms. Han, the Principal, provided strong criticism over the quality of online and face-to-face training content provided by MOET, contrasting them with more engaging private training programmes she personally invested in:

> First, you start with the online learning. It sounds good, right, but the way it's done... I could easily do it for ten people by myself because it's just about playing the videos. I can let it run until it reaches 100%, and that's it. The same goes for the assignments – I can simply copy things. The learning is tedious. It's not like the evening classes I'm currently attending, where someone constantly pushes you forward. It's often very intense. I have to upload assignments for group review. There is a supervisor who keeps track of my progress. We have twelve people divided into four smaller teams. It's a great system of keeping each other accountable. But with the Module training, there's no such supervision. A single team leader has to evaluate everything for

the entire school administration board. It's really ineffective. Online training is already dull, and face-to-face sessions are even worse. It's frustrating sitting in a training session and not wanting to listen. The topics are often too vague and not specifically applicable to our work. It's just boring. But what else can I do? Just observing others during the session, you can tell. Unless specifically called upon, most people sleep or surf things on their phones. Despite the Ministry's efforts to innovate, people need to want to participate and change their teaching approaches. Otherwise, they just attend for attendance. The methods of training are also problematic.

Whether in companies or any type of group, the trainers need to be engaging enough to motivate participants. Right now, it's all just going through the motions. Merely attending and signing the attendance sheets won't bring any effectiveness. So, it's a real challenge. Every time there's mention of training or a Module, it's dreaded. Sitting in one place for so long is exhausting. I'd rather be running around my school – it's less tiring. Sitting for two days straight can make you sick. I think changes should be made in the training approach for teachers, as well as a shift in the mindset and delivery methods of those at the top. (Ms. Han, Principal)

Ms. Bich also highlighted the drawbacks of the current training methods and expressed her wish for better training experiences.

About quality, well, in Vietnam, there are two types of training sessions. Those are conducted by Vietnamese trainers – not very exciting. But those are led by the foreign trainers, they're really fun. The trainers introduce an activity and then do it immediately, asking teachers to participate. I really enjoy that style. Vietnamese trainers tend to share the slides and then read them – it's quite boring. Frankly, I don't learn much from them. The foreign trainers, sometimes invited by publishing houses, have great sessions. I really enjoy them. But the presenters are all Vietnamese for the training sessions about the new curriculum or those organised by the publishing houses to promote the new textbooks. They explain things but don't really engage in activities to show how to make things exciting. When I go to training, I prefer the ones where the trainers are like the foreigners – they're much more fun. I've always preferred the sessions led by these foreigners. They bring such enthusiasm – they're jumping around and getting everyone involved. I try to bring that energy to my classroom, though I'm not quite sure I can be as lively as they are. (Ms. Bich, Teacher)

The above discussions with the participants revealed that despite the wealth of knowledge shared in online and face-to-face training programs, conventional methods of delivery and time constraints for

learning pose significant barriers to maximising these learning opportunities. Ms. Han shared that under these circumstances, teachers only have sufficient time for professional development, experimenting with new teaching methods, and receiving quality support when participating in city or provincial-level excellent teacher competitions. For example, teachers participated in these contests by designing lessons and striving to apply new techniques and methods like the *La main à la pâte* method, KWL Chart Strategy, or integrating information technology into the lessons. Only through such dedicated application in each lesson and detailed guidance from more knowledgeable and experienced teachers can the essence of these methods be understood and successfully applied. However, Ms. Han also noted that not many teachers participate in these competitions, and there was no guarantee they will continue implementing these innovative methods after returning from the contests.

Regarding the application of the lesson study model in professional development, teachers had overall positive responses. Ms. Tuyet observed that since implementing the lesson study approach, professional development sessions have become less formal and more focused on improving teaching.

> In the past, professional meetings started with reviewing completed tasks and then planning new ones. We would bring the content already discussed in the school meetings into our meetings, which involved a lot of merely reading and writing. Now, when we do the lesson study sessions, meaning on that day or week, if teachers encounter any challenges, for instance, if there are activities in Math or Vietnamese lessons that some teachers haven't grasped yet, we can bring them up. From these challenges, we discuss and find the approaches for teachers who are struggling. Or we study the lesson for the next week together. For instance, if there's a new required activity like experiential learning in the new curriculum, teachers usually discuss it to find the most effective way to implement it. Then, we tailor this method slightly to suit our classes. Then, at the end of the week, we meet again to evaluate. We ask, was it effective? If it was, we proceed; if not, we make adjustments. (Ms. Tuyet, Teacher)

Ms. Tuyet and Ms. Han acknowledged that it was challenging for teachers to follow the lesson study model rigorously; they often had to combine the sessions with other tasks and other types of meetings. At School B, as per BOET guidelines, teachers understood lesson study sessions as opportunities to discuss teaching challenges rather than strictly following the model steps. For Ms. Tuyet, such a change was already a significant improvement over the traditional approach to professional development.

7.5. The story of Ms. Han: *Striving to navigate the tightrope of high-level expectations and ground-level realities*

The first time I met Ms. Han, she was in the role of the Vice Principal and was awaiting the official decision to become the Principal. Due to the disruption caused by the COVID-19 pandemic leading to school closures, when I returned to School B after a few months, Ms. Han had officially become the Principal. Through two interviews with Ms. Han, it was quite clear that she is very committed to innovation and change in education. She also showed that she loved teaching and often personally funds herself in professional development courses, which was confirmed by other teachers when talking about Ms. Han in their individual interviews (Mr. Nam, Ms. Lan). However, as reported in previous sections, Ms. Han also had many concerns, even feelings of anger and frustration towards the implementation of the recent reform policies.

In the research findings of Truong and Hallinger (2017) at a teacher training college, a higher-secondary school, and a lower-secondary school in Vietnam, the authors concluded that at all three schools, the principals used an autocratic leadership style, employing their position of power to achieve obedience, compliance, and control over teachers. In another paper from the same study, Truong, Hallinger, and Sanga (2017) provided interview evidence from teachers showing that principals have significant power in decision-making. "The principal's decision is the highest. Everyone must accept, obey and execute it," a teacher affirmed in their research (p.87). However, this ultimate power of school leadership does not seem to apply in Ms. Han's case. Her role as a school leader has been more complex and challenging. Ms. Han's sharing revealed her struggle to implement what she saw as unreasonable demands from local authorities and find ways to communicate and persuade teachers who refuse to follow the mandates.

Ms. Han shared her discomfort in her interactions with the BOET:

> Honestly, I find meetings with the BOET very stressful. Their perspectives and way of speaking are problematic. When discussing an issue, they talk about one thing, then shift to another, and then to another without completing any topic. Then they start scolding. We, the principals, are under a lot of pressure... It's like they're forcing us to comply. If you say something must be done, you need to explain why. If you just order without explanation, I won't accept it. But we are always treated this way. So, many initiatives don't progress as they should. You have to explain, move from one issue to another, and say why. People need to know the reasons behind their actions, or they're just blindly following orders. It's like a top-down, superior-subordinate relationship. Being ordered to do something immediately makes me feel oppressed and pressured.

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If I don't gently pass this pressure down to the teachers, then it eventually goes down to the students. It's very unhealthy… I don't dare to criticise them, but they need to change. The leaders must change. This domineering and authoritarian style makes it difficult. In the long run, nothing can develop.

Ms. Han expressed the challenge of finding alternative ways to motivate teachers to change or comply with higher authorities' demands without resorting to imposition, as she herself experienced from her superiors:

I just use words, talking to them. I have a nature that I can't make teachers fear me... If I'm too harsh, they become afraid. If I'm too kind, they won't show respect. I only want mutual respect…I don't want to scare them. If they're scared, they'll just comply superficially. But if I'm too kind, they won't bother. Words are just words. I'm trying my best. Those who are willing to change change completely. Those who don't remain the same until retirement. (Ms. Han, Principal).

So, I've been thinking since I started teaching. I thought there needed to be some kind of system to motivate them, or this uniform approach wouldn't work. Whether teachers perform well or not, there is no distinction. Education cannot progress this way…. For example, do you know we have a plan to integrate lessons on energy saving, traffic culture, and safety? Everything is pushed down from above. My responsibility is to tell the teachers to do it. But whether they do it is another matter. They don't always follow through. To be honest, they only do it when someone is observing. Otherwise, they might not teach those parts. I can do nothing about it (Ms. Han, Principal).

I try to have conversations with the teachers, but it depends on them. If they are committed and willing to change their methods, then they will. However, if they want convenience, every classroom has a TV now, and they might just play pre-made lessons on the Internet. How can I control that? That's the reality. I can't control them. It's all about their willingness. They will if they want to teach effectively and make learning enjoyable for the students. Otherwise, there is no way for me to force them (Ms. Han, Principal).

One major issue Ms. Han mentioned that makes it even more difficult for her to focus on supporting teachers' professional development is the enormous amount of paperwork, which occupies a large part of her daily workload.

So much useless paperwork. For example, they want me to make a report for the programme, "For the Women's Advancement". Honestly, it's pointless. The School Council, again, is pointless. Many documents are just for show and don't really help. I am constantly burdened with so many tasks like that. Sometimes, I also have to ask teachers to do their parts, and they have to rush along with me. There's no time left for the students (Ms. Han, Principal).

When asked why these seemingly useless documents are required, Ms. Han shared that having a complete file to report to higher levels has always been a top priority. Additionally, as a sensitive issue, she noted, the requirement for schools and teachers to purchase pre-printed forms generates a commission income for those who request and provide these documents. Therefore, suggestions for reducing unnecessary paperwork from schools seemed to go unnoticed. Eventually, feeling ignored, Ms. Han decided to stop complaining.

Overall, Ms. Han's story illustrated the challenges of leading educational change as a school principal. On one hand, Ms.Han faced the top-down pressure to comply with directives that sometimes felt disconnected from the practical realities of classroom teaching. On the other hand, she endeavoured to inspire and persuade her teaching staff to embrace new methodologies and educational philosophies, which were met with varying degrees of resistance and scepticism. The challenge became more profound as she attempted to establish her own approach to leadership, diverging from traditional authoritarian models, yet struggling to find a feasible strategy within an environment that lacked support and was not appropriately structured for such transformation.

7.6. Summary

This chapter presents the research findings from School B, a school located in the urban centre of a moderately developed province in Southern Vietnam. Interview data revealed that - similar to School A, teachers at School B perceived the reform policies as mandatory and saw themselves primarily as implementers responsible for accepting these policies. However, several practical issues at the school level made the top-down implementation of these policies far from straightforward. Data suggested that there was a lack of consistency and depth in understanding the new policies, particularly the changes introduced in C2018. There was a tendency for teachers to interpret and translate the C2018 as merely an addition to their existing practices rather than a transformative shift in the educational approach. Interview data suggested that a significant part of this tendency stemmed from how teachers were trained for C2018. Delivering large volumes of information through online videos or ineffective face-to-face

training sessions did not appropriately support teachers in grasping the implications of C2018 and clearly understanding what changes were expected from them.

Meanwhile, teachers in school B were heavily pressured by school realities, such as class sizes, inability to implement full-day schooling, teaching time disrupted by spontaneous and irrelevant activities and tasks, a large volume of content pushed down from higher levels, heavy paperwork and parents' pressures. As a result, each lesson, lasting only 35 minutes, became a race against the clock to complete the content presented in the textbooks. The use of additional videos and games in lessons, while seemingly altering the form of learning, did not significantly change the essence of the teaching and learning process.

A school leader like Ms. Han, who preferred not to employ an autocratic leadership style, faced significant challenges in persuading teachers to embrace change. Introducing the Lesson Study model appeared to bring a more positive change dynamic. However, it was not strong enough to overcome the considerable forces pulling teachers toward traditional practices. The implementation of the Lesson Study itself was also distorted by the harsh school realities.

CHAPTER 8: FINDINGS IN SCHOOL C

8.1. Overview

This chapter presents research data from School C in Province Z, Southern Vietnam. Among the three provinces, Z is the most developed one in terms of socio-economic status, serving as an important hub for finance, services, tourism, and manufacturing in Vietnam. Notably, Province Z is pioneering a distinctive educational model. To protect the school's identity, this model will be referred to as 'The Advanced Schools' in this study. Under this model, public schools such as School C are permitted to collect additional fees to enhance facilities, maintain smaller class sizes of up to 35 students per class and offer specialised educational programmes, such as internationally recognised computer science and English courses. The schools also provide full-day schooling where students stay at school during lunchtime, having meals and some rest time. These features are designed to provide a higher quality of education than traditional public schools. Given the more affluent circumstances of School C and the higher socio-economic context of Province Z, the research findings for this third case study have been enriched when compared to the other case schools.

This chapter begins with a description of the distinct environment at School C, which markedly differs from Schools A and B in terms of its physical facilities. The observations further highlight that students at School C benefit from learning in a well-equipped classroom environment with smaller class sizes. As a result, although being a public school, School C charges higher tuition and additional fees, and it employs a unique student selection process.

Data suggested that the teaching and learning practices at School C extended beyond just technical adjustments, further altering the dynamics of the teacher-student relationship and enhancing student involvement in the process of knowledge construction. Despite these advancements, the data also suggested areas for improvement, particularly in providing time for activities that foster higher-level competencies and students' autonomy. Finally, the insights from Mr. Tung's narrative, the Principal of School C, shed light on the unique challenges and personal costs associated with The Advanced Schools model, underscoring the difficulties in replicating such success in other public schools.

8.2. The Context

8.2.1. Space

From the main entrance, School C stands out with a row of modern-style buildings designed with a clear aesthetic appeal. The area in front of the gate is decorated with a meticulously maintained and trimmed green landscape. As I entered the school grounds, I went through a security area, received a visitor's badge, and waited in a guest room equipped with air conditioning, a sofa, and a reception desk before meeting the Principal. This experience was entirely different from entering other public schools, which typically have only a simple guard post at the gate.

Despite being a public school, school C's facilities are on a par with many private schools. The school includes a swimming pool, a medium–sized football field, an auditorium, and various club rooms for extracurricular activities such as music and science clubs. The school also has a kitchen and air-conditioned nap rooms for students to accommodate their stay over lunch. The children's playground is equipped with an overhead canopy to shield students from the harsh year-round sun of Southern Vietnam. Hallways are monitored with security cameras. Another highlight of the school is the small vegetable gardens across the campus, which are cared for by the students.

Once the receptionist informed me that the Principal, Mr. Tung, was available to meet with me, I was guided to the school's Traditional Room. This room was spacious and has a long oval shape. The walls were adorned with shelves showcasing numerous awards and recognitions the school has achieved. The room was air-conditioned, clean and carefully decorated.

8.2.2. Students

School C has a total of 848 students across 30 classes. Each class has an average of less than 30 students. The school's admission process significantly differs from other public schools. Typically, public schools enrol only students from their local area until they reach their total capacity. However, School C also accepts students from other areas. To gain admission, students need to pass a proficiency assessment, including an entrance test, have a personal interview; parents are also interviewed. Mr. Tung emphasises the importance of interviewing parents to understand their perspectives. He explains:

> Interviewing the parents is crucial because we need to understand their viewpoints and approaches to educating the children. They shouldn't choose our school if they are overly focused on grades. For example, our English program follows an international standard curriculum that

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native speakers teach. We cannot intervene with how these teachers grade the students; they won't allow it. So, we must be very clear with parents about the nature of our program, the financial commitments, and the parents' collaborative role. (Mr. Tung, Principal)

While other public schools are free, at School C, parents pay a monthly tuition fee of 1,500,000 VND (about 48 GBP) per student, as set by the local BOET. Parents must also pay additional costs, including uniforms, lunch fees, extracurricular activities, and higher fees for enhanced English classes. These educational expenses are relatively high, and not every family in Province Z can afford them. Thus, "The Advanced Schools" model is implemented only in areas where other public schools have met the community's educational needs, ensuring no child is denied an education because they cannot access the Advanced Schools. The Advanced Schools are tailored only for families with better economic conditions who desire a differentiated educational quality for their children. This policy approach, a part of the socialisation/societalisation strategy, is also seen in the healthcare sector in Vietnam, where patients paying higher fees at public hospitals receive better services. As part of Province Z's educational development plan, Advanced Schools aim for financial and operational autonomy in the near future. While they will still receive some state investment and support, they will mainly rely on self-generated funds and have greater autonomy in their management, such as hiring and managing teachers.

8.2.3. Teachers

School C was established recently in 2015. Currently, there are 45 teachers, all under the age of 40. Among the six teachers participating in this study, five are below 35. Initially, when joining School C, they were either outstanding graduates or recognised as "good teachers" in other schools. In addition to teaching roles, the school has a team of managerial staff who maintain student discipline and oversee teaching and learning activities with frequent monitoring throughout the hallways. Additionally, there are caretakers who assist with student meals and rest during lunch hours.

Mr. Tung has been the Principal since School C's establishment. His goal is to build a professional culture among the teaching staff. Unlike normal public schools where teachers wear traditional *Áo Dài* or casual wear, all teachers at School C wear a uniform comprising a white shirt, blue trousers, and teacher badges. A unique practice at School C involves the school's management, teachers, and administrative staff greeting students and conversing with parents at the school gate every morning and after school. This means teachers arrive earlier and leave later than their counterparts in other public schools. Mr. Tung believed this practice helps foster closer relationships with students and parents. He also emphasised that

leadership participation in these activities is crucial for timely understanding and addressing student and parent concerns and ensuring the commitment of teachers:

> It's not easy to implement this. Everyone wants comfort, but calling for sacrifice requires uniform effort. If the leaders ask teachers to make sacrifices while enjoying privileges themselves, people won't commit in the long term (Mr. Tung, Principal).

Mr. Tung highlighted the collaborative work culture at School C:

> Everyone, including management and teachers, works together. It's not just one person's responsibility. For instance, in preparing for an innovative education contest, all departments and groups collaborate to inspire students to create their projects. (Mr. Tung, Principal)

Furthermore, Mr. Tung believed in guiding and training teachers in detail, such as greeting parents, and he asks teachers to be mindful in organising any activities involving the parents. Interviews conducted with teachers (Ms. Hoa and Ms. Yen) revealed a sense of pride in being part of the school and appreciation for the supportive leadership during the school's development journey since 2015.

8.3. Interpretation of FCER policies and C2018: *Encouraging responses from educators*

In contrast to the majority of teachers at Schools A and B, who tended to view the implementation of the recent reform policies and the C2018 as formalities and imposed obligations, all educators involved in the study at School C expressed more positive attitudes and seem to have internalised more deeply the reasons and benefits behind these educational reforms.

Mr. Tung, the Principal, outlined the important aspects of FCER, including school governance, curriculum, pedagogy, and assessment. He emphasised that such a fundamental and comprehensive reform connecting these aspects was a sensible strategy. For example, he explained:

> The C2018 started a comprehensive reform that aims to transform every aspect of school life, starting from the current management structure. The role of a principal can no longer be like a 'king' in a school. The Principal is now part of the school board, similar to the model in a university. In the school board, the Principal is just a member with the same voting power as others. Therefore, the board must agree upon all major policies and directions before they can be implemented. Thus, with the C2018, there is a shift in the mindset change of school leaders. Leadership is no longer autocratic and authoritative; decisions must go through a collaborative

system. The Principal only represents the school board to implement the board's resolutions. Such change is significant because principals can no longer be autocratic and must adapt themselves. If they maintain their previous attitude, they will face exclusion… This change in management is evident…. The concept of building a happy school is strongly emphasised. (Mr. Tung, Principal)

Teachers expressed their genuine enthusiasm for C2018 and noted that the new curriculum and textbooks make their teaching more reasonable and practical:

I find the C2018 highly practical compared to the previous one. All subjects are closely tied to the student's learning process and rooted in practicality. Unlike the previous curriculum, whose practicality was vague, this one closely follows reality in terms of both school activities and time distribution. For instance, on March 8th (International Women's Day), students learn topics related to that day…There is an interconnectedness among the activities and subjects. For instance, if experiential activities focus on self-protection, then the ethics lesson of that week will also address this theme. (Ms. Hoa, Teacher)

I see many positive aspects. The reform makes learning more enjoyable for the kids. The curriculum has been updated to suit the current era and the local conditions. Previously, we had to filter many things we taught as some details and topics didn't suit the local context or the present times. For example, teaching about the old Vietnamese currency is no longer relevant, so the new books have been updated with more appropriate content, making it easier for us. (Ms. Yen, Teacher)

In general, the teachers at School C expressed more support than criticism for the recent reforms and also articulated specific reasons underpinning their positive stance. They delved beyond mere acceptance, offering detailed insights into how these changes enhance the educational process. Their perspectives were grounded in practical experiences, illustrating a more thorough understanding of the reforms' objectives and benefits. This deeper level of engagement and comprehension stood in contrast to the more obligatory or superficial acceptance observed in Schools A and B.

Data from classroom observations and interviews presented in the following sections play a crucial role in providing insights into whether the realities of the classrooms reflect the positive perceptions of the educators in school C.

8.4. Translation and Practice: *Deeper changes and distinct practices*

8.4.1. The Lessons: Going beyond the technical level

During my research time in school C, I observed four face-to-face classes, including three first-grade and one second-grade lesson. All lessons at School C were unplanned and randomly selected on the day of my visit. Mr. Tung noted that it is common for parents or guests to observe lessons at School C, so there was no need for prior arrangements.

Grade 1 – Ethics lesson

I entered Ms. Yen's class, a young teacher under 30. It was just after break time, and Ms. Yen was getting students settled by counting down from 10. When the time was up, she rewarded the group that "sat nicely" first with bonus points. These points were accumulated weekly and could be exchanged for rewards like candy, pens, and notebooks.

School C's classroom setting was significantly different from Schools A and B. The floor was completely wooden (unlike the tiled floors in other schools), a decision Mr. Tung explained was made to foster a warm and clean environment. Therefore, shoes were left outside, and most students wore socks in class. Instead of shared desks, each student at School C had an individual desk. The classroom was equipped with air conditioners. The teacher's area had a printer and a laptop connected to an interactive whiteboard where users could write, draw, and interact. At the back of the room were shelves with student rewards and lockers where students kept their belongings.

Ms. Yen spent another five minutes guiding the class to tidy up. She then summarised that Group Three was leading in reward points and encouraged the others to earn more points in the following Ethics lesson.

The lesson began with a song called "On the Road, I Should Remember," with students singing and clapping along. After the song, Ms. Yen asked students to guess the lesson's topic from the song lyrics. Several students simultaneously answered: Traffic. Ms. Yen affirmed and asked for a round of applause. Some students were so excited that they interjected while Ms. Yen was speaking. She reminded them of classroom rules 2 and 4, pointing to a handwritten and decorated rules chart on the wall. A student recited: Respect the teacher and raise your hand to speak. Ms. Yen nodded in agreement and noted that some students had forgotten to follow these rules.

Once the chaos settled, Ms. Yen introduced the lesson on Traffic Accident Prevention. The first activity involved reading a poem about traffic lights from the textbook. After inviting a student to read, Ms. Yen introduced a game, asking, "Shall we turn our class into a road?" and showed pre-cut plastic circles resembling traffic light colours. Students enthusiastically agreed. She assigned roles to students: three as traffic lights and others as vehicles or pedestrians. The class discussed when each light would turn on. The learning environment was fun and engaging.

Students were then invited to the front to role-play. One student unexpectedly asked about stacking the students up, like how traffic lights are typically organised. This suggestion resulted in an amusing discussion on arranging the students from shortest to tallest. The role-play began with students acting as vehicles, honking and moving around, creating a lively atmosphere. When Ms. Yen signalled the end of the game, she inquired if the students enjoyed the game. The unanimous response was positive. She asked what they had learned from the game. A student described the traffic light functions and some scenarios in the role-play, showing his genuine understanding of the game's messages.

A student suddenly raised his hand to share a real-life incident of a traffic accident near his house where there were no traffic lights. Ms. Yen expressed interest, encouraged him to explain his point further and used this occasion to discuss traffic safety in areas without traffic lights.

Following, the class analysed a textbook picture of a traffic scene, discussing safe and unsafe behaviours (Figure 8.1). Ms. Yen asked students to observe the picture individually and think about the question. She then invited a student to the board area to share her opinion. Before the student answered, Ms. Yen reminded her to greet and introduce herself first. The student greeted the class, introduced her name, and began to present in a quiet, unconfident voice. When the student hesitated, Ms. Yen gently encouraged the student at the board: "Try to speak up a bit because your classmates are listening attentively". After the student finished her answer, Ms. Yen reminded them to invite classmates to comment on her response. The class continued with several students coming to the board to present, and the whole class and teacher commented on the answers.
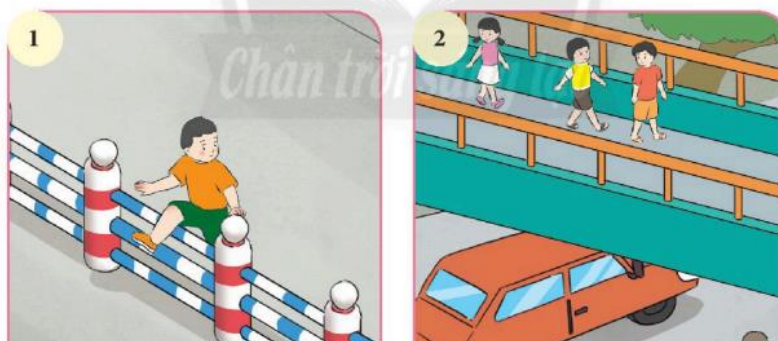
Figure 8.1: An excerpt from the student's Ethics textbook – Grade 1 – page 60

The next activity was for the students to observe the next two images (Figure 8.1), determining which depicted safe behaviour and which did not. Ms. Yen asked students to work in pairs. The students engaged in lively discussions. After one minute, Ms. Yen signalled the end of the discussion time with a small bell. Ms. Yen told the students to express their opinions using thumbs up or down. The students showed great interest in this method. Sometimes, the students were so enthusiastic that the teacher had to ring the bell to remind them to calm down.

A notable detail was when Ms. Yen asked the students why the first image, showing a child crossing the street by climbing over a barrier, was unsafe. A student answered that crossing the road while looking only in one direction could lead to being hit by oncoming traffic. Ms. Yen agreed it was a dangerous act, but then she posed a hypothetical situation, imitating a child's voice: "What if I did look both ways? I was very careful, dodging all the cars before crossing. Would that be okay?" Several students replied:

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No! Ms. Yen asked: Why not? She then led a discussion with the students on why such an action should not be performed.

