

# **‘You can just go out into the woods’**

**How geography teachers  
interpret and teach sustainable  
development**

Hampus Hallingfors



UMEÅ UNIVERSITY

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ISBN: 978-91-6850-037-9 (print)

ISBN: 978-91-6850-038-6 (pdf)

ISSN: 1402-5205, 2004-8890 (print), 2004-8661 (online)

GERUM no. 2026:3

Umeå Studies in the educational sciences no. 91

Electronic version available at: <http://umu.diva-portal.org/>

Printed by: Scandinavian Print Group, Hägersten, 2026

*To Sofia and Hugo, you have made it all worth it*



*Jag vill att din första resa ska vara med  
mig. Jag vill visa dig städer och landskap  
och lära dig att se på ett nytt sätt och våga  
klara dig på platser som du inte kan  
utantill, jag vill ha liv i dig*

Tove Jansson (1978, 171)

# Acknowledgements

The adage ‘it takes a village to raise a child’ suggests that the upbringing of a child is a collective responsibility, extending beyond the immediate influence of parents or primary caregivers. I would argue that a similar principle applies to the journey of a PhD student. Throughout my project, I have encountered numerous individuals whose interactions have profoundly shaped my development and, consequently, the trajectory of my research. Although you are too many to mention individually, please do not believe that your shared life experiences and perspectives have gone unappreciated; they have significantly and positively influenced my work.

Within my own ‘village’, my supervisors; Madeleine Eriksson, Erika Sandow, Henrik Åström Elmersjö, and with a most honourable mention to Aina Tollefsen are the first to be recognised. I wish to express my deepest and most sincere gratitude to you all. I have been incredibly fortunate to be guided by a supervisory team with expertise spanning both human geography and the educational sciences. Drawing from this collective pool of knowledge, I have always felt secure in the wealth of guidance available to me throughout the doctoral process. Consequently, my primary task has been to synthesise these two fields to the best of my ability.

Madeleine: my main supervisor during the final years of this project. You began as an assistant supervisor but stepped into the lead role when it was needed most. Thank you for providing such valuable insights into the academic world and for the comments that have sharpened my thinking as I finalised this work. I would also like to extend my thanks to my assistant supervisors. Henrik: you have been there almost from the start; although it took a few months to decide who my ‘educational sciences’ supervisor would be, I am so glad it was you. I genuinely appreciated the process of co-authoring the first paper of this thesis with you, where you taught me many tips and tricks that have been helpful in the work with the later papers. Erika: when Madeleine took over as main supervisor, I was pleased that you joined the group. You brought fresh energy and new ideas, and your focus on structure has been immensely helpful during these final years. Aina: a special and heartfelt thank you is due to you. You

started as my main supervisor but had to step down a few years into the project. I know that educational science was almost as new to you as it was to me, and I am deeply grateful for the enthusiasm and curiosity you showed towards the new perspectives the field offered you. Each of you has contributed insights that have challenged my assumptions and helped me navigate the complexities of geography and sustainable development from different angles. Thank you all for your hard work! I hope my project has encouraged you to think more deeply about educational science; as for Henrik, I look forward to seeing you engage even more with geography — after all, a key question remains: why is your focus so firmly on history?

What would the ‘village’ be without one's peers? Within my own, I wish to acknowledge the exceptional group of doctoral students at the department; had you not been part of this adventure, the process would have been far less enjoyable. When I began my studies in the midst of the COVID-19 pandemic, we were seven ‘academically young’ researchers. I am eternally grateful to this group of people for introducing me to the various facets of academic life. During the periods when departmental corridors stood empty due to remote-working mandates, our informal Zoom meetings were a vital highlight. Since then, new colleagues have joined the group while others have departed following successful defences; I am delighted to say that you have all been an essential part of my experience. The dynamic environment to which everyone has contributed has provided me with energy and resilience, particularly when motivation was difficult to sustain. In the earlier stages of my research project, when the pressures were less acute than in these final years, I took great pleasure in keeping my door open for whoever might stop by for a discussion, however brief. Equally, it has been wonderful to have newer members of the group knock on my door to check in. I consider myself extremely lucky to have had the opportunity getting to know you and learn about all your experiences. Thank you: Therese, Emma, Irma, Dorothee, Maria, Sania, Sarper, Sophia, Nils, Moa, Petrus, Caroline, Amrei, Tilda, Karolina, and Katja. Because of you – both past and present members of the PhD group – I might almost be tempted to do this all over again. To those of you who are yet to defend your theses: best of luck with all your projects. Not that luck has anything to do with it; you possess all the skills needed to succeed. I believe in you!