The next activity involved observing a picture and discussing in groups of four what actions to take to prevent traffic accidents in specific situations (Figure 8.2). Ms. Yen asked if the students remembered how to discuss in groups of four and arrange their desks and chairs. Many students replied: "Yes".
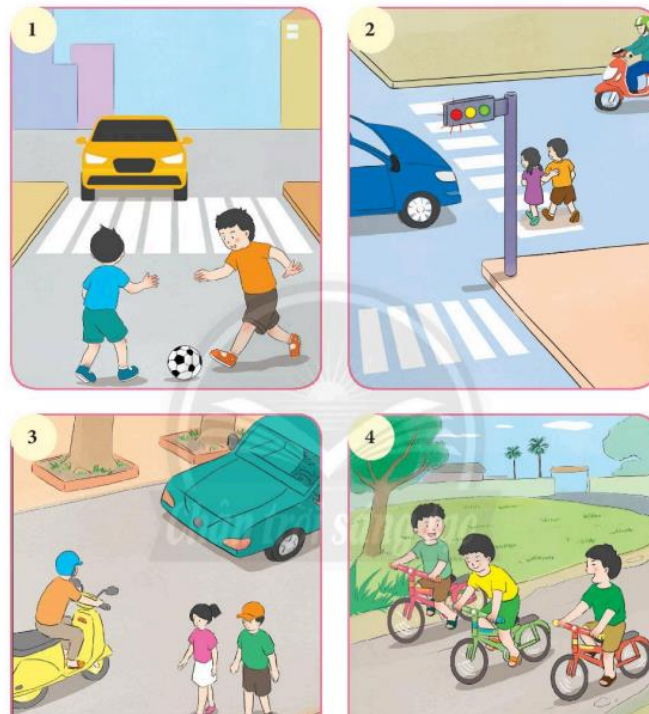
Figure 8.2: An excerpt from the student's Ethics textbook – Grade 1 – page 61

The students discussed for two minutes in an extremely lively atmosphere. Sometimes, the sound of "Yeah" from student groups could be heard. After the discussion ended, Ms. Yen rang the bell, and the students immediately fell silent. Ms. Yen commented, "Today you formed your groups well but quarrelled too much and could not unify your opinions, so I rate today's discussion session as... " Ms. Yen pointed to a neutral-faced emoji on the board. A student said: "Normal". Ms. Yen replied: Right, so try to aim for a happy emoji next time.

Next, Ms. Yen invited representatives from each group to present their answers. The students introduced themselves before answering and invited others to comment on their responses. For those who spoke

loudly and clearly, Ms. Yen praised their efforts and gave them candy. One group, where two students wanted to present, decided who would present by playing rock-paper-scissors.

As the lesson concluded after 45 minutes (10 minutes over the usual duration), Ms. Yen asked if the students enjoyed the class. Their response was a resounding "Yes!" The lesson ended on a high note.

The classroom activities in this lesson are summarised in Table 8.1 below.

Section	Activity	Conducted by
Introducing new lesson	Singing a song and guessing the topic	Students
	Simulated road game	Students and Teacher (Groups)
	Reflecting on lessons learnt from the game	Students (Selected individuals)
	Individual work on analysing a traffic scenario	Students (Individuals)
	Pair work on analysing traffic scenarios	Students (Groups)
	Group work on analysing traffic scenarios	Students (Groups)
Closing	Reflecting on learnings	Students and Teacher

Table 8.1. Summary of Classroom Activities during Observation 1 at School C (SC.O1)

At a glance, Ms. Yen's classroom activities appeared similar to those at Schools A and B, closely following activities suggested in the textbooks, including singing, playing games, and group work. However, there was a significant difference in the atmosphere and interactions in Ms. Yen's lesson compared to those I observed at the other schools. Ms. Yen's classroom was much noisier, not due to disruptive behaviours, but because of students' excitement and enthusiasm for the lesson activities.

Three main reasons helped to explain this difference. Firstly, Ms. Yen's communication with the students was natural, similar to everyday dialogue. Sometimes, she joked and used language that established a feeling of being on the same level as the students rather than maintaining a clear power distance. Secondly, many unexpected situations occurred during the lesson, like students making suggestions, sharing a personal story, or using rock-paper-scissors to decide who would present. In these situations, instead of ignoring or quickly moving on, Ms. Yen took the time to listen, genuinely engage with students' ideas, and respected their problem-solving approaches. Such situations and Ms. Yen's reactions created lively and exciting moments in the lesson.

Thirdly, Ms. Yen used a variety of alternative techniques for classroom management and communication with students, including a class rules chart, a bell signal (instead of traditional ruler tapping), allowing students to express opinions using thumbs up or down, using emojis for activity evaluation, and a point system for rewards.

I was particularly interested in the use of the class rules chart because Ms. Yen frequently reminded students of the rules outlined there throughout the lesson. Notably, at times, without Ms. Yen's prompting, some students spontaneously used these rules to remind their peers, showing that they had internalised these regulations. After the class, I asked Ms. Yen for more details about this practice. She explained that these class rules were discussed and agreed upon with the students at the beginning of the school year. Since the students participated in creating these rules, they felt more responsible for adhering to the rules. When I asked Ms. Yen where she got the idea for this practice, she said she observed how foreign English teachers at the school implemented it and found it effective.

Using Schweisfurth's (2013) model on LCE, similar to some lessons at Schools A and B, in terms of techniques, Ms. Yen's lesson applied methods associated with LCE, such as group work, role-playing and peer assessment. However, Ms. Yen's class shows a more profound shift in the three remaining dimensions: classroom relationships, motivation for learning, and knowledge construction. Regarding classroom relationships, the fact that students participated in establishing class rules created a more democratic atmosphere in the classroom. Rather than simply saying students are not allowed to do this or that, the teacher reminded them of what they committed to, and students complied without any sign of annoyance. They even reminded their peers about the rules.

Regarding motivation for learning, although the teacher still used extrinsic motivators such as applause, candies, and point exchanges, it was evident that students were genuinely interested in the games, questions posed by Ms. Yen, and how she communicated with them. Their enthusiasm came from small details, such as the teacher's preparation of circles symbolising traffic light colours, with students exclaiming "That's so cool!" upon seeing them, and the use of thumbs up/down, and emojis. Additionally, the exercises and questions posed were challenging enough to make students think and come up with various answers. The way Ms. Yen encouraged students to share their viewpoints also fostered engaging discussions.

Lastly, in terms of knowledge construction, Ms. Yen followed up with students' suggestions and statements, sometimes admitted her own mistakes during teaching, or suggested ways to improve the lesson upon noticing students' confusion. These practices show that she listened, respected, and

responded to students' knowledge and experiences brought into the educational setting, allowing them to be contributors to the learning process.

Furthermore, it was evident that Ms. Yen spent time helping students familiarise themselves with and practice specific actions to develop communication and collaboration competencies, as expected in the C2018. This included introducing themselves before sharing opinions, facing their peers while speaking, inviting peer feedback, and learning the strategies to conduct group work. These details demonstrate an effort to integrate competency development into the lessons, going beyond just listing out the objectives in the lesson plan.

Grade 2 – Ethics lesson

The next class I observed was an Ethics lesson in Grade 2 led by Ms. Tu, a teacher under 35 years old. The lesson focused on following rules and norms in public places. The first activity involved students working in pairs to discuss scenarios from the textbook and evaluate characters' actions. Then, they participated in role-playing real-life situations, such as using an elevator or waiting at a bus stop to practice public behaviour norms. Ms. Tu divided students into groups for discussion and preparation for the role-play. The students were so engaged in the role-playing that when the break bell rang and Ms. Tu asked if they wanted to continue, the whole class agreed to continue with the lesson.

Like Ms. Yen, Ms. Tu employed practices such as the point system, encouraging students to introduce themselves when speaking and inviting feedback on their answers. Ms. Tu also used hypothetical situations to provide deeper explanations of the scenarios discussed in the lesson. She brought energy into her teaching, filling her voice with emotion and striving for positive interactions with students. For example, when a student gave a correct answer, Ms. Tu would high-five them with excitement as a form of encouragement.

Grade 1 – Mathematics lessons

The point system was also used in two Math lessons taught by Ms. Huong, the leader of Grade 1. These lessons aimed to review and prepare the students for their final exams. Ms. Huong, although being the oldest teacher at the school, was still under 40 years old.

In contrast to the other lessons, Ms. Huong's class atmosphere was noticeably more tense. Throughout the lesson, she continuously reminded students to sit properly, speak up, organise their pens neatly, and avoid talking to each other. She used the point program to create a sense of group competition, warning

that misbehaviours would lead to a points deduction. The tension escalated as Ms. Huong constantly compared the points between groups, stating that some groups were better than others. Sometimes, she awarded points to other groups, as she explained, to penalise individual students who displayed misbehaviour. When a student tried to comment on another's behaviour, Ms. Huong would interrupt immediately: "If there's any tattling, other groups will get extra points." The tension among students grew to the extent that some started blaming each other for letting other groups gain points.

Ms. Huong occasionally used negative language to describe students' actions, such as "slow" or "careless," and "You'll be in big trouble with me if you do that again!" There was a particularly tense moment when, after several reminders, a distracted student was asked to sit at the teacher's desk to focus on his work. When moving to the teacher's desk, the student accidentally knocked over Ms. Huong's water bottle, wetting items on her desk. Ms. Huong became visibly upset, shouting at the student while trying to clean her area and directing the student to return to their seat.

Overall, the classroom atmosphere was tense and differed significantly from the previous two classes I observed. During break time, I had a conversation with Ms. Huong and gained further insights into her behaviours. It transpired that she was covering for another teacher who was unwell, and it was a busy and stressful day for her with multiple paperwork tasks in her role as group leader, while also dealing with personal family matters.

8.4.2. Pedagogy: School-level practices that further the reform progress

The interview data indicated that School C's approach to implementing reform policies, especially C2018, differed significantly in the policy translation process. Mr. Tung, the Principal, explained that while the FCER's direction since 2013 was theoretically sound, it remained largely on paper without clear, specific guidelines for schools to follow. Mr. Tung observed that in such a vague context, most schools preferred stability over the risks associated with change. However, since its establishment in 2015, School C and its teaching staff have concretely translated the general direction of FCER into more specific goals, including ensuring students are happy at school, functioning in a well-equipped environment, and having their potential nurtured.

To achieve these specific goals, regarding pedagogy, School C decided to rely on the existing textbooks (based on C2006) and design internal materials, including worksheets for daily classroom use by teachers and students. These worksheets, for example, as Mr. Tung explained, replaced the traditional approach of students writing down titles and questions in notebooks, thus saving time and allowing focus on core

content and activities of the lessons. When C2018 was released, School C's teachers worked together to adjust these internal materials to align with the new curriculum and textbooks and continue to use them today.

Compared to Schools A and B, a distinct practice at School C was scheduling Guided Self-Study sessions in the afternoon, allowing students to do exercises with teacher support when necessary. Additionally, Ms. Mai, a Grade 1 teacher, mentioned extra classes for struggling students. Although these sessions were unpaid and voluntary, they were officially integrated into the timetable.

When Ms. Yen was asked about other measures to personalise learning according to students' levels during class hours, she acknowledged the limitations of the current whole-class learning model in which students need to wait for others:

> For example, during the class, if there is long content that some kids can't read, I need to break it down, or I'll have the better readers do it. If the slower readers spend too much time on reading the text, it becomes discouraging for them and others waiting. I, too, feel discouraged. So, I assign shorter texts because I know (that) students struggling compared to their peers can easily get demotivated and lose interest. (Ms. Yen, Teacher)

Regarding methods such as learning stations for students to choose content and activities suitable for their levels and work at their own pace, Ms. Yen shared:

> I'm aware of methods like setting up learning stations and catering to students' preferences and levels. But, as you see, there are many lessons in a day and many other things to do. There's a lot. So, I can't organise such activities. There's no time to regularly support students in that way. (Ms. Yen, Teacher)

Time constraints appeared to be an obstacle in furthering LCE activities at School C. Ms. Yen admitted not having enough time to cover all desired content and activities in the lesson that I observed - even though the lesson had already extended beyond the usual duration. Similarly, Ms. Mai noted that while the C2018 and new textbooks provided more opportunities to apply alternative teaching methods, the issue of time remained a barrier. Each new method required significant time for guidance, especially for younger students. The impact of COVID-19 on schooling time has further limited available time, leading teachers to mainly focus on more straightforward activities such as group discussion, games and role-playing that were easier to manage.

8.4.3. Professional Development: The role of collaborative work and learning

Teachers' opinions on MOET's training programmes for implementing C2018 at School C, similar to those at Schools A and B, recognised the convenience of self-paced online training but also acknowledged the challenges that accompany this mode of learning. For example, Ms. Mai shared:

> Honestly, this type of training requires a lot of self-motivation. No one can manage the progress of teachers. Many teachers just skim through the materials. They do just enough to pass. Answers for the quizzes are widely available on the Internet, so many copy them to tick boxes. We should have more face-to-face training for better control. Honestly, I feel that online learning like this alone is not effective. (Ms. Mai, Teacher)

There were two notable practices related to professional development at School C that seemed to help overcome the limitations of MOET's training. First, as the school curriculum includes English lessons taught by foreign teachers, a unique practice at School C was that during these lessons, Vietnamese teachers, instead of leaving the classroom for other tasks, were required to be present to observe and assist in classroom management. As Ms. Yen shared, teachers learned techniques and observed a different classroom environment established by these foreign teachers, which they then applied to their classes. Such close and authentic observation effectively impacted teachers' perceptions and behaviours.

Additionally, during my observation of the lessons, I noticed that the teachers' presentation slides were carefully designed with aesthetically pleasing and engaging images. Ms. Tram, a Grade 2 teacher, explained that each lesson is collaboratively designed by teachers in the same grade. Then, teachers shared and used common teaching materials, which helped reduce workload, enhance material quality, and ensure consistency across classes. Ms. Tram highlighted that this practice was significant when implementing the C2018, as it involved numerous changes that teachers need to work with. In general, the implementation of Lesson Study at School C, in which teachers work together to design lessons, although also not strictly following the Japanese model, has genuinely been integrated into the teachers' routines.

Overall, much like at Schools A and B, teachers' opinions regarding MOET's training programs for implementing C2018 at School C presented a mixed response, encompassing areas of improvement and points of critique. However, School C stood out with its innovative and effective professional development practices, which significantly enhanced teaching quality. While direct collaboration with foreign teachers might not be feasible for all schools, the effectiveness of this approach at School C underscores the importance of hands-on learning experiences. Furthermore, the more effective

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implementation of Lesson Study at School C also demonstrated the model's feasibility and potential benefits when integrated properly into the school's routine. This approach showed how collaborative work and learning among teachers can contribute significantly to implementing educational changes.

8.5. The story of Mr. Tung: *The costs of being an exceptional leader*

Mr. Tung has been the Principal of School C since its early days. His interview revealed a sense of pride and commitment towards the school. However, looking back, Mr. Tung shared that the journey was not easy. Although "The Advanced Schools" model received support from the local government, like many new policy initiatives in Vietnam, in the early stages, it was all vague, and the implementers had to figure out on their own how to translate the policy text into reality. Mr. Tung, a keen learner and explorer of new ideas, strived to learn and apply good practices from other countries, such as Japan and the United States, at his school. One aspect that Mr. Tung felt needed more attention was improving the school's physical environment. He stated:

> One important condition for education, which is overlooked, especially in Vietnam, is the teaching environment. Whereas abroad, great importance is placed on it. The environment stimulates teachers and motivates students to achieve a better education. (Mr. Tung, Principal)

Mr. Tung emphasised the importance of small but significant changes in the physical environment for effectively implementing a more LCE environment. Examples included class size, classroom size, interactive screens, computer systems for students to present discussion results, air conditioning, printers, wi-fi, and even something as simple as clean toilets. Mr. Tung believed these conditions empower students and enable teachers to meet the demands imposed from above. It would be pointless to expect students to be active and independent if they cannot even move in an overcrowded classroom, or in the case of teachers, to require the use of technology without providing the necessary equipment, especially when their salaries are insufficient for them to purchase individually.

With this awareness, Mr. Tung has worked hard to provide School C with better physical infrastructure than other public schools and even some Advanced Schools. However, these efforts came at a cost. Mr. Tung shared his experience:

> The expectation to reform education comprehensively is there, but most schools don't implement it. They don't because to do so requires socialisation (for example, additional income from parents), and although everyone wants its benefits, the burden falls on the Principal. For example,

whenever the media reports something, the Principal must deal with it. It's often hurtful. One year, the articles criticised our reform efforts, claiming we didn't consider people's capabilities, portraying us as pressuring the poor, or the Principal must be very rich he assumes parents are similarly well off. But they don't understand that when they say this, they only look at it from one side. When I enrol students, I discuss everything with parents, ensuring that our approach aligns with their family's wishes, financial conditions, and their child's abilities. If they agree to join the school, they agree to work with the school. But in Vietnam, parents can criticise schools even if the accusation is wrong, but schools can't defend themselves. That's a limitation in Vietnamese education. Thus, these reform policies are there, but few schools effectively implement them due to these immense pressures. (Mr. Tung, Principal)

I verified Mr. Tung's statements and found that he had become a target of a series of articles criticising the collection of high fees at school C. However, the issue eventually calmed down as no legal violations were found. Nonetheless, Mr. Tung acknowledged that such incidents left emotional and reputational scars. He admitted that he was brave in facing the risks of making a difference because, if things worsened, he had other options, such as teaching and researching at a university. This "fallback" option, as Mr. Tung observed, was not available to many of his colleagues:

Primary school leaders usually have only one job. They can't do anything else. So, they tend to think, I'll stay here for a few years. Whatever the government provides, I'll use. Whatever the curriculum is, I'll teach. Whatever the staff is, I'll manage. Then, I'll leave. (Mr. Tung, Principal)

Mr. Tung also shared another surprising reality: Many assumed the school's impressive facilities as an indication of corresponding investment in human resources, meaning high teacher salaries, which was not the case. He admitted that many teachers left his school because their salaries were lower than regular public schools, while the demands and pressure to maintain quality were higher than others. This paradox arose because government funding for teacher salaries is based on student numbers, a policy applicable to all public schools - with no exception. Thus, fewer students meant lower budgets and salaries as funding collected from sources other than the government, such as parents, was not allowed to be used to pay salaries. Mr. Tung remarked bitterly: "The better the school, the poorer it becomes." He tried explaining this paradox to the authorities but faced challenges changing some leaders' views. Some responded, "Teaching fewer students should be more comfortable, so why should salaries be higher?" They failed to understand that despite having fewer students, the effort required to change teaching methods is similar, not more significant.

In the face of this reality, Mr. Tung said those who chose to stay were deeply committed to the school's vision and culture. He repeatedly stressed that a team of young and passionate teachers who aligned with the school's direction right from the beginning was the key to its distinction. Therefore, after completing two terms (10 years) as Principal at School C, when offered to transfer to another public school to transform it into an Advanced Schools model, Mr. Tung expressed his concern that he might refuse, doubting his ability to replicate these successes with a different team.

Overall, Mr. Tung's narrative added insights into the challenges that school leaders face when implementing reforms. These include not just pedagogical challenges but also financial, social, and political pressures. A critical factor in overcoming these challenges, according to Mr. Tung's perspective is having a team of teachers who are willing to cooperate also have a deep understanding of the reform vision. Mr. Tung believed that the age of the teachers plays a significant role in this context, with younger teachers generally being more receptive to change and innovation, as well as more willing to accept the costs associated with these changes. Insights from Mr. Tung's experience suggested that his success at School C, under The Advanced School model, was more of an exception than the norm. He managed to align the necessary factors in his school and was willing to shoulder the personal costs and risks that are often unfeasible for his peers. This narrative suggested that individual efforts, while commendable, may not be sufficient for widespread and sustainable reform. Systemic support – including policy, resources, and community backing needs to be improved.

8.6. Summary

In contrast to Schools A and B, no educators at School C mentioned implementing policies as mere obligations. They seemed to recognise the benefits of such changes and did not encounter as many difficulties in implementation as teachers in other schools. This could be attributed to the fact that School C has established a different environment for change with adequate facilities, carefully selected parents who align with the school's teaching philosophy, and reduced teacher workload due to support from managerial staff, caretakers and collaborative practices for preparing lessons. Additionally, regular interaction and observation with foreign teachers helped teachers learn specific techniques for managing and fostering a positive and engaging classroom environment.

Observations in Ms. Yen's and Ms. Tu's classes at School C revealed a more profound transformation not only in techniques with the inclusion of activities associated with LCE, but in the genuine execution of these activities. However, complex activities that allow students to demonstrate more autonomy and

independence have not yet been regular, which teachers attributed to a lack of time. Classroom observations also indicated that richer student-teacher interactions require more time than the currently allocated 35 minutes per lesson.

Ms. Huong's case at School C presented an interesting contrast to the overall positive and innovative teaching approaches observed in other classes at the school. It showed how individual factors and external pressures can influence the implementation of new pedagogical approaches and lead to diverse practices even within the same school.

Lastly, Mr. Tung's experiences underlined the significant challenges faced by school leaders in Vietnam in trying to implement change, including the vagueness of policies, the pressures of public opinion, and funding constraints. His concerns about the scalability of initiatives without broader systemic support were an essential consideration for policymakers and educational stakeholders.

CHAPTER 9: CROSS-CASE ANALYSIS AND DISCUSSION

9.1. Overview

This chapter presents a cross-case analysis and discussion based on the empirical findings of Schools A, B, and C. The aims are to synthesise insights from these individual case studies to answer the research questions and to offer an understanding of broader patterns of the FCER implementation utilising CAST's theoretical concepts and insights.

9.2. Interpretation, Translation, Practice and factors that impact the implementation processes of FCER and C2018

This study raises a central question in regard to Vietnamese primary schools: How do schools manage the implementation of system-level education reform policies, particularly focusing on the FCER policies? This overarching question is further divided into sub-questions that investigate the perceptions of school actors towards the reform policies (SRQ1), the actual implementation of these policies (SRQ2), and the factors influencing the implementation process (SRQ3). These questions were used as the structure to conduct the cross-case analysis below.

SRQ1: How do school leaders and teachers perceive the intentions and expectations of the FCER policies?

Regarding school actors' perceptions, or in other words, how they interpret the policies, data from this study suggests it is helpful to classify educators into four groups based on two dimensions: their understanding of the educational reform policies and their receptivity towards them. *Understanding* in this context refers to how teachers understand the policies' content, purpose and necessity, involving a thorough grasp of the policy objectives and their underlying rationale. For instance, a quote from a teacher shows low understanding:

> Actually, I don't know much about these competencies and qualities. When we're trained on these, we just look at the slides and write down the answers. I still don't grasp what they are (Ms. Bich, Teacher, school B).

In contrast, an example of a higher level of understanding is:

I find the C2018 highly practical compared to the previous one. All subjects are closely tied to the student's learning process and rooted in practicality. Unlike the previous curriculum, whose practicality was vague, this one closely follows reality in terms of both school activities and time distribution. For instance, on March 8th (International Women's Day), students learn topics related to that day…There is an interconnectedness among the activities and subjects. For instance, if experiential activities focus on self-protection, then the ethics lesson of that week will also address this theme. (Ms. Hoa, Teacher, school C)

'*Receptivity*' indicates the level of willingness teachers demonstrate towards implementing these reform policies. An example of low receptivity is:

I don't care much about the textbook. I just continue with my activities and teach based on the content. It doesn't matter which book I use… For developing competencies and qualities, I think that's more the responsibility of the classroom teacher. (Ms. Bich, Teacher, School B).

An example of higher receptivity is:

I support the reform because education, much like life, needs to evolve daily. It should grow and develop. We cannot keep following the same old path, so I welcome the changes. (Ms. Minh, Teacher, school A)

By considering the two dimensions, Receptivity and Understanding, educators who participated in interviews in three case schools can be classified into four types: *Passive Acceptors*, *Informed Advocates*, *Informed Critics*, and *Non-engaged Critics*. Figure 9.1 below illustrates this analytical framework:
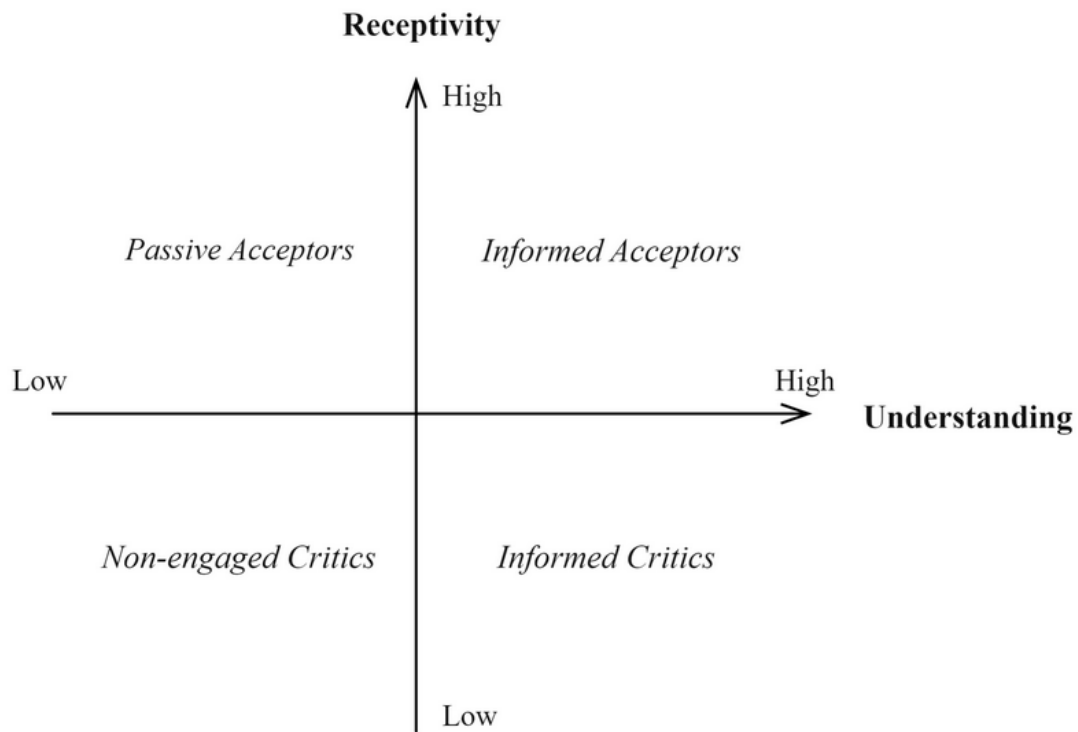
Figure 9.1: Policy Receptivity and Understanding Mix

Passive Acceptors are educators who, despite not fully understanding the policies, are still willing to accept and implement them. Without a detailed and thorough understanding, this willingness stems from their trust in authorities or a general agreement with the broader visions of the policies. *Informed Acceptors* comprehend the policies well and are receptive to them. Their support is informed by their deep understanding and belief in the policies. *Informed Critics* are teachers who understand the policies clearly but are not receptive to them due to critical disagreements or scepticism. Meanwhile, *Non-engaged Critics* might perceive the policies as irrelevant or undesirable and show unwillingness to consider change based on their incomplete or incorrect understanding.

It is crucial to acknowledge that the dimensions of understanding and receptivity do not operate on a simple binary of high and low. Rather, these dimensions should be seen as spectrums, encompassing a range of nuances that reflect individuals' complex and varied perspectives. However, for this study's purpose, the four categories above help generate a more structured and manageable analysis to understand the patterns in educators' perceptions of educational reform policies. From the data collected, there appears to be a dominant type attributable to each case school.

At School A, the dominant view among educators who participated in interviews (N=7) was that of *Passive Acceptors*. For example, concerning assessments and multiple textbook sets, teachers initially saw themselves as mere executors of higher authorities' policies. They could see some logic in the policy

intent, but their understanding was generally limited to the general goals of the policies. They did not necessarily grasp the practical implications and the rationale behind the changes they were being asked to make. Under constraints such as time for consideration and cultural and procedural barriers to providing feedback, teachers tended to initially support the policies. However, there has been a gradual shift in some educators towards becoming *Informed Critics* (N=4) as they begin to implement these policies and recognise the challenges and mismatches between the policy and the school's actual context. They increasingly developed doubts and even opposition. It is important to emphasise that these educators' criticisms did not necessarily stem from a failure to recognise the values of the policies. Rather, they were rooted in scepticism about the practicality and feasibility of implementing these policies within their specific, often constrained, contexts.

At School B, a majority of educators (N=7) appeared to be *Passive Acceptors*. This was either because they perceived themselves as lacking the capacity to critique decisions made by higher authorities and experts or because their understanding of the policies was rather superficial, and they tended to simplify the policies' expectations. Ms Han, the Principal, positioned herself as an *Informed Critic*, expressing strong criticisms towards most aspects of the FCER policies based on their limitations in practice. Meanwhile, Ms. Bich, the English teacher, seemed to fall into the category of *Non-engaged Critics*, as she demonstrated a lack of understanding and receptivity towards the current changes in the policies and C2018.

At school C, educators interviewed predominantly exhibited tendencies that closely align with those of *Informed Acceptors* (N=5). They demonstrated support for the policies and had valid, critically informed reasons, indicating a deeper understanding of the innovative policies.

Overall, the general trend in terms of perception across all three schools, especially in the initial phase of receiving the policies, was one of receptivity. However, as Hallinger (2018) points out in studying reforms in other Southeast Asian countries, positive responses could merely be signs of passive receptivity – teachers accepting initiatives without sufficient understanding and emotional connection, which is a result of both a highly centralised administrative structure and a cultural tradition of respecting authority, age, rank, and status (i.e., power distance). The findings analysed through the Policy Receptivity and Understanding Mix showed that this explanation applied to the case schools, especially schools A and B. Nevertheless, as the reality of implementation set in and teachers faced increasing difficulties, there was a trend towards changing attitudes towards doubts and opposition to some aspects of policy reform. This tendency was apparent at School A, less at School B and even less at School C.

SRQ2: How do schools attempt, if at all, to incorporate the FCER policies into their practice?

Research data, particularly from classroom observations, offered insights into how the policies were translated and actually enacted in the classroom setting.

In terms of pedagogy, the evidence suggested that textbooks played a crucial role in translating the reform policies and C2018 into classroom practice. Teachers across all three schools tended to design learning structures and activities based on the contents and activities proposed in the textbooks. Data from observations also showed that there was consistency in teachers employing new practices such as group discussions, peer feedback and games in classrooms. However, the majority of teachers in focus, particularly at Schools A and B (N=7) continued to employ strategies that align more with a teacher-centred approach in terms of classroom relationships, motivation for learning and construction of knowledge (Schweisfurth, 2013). Examples include classroom activities being mainly organised and controlled by teachers, a tendency to accept that slower students cannot keep pace with the class, expectations for students to maintain order and remain quiet for extended periods, the fostering of a quiet and monotonous classroom atmosphere, as opposed to one that is lively and engaging, and the frequent use of techniques based on extrinsic motivation. Additionally, there was a lack of encouragement and engagement of teachers with students' personal opinions and viewpoints.

Thus, classroom practices have largely remained consistent with the entrenched tradition of textbook-based teaching and learning, as illustrated by Duggan (2001) and Le (2018). As Tanaka (2020) describes in the pre-FCER classroom, it appears that changes have occurred primarily in surface-level techniques and little or not at all in the fundamental nature of classroom interactions. In the case of Ms. Yen and Ms. Tu's lessons at School C, the learning environment exhibited more pronounced shifts towards LCE; however, the extent to which teachers autonomously select materials and design activities tailored to students' needs, including fostering deeper thinking, autonomy and creativity as foreshadowed in the C2018, is still limited.

Regarding assessment, although there were doubts and disagreements about the shift from traditional grading to formative feedback, teachers were still following these regulations. However, it has been reported, especially in School A, that teachers were struggling to use this new approach to motivate student learning. Additionally, communicating with parents to gain acceptance and understanding of the new assessment methods remains a challenge. Consequently, despite its implementation across all case schools, the full range of potential benefits of this assessment shift (e.g., providing constructive suggestions for improvements, fostering a growth mindset, making learning more relevant and visible to

students and parents), which extend beyond merely reducing academic pressure, remained underappreciated and unrealised.

In terms of professional development, implementing Lesson Study has led to some positive changes, such as reducing unnecessary formal activities in traditional professional development meetings. Teachers saw the benefits of collaboration in lesson planning and addressing professional issues, as well as in observing classroom practices. However, data indicated that there were still limitations in time allocation for these sessions, and the process has been simplified to mainly problem-solving discussions rather than fully implementing the original Japanese model. There was also a lack of thorough understanding among educators of how the model supports the transition from TCE to a more LCE that focuses on student learning rather than teacher teaching. The implementation of Lesson Study in School C has shown the most noticeable results and has been integrated into the teachers' routines throughout their teaching process.

Other forms of professional development, such as 'good teacher' competitions and pedagogical research, remained detached from the actual realities of classrooms and, in some cases, disrupted the progress of teaching and learning.

In terms of school governance, while the establishment of the School Council has been carried out, educators have reported that its impact on reality was limited. There was little evidence of substantial change in school management practices. Data indicated that school leaders tended to rely more on their personal abilities and learning than on systemic guidelines. In School A, this has led to a lack of recognition and active response to teacher issues. The Principal of School B acknowledged the limitations of her school but has failed to find a feasible way to foster more positive changes. The Principal in School C demonstrated more effective management, learning from good practices in other countries, such as building a supportive managerial staff or joining teachers in greeting parents every morning.

SRQ3: Which facilitators and constraints have affected the FCER implementation, to what extent, in what ways and under what conditions?

This section delves into the facilitators and constraints influencing the implementation of FCER reforms, guided by Fullan's (2006) framework on capacity building that encompasses motivation, competencies, and resources.

Motivation

Regarding motivation, as previously noted, educators across the three schools generally tended to accept the FCER's new policies. However, it is not necessarily true that this acceptance by most teachers was grounded in a profound understanding and trust in the policies. In a system traditionally characterised by top-down approaches and a cultural tradition that emphasises power distance, data from this study indicated that teachers perceived policy implementation as an obligatory duty. Moreover, the ambiguous and broad nature of the policies led to a lack of clear opposition at the early stage of implementation as teachers were unsure of the specificities and impacts of the practical application.

However, as the implementation phase progresses and teachers gained a clearer insight into the actual impact of the policies, their attitudes evolve. They may re-interpret the policies, leading to a stronger connection with and trust in the policies (as observed with teachers at School C and individuals like Ms. Nhung at School A and Ms. Tuyet at School B), or they may resist the policies (as seen predominantly among teachers at School A), or in some cases, teachers might find the policies irrelevant to their teaching methods (as in the case of Ms. Bich at School B – an illustration of *Non-engaged Critics*). Teachers' attitudes evolved from initial compliance to deeper engagement, detachment or even resistance.

Nevertheless, even in situations where teachers felt disconnected from or resistant to the policies, they felt the pressures to continue with their implementation, driven by external factors. Interview data from this study showed that as the systemic shift of the FCER means that these changes are being implemented school-wide, the expectations and practices of their peers and the broader school community influenced teachers to continue with implementation to avoid standing out or going against the norm. Additionally, when lessons were observed by school administrators, inspectors, or fellow teachers, there was a felt obligation to conform to the requirements. This sense of duty was reinforced by accountability measures such as evaluations and performance reviews, which could influence their career progression and reputation. Furthermore, as teachers felt they did not have a voice in influencing policy, they also complied out of a sense of helplessness.

In a large and heterogeneous system, it might be unrealistic to achieve a similar level of agreement and connection with new policies right from the start. The existence of systemic pressures can facilitate the initial rollout of reforms, ensuring that changes are at least introduced across the board. Over time, this exposure may result in teachers developing a better understanding and, potentially, a more genuine acceptance of the reforms. Data from this study indicated that such a transition did occur. However, the observation that this phenomenon was more pronounced among teachers in School C suggested that the

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transition depended on the environment, support, and opportunities available for teachers to develop a deeper understanding and engagement. In instances where genuine buy-in is absent, as observed by Ms Han, the Principal of School B, teachers might comply with the requirements only when under observation or assessment, or they might execute these changes superficially.

Competencies

Both Elmore (2005) and Fullan (2017) highlight a common issue in implementing top-down policies: policymakers often fail to recognise that along with requiring teachers to comply with certain standards, they must also ensure that teachers can meet these demands. It is unrealistic to assume that teachers can instantly understand and apply new directives without any preparation or learning phase.

To implement the FCER policies and specifically C2018, the MOET has provided various forms of training for teachers, ranging from online training modules and face-to-face training sessions organised by local DOETs/BOETs to workshops conducted by textbook publishers. Additionally, the implementation of the lesson study model aims to create communities of teachers who learn from one another and apply their new knowledge and understanding in actual teaching practice. These efforts indicated that the MOET was aware of the need to equip teachers with the necessary capabilities to implement the aspirations of the reform.

However, data from the study showed that the majority of interviewed educators (N=18) were not satisfied with the quality of the training provided. Their concerns ranged from the failure of training to foster engagement and commitment to an overemphasis on theoretical aspects, leaving teachers struggling to translate and adapt new knowledge to real classroom situations. To triangulate teachers' perspectives, this study includes an analysis of online modules from the MOET's online training programme, demonstration lesson videos from textbook publishers, and accompanying teacher guides.

The analysis of online modules 1-5, covering an overview of C2018, pedagogy, assessment, educational planning, and student counselling and support, revealed that the content was presented in videos averaging 45-60 minutes in length. These videos combined expert presentations with content delivered in AI-generated voices. Figure 9.2 below is an excerpt taken from module 2 of the programme regarding the pedagogical approach of the C2018.

Figure 9.2: An excerpt from the online module training for C2018 provided by MOET

In the above Figure, the lesson on the pedagogical approach delivered by the Director of the Department of Higher-Secondary Education highlighted two main principles: 1) Teachers organise activities that help students actively engage, construct and apply knowledge, adhering to the principle "Activities and competencies align," and 2) Textbooks and other resources or tools serve as means to facilitate these student activities.

The module also listed a series of techniques that are considered compatible with the new approach, such as Project-Based Learning, Problem-Based Learning, Inquiry-based learning, Flipped Classroom, Brainstorming, Mind Mapping, KWL, Jigsaw, Placemat, Think-Pair-Share, See-Think-Wonder. There were short classroom videos to illustrate the use of these techniques. In discussions about implementing these activities, the Director of the Department of High School Education also stressed that these activities need time to be effective and cannot be implemented in just 5-10 minutes.

However, classroom observation data from this study showed that the majority of teachers (N=10) did not use the aforementioned practices in their classrooms. Student discussion mostly took the form of interactions where students discussed the textbook tasks in pairs or small groups. The discussion time was often very short, only about 2-3 minutes. This phenomenon occurred because teachers, in reality, still organise activities exactly as outlined in textbooks and teacher guides, which generally did not apply the new techniques mentioned in the MOET's training program. Moreover, the analysis of teacher guides showed a lack of detailed instructions to help teachers handle potential students' responses and classroom situations or tailor the lessons to the level and needs of students. The analysis of sample lesson videos provided by textbook publishers showed that, as Ms. Anh from School B pointed out, these model lessons

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unfolded seamlessly, with students being extremely cooperative, always answering questions correctly, and the process moving very quickly to ensure it fit within the 35-minute lesson time, which is difficult to replicate in practice. Teachers' insights also indicated that they were not ready to apply the new techniques and methods in their classrooms because they did not feel confident to use them for younger students. Additionally, some activities may require family cooperation, and teachers lack confidence in coordinating with parents, especially in School A, where parents are perceived as not interested in and supportive of students' learning. Therefore, even though teachers knew that it was not necessary to strictly follow the activities in the textbooks, they still decided to do so. When carrying out these simpler activities, teachers also implemented them quickly and, at times, superficially. Or, when unexpected situations arose, managing their classrooms became significantly challenging for teachers like Ms. Minh at School A.

Classroom observation data revealed that some teachers still placed emphasis on establishing classroom discipline, as seen in the classes of Ms. Tuyet (School B) and Ms. Huong (School C). At times, this focus consumed a significant amount of time and became a source of tension in the classroom. Ms. Han, the Principal of School B, believed that these discipline-focused practices reflected the personal views of teachers influenced by traditional learning and assessment philosophies rather than school policies. In most observed classrooms, except those in School C, teachers often instructed students to be *"ngoan"* or well-behaved – a traditional concept in Vietnamese culture that implies obedience. This suggested there may be conflicts between teachers' viewpoints and the new practices they were being introduced to, and teachers might struggle to balance these differing approaches.

The policy shift in assessment methods also presents challenges for teachers. As data presented in sections 6.4.3 and 7.4.3, teachers struggled with transitioning from traditional grading to providing descriptive feedback. They found the new practice ineffective in communicating with parents about student progress and motivating students but feel helpless in finding solutions to address these issues.

In general, there appeared to be a significant gap between the innovative ideas promoted in training modules and teachers' practical application in classrooms. Interview data with teachers in the three case schools indicated a need for more realistic and relatable training that addresses the challenges faced in actual classroom environments. Issues such as classroom management, personalising learning, connecting with parents, and implementing activities that give students greater space for autonomy, critical thinking, and problem-solving were areas where teachers still lacked confidence and required further guidance and support. It seems unrealistic to expect that teachers, transitioning from an approach

where they primarily follow pre-set instructions and regulations, can easily shift to a more autonomous approach where they can independently equip themselves with the necessary knowledge and skills.

Teachers also needed greater support in more specific ways to navigate challenging conditions such as those at School A. Ms. Tuyet from School B shared her experience of training at a school in a disadvantaged area where students lacked adequate learning materials and textbooks. She was shocked to be expected to teach a demonstration lesson as if it were a well-equipped urban classroom. To meet this requirement, Ms. Tuyet had to request local authorities to ensure students had all the necessary materials for her to demonstrate new teaching practices to the observing teachers. However, she knew that teachers do not teach in such well-equipped conditions. She was unsure how they would cope with the reality after the training since finding solutions to the issue was not part of her training responsibility.

Furthermore, insights from Ms. Bich at School B, Mr. Tung and Ms. Sen at School A, and the experiences of Ms. Yen at School C showed that teachers need close observations and first-hand experiences, either as participants or as supporters, to understand how to implement new practices truly with a greater level of fidelity. Teaching goes beyond merely following steps; it also involves the attitudes, gestures, energy, and emotions that take practice and some good models to learn from.

Resources

As with competencies, it would be unrealistic to assume that schools and teachers have or are able to seek all the resources needed to implement the demands of the FCER reforms. Data from the case schools showed that to implement C2018, the MOET provided additional facilities related to subjects such as Art, Physical Education, and Music. However, there appeared to be no significant additions to teaching materials for other subjects. Classroom observations indicated that all lessons, except those by Ms. Yen at School C, did not use any materials to support the learning process. Teachers and students mainly interacted verbally, observing images in textbooks or on the board.

Mr. Nhan, the Deputy Principal of School A, acknowledged the limited budget for purchasing more interactive teaching materials. Teachers were also reluctant to use this budget due to complex reimbursement procedures. According to state regulations, reimbursements require invoices, including 10% VAT. However, in Vietnam, small shops often do not issue such invoices, making it difficult for teachers to find suitable receipts for minor purchases. Therefore, as Mr. Nhan mentioned, teachers only tended to make purchases and complete the paperwork when participating in teaching competitions. At Schools A and B, teacher interviews revealed that even when resources like art easels and musical

instruments were provided, they were under-utilised due to the lack of dedicated rooms for these subjects, making it impractical to transport these resources to different classrooms.

At all three schools, conversations with principals indicated that, aside from state budget and equipment support, schools felt responsible for implementing socialisation (the requisition of additional resources) by seeking support from parents or donors. However, this approach at School A, according to Mr. Nghi (the Vice-Principal), was ineffective due to the limited financial capabilities of parents and local businesses, leading to minimal support. School C has been more successful in socialisation, but as Mr. Tung shared, this success required a risk element to personal reputation and legal issues, a challenge not all school leaders are willing to confront. Additionally, this approach was feasible at School C due to its status as an experimental Advanced School, allowing it to recruit students from different areas and seek more affluent donors and parents – an option not available to most public schools in Vietnam and not necessarily desirable due to potential debates around school choice.

A common theme across the three case schools was the challenge presented by lack of time. Under C2018, a learning period for the primary classroom is 35 minutes long. Although MOET guidelines indicated that learning content was not confined to one period and could span multiple periods or be shorter depending on lesson requirements, classroom observation data showed that teachers still adhered to the textbook's lesson distribution, with each period corresponding to one textbook lesson. As chapters 6, 7, and 8 findings showed, almost all lessons that truly engaged students and followed up on their questions and viewpoints exceeded the 35-minute limit.

Teachers also highlighted the increased demands of the Vietnamese and Mathematics curriculum under C2018, with longer, more complex readings and math problems necessitating additional time for students to meet these new standards. However, overall school hours have not increased, and coupled with the impact of COVID-19 school closures, teachers feel pressured to cover textbook content quickly. School B's lack of time for teaching and learning was particularly severe due to the inability to offer full-day schooling and disruptions to students and teachers from various activities and demands imposed from above, which teachers found unnecessary and poorly planned for practical implementation.

A notable finding from interviews at all three schools was that all teacher participants were somewhat satisfied with their current salaries, which have often been depicted as low in the literature (Dang, 2013; McAleavy, Ha and Fitzpatrick, 2018). Teachers admitted that their salaries were not high but were sufficient for living, or they found other solutions to manage their financial situations. Teachers such as Ms. Minh at School A and Ms. Anh at School B believed that having chosen this profession, they have a

passion for their work and find ways to make it work financially. As Ms. Minh and Ms. Han emphasised in their interviews, what frustrated teachers and made them consider leaving was not so much the salary issue but unmet expectations and difficulties they felt unable to overcome in their daily work.

9.3. The FCER implementation through the lens of CAST

This section presents further discussions on the cross-case findings through the lens of CAST and related literature. It also proposes additional analytical concepts (*Zone of Feasible Practices* and *Zone of Expected Practices*) to develop CAST and enhance the theory's relevance to the practicalities of reform implementation.

Through the lens of CAST, the transition from one practice to another by actors within a Complex Adaptive System (CAS) is not solely based on the intrinsic value of the new practice. Instead, it is also significantly influenced by the outcomes of interactions among various actors and their environments, which emerge during the enactment of these practices. In the context of education reforms, educators' responses to reform policies are shaped by a multitude of factors, extending beyond mere agreement with the values of the policies. The following sections will examine the findings from the case schools in this regard to examine how the current implementation realities influence educators' responses to the reform policies.

The impacts of system-level policies in building up critical mass for change

As detailed in Chapter 4, in CAS, for certain reasons, if a critical mass of behaviour adoption is achieved that triggers self-reinforcing mechanisms, the results of interactions among actors lead to the escalation and dominance of certain behaviours. This dominance ultimately brings the system to a state of stability or lock-in (Sydow, Schreyögg and Koch, 2020). This understanding raises an important question: Is it possible to proactively create a critical mass of expected behaviours and utilise self-reinforcing mechanisms to institutionalise these behaviours as the new norms for the system?

System-level policies that employ government authority to compel school educators to implement reforms appear to be one way to create such a critical mass. The data from this study suggest that such an approach, to some extent, fosters uniform adoption of reforms. The pressures exerted by a whole system moving in a unified direction prompt simultaneous group adoption. Teachers, as noted in this study, feel an obligation to adhere to these policies despite their initial level of understanding or receptivity. Over time, this uniformity in adoption leads to reduced resistance and lowers the resource

and effort expenditure required for individual educators to transition to new practices. In other words, the critical mass of adoption triggers self-reinforcing mechanisms that make adopting the new practices less challenging.

The study identifies such self-reinforcing mechanisms in the case schools that reinforce the implementation of new practices resulting from system-level policies:

1) *Learning effect* (actors become more skilled in performing the practice as they replicate it and share experiences or resources): In instances like those observed with teachers at School C, understanding and appreciation of the reform's value developed gradually after implementing the policies. This evolution of understanding was facilitated by hands-on experiences with foreign teachers and collaborative work, enabling a practical translation of policy expectations into reality – a process that might have been more challenging on an individual basis. The systemic requirements, therefore, encourage all actors to participate to some extent, creating opportunities for collaborative work that reduce workload and improve teaching quality.

2) *Improvement effect* (as practices are repeated, they tend to be refined and enhanced): Teachers reported an increase in the availability of resources, such as videos and lesson plans, to develop the new teaching approach. This increase was particularly notable for resources shared over the Internet by other educators, as all teachers in the country were working with a similar curriculum and policies. The availability of these resources reduced the initial uncertainty associated with adopting new practices. Over time, this led to a positive feedback loop where improved practices further motivated teachers to continue using and developing these new methods.

3) *Coordination effect* (as more actors adopt similar practices, coordination among them becomes easier): Teachers expressed their receptivity towards the new policies because they saw these practices being embraced by their peers. Teacher felt that their individual efforts are part of a broader, school-wide or system-wide initiative. This shared experience reduced feelings of isolation and the risk of conflicts with others.

4) *Emotional effect* (actors becoming emotionally invested in the practice): Teachers gradually became accustomed to the new practices, and they became integral to the teachers' sense of professional competence. The way in which teachers' implementation of these practices influenced how they were viewed by their peers, superiors, and students. This external validation further reinforced their commitment to and investment in these new educational practices.

5) *Legitimation explanation* (initial adoption of a practice establishes a precedent for what is considered appropriate and legitimate for future decisions): The initial adoption of new practices, especially when endorsed and promoted by top-level experts, policymakers and school leaders, sets a benchmark for what is considered appropriate and legitimate within the educational system. As these practices gain traction, teachers begin to view them as the new norm, making it easier to integrate these practices into their daily routines. This perception of legitimacy is crucial in overcoming initial resistance or scepticism. When teachers believe that the direction of the reform and its policies are well-founded and supported by educational authorities, they are more likely to embrace these changes and view them as a positive step forward for the school system.

Although there is still potential for further improvement, the professional development practices implemented in the case schools have played a role in building up and enhancing the aforementioned effects. For instance, Lesson study, the collaborative model where teachers jointly plan, observe, and critique lessons with a focus on new teaching approaches, fosters a sense of collective effort and provides opportunities for knowledge and resource sharing. Additionally, the hybrid training program (ETEP) provided by the MOET, which combines online and in-person training, offers a useful platform for teachers to learn from top-level experts while also engaging with trainers and colleagues in their local contexts.

This finding supports the arguments of Fullan (2003) and Hall and Hord (2020) that system-level, government-led efforts to initiate change can play a significant role in advancing reforms. In the case schools, a combination of policy-driven changes and structured professional development programs have resulted in a degree of consistent change in teaching practices across all the schools. Examples of these changes include the adoption of group discussions, peer feedback, and games in the classrooms of all three schools.

However, as discussed in section 4.4.4, another critical factor in effecting change is the complementary effect. This effect occurs when a practice adopted in one area is supported by concurrent developments in related areas, creating coherence that amplifies the impact of the change across multiple sectors. This also implies that initiating change in one area while leaving related areas unchanged can lead to challenges for overall change. The data from this study indicate that this is a significant issue in the case schools. While changes have been implemented to some extent in areas such as pedagogy, assessment, and professional development, there are connected aspects that have seen little change. These include students' and families' socio-economic background, class size, school schedule, school facilities, local

leadership, the quality of trainers, the quality of teaching guidance, parents' and community awareness, and teachers' understanding of the theoretical foundations of the changes, as well as their personal characteristics such as age and current competency levels. The failure to improve these interconnected areas hinders the progress of change, as it imposes additional burdens and costs in implementing the new practices. The stories of three individuals in three case schools, including Ms. Minh, Ms. Han, and Mr. Tung, illustrate that aligning with new aspirations comes with high personal and professional costs.

Rogers (2003) categorises innovation adopters into five groups: innovators, early adopters, early majority, late majority, and laggards, based on their willingness to accept new ideas and the timing of their adoption. A critical cause for difference among these adopters is their capacity to accept risks and costs when experimenting with new ideas, especially when benefits and risks are not clearly acknowledged. According to the author, those with fewer resources tend to be more cautious, adopting innovations only after they have been proven to reduce uncertainty by others. This suggests that in implementing change, it is important to focus not just on the benefits that adopters receive but also on the costs they are facing. This study supports this line of argument, the reluctance or resistance to change is not necessarily a result of a lack of agreement with the new policies but is often rooted in the practical difficulties and risks involved in implementing these changes under constrained contexts.

In a similar vein, as discussed in section 4.5.3, according to Sydow, Schreyögg and Koch (2009) when the system enters the lock-in phase of certain behaviours, commitment to a particular choice strengthens, making deviating from it increasingly difficult. Even when aware that different choices might be more beneficial, actors find it hard to switch paths. The psychological, resource-related, and social costs of transitioning to new practices often outweigh the benefits of adopting these practices, leading to resistance to change.

Overall, through the lens of CAST, although the collective adoption driven by system-level policies creates a critical mass and self-reinforcing mechanisms that help improve understanding and reduce the uncertainties, risks, and costs of implementing new practices, the discrepancy between the expected improvements and some of the structures and conditions in the school context creates additional burdens that educators seem unable to shoulder. Confronted with this mismatch between expectations and the actual supportive conditions and structures, most teachers in this study tend to interpret the reform policies and C2018 in a way that leads to changes at a more basic level, thereby reducing the costs associated with change. Individuals who do not accept this simplified understanding, such as Ms. Minh, Ms. Han, and Mr. Tung, appear to bear these costs themselves. Cases of educators like Mr. Tung, who

successfully overcame these challenges and led the implementation of FCER policies in a transformative manner, are rare exceptions.

The one-size-fits-all approach in bridging the gap between the Zone of Feasible Practices and the Zone of Expected Practices

This study proposes two new and original concepts, the Zone of Feasible Practices (ZFP) and Zone of Expected Practices (ZEP), to conceptualise the current status of ongoing system reform implementation in Vietnam primary school case studies. ZFP suggests the range of currently possible and achievable practices within the existing standards and conditions, while ZEP represents the desired state or practices as set out in CPV legislation. These concepts of ZFP and ZEP complement the notion in CAST of transitioning complex adaptive systems (CAS) from the current state space to another state space. The notion of ZFP is also in line with Sydow, Schreyögg and Koch (2009), which describes the range of behaviours and practices that actors are able, and have the capacity, to select and perform. This study argues that ZFP and ZEP can serve as more helpful terms to capture the essence of CAST and make it easier to understand and more relatable for actors on the ground.

Through this lens, the initial ZFP of Vietnamese schools prior to FCER can be described as more teacher-centred pedagogies with attendant summative assessments that focus on transferring knowledge from textbooks, students playing passive roles in their learning and motivational strategies to learn based on extrinsic motivations such as grades and other types of evaluation and punishments. The aim of the FCER and C2018 reform is to move to a more desirable state of practices that embraces more LCE education, or the ZEP.

Using the notions of ZEP and ZFP, the study finds that while schools have moved their initial ZFP towards this new model by integrating some LCE practices, deeper transitions in key education aspects like teacher-student relationships and student motivation are lacking. This discrepancy prevents schools from fully reaching the ZEP as envisioned by the MOET. The study argues that these gaps are a natural part of change, requiring time and effort to bridge. However, the MOET's approach to addressing these gaps appears to rely heavily on schools' capabilities rather than providing systemic support, potentially hindering the further progress of reform efforts.

Policy texts under the FCER indicate a tendency of the CPV and MOET to recognise the importance of building up schools' ownership of change. The adaptive, centralised decentralisation approach provides schools with more adaptive opportunities, greater responsibility, and autonomy in capacity building

through practices such as Lesson Study. There is also a tendency for reform policies to lack detail and guidelines for implementation, which leaves room for local adaptation. This vagueness of policies also helps reduce opposition, as implementers cannot foresee specific or tangible impacts on their work and lives. As a result, in the case of FCER policies, generally, teachers agree with the CPV and MOET's goals to reduce academic pressure and make learning more practical, dynamic, and future-ready – ideals that few would oppose. This strategy, as explained above, has been beneficial to gaining receptivity consistently throughout the system and has contributed to building internal accountability and collective capacity for change within each school to some extent. However, data from this study also suggest that the actual application of this strategy appears insufficient, even counteractive, when schools begin to face significant constraints in their contexts when implementing the policies in practice. There are systemic issues that are more challenging to address, like students' and families' socio-economic background, class size, school facilities, and parents' and community's awareness that schools seem unable to overcome on their own.

To be more specific, C2018 recognises the importance of schools and teachers adapting to the needs and circumstances of students. Compared to C2006, C2018 gives schools and teachers more autonomy to design curricula, use learning materials, and apply new teaching methods, with the expectation that teachers will use this autonomy to transform their classrooms, focusing on LCE and the development of students' competencies and qualities, thus fundamentally changing the nature of the classroom. C2018 is therefore called an "open" curriculum. The data from this study show that teachers are aware of these expectations of C2018. However, evidence also indicates that teachers are either not necessarily able or willing to take up the autonomy they are given. An important and relevant opinion from a teacher participating in the pilot interview of this study is the feeling of being in an open curriculum but feeling it very closed, that is, "closed within the openness." This means that even when policy direction gives teachers license, the constraints they perceive in the reality of their work in terms of such as students' background, school facilities, class size, and parental cooperation, along with a lack of competencies to address these realities, make them feel restricted in implementing changes.

These findings support the line of argument of Fullan (2003) that while school ownership in change is important but:

> You can't get it on large-scale by relying on bottom-up strategies. If you base a strategy on investing only in local development, what happens is: (a) not much of the bottom moves, or (b)

some of it moves in the wrong way, or (c) some of it moves productively, but the good ideas do not get around, nor do they persist for very long (p.48).

It seems unrealistic to expect schools to independently devise strategies to overcome challenges that are systemic in nature. Furthermore, data from the case schools reveal that educators, especially those in more challenging environments, often encounter greater difficulties in addressing these systemic challenges. This is because the gaps between their initial ZFP and the ZEP are indeed larger than in other schools. Initially, schools already have varying ZFPs rather than a uniform one. Therefore, when schools with disadvantaged contexts aim to progress beyond basic requirements, they face greater personal and professional costs. This understanding helps explain why teachers in School C, after implementing the FCER policies and C2018 for a period, express more criticisms compared to School B and even more so than in School A.

Furthermore, the data from this study, including Ms. Tuyet's insights into the similarity of training approaches for schools in different contexts and the analysis of documentation, suggests a lack of guidance for local adaptation (see section 9.2). This indicates that the MOET may not fully recognise its role in supporting schools with varying ZFPs in different ways to achieve the common ZEP they establish. The manner in which reform policies are communicated and implemented creates the impression that MOET, when promoting school autonomy, also leaves schools to address the gaps between their ZFP and the ZEP on their own, regardless of the magnitude of these gaps.

Consequently, as pointed out by previous studies exploring FCER implementation, this one-size-fits-all approach places the responsibility on schools to interpret, select, and adapt the reforms based on their existing capacities and resources. This approach leads to variations in the understanding and application of the reforms (Nguyen, 2020; Dimmock *et al*., 2021). Two emerging interpretations of the ZEP have become evident in the implementation of FCER and C2018 in Vietnam: a "*near ZEP*" and a "*far ZEP*." The near ZEP involves mainly technical changes without substantial shifts in the essence of the learning process or the teacher-student relationship. Educators having *this near ZEP* find comfort, or at least acceptance, in the current limited innovations, therefore being *Passive Acceptors*. In contrast, educators understanding the FCER as the far ZEP, which is more ambitious, struggle to find practical ways to implement it within their real-life conditions, leading these teachers to become *Informed Critics*.

Both approaches to defining ZEP seem to be problematic. If educators perceive FCER as just the *near ZEP*, they miss understanding the full scope and depth of the reform, lacking the drive and effort to progress beyond. However, if they view the *far ZEP* as the goal but the contextual conditions do not

support achieving this, and without appropriate support and guidance, schools and teachers may eventually have to accept that they might only reach the *near ZEP*. This can lead to frustration and disillusionment among teachers, which could undermine trust in future reform efforts. Additionally, in this process, dedicated teachers like Ms. Minh may feel compelled to abandon their roles due to the overwhelming challenges.

9.4. Summary

This chapter synthesises the collected data from interviews, observations, and documentation across three case studies, utilising the theoretical lens of CAST and the additions to CAST presented in section 4.5 to critically examine the FCER implementation. The findings illustrated that despite an apparent surface-level acceptance and compliance with the FCER policies and C2018, the actuality of implementing these reforms at the school level was considerably more complex.

The system-level, government-led policies placed pressure on teachers to implement changes, creating a critical mass of a number of adopters. Initiatives like the Hybrid Training Program (ETEP) and the Lesson Study model have been instrumental in fostering self-reinforcing mechanisms, enabling schools to build on this base progressively. However, this study also uncovers a critical gap: a shortfall in acknowledging the diversity of challenges in school contexts. The current approach, while aimed at empowering schools with autonomy and ownership, risks overburdening them with responsibilities that may be beyond their current capacity to manage effectively.

By proposing the two concepts ZFP and ZEP, this study conceptualised the current circumstances of schools and educators as they can only respond according to their capabilities. As a result, while some perceive the FCER as a call for an extensive and more fundamental change (*the far ZEP*), others view it as requiring only minor, primarily technical adjustments (*the near ZEP*). Teachers who align with the near ZEP feel at ease with their current efforts, as these are closer to their initial ZFP, yet risking failing to move the reform further. In contrast, those interpreting the reform as the far ZEP experience constraints due to limitations in their contexts, despite the MOET's promise for increased autonomy to drive more significant changes.

This study's findings resonate with Fullan's views that the challenge in public education reform does not always lie in resistance to change at the school level but rather in the uncritical and superficial adoption of new policies of national, system-wide reform due to challenges in their implementation contexts (Fullan, 1993). Implementing large-scale reforms through top-down leadership may create a critical mass

(a significant number of school-level educators) of adopters who initiate change, but only to a limited extent. The findings of the present study suggest that the depth and sustainability of these changes ultimately depend on the everyday abilities and interactions of educators with their cultural traditions, local contexts and surrounding conditions. As CAST predicts, school-level educators – possessing a degree of agency varying from school to school - adapt their interpretations, translations, and actual practices regarding reform to their available competencies and resources. Therefore, it could be concluded that it is strategic naivety for the MOET to assume that simply communicating with teachers using generalist, overarching visions and plans and, at the same time, granting school educators more autonomy to navigate their way towards this vision will lead to success. Ultimately, most school actors are limited to practices within or proximate to their feasible zone.

The upcoming chapter (Chapter 10) summarises the research findings and their implications and proposes specific policy recommendations to help address the complex challenge of implementing system-wide education reforms, particularly within the context of Vietnam as a developing country, where improving systemic issues may not be easily addressed across the country.

CHAPTER 10: KEY FINDINGS, IMPLICATIONS AND RECOMMENDATIONS

10.1. Overview

This study is centred on how a small number of case primary schools in Vietnam approaches the challenge of implementing the FCER - Vietnam's most significant and ambitious education reform since the 1970s. The cluster of policies associated with the FCER represents an increasingly popular approach to whole-system reforms that aim to simultaneously transform entire national educational systems in multiple, connected areas of schooling, in contrast to piecemeal, fragmented reform efforts that do not seem to bring expected and sustainable outcomes (Dimmock *et al*., 2021). The policies also signify a critical shift in Vietnamese education, transitioning from a centralised to a more decentralised system, empowering local authorities, schools, and teachers to take ownership of improving their practices (the centralised-decentralisation approach). This decentralisation aims to enable practitioners to move away from traditional rigidities and embrace more creative and adaptive educational practices tailored to the specific needs of individual schools, classrooms, and students. The study of FCER's implementation in Vietnam is not only valuable for providing context-specific insights but also for understanding the impacts of such approaches in other educational systems undergoing similar reforms. It contributes to addressing the problem of effectively implementing reforms, a challenge that has persistently affected educational systems around the globe for many years.

The significant theoretical contribution of this research lies in its use of Complexity thinking and, specifically, the Complex Adaptive System Theory (CAST) as a theoretical lens to investigate the research problem. CAST is a promising approach that is transforming other fields of natural and social sciences; however, it has not yet been widely applied in the field of education. This research aims not only to apply CAST to shed light on the practical challenges of reform implementation but also to develop supporting frameworks and concepts that enhance CAST's relevance and applicability.

Employing a multiple-case study design, the research gathers in-depth data from three public primary schools in Central and Southern Vietnam through interviews, observations, and documentation. The data collection and analysis aim to gain a deep and comprehensive understanding, including school actors' (teachers and school leaders) perspectives on new policies and the realities of their implementation. The study goes beyond assessing superficial technical changes and delves into deeper shifts in the learning process and the student-teacher relationship. Additionally, by applying CAST as the theoretical

framework, the study aims to offer not just descriptions of current scenarios but also explanations for these outcomes. It seeks to uncover how various elements within the system—such as policy signals, stakeholders' sense-making and responses, and environmental factors—interact and evolve over time, revealing both the intended and unintended consequences of the changes.

This chapter summarises the key findings to answer the main research question: *How do schools manage the implementation of national education reform policies, with special reference to the FCER policies?* Subsequently, the chapter presents the implications of these findings to explain their meanings for the field of study, policy, and practice. Based on these findings and their implications, practical suggestions for stakeholders such as policymakers and practitioners are proposed. This chapter also acknowledges the limitations of the study and suggests how these might be addressed in future research. Finally, the chapter presents reflections on my experience conducting this research and concludes by capturing the essence of the research and its significance.

10.2. Key findings

SRQ1: How do school leaders and teachers perceive the intentions and expectations of the FCER policies?

- **Initial passive acceptance of practitioners**: Educators primarily showed passive compliance towards the FCER at the beginning of implementation. They generally agreed with the policies' overarching visions, trusting in the decisions made by those in higher positions and acting more as policy executioners rather than active contributors to the reform process.

- **The emergence of different interpretations of the FCER**: Despite initial compliance and genuine attempts at implementing changes, educators eventually displayed a range of interpretations and responses to the FCER policies. Some teachers began to develop a deeper understanding and appreciation for the changes. Meanwhile, others grew sceptical or resistant due to challenges faced during implementation. A majority of practitioners understood the reform requirements solely through textbook activities, equating compliance with textbook content as fulfilling the reform's objectives. As textbooks did not fully capture the deeper changes, these teachers tended to perceive the shift in teaching as not substantial. On the other hand, a group of educators realised that merely following the textbooks was inadequate for achieving the more advanced and sophisticated goals they interpret from C2018 discussions and training sessions.

SRQ2: How do schools attempt, if at all, to incorporate the FCER policies into their practice?

- **Pedagogy**: Textbooks were central in translating reform policies and C2018 in classroom practice. Teachers in all three schools designed learning activities based on these textbooks, incorporating new methods like group discussions, peer feedback, and games. However, many still preferred a teacher-centred approach in deeper dimensions of teaching and learning, including teacher-controlled activities, limited accommodation for slower or faster learners, expectations of quietness and order, a monotonous classroom atmosphere, reliance on extrinsic motivation and a lack of engagement with students' opinions.

- **Assessment**: The transition from traditional grading to formative, qualitative feedback was in place across all case schools; however, the full range of potential benefits of this assessment shift remained underappreciated and unrealised. Teachers mainly saw its benefits as a way to reduce academic pressure. They faced challenges in using this new approach in more sophisticated ways to enhance student motivation and effectively communicate with parents.

- **Professional Development**: The adoption of Lesson Study Model in professional development has brought positive changes like enhanced collaboration in lesson designing and reduced formality in meetings in all three case schools. However, it faced limitations in time allocation and a simplified approach that failed to realise the model's full potential in promoting LCE. Other professional development forms, such as 'good teacher' competitions and pedagogical research, were not effectively integrated into actual teaching practices. The hybrid teacher training (ETEP) that combines online and face-to-face sessions addressed some of the weaknesses of the traditional cascade training model. Teachers were directly exposed to messages and information from MOET experts and officers for a more authentic understanding. However, teachers reported the need for more practical, hands-on and context-based training.

- **School governance**: School councils have been established, but their effectiveness has been limited, with little change in management practices. Leaders relied more on personal approaches than on systemic guidelines, resulting in unrecognised teacher challenges and a lack of effective strategies to foster change.

- Among these areas of schooling, educators at School A appeared to face the most significant challenges, with changes being notably limited. School B, while showing moderate improvements, also encountered its own set of moderate challenges that hindered further progress in implementing reform policies. School C exhibited more profound and noticeable changes, but the extent of progress, although significant, may not entirely meet the desired goals.

SRQ3: Which facilitators and constraints have affected the FCER implementation, to what extent, in what ways and under what conditions?

- **Bounded changes in reform realities**: Regardless of how teachers understood and expected the changes, the pressures exerted by a whole system moving in a similar direction prompted the simultaneous adoption of new practices across the case schools. However, the actual implementation was confined to what each school's conditions allowed. Teachers in contexts with constraints in resources (such as time, facilities, materials), support (from parents and local authorities), and competencies (including classroom management, personalised learning, parent engagement, and activities fostering more complex competencies) tended to implement the policies in a simpler, more limited manners. Even in schools with better conditions, like School C, what was happening in practice still had quite a gap from idealised visions of practices. While the FCER was considered a comprehensive initiative addressing all schooling areas to facilitate radical changes, the data suggested that certain areas were not developing in line with the demands of change, thereby hindering further progress in other areas.

- **A one-size-fits-all approach in reform implementation:** This study revealed a standardised distribution of reform objectives, resources, and training materials, indicating a uniform approach of MOET that overlooks the diverse conditions of schools. While the FCER aimed to encourage schools and teachers to enhance their sense of ownership for change, the lack of a clear and effective strategy from the MOET to assist schools in overcoming systemic and challenging issues hindered their true autonomy. Consequently, rather than feeling empowered, school personnel found themselves overwhelmed with additional responsibilities, unprepared to localise their practices. As a result, the inability to truly adapt to the context, combined with the reliance on textbooks as the central teaching resource, led to actual practices not significantly diverging from the traditional learning environments. Moreover, there was also a tendency for schools in more disadvantaged contexts to encounter more challenges in reform implementation. Without additional support, they can only manage the changes according to their existing conditions and achieve more limited improvements. This situation potentially will intensify the educational equity challenges of the system.

The use of CAST as the theoretical device to understand and explain the FCER implementation in the case schools

- **The advantages of system-level reforms:** Government-mandated system-level policies, in conjunction with structured professional development programs, appear to be instrumental in fostering widespread adoption of reforms among schools and educators. This approach ensures a high level of consistency across the nation despite varying levels of understanding and willingness among educators, thereby, establishing new and powerful attractors that pull schools towards new practices. Over time, this consistency has activated self-reinforcing mechanisms, leading to positive feedback loops that reduce resources and effort for individual educators to adopt these practices.

- **The mismatch between areas of change:** The study shows that initiating change in some areas without addressing interconnected areas can hinder overall reform progress, adding burdens and costs to the implementation of new practices. These additional costs appear to overshadow the benefits of the practices and diminish the impacts of self-reinforcing mechanisms that reduce the costs associated with change.

- **Struggles in bridging the gaps between the ideal and the real**: Drawing on the foundational concepts and ideas of CAST and related literature, the study proposes the concepts of ZFP and ZEP to understand the varying responses of schools to the FCER policies. The MOET appears to implement a one-size-fits-all approach, establishing a vague and unclear ZEP and transferring the responsibility for contextual adaptation onto schools to achieve this ZEP. As a result, schools' and educators' responses are confined to their existing ZFP. Particularly in disadvantaged settings, facing significant costs in making changes, schools tend to view the required changes as minimal adjustments (*the near ZEP*) that align more closely with their initial ZFP, leading to potential complacency and inadequate progress in reforms. Those targeting the far ZEP encounter greater challenges, often having to find solutions on their own, with successes being exceptions rather than the norm.

10.3. Implications

The findings of this study reaffirm the complexity inherent in implementing education reforms. Even in a system such as Vietnam, where political, administrative, and cultural factors seem to facilitate initial

compliance throughout the system, particularly through the use of system-level policies, transitioning from policy to practice is not straightforward.

The implementation model views change as an adaptive and iterative process

This study provides empirical support for the implementation model proposed in Chapter 4, which integrates Ball, Maguire, and Braun's (2012) framework with CAST to capture a more complex account of the implementation phase. The model includes six processes: interpretation, translation, practice, variation, selection and interaction. The data from this present study underscore the distinction and interconnectedness of these processes. Evidence suggests that the ways school practitioners interpret policies, translate and put them into practice may differ from the policy intent because these processes are bounded by interactions with real-world contexts, including personal competencies, beliefs and pressures posed by local actors such as colleagues, students, parents, and administrative structures, as well as resources. These contextual factors may create gaps between policy texts and their interpretations, interpretations and translations, and between translations and practices. Collectively, these gaps can lead to a substantial discrepancy between the intentions of policymakers and the actual outcomes in practice. Additionally, the experiences and outcomes in later stages provide feedback on earlier processes; for example, what happens in the practice phase requires a re-interpretation, re-translation, or even re-formulation of the policy. These insights altogether suggest that reform implementation should be viewed as an adaptive and iterative process, where understanding, planning, and actions are continuously subject to the conditions present at the implementation level.

The implementation model, as discussed in section 4.5.2, has been modified in Figure 10.1 below to better capture the complexity and dynamics of the various phases in the implementation process, incorporating the ideas mentioned above.
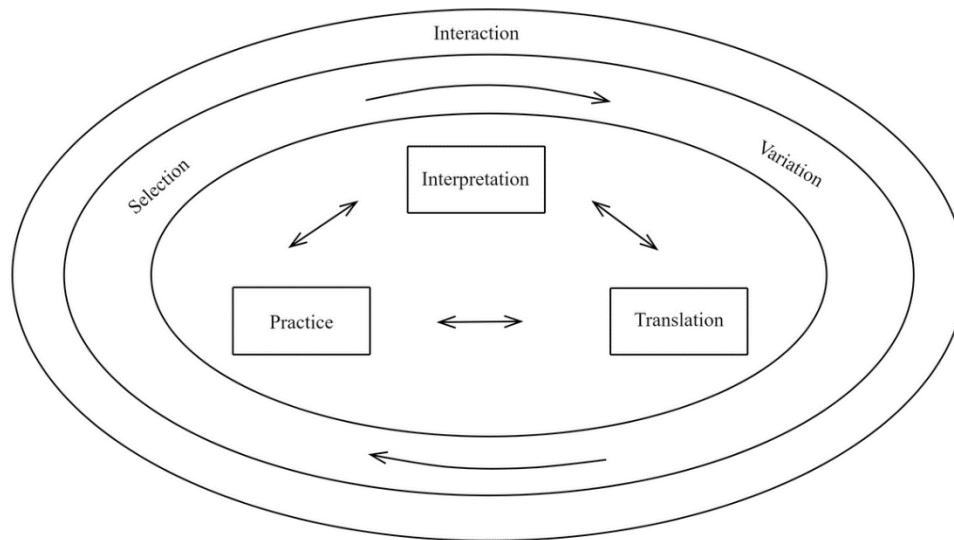
Figure 10.1: The Implementation Model as an Adaptive and Iterative process

Neglecting implementation costs impedes reform progress

The findings of this study indicate that when implementing change, having a set of good ideas proven beneficial for student learning elsewhere is not sufficient. The inherent benefits of these ideas are just one aspect considered by those implementing these practices in reality. Initially, adopters may agree with the ideas and support the implementation, but the costs that emerge from their day-to-day implementation within the local contexts are crucial in determining how they continue with these practices. Policymakers who focus solely on promoting the benefits of new practices without acknowledging the costs of change and assisting implementers in mitigating these costs risk rendering the reform unsustainable and superficial.

The potential of centralised-decentralisation approach

The centralised-decentralisation approach, as evidenced by the implementation of the FCER, holds significant potential for fostering educational change. This approach provides a uniform framework for reform, ensuring that all schools work towards common objectives. It plays a crucial role in building a critical mass for change. By mandating reforms, the approach creates an initial momentum that activates self-reinforcing mechanisms or positive feedback loops. This makes the adoption of new practices less challenging and more widespread. Particularly, as schools work towards these common goals, opportunities for collaborative learning and the sharing of best practices emerge. This collective effort can alleviate the burden of change, making it more feasible for schools. Meanwhile, centralised-

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decentralisation also allows for flexibility, enabling schools to adapt the reforms to their contexts. This appears to be a more realistic approach, considering that schools operate in diverse and varied contexts.

Equity concerns in employing a centralised-decentralisation approach

The analysis of the FCER policies in this study shows an awareness by the MOET of Vietnam to empower schools with the autonomy to tailor their programmes and practices to their local contexts. However, schools and teachers are limited to implementing this approach within their capabilities and constraints. The findings from this present study imply that schools facing greater challenges struggle more to utilise this granted autonomy for meaningful change. They are more likely to rely on traditional practices or, at best, adopt limited and superficial changes.

As highlighted by complexity theorists such as Mason (2016) and supported by this study's empirical evidence, challenges in one aspect of reform can impede progress in other areas. This interconnectivity necessitates changes across multiple fronts, which poses a particularly daunting challenge for schools in less advantageous situations. Mason (2016) suggests that pursuing both radical and system-wide reforms may not be feasible. In scenarios where resources are scarce and numerous schools require support, focusing efforts on a few schools might be more effective rather than diluting resources across all schools. While such an approach could contribute to increasing school disparities, Mason (2016) suggests that a trade-off might seem unavoidable. This study agrees with the author that effecting change requires simultaneous action across multiple dimensions. However, it disagrees with the implication that accepting a trade-off between effective reforms and equity is an inevitable outcome. It argues for the possibility of devising strategies that are both equitable and effective, even within the constraints of limited resources.

A concept from Complexity thinking that proves useful in addressing the tension between equity and effectiveness in reform is *equifinality* (Bertalanffy, 1968; Mason, 2008), as previously mentioned in Chapter 4. It refers to the idea that in CAS, a similar or identical endpoint can be reached from different initial conditions and through various paths. In the context of education reform, *equifinality* suggests that different schools, each with its unique contexts, resources, and challenges, can achieve similar educational goals or standards through diverse approaches and strategies.

This notion advocates for a more flexible, adaptive approach to educational policy and reform implementation, where the goal is not uniformity in the process but adaptations to achieve the same standards and outcomes in different ways. This means that policymakers must acknowledge that each

school will progress towards the ideal ZEP at its own pace and via its own unique route. Additionally, through the lens of CAST, change is a continuous process of transformation and adaptation. This perspective suggests that instead of defining a single, rigid ZEP, it may be beneficial to establish multiple intermediate sub-ZEPs along the journey to reach the final ZEP. For each school, how the sub-ZEPs are defined and achieved should be tailored according to the specific conditions of the school and modified continuously. This study proposes calling these sub-ZEPs the Adjacent Zone of Feasible Practices (AZFP) to indicate these are the next achievable goals in innovation, closely aligned with each school's current capabilities.

The notion of AZFP could be useful to address the tension between equity and effectiveness in reform. Facilitating change across various aspects of schooling simultaneously may be less demanding within the constraints of limited resources if the changes in each aspect are moderate and fit the AZFPs. A useful metaphor for this idea could be envisioning a group of people (symbolising different aspects of schooling) joining hands and forming a circle, moving forward together. If a few individuals attempt to move too quickly or too far ahead while others are not prepared for such rapid advancement, it results in a pulling force that hinders the group's overall progress. In contrast, setting manageable AZFPs and moving towards these objectives together ensures that every member of the group moves forward, perhaps at a slower pace, but in a way that promotes more stable and constructive development overall.

Furthermore, data from this study suggest that teachers often find it more manageable and less overwhelming to adapt to changes that build upon existing practices. Teachers tend to extend their thinking and practices only to a distance not too far from their current state. From their perspective, this strategy might be considered a safe choice, avoiding significant tangible and emotional/psychological costs. This research argues that rather than seeing this as a problematic tendency of actors, as indicated by Spillane, Reiser, and Reimer (2002), policymakers should consider it a natural inclination and choose to work with it rather than resist it. These insights suggest that the next Adjacent Zone of Feasible Practices (AZFP) should not only be close but also overlap to some extent with the previously achieved AZFP (which has become the new Zone of Feasible Practices or ZFP). This overlapping makes the transition between the two areas easier for actors who may struggle with drastic change. This study proposes naming this overlapping space where the impact of change is softened as the Buffering Zone (BZ). The concept suggests the importance of recognising areas where educators are performing well and using these foundations to develop new practices, which helps ease the transition during the implementation of reforms.

Figure 10.2 below summarises the above ideas and illustrates the difference between the *one-size-fits-all, abrupt approach* in the implementation process and the alternative approach, which is *adaptive and iterative*, fostering incremental and manageable change.
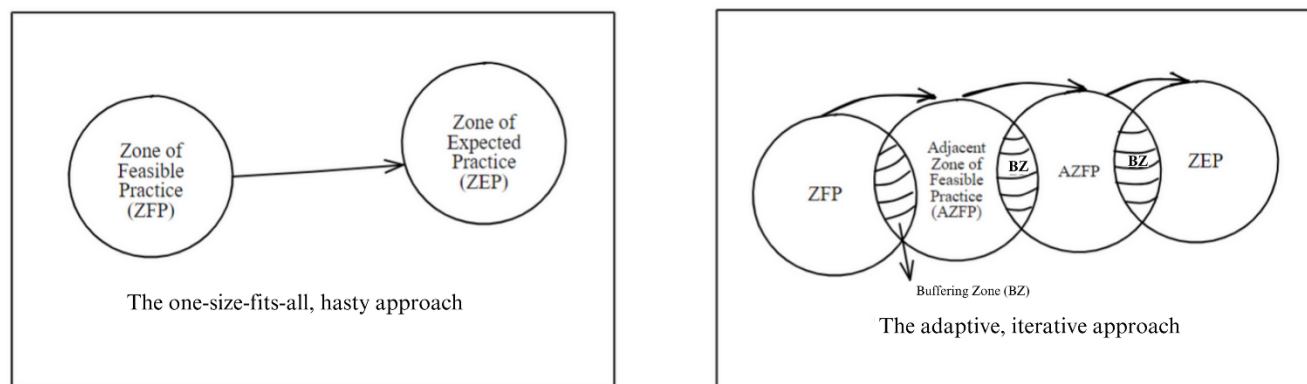
Figure 10.2: A contrast between a one-size-fits-all abrupt approach and an adaptive, iterative approach in reform implementation

Utilising these proposed concepts and ideas, the unfolding reality in the implementation of FCER can be attributed to a combination of factors: 1) there is a lack of deep understanding of the ZEP among some teachers and principals, and 2) there is the tendency of actors within CAS to adapt to local contexts which are currently less than ideal. This combination has led to an unintended outcome where educational practices have shifted, but only minimally. Practices have moved from traditional teaching and assessment methods (the initial ZFP) to an immediate AZFP with limited changes. While a step away from the status quo, this shift has not reached the broader, more ambitious objectives intended by MOET. The journey to the ultimate ZEP remains lengthy, requiring navigation through several more AZFPs.

This study argues that the fact that schools have only shifted to a limited nearby AZFP is not in itself problematic; the real risk lies in MOET's apparent lack of system-level acknowledgement and guidance in helping schools navigate the necessary gradual process towards achieving the ZEP. The school's shift to this immediate AZFP appears to be a passive response rather than part of a proactive strategic plan. Moreover, MOET, as indicated by the findings of McAleavy, Ha, and Fitzpatrick (2018), appears to unofficially tolerate this modest transformation rather than genuinely acknowledging, communicating, and working with schools to move forward based on recognising this as a normal part of a long-term, gradual process.

On the one hand, this reality of implementation could create tensions between MOET and the schools. Educators are perceived as not meeting MOET's expectations while policymakers are viewed as making

unrealistic demands. This mismatch creates a conflicting and confrontational relationship rather than one of cooperation and support, a common situation of lacking mutual understanding in implementing reforms, as indicated by Hord (2020). On the other hand, if MOET adopts an overly lenient attitude and accepts the status quo, there is a real danger that schools will settle for these minor changes without actively striving for further progress towards more substantial goals. This could result in stagnation in the reform and a failure to fully realise the intended changes.

The Adaptive Implementation Approach

These implications from the findings of this study suggest adopting an approach termed "*Adaptive Implementation*" as outlined by Yamaguchi *et al*. (2017). This approach originates from the authors' research and teaching experiences, particularly in special education, which demonstrates that a one-size-fits-all teaching approach with a single textbook, strategy, and program cannot meet the needs of all learners. The authors argue that this logic also applies to school improvement efforts.

A technical approach, assuming a singular, rigid model for schools to implement, should be replaced with a strategy driven by feedback from experience and a mindset of continuous improvement. Yamaguchi *et al*. (2017) arrive at a similar conclusion to this study, suggesting that while it is necessary to establish a system of core goals that are non-negotiable, overarching, and somewhat challenging, it is equally important to establish *waypoints* that identify smaller, more manageable milestones schools can undertake to move closer to the core goal or endpoint. To set these milestones, in the authors' concept, *waypoints*, or AZFPs as presented in this study, Yamaguchi *et al*. (2017) recommend establishing an *Adaptive Implementation Team* (AI Team) for each school. This team includes school actors, policymakers, researchers, experts, counsellors, to collaborate, share professional experiences, and conduct joint research to develop a feasible pathway to success. The AI team formulates the pathway by analysing current school resources, faced constraints, and creative strategies to utilise available resources and necessary additional resources. Based on the actual progress of implementing subsequent AZFPs and changing conditions, the team continuously evaluates and adjusts their pathways. This approach aims to foster genuine ownership among schools in the reform process, involving them in setting goals and choosing a path that aligns with their conditions. However, the approach also ensures that schools' adaptive efforts follow a defined direction, with the support and collaboration of policymakers and researchers, preventing complacency and fostering continuous improvement.

This *Adaptive Implementation approach* offers a concrete solution to the four key tensions/challenges in reform implementation identified earlier in this study (section 3.3). Firstly, it balances the need for

flexibility in response to individual school contexts with the need for consistency across the educational system. Secondly, the approach recognises the importance of support from policymakers and the government while maintaining necessary pressure for improvement. Such a balance can drive progress while ensuring schools do not feel unsupported or overwhelmed. Thirdly, by accounting for the complexities of the sense-making process and the emotional dimensions of reform, the approach paves the way for more empathetic and effective policy implementation that takes into account practitioners' perceptions and feelings. Lastly, establishing the AI Team in each school encourages collaboration across different levels and stakeholders within the education system. Furthermore, while enabling simultaneous changes across interconnected school areas, the approach ensures that each school progresses at a pace suited to its capabilities.

The Adaptive Implementation approach could also serve as a strategic framework to achieve what has been conceptualised as "the edge of chaos" in Complexity thinking (Fullan, 1999; Morrison, 2008). The "edge of chaos" is a state where systems exhibit enough order to maintain coherence and enough instability to allow for flexibility and spontaneous change. By embracing the approach, schools can become more resilient and better equipped to handle the complexities and uncertainties of environments. At the same time, it allows them to retain a level of stability so that their actors can align their efforts and better absorb the costs associated with change.

In general, this study's contribution to the existing Adaptive Implementation approach lies in its integration with Complexity thinking and CAST. The integration provides a deeper theoretical grounding to explain in more detail why the approach may bring about effective outcomes. Additionally, the study enhances the approach by introducing original concepts like ZFP (*Zone of Feasible Practices*), ZEP (*Zone of Expected Practices*), and AZFP (*Adjacent Zone of Feasible Practices*). These concepts are instrumental in visualising and capturing the essence of an *adaptive, iterative reform implementation* process in educational settings, contrasting with the conventional, one-size-fits-all, abrupt approach. As a result, it makes the Adaptive Implementation approach and CAST more tangible and understandable. Furthermore, the introduction of the *Buffering Zone* (BZ) concept is also a significant addition, indicating the importance of transitional space during the implementation of reforms.

10.4. Recommendations for policy and practice

The findings and implications from this study lead to the following recommendations for policy and practice:

1. **Enhancing a thorough and coherent understanding of reform goals:** When considering system-wide reform, there is a critical need for buy-in from all stakeholders in the educational system. This encompasses understanding the rationales, being convinced by theoretical and empirical explanations, visualising and experiencing high-quality practices that truly reflect the visions and aspirations of the reforms and having core educational principles that guide the reform implementation. Achieving this requires enhancing training programmes and improving communication through policy texts. Policy texts should not just dictate policies as duties but provide clear, detailed, practical, and understandable explanations of the policies' rationales. While online training for the self-paced study is promising, especially for rural, remote school personnel, its quality needs improvement to incorporate more practical and context-sensitive content, and it should complement, not replace, real – life and hands–on training and professional development experiences.

2. **Adopting the Adaptive Implementation Approach:** MOET should develop a manual guiding school to create Adaptive Implementation plans for enacting reform policies and C2018. This would empower schools and educators to actively plan their timelines and pathways to fulfil the reform's common goals/principles/practices. To ensure effective implementation, it is essential to provide additional training for all stakeholders, including middle-level administrators, school leaders, and teachers. This training should focus on providing a deep and coherent understanding of the philosophy, rationales, principles and practical tools of this approach throughout the system.

   Current structures such as School Councils or Governing Boards could be utilised – after appropriate training and supervision were provided - as Adaptive Implementation Teams to establish suitable AZFPs and adjust them based on implementation effectiveness evaluations. The meetings of these teams would serve as platforms for various stakeholders in the system to listen to each other and collaborate with more defined and clear purposes.

   The Lesson Study model currently implemented in schools shows promise of a space for exchanging adaptive ideas and experiences but needs to be connected to the Adaptive Implementation plans so that school educators see its broader values and implement it more effectively.

3. **Developing teaching guidelines for Adaptive Solutions:** Practitioners need access to quality guidelines to learn how to adapt practices to diverse conditions (e.g., urban, suburban, rural,

coastal, and mountainous areas). These guidelines should include findings from MOET's pilot programmes, research outcomes, international experiences, or teachers' practical experiences. MOET should actively facilitate platforms for sharing such information with schools' Adaptive Implementation Teams, aiding them in setting appropriate goals and developing adaptive solutions. As teachers still heavily rely on textbooks and guides in the short term, MOET should direct publishers to include official "Adaptive Implementation" guidance in these materials.

4. **Improving school resources based on Adaptive Implementation Plans:** While short-term socio-economic constraints may limit the availability of resources, ongoing resource enhancement, tailored to align with schools' adaptive implementation plans, is crucial for their progression. The MOET should avoid overly relying on the socialisation strategy, which transfers the responsibility of resource enhancement to schools through market-based mechanisms like the Advanced Schools Model, as this could increase inequity among schools. Both MOET and regional/local governments should actively participate in this process. The targeted approach based on the Adaptive Implementation Plans will help ensure that resources are not only provided but also effectively utilised, facilitating meaningful and sustainable progression in line with the specific goals and challenges of each school.

Additionally, time is a critical resource that seems to be under the MOET's current control. Teachers need adequate time for deep student interactions and developing long-term activities focused on higher-level competencies. MOET should consider modifying lesson durations, reducing unnecessary content in the curriculum and emphasising depth rather than breadth of knowledge.

Moreover, alleviating teachers' workload proves a critical solution. The introduction of full-time professional roles such as caregivers, academic counsellors, school psychologists, and staff responsible for collecting tuition fees and other charges from parents, along with connecting with external support professionals like social workers and special education counsellors, would further assist in reducing teachers' burdens. To finance these positions, funds could be sourced by cutting back on expenditures in less critical or less effective programs and reallocating those funds to these new roles. Additionally, seeking grants from international educational foundations and NGOs could provide further financial support for these initiatives.

10.5. Limitations and suggestions for further research

This study employed a multiple-case study design and Complex Adaptive System Theory (CAST) as the theoretical lens to offer in-depth insights into the implementation of FCER in Vietnam. The conclusions, implications, and recommendations from this study were useful for schools in contexts similar to those in this study and also had implications for reform and change implementation in other contexts. However, the limitations of this study need to be acknowledged for future research recommendations.

Firstly, although the study's goal was to provide theoretical implications useful for a wider range of contexts, the specific findings were derived solely from data from three case schools in Central and Southern Vietnam. Thus, the conclusions and suggestions might not be fully generalisable to other primary schools in Vietnam, especially those in different contexts to the case schools, or other types of reforms or educational systems in different cultural or socio-economic contexts. It is advisable for readers to critically assess the detailed findings from each case to draw relevant insights into their contexts.

Secondly, education reforms often take years, sometimes decades, to implement fully and show results. This study was constrained by the data collection timeframe, therefore, might not capture the long-term impacts of the reform policies. The findings and implications only reflected the reality at the time of data collection and can only offer some predictions for the future. Conducting longitudinal studies to observe the impact of the FCER policies and C2018 over time would provide more accurate insights into their effectiveness.

Thirdly, the implementation of FCER policies and C2018 at the primary school level may differ from that at lower secondary and higher secondary school levels. The curricular at these higher levels are more complex, and the pressures from transitional exams, high school graduation, and university entrance exams are greater. Additionally, unlike primary schools, where one teacher often teaches most subjects at higher levels, each teacher specialises in a single subject, potentially requiring more collaborative efforts for change. Under the C2018, higher education levels also have unique expected practices, such as implementing an interdisciplinary approach or offering elective courses to students. Researching these educational levels would provide a more complete picture of educators' challenges in implementing FCER policies.

Fourthly, there are limitations in representing all relevant viewpoints as the study only incorporated perspectives from teachers and school leaders. Thus, it would be helpful to expand the research to include a wider range of stakeholders, like students, parents, policymakers, local authorities, and textbook

authors. These additional insights may provide a more holistic understanding of the impact of the implementation and factors that enable or hinder the reform efforts.

Fifthly, due to time constraints and COVID-19 restrictions, data collection was limited to individual interviews with educators, classroom observations and a small number of teacher meetings. Broadening the scope of the research to encompass focus groups or engaging in direct observation of training sessions held by textbook publishers, DOETs, BOETs, or Lesson study sessions would offer a deeper understanding of the dynamics of collective work and their influence on how teachers respond to reform policies.

Lastly, the proposal of the *Adaptive Implementation approach* and the addition of new concepts like ZFP, ZEP, AZFP, and BF as more concrete applications of Complexity thinking and CAST are presently theoretical and would benefit from further empirical validation to establish their practical effectiveness.

10.6. Personal reflections and concluding thoughts

I embarked on this research journey five years ago, driven by the desire to make a meaningful contribution to a critical phase of Vietnam's education system as the country was undergoing one of its most significant reforms, the FCER. I was intrigued by why the VNEN model, despite its innovative ideas and previous success in countries with similar conditions to Vietnam, received immense support initially but ultimately faced intense opposition and had to be discontinued. This led me to investigate why theories and practices that are effective in theory or in different contexts might not guarantee success in a specific setting. Although this problem is not new and has been explored by many previous researchers, my challenge was to approach it through a new theoretical perspective, employing Complexity thinking and CAST. From the very start to writing this final chapter, this task has proved challenging. The academic and personal challenges that I have encountered throughout this journey have taught me important lessons that could reshape my life and future career path.

Complexity thinking/science and CAST are difficult to grasp, especially for someone without a natural science background like me. I struggled to understand high-level abstract concepts outside my expertise to integrate them into educational reform research. The limited previous research to bridge the gap between this abstract theory and the reality of reform efforts is both an opportunity and a great challenge. There were times when I doubted my ability to contribute something original and useful. However, I am grateful that I persisted. While the conclusions of this study may not be groundbreaking in their novelty,

they significantly enhance and expand upon the foundational work of previous scholars, paving the way for more thorough understanding and more precise, realistic actions on the ground.

On a personal level, I conducted this research during the COVID-19 pandemic, catching the virus twice. The uncertainties and anxieties about my personal and my family's safety and the feasibility of data collection during school closures posed significant psychological and physical challenges. The final years of my research also coincided with other personal life challenges. I experienced conflicts between the values and cultures I was exposed to as a student who studied abroad and those I grew up with, leading to personal crises related to family, identity, and relationships. The challenge of effectively implementing change became a significant personal issue as I also tried to make some changes in values and practices in my family and community. These experiences offered me a deeper understanding of the complexities involved in effecting change, even when it involves just one or a few individuals, let alone millions of people within a large educational system.

These experiences have entirely shattered my previous naivety about the inherent effectiveness of good ideas and expectations for rapid change. At this point, I see that an *adaptive, iterative, comprehensive* approach to implementing change is useful as an approach to educational change and reform and as a life philosophy applicable in various areas, including personal levels. This approach has equipped me with a practical and efficient strategy to pursue my life goals, especially those that are challenging. It allows me to progress through each step and phase without feeling excessively burdened or overwhelmed. I firmly believe this lesson will profoundly transform my future life.

Another difficulty while conducting this research was my lack of practical teaching experience in general education, which posed significant challenges in data analysis for generating useful insights. I addressed this by immersing myself in learner-centred education models worldwide, such as in Italy, Finland, Singapore, and India, through online training and field trips so I could have sufficient knowledge and experience to assess the reality of FCER implementation in Vietnam. This process opened up new learning opportunities, memories, relationships, and career opportunities.

In concluding this thesis, I want to revisit the research problem set out at the beginning of this thesis about the potential of whole-system reforms in solving the implementation problem in education. The existing literature and findings in this study show that the idea of systemic reforms affecting various aspects of education and a large number of schools simultaneously is appealing, as it seems that only by creating a large enough critical mass in terms of participants and aspects of schooling can enough momentum be built for the expected changes. However, this study also reveals that even in a context like

Vietnam, where creating this critical mass is not too challenging, it does not guarantee radical and sustainable change. Such an approach must be accompanied by an implementation strategy that avoids overreliance on initial momentum or unrealistic expectations of immediate change. Collaborative, adaptive work and continuous adjustment towards a long-term vision with feasible current steps appear crucial for sustainable and effective school improvement.

References

Alhadeff-Jones, M. (2008) 'Three generations of complexity theories: Nuances and ambiguities', *Educational Philosophy and Theory*, 40(1), pp. 66–82.

Anderson, S.E. (2010) 'Moving change: Evolutionary perspectives on educational change', in *Second international handbook of educational change*, pp. 65–84.

Arkadie, B. and Mallon, R. (2004) *Viet Nam: a transition tiger?* Canberra: Asia Pacific Press.

Arthur, W.B. (1994) *Increasing returns and path dependence in the economy*. University of Michigan Press.

Azubuike, O.B. and Little, A.W. (2019) *Learning motivations, learning outcomes and gender in Vietnam*. Young Lives.

Ball, S.J., Maguire, M. and Braun, A. (2012) *How schools do policy: Policy enactments in secondary schools*. London and New York: Routledge.

Bartlett, S. and Burton, D. (2020) *Introduction to education studies*. London: Sage.

Berman, P. and McLaughlin, M.W. (1976) 'Implementation of educational innovation', in *The educational forum*. Taylor & Francis, 40 (3), pp. 345–370. Available at: https://doi.org/https://doi.org/10.1080/00131727609336469.

Bertalanffy, L. V. (1968) *General system theory: Foundations, development, applications*. G. Braziller.

Beyer, J. (2010) 'The same or not the same-on the variety of mechanisms of path dependence', *International journal of Humanities and Social sciences*, 5(1), pp. 1–11.

Blumer, H. (1969) *Symbolic interactionism: Perspective and method*. Berkeley Los Angeles London: University of California Press.

Borman, G.D. *et al.* (2003) 'Comprehensive school reform and achievement: A meta-analysis', *Review of educational research*, 73(2), pp. 125–230.

Boulton, J.G., Allen, P.M. and Bowman, C. (2015) *Embracing complexity: Strategic perspectives for an age of turbulence*. Oxford: Oxford University Press.

Bremner, N. (2019) 'From learner-centred to learning-centred: Becoming a 'hybrid practitioner', *International Journal of Educational Research*, 97, pp. 53–64.

Brinkmann, S. (2019) 'Teachers' beliefs and educational reform in India: from 'learner-centred'to 'learning-centred'education', *Comparative education*, 55(1), pp. 9–29.

Bryman, A. (2016) *Social research methods*. Oxford university press.

Burnes, B. (2004) 'Kurt Lewin and complexity theories: back to the future?', *Journal of change management*, 4(4), pp. 309–325.

Byrne, D. and Callaghan, G. (2013) *Complexity theory and the social sciences: The state of the art*. London: Routledge.

Campbell, J., Hankey, A. and Seiden, J. (2017) 'Can Parental Choice Improve Education for All?', in S. Pasi, J. Hasak, and R. Vanessa (eds) *Hard Questions on Global Educational Change: Policies, Practices, and the Future of Education*. New York: Teachers College Press, p. 13.

Chisholm, L. and Leyendecker, R. (2009) 'Curriculum Reform in Sub-Saharan Africa: When Local Meets Global', in R. Cowen and A.M. Kazamias (eds) *International Handbook of Comparative Education*. Dordrecht: Springer Netherlands, pp. 685–702. Available at: https://doi.org/10.1007/978-1-4020-6403-6_44.

Coburn, C.E. (2003) 'Rethinking scale: Moving beyond numbers to deep and lasting change', *Educational researcher*, 32(6), pp. 3–12.

Cohen, L., Manion, L. and Morrison, K. (2018) *Research methods in education*. London and New York: Routledge.

Conger, J.A. (1998) 'Qualitative research as the cornerstone methodology for understanding leadership', *The Leadership Quarterly*, 9(1), pp. 107–121.

Communist Party of Vietnam (1993) *Nghị quyết 04-NQ/HNTW về tiếp tục đổi mới sự nghiệp giáo dục và đào tạo [Resolution 04-NQ/HNTW regarding continuing the education reform] (in Vietnamese)*.

Communist Party of Vietnam (2013) *Nghị quyết số 29-NQ/TW về đổi mới căn bản, toàn diện giáo dục và đào tạo [Resolution 29-NQ/TW on the Fundamental and Comprehensive education reform] (In Vietnamese)*.

Creswell, J.W. (2015) *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Boston: Pearson.

Creswell, J.W. and Creswell, J.D. (2018) *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: Sage Publications.

Crouch, C. and Farrell, H. (2004) 'Breaking the path of institutional development? Alternatives to the new determinism', *Rationality and society*, 16(1), pp. 5–43.

Cummings, S., Bridgman, T. and Brown, K.G. (2016) 'Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management', *Human relations*, 69(1), pp. 33–60.

Curtis, B. and Curtis, C. (2011) 'In Depth Interviewing–The Interactive Base', in *Social Research: A Practical Introduction*.

Dang, H.A. (2013) *Private tutoring in Vietnam: A review of current issues and its major correlates*. The World Bank.

Dang, H.A. and Glewwe, P.W. (2017) *Well begun, but aiming higher: a review of Vietnam's education trends in the past 20 years and emerging challenges*. The World Bank.

Dang, H.A., Glewwe, P., Lee, J., and Vu, K. (2020). *What Explains Vietnam's Exceptional Performance in Education Relative to Other Countries? Analysis of the 2012 and 2015 PISA Data.* RISE Working Paper Series. 20/036. https://doi.org/10.35489/BSG-RISE-WP_2020/036

Dannemiller Tyson Associates (2000) *Whole-scale change: Unleashing the magic in organizations*. San Francisco: Berrett-Koehler Publishers.

Davis, B. and Sumara, D. (2006) *Complexity and education: Inquiries into learning, teaching, and research*. New York: Routledge.

Delaney, J.G. (2017) *Education policy: Bridging the divide between theory and practice*. Brush Education.

Denscombe, M. (2014) *The good research guide: for small-scale social research projects*. McGraw-Hill Education (UK).

Desimone, L. (2002) 'How can comprehensive school reform models be successfully implemented?', *Review of educational research*, 72(3), pp. 433–479.

Dimmock, C., Tan, C.Y., Nguyen, D., Tran, T.A. and Dinh, T.T. (2021) 'Implementing education system reform: Local adaptation in school reform of teaching and learning', *International Journal of Educational Development*, 80, p.102302.

Dimmock, C. and Walker, A. (2002) 'Connecting school leadership with teaching, learning and parenting in diverse cultural contexts: Western and Asian perspectives', in *Second international handbook of educational leadership and administration*. Springer, pp. 395–426.

Dooley, K. (1996) 'A nominal definition of complex adaptive systems', *The chaos network*, 8(1), pp. 2–3.

Dooley, K.J. (1997) 'A complex adaptive systems model of organization change', *Nonlinear dynamics, psychology, and life sciences*, 1, pp. 69–97.

Duc, L.T. and Tam, T.N.M. (2013) *Why children in Vietnam drop out of school and what they do after that*. Young Lives.

Duggan, S. (2001) 'Educational Reform in Viet Nam: a process of change or continuity?', *Comparative Education*, 37(2), pp. 193–212.

Duong, B.-H. and Dao, V. J. (2022) *Complexities in Teaching Competencies: A Longitudinal Analysis of Vietnamese Teachers' Sensemaking and Practices*.

Elmore, R. (2005) *School reform from the inside out: policy, practice, and performance*, *Choice Reviews Online*. Cambridge: Harvard Education Press.

Eoyang, G.H. (2016) *Conditions for self-organizing in Human systems*. Minnesota: Human Systems Dynamics Institute.

European Centre for the Development of Vocational Training (CEDEFOP) (2008) *The shift to learning outcomes: conceptual, political and practical developments in Europe*. Office for Official Publication of the European Communities.

Evers, J. and Kneyber, R. (2016) 'Introduction', in *Flip the system: Changing education from the ground up*. New York: Routledge.

Fullan, M. (1993) *Change forces: Probing the depths of educational reform*. Oxon: RoutledgeFalmer.

Fullan, M. (1999) *Change forces: The sequel*. London and New York: RoutledgeFalmer.

Fullan, M. (2000) 'The return of large-scale reform', *Journal of educational Change*, 1(1), pp. 5–27.

Fullan, M. (2003) *Change forces with a vengeance*. London: RoutledgeFalmer.

Fullan, M. (2006) 'The future of educational change: System thinkers in action', *Journal of educational change*, 7(3), pp. 113–122.

Fullan, M. (2007) *The new meaning of educational change*. Routledge.

Fullan, M. (2015) 'Leadership from the Middle', *Education Canada*, 55(4), pp. 22–26.

Fullan, M. and Quinn, J. (2015) *Coherence: The right drivers in action for schools, districts, and systems*. London: Corwin Press.

Furneaux, C., Tywoniak, S. and Gudmundsson, A. (2010) 'Selection-adaption-retention dynamics and variety in organisational routines', in *2010 Academy of Management Annual Meeting*, p. 1.

General Statistics Office of Vietnam (2019) *Công bố kết quả Tổng điều tra dân số 2019 [Annoucing the results of 2019 Population Investigation]*. Hanoi.

General Statistics Office of Vietnam (2022a) *GIS on population and development*. Available at: https://gis.gso.gov.vn/#5/16.16/108.17 (Accessed: 17 November 2022).

General Statistics Office of Vietnam (2022b) *Statistics of Education*.

Gerring, J. (2017) *Case study research: Principles and practices*. Cambridge university press.

Gold, R.L. (1969) 'Roles in sociological field observation', *Issues in participant observation: A text and reader*, pp. 30–39.

Goldstein, J., Hazy, J. and Lichtenstein, B. (2010) *Complexity and the nexus of leadership: Leveraging nonlinear science to create ecologies of innovation*. Springer.

Goscha, C. (2016) *Vietnam: A new history*. New York: Basic Books.

Guba, E.G. (1981) 'Criteria for assessing the trustworthiness of naturalistic inquiries', *Ectj*, 29(2), pp. 75–91.

Guskey, T.R. (2002) 'Professional development and teacher change', *Teachers and teaching*, 8(3), pp. 381–391.

Ha, L.T.M. (2016) 'Education Assessment System and PISA 2012 in Vietnam', in *What Can PISA 2012 Data Tell Us?: Performance and Challenges in Five Participating Southeast Asian Countries*. Sense Publishers, pp. 35–49.

Hai, P.T.T. and Kendall, A. (2023) 'Conceptualizing reform and professional learning in the contemporary Vietnamese context', *PRACTICE*, pp. 1–8. Available at: https://doi.org/10.1080/25783858.2023.2177186.

Hall, G.E. and Hord, S.M. (2020) *Implementing change: Patterns, Principles, and Potholes*. Hoboken: Pearson.

Hallinger, P. (2018) 'Bringing context out of the shadows of leadership', *Educational Management Administration & Leadership*, 46(1), pp. 5–24.

Hamilton, L. and Corbett-Whittier, C. (2014) *Using case study in education research*. SAGE Publications Ltd, https://doi.org/10.4135/9781473913851.

Hancock, D.R. and Algozzine, B. (2017) *Doing case study research: A practical guide for beginning researchers*. Teachers College Press.

Hargreaves, A. (2016) 'Autonomy and Transparency: Two good ideas gone bad', in *Flip the system: Changing education from the ground up*. New York: Routledge, pp. 120–139.

Hargreaves, A. and Fink, D. (2000) 'The Three dimensions of reform.', *Educational leadership*, 57(7), pp. 30–33.

Harris, A. (2013) 'Building the collective capacity for system change: Professional learning communities in Wales', in H.J. Malone (ed.) *Leading Educational change: Global issues, challenges, and lessons on whole-system reform*. New York: Teachers College Press, pp. 109–113.

Harvey, D.L. (2009) 'Complexity and case', *The SAGE handbook of case-based methods*, pp. 15–38.

Hawkins, M. and James, C.R. (2018) 'Developing a perspective on schools as complex, evolving, loosely linking systems', *Educational Management Administration & Leadership*, 46(5), pp. 729–748.

Hawkins, M. and James, C.R. (2016) 'Theorising schools as organisations: Isn't it all about complexity?', in *annual conference of the American Educational Research Association, Washington, DC, USA*, pp. 8–12.

Hayton, B. (2010) *Vietnam: Rising Dragon*. New Haven and London: Yale University Press.

Hazy, J., Jeffrey, G., and Lichtenstein, B. (2007) 'Complex Systems Leadership Theory: An Introduction', in Hazy, J., Jeffrey, G., and Lichtenstein, B. (eds) Complex system Leadership Theory. Mansfield: ISCE Publishing, pp. 1–16.

Hitchcock, G. and Hughes, D. (2002) *Research and the teacher: A qualitative introduction to school-based research*. Routledge.

Horn, J. (2008) 'Human research and complexity theory', *Educational philosophy and theory*, 40(1), pp. 130–143.

Hoyle, E. (1969) 'How does the curriculum change? 2. Systems and strategies', *Journal of curriculum studies*, 1(3), pp. 230–239.

Huy, Q.N. (1999) 'Emotional capability, emotional intelligence, and radical change', *Academy of Management review*, 24(2), pp. 325–345.

James, H., Goldstein, J. and Benyamin, Lichtenstein. (2007) 'Complex Systems Leadership Theory: An Introduction', in Hazy, J., Jeffrey, G., and Lichtenstein, B. (eds) *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 1–16.

Jennings, P. and Dooley, K. (2007) 'An emerging Complexity Paradigm in Leadership Research', in *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 18–34.

Jerrim, J. (2015) 'Why do East Asian children perform so well in PISA? An investigation of Western-born children of East Asian descent', *Oxford Review of Education*, 41(3), pp. 310–333.

Jeynes, W.H. (2007) 'The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis', *Urban education*, 42(1), pp. 82–110.

Kataoka, S., Le, A.V, Kitchlu, S. and Inoue, K. (2020) *Vietnam's Human Capital: Education Success and Future Challenges*. Washington DC.

Kotter, J.P. (2012) *Leading change*. Harvard Business Review Press.

Le, H.M. (2018) 'Another textbook project? The implementation of Escuela Nueva in Vietnam', *Educational Research for Policy and Practice*, 17(3), pp. 223–239.

Li, L., Zheng, J. and Yu, Z. (2018) 'Introduction', in L. Li, J. Zheng, and Z. Yu (eds) *Reform and Development of Educational System: History, Policy and Cases*. Berlin, Heidelberg: Springer Berlin Heidelberg, pp. 1–13. Available at: https://doi.org/10.1007/978-3-662-55525-5_1.

Lichtenstein, B., Uhl-Bien, M., Marion, R., Seers, A., Orton, J. D. and Schreiber, C. (2007) 'Complex Systems Leadership Theory: An Interactive Perspective on Leading in Complex Adaptive Systems', in

Hazy, J., Jeffrey, G., and Lichtenstein, B. (eds) *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 129–142.

Lichtman, M. (2012) *Qualitative research in education: A user's guide*. Thousand Oaks, California: Sage publications.

London, J. (2019) 'Vietnam: Exploring the Deep Determinants of Learning', *RISE Insight* [Preprint]. Available at: https://doi.org/10.35489/BSG-RISE-RI_2019/011.

London, J. (2023) *The Communist Party of Vietnam: Consolidating Market-Leninism*. Edited by J. London. New York: Routledge.

London, J. and Pincus, J. (2023) 'Welfare, Inequality, and Opportunity in contemporary Vietnam', in J. London (ed.) *Routledge Handbook of Contemporary Vietnam*. New York: Routledge, pp. 273–290.

London, J.D. (2021) *Outlier Vietnam and the Problem of Embeddedness: Contributions to the Political Economy of Learning*. 21/062. Available at: https://doi.org/https://doi.org/10.35489/BSG-RISE-WP_2021/062.

London, J.D. and Duong, B.-H. (2023) 'The Politics of Education and Learning in Vietnam', *Research on improving systems of Education* [Preprint]. Available at: https://doi.org/10.35489/BSG-RISE-2023/PE10.

Lorenz, E. (2000) 'The Butterfly Effect', in R. Abraham and Y. Ueda (eds) *The chaos avant-garde: Memories of the early days of chaos theory*. World scientific, pp. 91–94.

MacIntosh, R. and MacLean, D. (1999) 'Conditioned emergence: A dissipative structures approach to transformation', *Strategic management journal*, 20(4), pp. 297–316.

Mahoney, J. (2000) 'Path dependence in historical sociology', *Theory and society*, 29(4), pp. 507–548.

Malone, H.J. (2013) 'Whole-system change', in *Leading educational change*. New York and London: Teachers College Columbia University, pp. 107–108.

March, J.G. (1994) *Primer on decision making: How decisions happen*. New York: The Free Press.

Marion, R. and Uhl-Bien, M. (2007) 'Paradigmatic Influence and Leadership: The Perspectives of Complexity Theory and Bureaucracy Theory', in *Complex system Leadership Theory*. Mansfield: ISCE Publishing.

Mason, M. (2008) 'What is complexity theory and what are its implications for educational change?', *Educational Philosophy and Theory*, 40(1), pp. 35–49.

Mason, M. (2016) 'Complexity theory and systemic change in education governance', in T. Burns and F. Köster (eds) *Governing Education in a Complex World*. OECD.

McAleavy, T., Ha, T.T. and Fitzpatrick, R. (2018) *Promising Practice: Government Schools in Vietnam*. ERIC.

McCarthy, I.P. (2004) 'Manufacturing strategy: understanding the fitness landscape', *International Journal of Operations & Production Management* [Preprint].

McKelvey, B. and Lichtenstein, B. (2007) 'Leadership in the Four Stages of Emergence', in *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 93–108.

McLaughlin, C., Winter, L., Fimyar, O. and Yakavets, N. (2021) 'Reforming a Whole School System - The case of Kazakhstan', in C. McLaughlin and A. Ruby (eds) *Implementing educational reform: Cases and challenges*. Cambridge University Press, pp. 67–90.

McLaughlin, M.W. (1985) *Implementation realities and evaluation design*, *Social science and social policy*. Stanford: Institute for Research on Educational Finance and Governance.

Miles, M.B., Huberman, A.M. and Saldaña, J. (2019) *Qualitative data analysis: A methods sourcebook*. 4th ed. London: Sage publications.

Minh Duc (2016) *Hàng loạt địa phương dừng triển khai mô hình trường học mới [A vast number of schools stopped implementing the VNEN model] (In Vietnamese)*. Available at: https://vtc.vn/hang-loat-dia-phuong-dung-trien-khai-mo-hinh-truong-hoc-moi-ar272893.html (Accessed: 10 June 2022).

MOET (2006) *Quyết định Ban hành chương trình giáo dục phổ thông [The launch of the Basic Education Curriculum] (In Vietnamese)*.

MOET (2014a) *Chỉ thị 5105 - Chấn chỉnh tình trạng dạy thêm, học thêm đối với giáo dục tiểu học [Directive 5105 - Rectifying the Situation of Extra Tutoring and Learning in Primary Education]*. Vietnam.

MOET (2014b) *Thông tư 11 - Quy chế tuyển sinh Trung học cơ sở và tuyển sinh Trung học phổ thông [Circular 11 - Regulations on Admission to Lower Secondary and Upper Secondary Education]*. Vietnam.

MOET (2014c) *Thông tư 30 - Quy định đánh giá học sinh tiểu học [Circular 30 - Regulations on the Assessment of Primary School Students]*. Vietnam.

MOET (2014d) *Vietnam National Education for All Review 2015*. Hanoi.

MOET (2016) *Thông tư 22 - Sửa đổi, bổ sung một số điều của Quy định đánh giá học sinh tiểu học [Circular 22 - Amendments and Additions to Certain Regulations on the Assessment of Primary School Students]*. Vietnam.

MOET (2017) *GS: Nguyễn Minh Thuyết: Chương trình mới đào tạo lớp người mới có đủ phẩm chất, năng lực [Professor Nguyen Minh Thuyet: The new curriculum educates a new generation of students who have both attributes and competences] (In Vietnamese)*. Available at: https://moet.gov.vn/Pages/tim-kiem.aspx?ItemID=4617 (Accessed: 20 June 2022).

MOET (2018a) *Chương trình giáo dục phổ thông - Chương trình tổng thể [National Curriculum Framework for General Education - The General Framework] (In Vietnamese)*.

MOET (2018b) *Quy định về tài trợ cho các cơ sở giáo dục thuộc hệ thống giáo dục quốc dân [Regulations on funding for Public Educational Institutions]*. Vietnam.

MOET (2020a) *Thông tư Ban hành Điều lệ Trường Tiểu học [Circular on issuing Regulations for Primary schools]*. Vietnam.

MOET (2020b) *Thông tư hướng dẫn sinh hoạt chuyên môn thực hiện Chương trình giáo dục phổ thông cấp Tiểu học [Circular on instructing professional development to implement the Curriculum of Primary schools]*. Hanoi.

Morrison Foerster (2023) 'What Does Vietnam's Anti-Corruption Drive Mean for Investors and Businesses?' Available at: https://www.mofo.com/resources/insights/230419-vietnam-anti-corruption-investors-businesses.

Morrison, K. (2002) *School leadership and complexity theory*. London and New York: RoutledgeFalmer.

Morrison, K. (2008) 'Educational philosophy and the challenge of complexity theory', *Educational Philosophy and Theory*, 40(1), pp. 19–34.

Muijs, D. (2015) 'Improving schools through collaboration: a mixed methods study of school-to-school partnerships in the primary sector', *Oxford Review of Education*, 41(5), pp. 563–586.

National Assembly (2019) *Luật Giáo dục [Law of Education]*. Vietnam.

Nethercott, K., Nguyen, T. and Hunt, J. (2010) *Gender Equality Results in ADB Projects: Viet Nam Country Report*. Asian Development Bank.

Ng, P.T. (2016) 'Whole-Systems Approach: Professional Capital in Singapore', in J. Evers and R. Kneyber (eds) *Flip the system: Changing Education from the Ground up*. London and New York: Routledge.

Nguyen, C. (2020) 'Nationally standardized policy and locally interpreted implementation: how Vietnamese school leaders enact education reform', *International Journal of Leadership in Education*, pp. 1–30. Available at: https://doi.org/10.1080/13603124.2020.1722249.

Nguyen, D. and Ng, D. (2020) 'Teacher collaboration for change: sharing, improving, and spreading', *Professional Development in Education*, 46(4), pp. 638–651.

Nguyet, L.M., Hanh, N.T. and Linh, N.P. (2018) 'Áp lực gây căng thẳng tâm lí ở học sinh trung học cơ sở' [Psychological Stress Induced by Academic Pressure in Middle School Students], in *International Schooling VI*, pp. 404–417.

Nicholls, C.M., Mills, L. and Kotecha, M. (2014) 'Observation', in *Qualitative research practice: A guide for social science students and researchers*.

Nurjannah, I. *et al.* (2014) 'Conducting a grounded theory study in a language other than English: procedures for ensuring the integrity of translation', *Sage Open*, 4(1), p. 2158244014528920.

Nurul-Awanis, A.W. *et al.* (2011) 'Malaysian education system reform: Educationists' perspectives', in *Proceeding of the International Conference on Social Science, Economics and Art 2011*, pp. 14–15.

OECD (2012) *Equity and Quality in Education: Supporting disadvantaged students and schools*. OECD Publishing.

OECD (2014) *PISA 2012 Results in Focus: What 15-year-olds know and what they can do with what they know*. Paris: OECD Publishing.

OECD (2018) *PISA 2015 Results in Focus*. Paris: OECD Publishing.

OECD (2023) *PISA 2022 Results: The State of Learning and Equity in Education - Volume I*. Paris. Available at: https://doi.org/10.1787/53f23881-en.

Olmos-Vega, F.M., Stalmeijer, R.E., Varpio, L. and Kahlke, R. (2023) 'A practical guide to reflexivity in qualitative research: AMEE Guide No. 149', *Medical Teacher*, 45(3), pp. 241–251. Available at: https://doi.org/10.1080/0142159X.2022.2057287.

Parandeka, S.D. and Sedmik, E.K. (2016) *Unraveling a secret: Vietnam's outstanding performance on the PISA test*. The World Bank.

Parandekar, S.D., Yamauchi, F., Ragatz, A.B., Sedmik, E.K. and Sawamoto, A. (2017) *Enhancing school quality in Vietnam through participative and collaborative learning*. World Bank.

Petermann, A., Schreyögg, G. and Fürstenau, D. (2019) 'Can hierarchy hold back the dynamics of self-reinforcing processes? A simulation study on path dependence in hierarchies', *Business Research*, 12(2), pp. 637–669.

Phan, D. and Coxhead, I. (2023) 'Education and Development in Vietnam: A Glass Half Full?', in J. London (ed.) *Routledge Handbook of Contemporary Vietnam*. New York: Routledge.

Phuong, N.T.H. (2019) 'Thực trạng mức độ căng thẳng trong học tập của học sinh lớp 12 trên địa bàn thành phố Đà Nẵng' [The Current State of Academic Stress Levels Among 12th-Grade Students in the City of Da Nang], *Journal of Education*, 2(Special).

Pierson, P. (2000) 'Increasing returns, path dependence, and the study of politics', *American political science review*, 94(2), pp. 251–267.

Pietarinen, J., Pyhältö, K. and Soini, T. (2017) 'Large-scale curriculum reform in Finland–exploring the interrelation between implementation strategy, the function of the reform, and curriculum coherence', *The Curriculum Journal*, 28(1), pp. 22–40.

Pincus, J. (2023) 'Contemporary Vietnam: State Effectiveness under conditions of Commercialization', in *Routledge Handbook of Contemporary Vietnam*. New York: Routledge, pp. 164–183.

Plowman, D. and Duchon, D. (2007) 'Emergent Leadership: Getting beyond heroes and scapegoats', in *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 109–128.

Political Bureau (1979) *Nghị quyết 14-NQ/TW về cải cách giáo dục [Resolution 14-NQ/TW regarding the education reform] (in Vietnamese)*.

Quinn, D.M. and Kim, J.S. (2017) 'Scaffolding Fidelity and Adaptation in Educational Program Implementation: Experimental Evidence From a Literacy Intervention', *American Educational Research Journal*, 54(6), pp. 1187–1220. Available at: https://doi.org/10.3102/0002831217717692.

Rama, M. (2023) 'Vietnam's extraordinary economic journey from poverty to prosperity', in J. London (ed.) *Routledge Handbook of Contemporary Vietnam*. New York: Routledge, pp. 131–148.

Reed, M. and Harvey, D.L. (1992) 'The new science and the old: Complexity and realism in the social sciences', *Journal for the theory of Social Behaviour*, 22(4), pp. 353–380.

Rogers, E.M. (2003) *Diffusion of Innovation*. 5th ed. New York: Free Press.

Rogers, E.M., Medina, U.E., Rivera, M.A. and Wiley, C.J. (2005) 'Complex adaptive systems and the diffusion of innovations', *The innovation journal: the public sector innovation journal*, 10(3), pp. 1–26.

Saito, E., Tsukui, A. and Tanaka, Y. (2008) 'Problems on primary school-based in-service training in Vietnam: A case study of Bac Giang province', *International Journal of Educational Development*, 28(1), pp. 89–103.

Schwandt, D. and Szabla, D. (2007) 'Systems and Leadership: Coevolution or Mutual Evolution', in H. James, J. Goldstein, and Lichtenstein. Benyamin (eds) *Complex system Leadership Theory*. Mansfield: ISCE Publishing, pp. 35–60.

Schweisfurth, M. (2013) *Learner-centred education in international perspective: Whose pedagogy for whose development?* London: Routledge.

Senge, P.M., Cambron-McCabe, N., Lucas, T., Smith, B., Dutton, J. and Kleiner, A. (2012) *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. London: Nicholas Brealey Publishing.

Shadoian-Gersing, V. (2015) *Learning from and with Vietnam's schools*, *Education Week*.

Shaeffer, S. (1992) 'Collaborating for educational change: the role of teachers, parents and the community in school improvement', in. International Institute of Educational Planning.

Simon, H.A. (1997) *Administrative Behavior*. New York: The Free Press.

Singh, A. (2014) *Emergence and evolution of learning gaps across countries: Linked panel evidence from Ethiopia, India, Peru and Vietnam*.

Snyder, S. (2013) *The simple, the complicated, and the complex: Educational reform through the lens of complexity theory*. 96. Paris: OECD Publishing.

Spillane, J.P. (2009) *Standards deviation: How schools misunderstand education policy*. Harvard University Press.

Spillane, J.P., Reiser, B.J. and Reimer, T. (2002) 'Policy implementation and cognition: Reframing and refocusing implementation research', *Review of educational research*, 72(3), pp. 387–431.

Stacey, R.D. and Mowles, C. (2016) *Strategic Management and Organisational Dynamics: The Challenge of Complexity to Ways of Thinking About Organisations*. Seventh Ed. Harlow: Pearson Education.

Stepanek, J., Appel, G., Leong, M., Mangan, M.T. and Mitchell, M. (2006) *Leading lesson study: A practical guide for teachers and facilitators*. California: Corwin Press.

Stoll, L. (2013) 'Capacity for Learning: Getting serious about practice improvement', in H.J. Malone (ed.) *Leading Educational change: Global issues, challenges, and lessons on whole-system reform*. New York, pp. 33–36.

Sydow, J., Schreyögg, G. and Koch, J. (2009) 'Organizational path dependence: Opening the black box', *Academy of management review*, 34(4), pp. 689–709.

Sydow, J., Schreyögg, G. and Koch, J. (2020) 'On the theory of organizational path dependence: Clarifications, replies to objections, and extensions', *Academy of Management Review*, 45(4), pp. 717–734.

Tabulawa, R. (2013) *Teaching and learning in context: Why pedagogical reforms fail in Sub-Saharan Africa*. African Books Collective.

Tanaka, Y. (2020) *Cải cách giáo dục Việt Nam - Liệu có thực hiện được lấy học sinh làm trung tâm? [Education reforms in Vietnam - Is student-centred education possible?]*. Hanoi: Nha Xuat Ban Phu Nu Viet Nam.

Thanh, P.T.H. (2008) 'The roles of teachers in implementing educational innovation: The case of implementing cooperative learning in Vietnam', *Asian Social Science*, 4(1), p.3.

The Health Foundation (2010) 'Complex adaptive systems'. Available at: https://www.syrialearning.org/system/files/content/resource/files/main/ComplexAdaptiveSystems.pdf.

Thelen, K. (2003) 'How institutions evolve: insights from comparative historical research', *Comparative historical analysis in the social sciences*, pp. 208–240.

Thurner, S., Hanel, R. and Klimek, P. (2018) *Introduction to the theory of complex systems*. Oxford University Press.

Tikkanen, L., Pyhältö, K., Pietarinen, J. and Soini, T. (2020) 'Lessons learnt from a large-scale curriculum reform: The strategies to enhance development work and reduce reform-related stress', *Journal of Educational Change*, 21(4), pp. 543–567.

Timmons, V. and Cairns, E. (2010) 'Case study research in education', *Encyclopedia of case study research*, 1, pp. 99–102.

Torfing, J. (2001) 'Path-dependent Danish welfare reforms: the contribution of the new institutionalisms to understanding evolutionary change', *Scandinavian political studies*, 24(4), pp. 277–309.

Tran, T.L. and Nguyen, T.P.T. (2022) 'Overview of Education in Vietnam', in L.P. Symaco and M. Hayden (eds) *International Handbook on Education in South East Asia*. Singapore: Springer Nature Singapore, pp. 1–33. Available at: https://doi.org/10.1007/978-981-16-8136-3_32-2.

Truong, T.D. and Hallinger, P. (2017) 'Exploring cultural context and school leadership: conceptualizing an indigenous model of có uy school leadership in Vietnam', *International Journal of Leadership in Education*, 20(5), pp. 539–561.

Truong, T.D., Hallinger, P. and Sanga, K. (2017) 'Confucian values and school leadership in Vietnam: Exploring the influence of culture on principal decision making', *Educational Management Administration & Leadership*, 45(1), pp. 77–100.

Turner, J.R. and Baker, R.M. (2019) 'Complexity theory: An overview with potential applications for the social sciences', *Systems*, 7(1), p. 4.

UNESCO (2018) *Gender Equality and Girls' Education Initiative in Viet Nam: Empowering girls and women for a more equal society*.

Vergne, J.-P. and Durand, R. (2011) 'The path of most persistence: An evolutionary perspective on path dependence and dynamic capabilities', *Organization Studies*, 32(3), pp. 365–382.

Verspoor, A. (1989) *Pathways to Change: Improving the Quality of Education in Developing Countries. World Bank Discussion Papers 53.* Washington D.C: The World Bank.

Waslander, S., Pater, C. and Van Der Weide, M. (2010) 'Markets in education: An analytical review of empirical research on market mechanisms in education', *OECD Education Working Papers*, No.52.

Weaver, W. (1948) 'Science and complexity', *American scientist*, 36(4), pp. 536–544.

Wedell, M. (2009) *Planning for educational change: Putting people and their contexts first*. Bloomsbury Publishing.

Willoughby, E. (2021) 'An ideal public health model? Vietnam's state-led, preventative, low-cost response to COVID-19', *Brookings* [Preprint]. Available at: https://www.brookings.edu/articles/an-ideal-public-health-model-vietnams-state-led-preventative-low-cost-response-to-covid-19/.

Woodhead, M., Dornan, P. and Murray, H. (2014) 'What Inequality means for Children: Evidence from Young Lives', *The International Journal of Children's Rights*, 22(3), pp. 467–501. Available at: https://doi.org/https://doi.org/10.1163/15718182-02203006.

Woodside, A.G. (2010) *Case Study Research: Theory, Methods, Practice*. Bingley: Emerald Group Publishing Limited.

Yamaguchi, R., Avery, L., Cervone, J., Dimartino, L. and Hall, A. (2017) *Adaptive Implementation: Navigating the School Improvement Landscape*. Maryland: Rowman and Littlefield.

Yin, R.K. (2017) *Case study research and applications: Design and methods*. London: Sage publications.

Zhao, Y. (2013) 'Directions of change: Why the United States and China are moving in opposite directions', in *Leading Educational change: Global issues, challenges, and lessons on whole-system reform*. New York: Teachers College Press, pp. 16–19.

Appendix

Appendix A: Interview Protocol

I. Introduction

I'd like to thank you once again for being willing to participate in the interview. As I have mentioned to you before, my study seeks to investigate the implementation processes of education reforms in Vietnamese public primary schools, with special reference to the Fundamental and Comprehensive Education Reform (FCER) since 2012-2013.

Our interview today will last approximately 45 minutes to a maximum of 90 minutes. I will be asking you about your opinions and experiences regarding reform policies established in the FCER.

You completed a consent form indicating that I have your permission to audio record our conversation. Are you still ok with me recording our conversation today?

If yes: Thank you! Please let me know if at any point you want me to turn off the recorder or keep something you said off the record.

If no: Thank you for letting me know. I will only take notes of our conversation.

Before we begin the interview, do you have any questions? [Discuss questions]

If any questions (or other questions) arise at any point in this study, you can feel free to ask them at any time. I would be more than happy to answer your questions.

Please note that during the interview, you can take breaks as you wish, and you can decide to stop the interview at any point. You do not need to answer all the questions if you do not want to without giving reasons.

II. Background Information

To begin this interview, I'd like to ask you some general questions about your job and your school.

- Which subject are you currently teaching and to which grade?
- How long have you been teaching at this school?
- Before you started teaching at this school, where did you complete your teacher training program?

- Apart from classroom teaching, do you have any additional responsibilities in the school or any other jobs outside of the school?
- To help me understand more about your job, could you describe what a typical day at work is like for you?
- To help me understand more about the school, could you share some general impressions about it?
- Could you share some general thoughts about the students at your school?

III.   Overview of the FCER policies

Since 2013, under the FCER, the Ministry of Education and Training has introduced several policies to make changes in primary schools in terms of, for example, assessment, curriculum, pedagogy and professional development.

- In general, what do you think about these reform policies?
- What do you think is the goal of these policies?
- What changes have you noticed being implemented at your school? How, if at all, have these practices impacted teaching and learning? Can you provide some specific examples of how you have implemented some of these required policies?
- How do you feel about implementing these changes? How confident do you feel in the process of implementation? Have you faced any difficulties while implementing these changes?

IV.   Details of the implementation process

- If there is a new policy from the Ministry or Department/ Bureau of Education, how do you usually become aware of these new policies? How do you often feel when receiving these policy texts?
- According to your observation, how does the Ministry or Department/ Bureau of Education monitor the implementation of these reform policies?
- To what extent, if at all, do you feel you and your school have autonomy in implementing the reform policies?
- How do you feel about the professional development programmes and activities you have participated in to implement the reform policies in recent years?

V.   Ending questions

- In addition to what has been discussed, in your view, are there any other factors affecting the ways in which you and your school implement the reforms?

- Before we conclude this interview, is there something about the implementation of the FCER policies in your school that we have not yet had a chance to discuss?

Appendix B: Observation Protocol

General Protocol

    I.   **General information**

School: _____

Purpose: _____

Date of observation: _____

Time_____

Number of participants_____

Who are the participants? _____

Location: _____

    II.   **Event recording**

Activities	Purpose	Time	What is happening?	Notes

Appendix C: Ethics Application Approval

Copy of form removed due to confidentiality issues.

Appendix D: School Permission to conduct research

Vietnamese version

University *of* Glasgow

College of Social Sciences

V/v Đề nghị chấp thuận   , ngày 06 tháng 05 năm 2021
thực hiện đề tài nghiên cứu
khoa học

Kính gửi: Ban Giám hiệu Trường Tiểu học

Tôi tên là Hồ Hồng Linh, hiện là Giảng viên tại Khoa Giáo dục của trường Đại học Khoa học Xã hội và Nhân văn, ĐHQG – TP.HCM và đang theo học chương trình Tiến sĩ tại Đại học Glasgow, Vương Quốc Anh, chuyên ngành Giáo dục học.

Tôi viết thư này nhằm trình bày về đề tài nghiên cứu khoa học của tôi và rất mong nhận được sự chấp thuận, hỗ trợ của Ban Giám hiệu nhà trường để thực hiện đề tài nghiên cứu tại nhà trường. Nghiên cứu có tên gọi: **THỰC HIỆN ĐỔI MỚI GIÁO DỤC: NGHIÊN CỨU ĐA TRƯỜNG HỢP TẠI CÁC TRƯỜNG TIỂU HỌC CÔNG LẬP VIỆT NAM.**

1. Mục tiêu nghiên cứu

Nghiên cứu hướng đến mục tiêu tìm hiểu quá trình triển khai các chính sách đổi mới giáo dục tại các trường tiểu học, đặc biệt những chính sách nằm trong phạm vi của chương trình "Đổi mới căn bản, toàn diện giáo dục và đào tạo". Nghiên cứu mong muốn có thể hiểu được quá trình các trường tiếp nhận, lên kế hoạch và triển khai thực hiện các chính sách đổi mới cũng như cách thức tạo nên những thay đổi có tính chất lan tỏa và bền vững trong nhà trường.

2. Phương thức nghiên cứu

Tôi rất mong nhận được sự đồng ý của Ban Giám hiệu nhà trường để thực hiện các hoạt động nghiên cứu sau đây:

a) **Phỏng vấn cá nhân** với Ban Giám hiệu nhà trường và với giáo viên: các buổi phỏng vấn cá nhân bằng Tiếng Việt, kéo dài trong khoảng từ 45 phút đến tối đa 90 phút, có ghi âm nếu nhận được sự đồng ý của người tham gia phỏng vấn.

b) **Phỏng vấn nhóm**: các buổi phỏng vấn với các nhóm giáo viên từ 6-8 người, bằng Tiếng Việt và kéo dài trong khoảng từ 60 phút đến tối đa 120 phút, có ghi âm nếu nhận được sự đồng ý của người tham gia phỏng vấn.

c) **Quan sát lớp học**: quan sát các hoạt động diễn ra trong một số lớp học với sự cho phép của Ban giám hiệu nhà trường và giáo viên đứng lớp.

d) **Quan sát các hoạt động khác** diễn ra tại nhà trường như tập huấn, sinh hoạt hoặc họp tổ chuyên môn với sự cho phép của Ban giám hiệu nhà trường.

e) **Thu thập một số văn bản, tài liệu** có liên quan đến nội dung nghiên cứu như kế hoạch, báo cáo, biên bản cuộc họp, giáo án do Ban giám hiệu nhà trường và giáo viên đồng ý cung cấp.

f) **Chụp ảnh** một số không gian, cơ sở vật chất của nhà trường như lớp học, sân trường.

Số lượng các buổi phỏng vấn, quan sát và các văn bản, tài liệu sẽ tùy theo mức độ thông tin đã thu thập được và sự chấp thuận của nhà trường và các cá nhân tham gia nghiên cứu.

3. Chọn lựa đối tượng nghiên cứu

Việc chọn lựa các đối tượng nghiên cứu bao gồm người tham gia phỏng vấn, các hoạt động và các văn bản, tài liệu dựa trên sự đề xuất, gợi ý và chấp thuận của Ban Giám hiệu và các cá nhân tham gia vào nghiên cứu. Việc tham gia vào nghiên cứu là hoàn toàn mang tính chất tự nguyện. Việc từ chối tham gia nghiên cứu của nhà trường hoặc của bất kì cá nhân nào cũng sẽ không gây ra ảnh hưởng đến hoạt động của nhà trường và các cá nhân ấy.

4. Thời gian và địa điểm

Thời gian thực hiện đề tài nghiên cứu tại nhà trường có thể kéo dài từ 1 đến 8 tuần tùy theo mức độ dữ liệu thu thập được.

Thời gian thực hiện các buổi phỏng vấn, quan sát sẽ được sắp xếp theo lịch trình làm việc của người tham gia nhằm hạn chế tối đa việc ảnh hưởng đến hoạt động của nhà trường, công việc và cuộc sống cá nhân của người tham gia.

Địa điểm thực hiện các buổi phỏng vấn cũng được lựa chọn tùy theo yêu cầu của người tham gia hoặc sự sắp xếp của Ban giám hiệu nhà trường.

5. Bảo mật thông tin

Tất cả những thông tin cá nhân của những người tham gia vào nghiên cứu bao gồm họ và tên, tên trường, thông tin liên lạc sẽ không được tiết lộ trong bất kì trường hợp nào để đảm bảo tính riêng tư và bảo mật. Các bản ghi âm của các buổi phỏng vấn chỉ được sử dụng cho mục đích phân tích dữ liệu và sẽ không được chia sẻ, công bố trong bất kì trường hợp nào.

Trong nội dung báo cáo và các công bố khoa học có sử dụng thông tin từ nghiên cứu này, tên của nhà trường và tên của người tham gia vào nghiên cứu sẽ được thay đổi.

6. Trách nhiệm của nhà nghiên cứu

Mọi hoạt động nghiên cứu sẽ được thực hiện dựa trên sự hướng dẫn, cho phép của Ban giám hiệu nhà trường để không gây ra bất kì ảnh hưởng tiêu cực nào đối với nhà trường, giáo viên và học sinh.

Sau khi nghiên cứu kết thúc, các thông tin thu thập được trong quá trình nghiên cứu sẽ được sử dụng để hoàn hoàn thành luận án Tiến sĩ của tôi (bằng Tiếng Anh). Kết quả và dữ liệu của nghiên cứu cũng có thể sẽ được sử dụng để thực hiện các bài báo khoa học và các bài viết tham dự hội thảo khoa học trong tương lai.

Bản tóm tắt các kết quả và đề xuất của nghiên cứu sẽ được gửi đến Ban giám hiệu nhà trường sau khi dự án nghiên cứu kết thúc.

7. Liên hệ

Nếu Nhà trường có bất kì câu hỏi nào cần được giải đáp về nghiên cứu này, xin hãy liên hệ thông qua email: l.ho.1@research.gla.ac.uk

Nhà trường cũng có thể liên hệ các Giảng viên hướng dẫn của nghiên cứu:

Giáo sư Clive Dimmock: clive.dimmock@glasgow.ac.uk   hoặc
Tiến sĩ Dong Nguyen: dong.nguyen@glasgow.ac.uk

Dự án nghiên cứu này đã được xem xét và chấp thuận bởi Hội đồng về Đạo đức Nghiên cứu của Trường Đại học Khoa học xã hội, Đại học Glasgow, Vương Quốc Anh.

Trên cơ sở các thông tin vừa nêu trên, tôi rất mong có thể nhận được sự chấp thuận của Ban giám hiệu nhà trường để thực hiện được nghiên cứu này và học hỏi được thêm nhiều kinh nghiệm quý báu từ quá trình thực hiện đổi mới giáo dục tại nhà trường.

Chấp thuận của Ban Giám hiệu   **Nghiên cứu sinh**

Hồ Hồng Linh

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English version

SCHOOL PERMISSION TO CONDUCT RESEARCH

------------ City, 06/05/2021

Dear the School Board of ------------ Primary School.

My name is Ho Hong Linh. I'm currently a lecturer at the Faculty of Education of the University of Social Sciences and Humanities, VNU-HCM and a PhD student in Education at the University of Glasgow, United Kingdom.

The purpose of this letter is to ask for your permission to conduct the research titled: **Implementing Education Reforms: A Multiple-case study of Vietnamese primary schools** in your school.

1. The purpose of the research

The purpose of this study is to investigate the implementation processes of education reforms in Vietnamese public primary schools, with special reference to the Fundamental and Comprehensive Education Reform (FCER) since 2012-2013. This study seeks to understand how schools receive, make sense of, and implement the reform policies established in the FCER, and how schools successfully make changes that are widely accepted and sustainably embedded.

2. Research methods

I hope that I can receive your approval to conduct the following research methods:

a) Individual interview with school leaders and teachers: Each interview will last between 45 minutes – 90 minutes. All interviews will be conducted in Vietnamese and audio-recorded with the consent of the participants.

b) Focus group interview with teachers: Each interview with 6-8 teachers will last between 60 minutes – 120 minutes. All interviews will be conducted in Vietnamese and audio-recorded with the consent of the participants.

c) Classroom observations with the permission of the School Board and teachers.

d) Observations in school meetings, department meetings, training sessions and other related events that the researcher is permitted to attend.

e) Access to relevant documents such as school plans, progress reports, and internal records.

f) Taking photos of the school's buildings and facilities

The number of interviews, observations and documents will be decided based on how much data has been collected and the consents of the School Board and participants.

3. Participant recruitment

Participants will be recruited based on the suggestions and consents of the School Board and participants. Participation is entirely voluntary. There would be no consequences for the school or any individuals for not agreeing to participate in the study.

4. Time and location

The period to conduct the study might last from 1 to 8 weeks, depending on how much data has been collected.

Time and location for interviews and observations will be organised flexibly based on the participants' preferences with the intention not to disrupt the operations of the school and the work and personal life of the participants.

5. Confidentiality

Personal information, including names and contacts of participants, name of the school, will not be disclosed to protect participants' privacy and confidentiality. Recordings of interviews will only be used for the purpose of analysing the data and will not be shared.

Participants' and school's names will be changed in my thesis or any publications.

6. Responsibilities of the researcher

All research activities will be conducted under the guidance and permission of the School Board to avoid making any harmful outcomes for the school, teachers, and students.

I will use the information collected to write up my PhD thesis in English. Findings and data from this study can also be used to write journal articles and conference papers.

A summary of the findings and recommendations will be sent to the School Board at the end of the project.

7. Contact

If you have any questions regarding this study, please contact me via my email address: l.ho.1@research.gla.ac.uk

You may also contact my supervisors:

Prof Clive Dimmock: clive.dimmock@glasgow.ac.uk   or

Dr Dong Nguyen: dong.nguyen@glasgow.ac.uk

This project has been considered and approved by the College Research Ethics Committee, University of Glasgow, United Kingdom.

Based on the information above, I hope to receive permission to conduct the research in your school.

       Approval of the School Board   **Name of the Researcher**

Appendix E: Participant Information Sheet

Vietnamese version

THÔNG TIN DÀNH CHO NGƯỜI THAM GIA PHỎNG VẤN CÁ NHÂN

Dự án: THỰC HIỆN ĐỔI MỚI GIÁO DỤC: NGHIÊN CỨU ĐA TRƯỜNG HỢP TẠI CÁC TRƯỜNG TIỂU HỌC CÔNG LẬP VIỆT NAM

Nghiên cứu sinh: Hồ Hồng Linh

Giảng viên hướng dẫn: Giáo sư Clive Dimmock; Tiến sĩ Dong Nguyen

Chương trình đào tạo: Tiến sĩ Giáo dục học – Đại học Glasgow, Vương Quốc Anh

Xin trân trọng kính mời Quý Thầy Cô tham dự dự án nghiên cứu **"Thực hiện đổi mới giáo dục: Nghiên cứu đa trường hợp tại các trường tiểu học công lập Việt Nam"** – một nghiên cứu nhằm tìm hiểu về quá trình triển khai thực hiện những đổi mới tại các trường tiểu học công lập Việt Nam. Trước khi đồng ý tham dự vào nghiên cứu, rất mong Quý Thầy Cô có thể hiểu rõ về mục tiêu của nghiên cứu và những yêu cầu về việc tham dự. Xin Quý Thầy Cô hãy đọc kĩ những thông tin bên dưới và có thể thảo luận thêm với những người khác nếu cần. Nếu có bất kì điều gì chưa rõ và cần thông tin thêm, xin Quý Thầy Cô hãy đặt câu hỏi, chúng tôi rất sẵn lòng để giải đáp một cách chi tiết. Rất mong Quý Thầy Cô dành thời gian để cân nhắc việc tham gia hỗ trợ cho dự án nghiên cứu này.

Xin trân trọng cám ơn Quý Thầy Cô.

1. **Mục tiêu nghiên cứu**

Nghiên cứu hướng đến mục tiêu *tìm hiểu quá trình triển khai các chính sách đổi mới giáo dục tại các trường tiểu học công lập Việt Nam, đặc biệt những chính sách nằm trong phạm vi của chương trình "Đổi mới căn bản, toàn diện giáo dục và đào tạo".* Nghiên cứu mong muốn có thể hiểu được quá trình các trường tiếp nhận, lên kế hoạch và triển khai thực hiện các chính sách đổi mới cũng như cách thức tạo nên những thay đổi có tính chất lan tỏa và bền vững trong nhà trường.

Các kết quả của nghiên cứu này sẽ mang lại những đóng góp quan trọng cho lĩnh vực nghiên cứu về sự thay đổi trong giáo dục, cho quá trình nâng cao chất lượng của các trường học tại Việt Nam, đồng thời giúp đưa ra các kiến nghị thực tế về chính sách cho những giai đoạn tiếp theo.

2. **Việc tham dự vào dự án nghiên cứu bao gồm những gì?**

Quý Thầy Cô sẽ được mời tham dự vào một buổi phỏng vấn cá nhân trong khoảng thời gian từ 45 đến 90 phút. Buổi phỏng vấn sẽ diễn ra bằng Tiếng Việt và được thu âm lại. Buổi phỏng vấn sẽ diễn ra tại trường của Thầy Cô hoặc bất kì một địa điểm nào thuận lợi cho thời gian của Thầy Cô.

Trong quá trình phỏng vấn, Thầy Cô có thể tạm ngưng bất kì lúc nào và cũng có thể quyết định dừng buổi phỏng vấn bất kì lúc nào. Thầy Cô cũng không cần phải trả lời hết mọi câu hỏi nếu Thầy Cô không muốn mà không cần giải thích lý do.

Những thông tin mà Thầy Cô cung cấp sẽ được sử dụng để hoàn thành luận án Tiến sĩ của tôi (bằng Tiếng Anh). Kết quả và dữ liệu của nghiên cứu này cũng có thể sẽ được sử dụng để thực hiện các bài báo khoa học và các bài viết tham dự hội thảo khoa học trong tương lai.

Nếu Quý Thầy Cô có yêu cầu, bản tóm tắt kết quả bằng Tiếng Việt hoặc Tiếng Anh sẽ được gửi đến Thầy Cô.

3. **Việc tham dự nghiên cứu này có bắt buộc?**

Việc tham dự nghiên cứu này hoàn toàn mang tính tự nguyện. Quý Thầy Cô có thể quyết định ngừng tham dự bất kì lúc nào mà không phải chịu bất kì ảnh hưởng gì đến công việc của Thầy Cô. Quý Thầy Cô cũng không cần phải giải thích về lý do quyết định ngừng tham dự.

4. **Những thông tin được cung cấp trong buổi phỏng vấn có được bảo mật không?**

Những thông tin cá nhân bao gồm tên của Thầy Cô, tên trường, thông tin liên lạc của Thầy Cô sẽ không được tiết lộ để đảm bảo tính riêng tư và bảo mật. Trong nội dung của luận văn và các công bố khoa học khác, khi cần đề cập đến các ý kiến, thông tin mà Thầy Cô đã cung cấp, *tên của Thầy Cô sẽ được thay đổi.*

Các bản ghi âm của buổi phỏng vấn chỉ được sử dụng cho mục đích phân tích dữ liệu và sẽ không được chia sẻ, công bố trong bất kì trường hợp nào.

Tất cả các dữ liệu thu thập sẽ được lưu trữ trong các tập tin có mã bảo vệ hoặc các ngăn tủ có khóa. Tất cả các tập tin và tài liệu có chứa thông tin cá nhân của Thầy Cô sẽ được xóa, hủy một cách an toàn khi dự án kết thúc. Các dữ liệu nghiên cứu còn lại không chứa thông tin cá nhân sẽ được lưu trữ trong vòng mười năm.

Những biện pháp để đảm bảo tính bảo mật như trên sẽ được thực hiện hết mức có thể nhưng vẫn có thể không hoàn toàn đảm bảo được việc bảo mật trong trường hợp số lượng người tham gia quá ít hoặc khu vực nghiên cứu quá hẹp. Ngoài ra, trong quá trình trao đổi, nếu nhận thấy rằng có ai đó đang gặp nguy hiểm, chúng tôi có thể cũng sẽ phải thông tin việc này đến các bên liên quan.

5. Liên hệ

Nếu Quý Thầy Cô có bất kì câu hỏi nào cần được giải đáp về nghiên cứu này, xin hãy liên hệ thông qua email: l.ho.1@research.gla.ac.uk

Quý Thầy Cô cũng có thể liên hệ các Giảng viên hướng dẫn của nghiên cứu:

Giáo sư Clive Dimmock: clive.dimmock@glasgow.ac.uk   hoặc
Tiến sĩ Dong Nguyen: dong.nguyen@glasgow.ac.uk

Nếu Quý Thầy Cô có bất kì khiếu nại gì về quá trình thực hiện nghiên cứu này, xin hãy liên hệ Cán bộ về Đạo đức của Trường Đại học Khoa học Xã hội, Tiến sĩ Muir Houston thông qua email: Muir.Houston@glasgow.ac.uk

Dự án nghiên cứu này đã được xem xét và chấp thuận bởi Hội đồng về Đạo đức Nghiên cứu của Trường Đại học Khoa học xã hội, Đại học Glasgow, Vương Quốc Anh

Họ và tên nghiên cứu sinh: Hồ Hồng Linh

Ký tên

Participant Information Sheet

Project: Implementing education reforms: A Multiple-Case Study of Vietnamese primary schools

Researcher: Ho Hong Linh

Supervisors: Prof. Clive Dimmock

Dr Dong Nguyen

PGR Programme Title: PhD in Education (Research)

You are being invited to take part in a study exploring the implementation of education reforms in Vietnamese public primary schools. Before you decide to take part, it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and discuss it with others if you wish. Ask the researcher/s if there is anything that is not clear or if you would like more information. Take some time to decide whether or not you wish to take part.

Thank you for reading this.

1. **The purpose of the research**

The purpose of this study is to investigate the implementation processes of education reforms in Vietnamese public primary schools, with special reference to the Fundamental and Comprehensive Education Reform (FCER) since 2013. This study seeks to understand how schools receive, make sense of, and perform the reform policies established in the FCER, and how some schools can successfully make changes that are widely accepted and sustainably embedded.

Findings from this study should make an important contribution to the field of educational change and help to suggest practical policy recommendations for the next phases of the reform.

2. **What does my participation involve?**

You are being invited to take part in a face-to-face interview which will take approximately 45 minutes or a maximum of 90 minutes. The conversation will be in Vietnamese and audio-recorded. The interview will take place at your school or any location that fits your schedule.

During the interview, you can take breaks as you wish, and you can decide to stop the interview at any point. You do not need to answer all the questions if you do not want to without giving reasons.

I will use the information that you give me to write up my PhD thesis in English. Findings and data from this study can also be used to write journal articles and conference papers.

You can ask me to send you the Vietnamese or English summary of the findings if you want to.

3. Do I need to participate if I do not want to?

Participation is entirely voluntary, and you can withdraw your participation at any point of time without prejudice to your job. You will not need to provide a reason for your withdrawal.

4. Will the information I give be kept confidential?

Your personal information, including your name, school and contact, will not be disclosed to protect your privacy and confidentiality. Your name will be changed if I want to mention your opinions in my thesis or any publications.

All data collected will be securely stored in password-protected files or locked cabinet. Files and documents that contain your personal information will be securely removed at the end of the research project. Data that do not include your personal information will be stored for ten years.

However, confidentiality may not be guaranteed in all cases due to the limited size of the participant sample.

5. Contact

If you have any questions regarding this study, please contact me via my email address: l.ho.1@research.gla.ac.uk

You may also contact my supervisors:

Prof Clive Dimmock: clive.dimmock@glasgow.ac.uk   or

Dr Dong Nguyen: dong.nguyen@glasgow.ac.uk

To pursue any complaint about the conduct of the research: contact the College of Social Sciences Ethics Officer, Dr Muir Houston, email: Muir.Houston@glasgow.ac.uk

This project has been considered and approved by the College Research Ethics Committee, University of Glasgow, United Kingdom.

Appendix F: Privacy Notice

Vietnamese version

THÔNG TIN VỀ QUYỀN RIÊNG TƯ

Thông tin về quyền riêng tư dành cho người tham gia dự án nghiên cứu: THỰC HIỆN ĐỔI MỚI GIÁO DỤC: NGHIÊN CỨU ĐA TRƯỜNG HỢP TẠI CÁC TRƯỜNG TIỂU HỌC CÔNG LẬP VIỆT NAM

NGHIÊN CỨU SINH: HỒ HỒNG LINH

Về thông tin cá nhân của Quý Thầy Cô

Đại học Glasgow sẽ đóng vai trò là đơn vị "kiểm soát dữ liệu" trong quá trình xử lý thông tin cá nhân của Quý Thầy Cô khi tham gia dự án nghiên cứu: THỰC HIỆN ĐỔI MỚI GIÁO DỤC: NGHIÊN CỨU ĐA TRƯỜNG HỢP TẠI CÁC TRƯỜNG TIỂU HỌC CÔNG LẬP VIỆT NAM

Phiếu Thông tin về quyền riêng tư này sẽ giải thích cách thức mà Đại học Glasgow xử lý các thông tin cá nhân của Quý Thầy Cô.

Vì sao chúng tôi cần thông tin cá nhân của Thầy Cô?

Chúng tôi thực hiện thu thập thông tin cá nhân của Thầy Cô như tên và thông tin liên lạc nhằm phục vụ cho quá trình nghiên cứu. Chúng tôi cần tên và thông tin liêc lạc để sắp xếp các buổi phỏng vấn hoặc lấy thêm các dữ liệu khác dựa trên các dữ liệu mà Thầy Cô đã cung cấp.

Chúng tôi chỉ lấy những dữ liệu cần thiết cho dự án nghiên cứu và sẽ tách phần thông tin cá nhân của Thầy Cô khỏi các dữ liệu nghiên cứu (ví dụ như khỏi các câu trả lời của Thầy Cô trong buổi phỏng vấn) bằng cách dùng tên thay thế.

Xin Quý Thầy Cô lưu ý rằng tính bảo mật có thể không hoàn toàn được đảm bảo trong trường hợp số lượng người tham gia quá ít hoặc khu vực nghiên cứu quá hẹp.

Xin mời Quý Thầy Cô xem thêm phiếu **Thông tin dành cho người tham gia.**

Cơ sở pháp lý cho việc xử lý thông tin

Cơ sở pháp lý là một điều cần thiết khi xử lý mọi loại thông tin cá nhân. Và vì việc xử lý các thông tin cá nhân trong nghiên cứu này nhằm mục đích Nghiên cứu khoa học nên chúng tôi sẽ xử lý các thông tin cá nhân mà Thầy Cô cung cấp dựa trên các cơ sở của việc "thực hiện các nhiệm vụ phục vụ lợi ích cộng đồng". Với bất kì loại thông tin thuộc nhóm đặc biệt nào được thu thập, chúng tôi sẽ xử lý chúng trên cơ sở rằng đây là một việc làm cần thiết cho mục đích lưu trữ, mục đích nghiên cứu khoa học, lịch sử hoặc mục đích thống kê.

Bên cạnh đó, để đảm bảo việc thực hiện nghiên cứu này đáp ứng được các yêu cầu về mặt đạo đức, chúng tôi mong nhận được sự chấp thuận của Quý Thầy Cô trước khi tham gia vào nghiên cứu. Xin Quý Thầy Cô xem **Phiếu chấp thuận tham gia.**

Chúng tôi sẽ xử lý thông tin cá nhân của Thầy Cô như thế nào và sẽ chia sẻ các thông tin này cho ai?

Tất cả các thông tin cá nhân mà Quý Thầy Cô cung cấp sẽ được xử lý bởi một Nghiên cứu sinh của Đại học Glasgow, Vương Quốc Anh. Chúng tôi sẽ sử dụng một số biện pháp bảo mật để đảm bảo rằng thông tin cá nhân của Quý Thầy Cô được an toàn như: sử dụng tên thay thế, lưu trữ bảo mật, mã hóa các tập tin và các thiết bị. Xin mời Quý Thầy Cô xem **Phiếu chấp thuận tham gia** và **Thông tin dành cho người tham gia** để biết thêm chi tiết.

Vì đặc thù của dự án nghiên cứu này, có thể sẽ có một số nhà nghiên cứu khác cảm thấy các dữ liệu từ nghiên cứu là hữu ích để giúp họ giải đáp một số câu hỏi nghiên cứu trong tương lai. Chúng tôi sẽ hỏi ý kiến chấp thuận của Quý Thầy Cô trong việc chia sẻ dữ liệu theo cách thức này.

Trong tương lai, nếu Thầy Cô có yêu cầu, chúng tôi sẽ gửi cho Thầy Cô kết quả của nghiên cứu và thông tin về các công bố khoa học có liên quan.

Qúy Thầy Cô có những quyền như thế nào?*
Quy định chung về việc bảo vệ dữ liệu chỉ ra một số quyền của các cá nhân bao gồm: quyền được yêu cầu truy cập các bản sao, yêu cầu chỉnh sửa và xóa các thông tin cá nhân hoặc phản đối việc xử lý các thông tin ấy. Bên cạnh đó, chủ nhân của các thông tin này có quyền hạn chế việc xử lý thông tin và việc chia sẻ thông tin. Quý Thầy Cô có quyền được yêu cầu truy cập các thông tin về Thầy Cô vào bất kì lúc nào.

Bất cứ khi nào các Thầy Cô cho rằng những thông tin mà chúng tôi đang xử lý liên quan đến Thầy Cô chưa chính xác, Thầy Cô có thể yêu cầu được xem các thông tin này và trong một số trường hợp có thể yêu cầu hạn chế, sửa chữa hoặc xóa các thông tin ấy. Quý Thầy Cô cũng có thể có quyền hạn chế việc xử lý thông tin và chia sẻ thông tin.

Xin lưu ý rằng việc chúng tôi xử lý các thông tin cá nhân của Quý Thầy Cô là nhằm mục đích nghiên cứu khoa học. Do đó, việc thực hiện các quyền nêu trên có thể có một số sự sự sai khác do một số trường hợp miễn trừ cho việc nghiên cứu theo Quy định chung về việc bảo vệ dữ liệu (EU) và Luật bảo vệ dữ liệu 2018 (Vương Quốc Anh). Để hiểu rõ hơn về các trường hợp miễn trừ này, xin vui lòng truy cập tại: https://www.gla.ac.uk/myglasgow/dpfoioffice/a-ztopics/research/#//

Nếu quý Thầy Cô có mong muốn thực hiện một trong các quyền nào trên đây, xin hãy gửi yêu cầu đến trang web sau: https://www.gla.ac.uk/myglasgow/dpfoioffice/gdpr/gdprrequests/#d.en.591523 hoặc liên hệ qua email: dp@gla.ac.uk

Khiếu nại
Nếu Quý Thầy Cô có bất kì khiếu nại nào về cách thức chúng tôi xử lý thông tin cá nhân của Quý Thầy Cô, xin Quý Thầy Cô hãy liên hệ Văn phòng bảo vệ dữ liệu theo địa chỉ email sau để được hỗ trợ: dataprotectionofficer@glasgow.ac.uk

Nếu Quý Thầy Cô không hài lòng về phản hồi của chúng tôi hoặc cho rằng chúng tôi đang không xử lý các thông tin cá nhân của Thầy Cô đúng với pháp luật, Thầy Cô có thể gửi khiếu nại đến Information Commissioner's Office (ICO) https://ico.org.uk/

Dự án nghiên cứu này đã được xem xét về khía cạnh đạo đức bởi ai?

Dự án này đã được chấp thuận về mặt đạo đức bởi Hội đồng Đạo đức của Trường Đại học Khoa học Xã hội, Đại học Glasgow, Vương Quốc Anh.

Chúng tôi sẽ lưu trữ dữ liệu trong bao lâu?

Các thông tin cá nhân của Quý Thầy Cô sẽ được lưu trữ cho đến khi hoàn thành dự án và sẽ không quá thời gian được Hội đồng chấp thuận (30/09/2022). Sau thời gian này, các thông tin cá nhân sẽ được xóa một cách an toàn.

Các dữ liệu nghiên cứu sẽ được lưu trữ trong vòng mười năm theo quy định của Đại học Glasgow. Các thông tin chi tiết về việc lưu trữ dữ liệu nghiên cứu có trong Phiếu chấp thuận tham gia và Thông tin dành cho người tham gia kèm theo phiếu thông tin này.

English version

Privacy Notice for Participation in Research Project: IMPLEMENTING EDUCATION REFORMS: A MULTIPLE-CASE STUDY OF VIETNAMESE PRIMARY SCHOOLS –

RESEARCHER: HO HONG LINH

Your Personal Data

The University of Glasgow will be what's known as the 'Data Controller' of your personal data processed in relation to your participation in the research project: IMPLEMENTING EDUCATION REFORMS: A MULTIPLE-CASE STUDY OF VIETNAMESE PRIMARY SCHOOLS

This privacy notice will explain how The University of Glasgow will process your personal data.

Why we need it

We are collecting basic personal data such as your name and contact details in order to conduct our research. We need your name and contact details to arrange interviews or potentially follow up on the data you have provided.

We only collect data that we need for the research project and will de-identify your personal data from the research data (your answers given during the interview, for example) through pseudonymisation.)

Please note that your confidentiality may be impossible to guarantee due to the size of the participant group, location etc.

Please see accompanying **Participant Information Sheet**,

Legal basis for processing your data

We must have a legal basis for processing all personal data. As this processing is for Academic Research we will be relying upon **Task in the Public Interest** in order to process the basic personal data that you provide. For any special categories data collected we will be processing this on the basis that it is **necessary for archiving purposes, scientific or historical research purposes or statistical purposes**

Alongside this, in order to fulfil our ethical obligations, we will ask for your **Consent** to take part in the study Please see accompanying **Consent Form**.

What we do with it and who we share it with

All the personal data you submit is processed by a PhD student of the University of Glasgow in the United Kingdom. In addition, security measures are in place to ensure that your personal data remains safe: such as pseudonymisation, secure storage, and, encryption of files and devices. Please consult the **Consent form** and **Participant Information Sheet** which accompanies this notice.

Due to the nature of this research it is very likely that other researchers may find the data collected to be useful in answering future research questions. We will ask for your explicit consent for your data to be shared in this way.

We will provide you with a copy of the study findings and details of any subsequent publications or outputs on request.

What are your rights?*

GDPR provides that individuals have certain rights including: to request access to, copies of and rectification or erasure of personal data and to object to processing. In addition, data subjects may also have the right to restrict the processing of the personal data and to data portability. You can request access to the information we process about you at any time.

If at any point you believe that the information we process relating to you is incorrect, you can request to see this information and may in some instances request to have it restricted, corrected, or erased. You may also have the right to object to the processing of data and the right to data portability.

Please note that as we are processing your personal data for research purposes, the ability to exercise these rights may vary as there are potentially applicable research exemptions under the GDPR and the Data Protection Act 2018. For more information on these exemptions, please see UofG Research with personal and special categories of data.

If you wish to exercise any of these rights, please submit your request via the webform or contact dp@gla.ac.uk

Complaints

If you wish to raise a complaint on how we have handled your personal data, you can contact the University Data Protection Officer who will investigate the matter.

Our Data Protection Officer can be contacted at dataprotectionofficer@glasgow.ac.uk

If you are not satisfied with our response or believe we are not processing your personal data in accordance with the law, you can complain to the Information Commissioner's Office (ICO) https://ico.org.uk/

Who has ethically reviewed the project?

This project has been ethically approved via the College of Social Sciences Research Ethics Committee or relevant School Ethics Forum in the College.

How long do we keep it for?

Your **personal** data will be retained by the University only for as long as is necessary for processing and no longer than the period of ethical approval (30/09/2022). After this time, personal data will be securely deleted.

Your **research** data will be retained for a period of ten years in line with the University of Glasgow Guidelines. Specific details in relation to research data storage are provided on the Participant Information Sheet and Consent Form which accompany this notice.

Appendix G: Consent Form for Participants

Vietnamese version

University of Glasgow

College of Social Sciences

PHIẾU CHẤP THUẬN THAM GIA PHỎNG VẤN CÁ NHÂN

Dự án: THỰC HIỆN ĐỔI MỚI GIÁO DỤC: NGHIÊN CỨU ĐA TRƯỜNG HỢP TẠI CÁC TRƯỜNG TIỂU HỌC CÔNG LẬP VIỆT NAM

Nghiên cứu sinh: Hồ Hồng Linh

Giảng viên hướng dẫn: Giáo sư Clive Dimmock; Tiến sĩ Dong Nguyen

- Tôi xác nhận rằng tôi đã đọc và hiểu rõ phiếu **Thông tin dành cho người tham gia** của nghiên cứu nói trên và đã có cơ hội để đặt ra những câu hỏi, thắc mắc nếu có.
- Tôi hiểu rằng sự tham gia của tôi là tự nguyện và tôi có thể ngừng tham gia bất kì lúc nào mà không cần giải thích lý do.
- Tôi biết rằng:
  - Người tham gia sẽ được nhắc đến bằng tên thay thế trong bất kì công bố nào xuất phát từ nghiên cứu này.
  - Sẽ không có bất cứ ảnh hưởng nào đến công việc của người tham gia cho việc tham gia hay ngừng tham gia vào nghiên cứu.
  - Tên và bất kì thông tin nào có thể được dùng để xác định danh tính của người tham gia cũng sẽ được bảo mật.
  - Tất cả các dữ liệu sẽ luôn được xem là tuyệt mật và được lưu trữ một cách an toàn.
  - Các thông tin cá nhân sẽ bị xóa, hủy ngay khi dự án nghiên cứu kết thúc.
  - Các dữ liệu nghiên cứu không chứa các thông tin cá nhân sẽ được lưu trữ trong vòng 10 năm một cách an toàn và có thể được dùng cho các nghiên cứu học thuật trong tương lai.
  - Các dữ liệu nghiên cứu có thể được sử dụng để thực hiện các công bố khoa học dưới dạng bản in hoặc trực tuyến trong tương lai.

- Tôi đồng ý từ bỏ bản quyền với các dữ liệu được thu thập trong dự án nghiên cứu này.
- Tôi đã đọc nội dung **Thông tin về quyền riêng tư** có liên quan đến dự án nghiên cứu này.

Tôi đồng ý tham gia vào dự án nghiên cứu   ☐

Tôi không đồng ý tham gia vào dự án nghiên cứu   ☐

Tôi đồng ý việc thu âm buổi phỏng vấn   ☐

Họ và tên người tham gia …………………………

Ký tên   ……………………………………

Ngày …..... Tháng…....Năm……

Họ và tên nghiên cứu sinh: Hồ Hồng Linh

Ký tên   ……………………………………

Ngày …..... Tháng…....Năm……

English version

Consent Form for Individual Interview

Title of Project: IMPLEMENTING EDUCATION REFORMS: A MULTIPLE-CASE STUDY OF VIETNAMESE PRIMARY SCHOOLS

Name of Researcher: Ho Hong Linh

Supervisors: Prof Clive Dimmock and Dr Dong Nguyen

- I confirm that I have read and understood the Participant Information Sheet for the above study and have had the opportunity to ask questions.

- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

- I acknowledge that:

  - Participants will be identified by pseudonym in any publications arising from the research.

  - There will be no effect on employment arising from my participation or non-participation in this research.

  - All names and other material likely to identify individuals will be anonymised.

  - The material will be treated as confidential and kept in secure storage at all times.

  - Personal data will be destroyed once the project is complete.

  - Research data that do not include personal information will be retained for 10 years in secure storage for use in future academic research.

  - The material may be used in future publications, both print and online.

- I agree to waive my copyright to any data collected as part of this project.

- I acknowledge the provision of a Privacy Notice in relation to this research project.

I agree to take part in this research study ☐

I do not agree to take part in this research study ☐

I consent to interviews being audio-recorded. ☐

Name of Participant ………………………… Signature ………………………………………

Date …………………………………

Name of Researcher: Ho Hong Linh   Signature …………………………………………

Date …………………………………

Appendix H: Examples of school-level documents collected and analysed in case schools

Lesson plans

<div align="center">

KẾ HOẠCH BÀI DẠY

</div>

Môn học: **Tiếng Việt**   Lớp: **2**
Tên bài học: **Từ chú bồ câu đến in-tơ-nét**   Số tiết: **6**
Thời gian thực hiện: **14/4/2022**

<div align="center">

TIẾT 1
ĐỌC: TỪ CHÚ BỒ CÂU ĐẾN IN-TƠ-NÉT

</div>

I. YÊU CẦU CẦN ĐẠT:

1. Năng lực đặc thù:
- Đọc đúng, rõ ràng một văn bản thông tin ngắn, biết ngắt hơi ở chỗ có dấu câu.

2. Năng lực chung: Năng lực tự chủ và tự học; năng lực giao tiếp và hợp tác; năng lực giải quyết vấn đề và sáng tạo; năng lực ngôn ngữ.

3. Phẩm chất : Phát triển phẩm chất nhân ái (biết yêu thương, thường xuyên giữ liên lạc với người thân trong gia đình), chăm chỉ (chăm học) và trách nhiệm (có tinh thần hợp tác trong làm việc nhóm).

II. ĐỒ DÙNG DẠY HỌC:
- GV: SGK, SGV, kế hoạch bài dạy.   - HS: SGK.

III. CÁC HOẠT ĐỘNG DẠY HỌC CHỦ YẾU:

a.Ổn định: (1')

b.Kiểm tra bài cũ: (5') Cảm ơn anh hà mã
-GV gọi 1 HS đọc lại bài và trả lời câu hỏi: Em học được điều gì qua bài đọc?
-Nhận xét.

TG	Hoạt động của GV	Hoạt động của HS

3'	**1. Khởi động:**
	  * *Mục tiêu:* Dẫn dắt vào bài mới.
	  * *Cách tiến hành:*
	-GV hỏi:
	+ Em có những người thân nào ở xa?
	+ Khi xa những người ấy em cảm thấy như thế nào?
	+ Làm thế nào để em có thể liên lạc được với người ấy?
	- GV dẫn dắt, giới thiệu bài.
	2.Khám phá:
		- HS chia sẻ.
		
		-HS lắng nghe.

27'-
30'
	2.1. Hoạt động 1: Đọc văn bản.
	  * *Mục tiêu:* Giúp HS đọc đúng, hiểu nghĩa các từ mới.
	  * *Cách tiến hành:*
	- GV hướng dẫn cả lớp:
	+GV giới thiệu: bài đọc nói về cách trao đổi thông tin của con người từ xưa đến nay. Khi đọc, em lưu ý đến những đồ dùng, vật dụng con người sử dụng để liên lạc với nhau.
		
		-HS lắng nghe.

+GV hướng dẫn giong đọc: Nhấn mạnh những từ ngữ chứa đựng những thông tin quan trong nhất của văn bản như: *trao đổi thông tin, bồ câu, chai thuỷ tinh, gọi điện, in-tơ-nét*; ngắt giong, nhấn giong đúng chỗ.	-HS lắng nghe
+GV đọc mẫu, yêu cầu HS đọc thầm theo và tìm từ ngữ khó đọc, dễ đọc sai.	- HS thực hiện yêu cầu của GV.
- Luyện đọc từ khó: GV và HS tìm những từ khó đọc hoặc dễ đọc sai có trong bài, khó đọc hoặc dễ đọc sai ở bộ phân nào. (GV dùng phấn màu để gach chân bộ phận đó).	- HS thực hiện.
+ *in-tơ-nét:* GV giới thiệu đây từ tiếng Anh được phiên âm sang tiếng Việt, hướng dẫn HS đọc vần in và vần et.	
*GV đọc mẫu –Đọc cá nhân – Đồng thanh.	-HS thực hiện.
→ giảng nghĩa từ in-tơ-nét: mang kết nối các máy tính trên toàn thế giới.	
+ *trò chuyên:* GV hướng dẫn HS đọc âm tr, ch, vần uyên.	
*GV đọc mẫu –Đọc cá nhân – Đồng thanh.	-HS thực hiện.
+ *huấn luyên:* GV hướng dẫn HS đọc vần uân, vần uyên.	
*GV đọc mẫu –Đọc cá nhân – Đồng thanh.	-HS thực hiện.
→ giảng nghĩa từ huấn luyện: giảng dạy và hướng dẫn luyện tập.	
+*dễ dàng:* GV hướng dẫn HS đọc thanh ngã, vần ang.	
*GV đọc mẫu –Đọc cá nhân – Đồng thanh.	-HS thực hiện.
+GV gọi 1HS đọc lại 4 từ.	-HS đọc.
-Luyện đọc câu dài: *Nhờ có in-tơ-nét,/ bạn cũng có thể/ nhìn thấy/ người nói chuyên với mình,/ dù hai người/ đang ở cách nhau/ rất xa.//*	
+GV đọc cho HS phát hiện chỗ ngắt, nghỉ hơi.	- HS lắng nghe
+GV gọi HS xác định chỗ ngắt, nghỉ hơi.	-HS thực hiện.
+GV gọi HS đọc lại, ngắt, nghỉ hơi đúng.	-HS đọc.
- HDHS chia đoạn: (3 đoạn)	-HS theo dõi.
+ Đoạn 1: Từ đầu … khi ở xa.	
+ Đoạn 2: Tiếp theo … mới được tìm thấy.	
+ Đoạn 3: Phần còn lại.	
-GV gọi HS đọc nối tiếp đoạn:	-HS đọc.

+GV gọi 3 HS đọc nối tiếp 3 đoạn (lần 1), chú ý sửa sai cho HS.	-HS đọc.
+GV gọi 3 HS đọc nối tiếp 3 đoạn (lần 2), chú ý sửa sai cho HS, kết hợp giải nghĩa từ: *cây số (cây số là ki-lô-mét), đất liền (là vùng đất rộng lớn giáp với biển).*	-HS đọc.
- Luyện đọc đoạn trong nhóm 3 HS. Chú ý quan sát, hỗ trợ HS.	-HS luyện đọc trong nhóm 3.
+GV nhận xét việc đọc trong nhóm của HS.	-HS lắng nghe.
+GV kiểm tra việc đọc trong nhóm của 1 nhóm.	-1 nhóm đọc nối tiếp đoạn, các nhóm khác lắng nghe, nhận xét.
-GV gọi 2 nhóm thi đọc nối tiếp đoạn.	-HS thi đọc.
-GV gọi 1 HS đọc cả bài.	-HS đọc.
-GV cho HS đọc đồng thanh toàn bài.	-HS đọc đồng thanh.
-GV đọc lại toàn bài	-HS lắng nghe.

c. **Dặn dò:** (1')
-GV nhận xét tiết học, dặn dò HS chuẩn bị tiết 2.
IV. ĐIỀU CHỈNH SAU BÀI DẠY:
....
....

MA TRẬN ĐỀ KIỂM TRA CUỐI HK I - MÔN TOÁN LỚP 2 – ĐỀ A
NĂM HỌC: 2021 – 2022

Mạch kiến thức, kỹ năng	Số câu và số điểm	Mức 1		Mức 2		Mức 3		Tổng	
		TN KQ	TL	TN KQ	TL	TN KQ	TL	TN KQ	TL
1. Số và phép tính: - Biết viết, so sánh các số trong phạm vi 100. Nhận biết số liền trước, liền sau của một số. - Cộng, trừ không nhớ và có nhớ trong phạm vi 100.	Số câu	3	2	1	1	1	1	5	4
	Câu số	1, 3,4	1,2a	5	2b	7	4		
	Số điểm	1,5	2,5	1,0	0,5	1,0	1,0	3,5	4,0
2. Hình học và đo lường: - Nhận biết được hình tứ giác. Điểm, đoạn thẳng, đường thẳng, đường cong, đường gấp khúc và tính độ dài đường gấp khúc - Biết đơn vị đo độ dài, khối lượng, dung tích.	Số câu	1	1	1	1			2	2
	Câu số	2	3a	6	3b				
	Số điểm	0,5	0,5	1,0	0,5			1,5	1,0
Tổng	*Số câu*	4	3	2	2	1	1	7	6
	Số điểm	2,0	3,0	2,0	1,0	1,0	1,0	5,0	5,0
Tỉ lệ		50%		30%		20%		100%	

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Trường Tiểu học ……..   KIỂM TRA CUỐI HK I - NĂM HỌC 2021 – 2022
Họ và tên học sinh: MÔN: TOÁN - ĐỀ A
………………………………………   Ngày kiểm tra: 11/01/2022
Lớp: ……………..   Thời gian: 40 phút

Điểm:	GT1:	GK1:	Nhận xét của giáo vên
	GT2:	GK2:	

I. TRẮC NGHIỆM (5 điểm)

- HS chọn chữ cái trước ý đúng nhất rồi viết vào giấy kiểm tra :

Câu 1: *(M1) (0,5 đ) Số nào dưới đây gồm 6 chục và 8 đơn vị.*

     a. 60   b. 80   c. 86   d. 68

Câu 2: *(M1) (0,5 điểm) Đề- xi- mét là đơn vị đo:*

     a. Khối lượng   b. Độ dài

     c. Thời gian   d. Cả a, b, c sai

Câu 3: *(M1) (0,5 điểm) Hiệu của 96 và 8 là:*

     a.74   b.73   c. 72   d. 88

Câu 4: *(M1) (0,5 điểm) Trong số 67, chữ số nào ở hàng đơn vị?*

     a. Chữ số 7   b. Chữ số 6   c. Chữ số76.   d. Chữ số 67.

Câu 5: *(M2) (1 điểm) 86 là kết quả của phép tính nào ?*

     a. 47 + 43   b. 39 + 57   c. 90 − 4   d. 100 − 45

Câu 6: *(M2) (1 điểm) Đường gấp khúc bên gồm mấy đoạn thẳng?*

     a. 1 đoạn thẳng   b. 2 đoạn thẳng   c. 3 đoạn thẳng   d. 4 đoạn thẳng
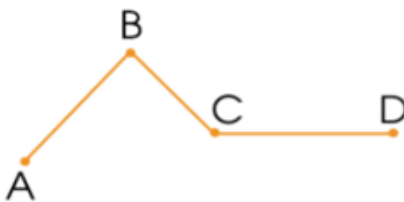
Câu 7: *(M3) (1 điểm) Lấy 56 trừ đi số liền trước số 8 thì được kết quả là:*

     a. 55   b. 48   c. 65   d. 49

II. BÀI TẬP (5 điểm)

Bài 1 *(M1) (2 điểm): Đặt tính rồi tính*

55 + 27	25 − 6	38 + 49	100 - 28
....	....	....	....
....	....	....	....
....	....	....	....

Bài 2: (1 điểm)

a. *(M1) (0,5 điểm Tính nhẩm* : 96 + 4 = ...

b. *(M2) (0,5 điểm): Sắp xếp các số 58, 85,32,57,97 theo thứ tự:*

- Từ lớn đến bé:...

Bài 3: (1 điểm) Số?

a.*(M1) (0,5 điểm)*   90 *l* − 50 *l* = ...*l*

b.*(M2) (0,5 điểm)* Hình bên có ...... hình tứ giác.
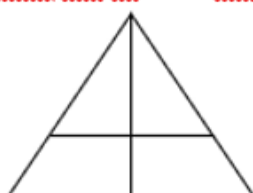
Bài 4: (M3) (1 điểm)

Cô giáo có 70 quyển vở, cô đã phát cho học sinh 48 quyển vở. Hỏi cô giáo còn lại bao nhiêu quyển vở ?

Bài giải

....

....

....

....

....

....

.............HẾT............

BIÊN BẢN

HỌP TỔ CHUYÊN MÔN 1,2,3 < Lần 1>

Tháng 11/2021

Thời gian : 14h00 ngày 6/11/2021

Địa điểm :

Thành phần :

Có mặt : 8/8 đủ

Chủ trì : ███████ - TT

Thư ký :

Nội dung

I/ Đánh giá hoạt động chuyên môn 2 tuần qua

1/ Học sinh

- HS test Covid đầy đủ để học trực tiếp đúng qui định

- HS đi học tuần 1 từ 1/11 học 6 buổi/

- Đã kiểm tra ĐCHT của HS :

+) Sách đa số đầy đủ

+) Tồn tại : có một số HS vở Tập viết trước, đồ nghề đời :

1A Bảo Trân, Phúc An, Thu Trang

1B Bảo Khương, Minh Thụy,

+) Vở đúng quy định.

BÚT CẦU

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- Các thành viên trong tổ làm việc rất nhiệt tình cùng hỗ trợ giúp nhau.
- Đã khảo sát chất lượng đầu năm.
→ Chưa thuộc chữ cái : Chí Phàm, Gia Hân, Thanh Hảo, Anh Thư (1B) Toàn Thắng, Thành, Lâm, ... (1A)
→ Chưa cầm viết được : Thanh Nhàn, Chí Phàm, Gia Hân (1B); Toàn Thắng, Thành Lâm, Đạt (1A)
3) Biện pháp.
- Nhắc HS đi học mang khẩu trang, đi học đúng giờ.

II/ Triển khai kế hoạch hoạt động 2 tuần tới.
- Thực hiện tốt chủ trương chính sách của Đảng và pháp luật nhà nước
- Thực hiện đúng lịch công tác Tháng 11 của trường.
- Chủ điểm tháng : Biết ơn thầy giáo, cô giáo
- Cách ngôn : Trọng thầy mới được làm thầy
- Mỗi cá nhân, kẻ cổ đủ các loại hồ sơ theo quy định nhà trường.
- Năm lại SSHS đầu tháng 11
  1A : 36/16   , 1B : 34/17.

Tiếp tục làm vệ sinh lớp học và trang trí lớp học.

- Dự giờ tuần 2, 3.
  → Tuần 2: ███████ dự giờ ███████ ngày 10/11 tiết 4; dự giờ cô Mỹ 11/11 tiết 3
  → ███████ dự giờ ███████ ngày 9/11 tiết 2, dự cô Nguyệt 12/11 (tiết 3)
  → Tuần 3: ███████ dự giờ ███████ ngày 15/11 tiết 1.
- Chọn HS tham gia đại hội liên đội.
- Sinh hoạt 20/11.
- Thao giảng tổ Tuần 4 (22/11 đến 26/11)
- Làm hồ sơ cá nhân:
  → Sổ tổng hợp kết quả đánh giá GD.
  → Sổ chủ nhiệm.
- Thông qua Bổ sung hoạt động năm học về tiêu nội bộ và các chỉ tiêu phấn đấu.
- GVCN liên hệ PH những HS quá chậm để l
III/ Nội dung sinh hoạt chuyên môn.
- Theo lị họp lần trước tổ chức giờ dạy m hoa Tiếng Việt 1 dạy âm \ vần do tình hình

bệnh HS mới đến trường tuần đầu tiên chưa thực hiện được, chuyển dạy vào tuần 3 khi HS học 2 buổi / ngày.

IV) Kết luận cuộc họp

- Các thành viên trong tổ thực hiện đúng các nội dung trên.

- Cuộc họp kết thúc vào lúc 16 giờ cùng ngày nội dung cuộc họp đã được các thành viên dự họp thông qua và nhất trí.