Naturally, the wider department, comprising both former and current colleagues, has also made an invaluable contribution to my ‘village’ and must be recognised. I hold fond memories of you all. You have all played a part in my work. Thank you, Emma Lundholm: as Head of Department, you were the first to welcome me upon my arrival, and I have greatly appreciated your leadership. You have now passed the torch, as my ‘village’s’ keeper of the common weal, to Roger Marjavaara; I am certain that he will continue in the same spirit, perhaps with a few more puns. Among those who have supported me throughout these years, I would particularly like to mention a few individuals. Håkan: your dedication to, education – and particularly the student teachers I had the privilege of teaching alongside you – has been of immense help. Given your connection to the Umeå School of Education, your keen interest in my work was consistently encouraging. It was always a pleasure to visit your office, where you generously offered your perspectives on matters both academic and personal. Of particular significance were the Geography Days (*Geografdagarna*), which we first attended in Uppsala and later planned and co-organised together with Linda and the National Association of Geography Teachers (*Geografilärarnas riksförening*). Although you undertook the lion’s share of the work, you always ensured my voice was heard and frequently noted the value of my contributions. Because you believed in me – so much so that you nominated me – I am now chair of the association. I am deeply honoured and I will do my utmost to prove that your faith in me was well-founded. As a colleague, friend, and chair, I hope that Geography Day (*Geografidagen*) will continue to thrive!

There are, of course, many more people to mention. In my ‘village’, we had something like a bonfire in the fikaroom (or centre of excellence) every morning – not the 10 o’clock break, but the one at 8. As someone who often started work at 7 (or even earlier), I eagerly anticipated the short, or occasionally longer, break with the department’s ‘morning people’. Those of you who were there ensured that I started every day with a smile and a mind at ease. To be honest, though, for quite some time, that was not necessarily the first ‘break’ of the morning. I greatly valued the times when Dagmar, while she was working at House Service (*Husservice*), would drop by my office to give me an update on university news, occasionally share pictures of her dog, and talk about life in general. She was something of a ‘harbinger of the hearth’ in the ‘village’, sometimes quite literally so,

by turning on the lights in my office if I was sitting in front of the computer in the dark. Dagmar's colleagues also deserve a thank you for always being accommodating and helping me with a smile regardless of my queries. Again, if I were to thank everyone by name, this thesis would be twice as long, but I must express my appreciation to a few more individuals. Marco Eimermann: thank you for being you and for supplying me with *Hopjes*; even though I will no longer be at the department, the need for restocking remains! Emelie Hane-Weijman: meeting you in the corridor and seeing your smile could turn an ordinary rainy day into a joyful one. I will greatly miss your kindness and genuine care. I do not know if I have ever truly had an idol – not because such people have necessarily been absent from my life, but because I never thought in those terms. However, I now believe I may have found one in you, Andreas Back. You have been a true academic role model, not only in this context but in life in general. It was no coincidence that you were one of the first people to know that I was to become a father.

I also wish to extend my gratitude to the administrative staff at the department, the true keepers of the keys (and indeed, the sanity) within my project's 'village': Lotta Brännlund and Sofia Eriksson: who respectively had and have full control over financial matters and always took the time to help me register expenses and navigate paperwork. Erik Bäckström, imagine how much more time you will have now that you no longer have to help me with every basic issue – most of which were usually solved just by you stepping into my office and looking at the computer screen! Fredrik Gärling: I am equally impressed by your ability to always answer my questions – often before I had even sent the emails – as by all your stories and perspectives on current events that you shared with anyone who would listen. We share a common interest in sports, and you frequently engaged me in discussions on topics ranging from the latest Björklöven game (next season in the SHL) to why referees should be more outspoken about controversial decisions. We did not always agree, but these were always enjoyable conversations. I will miss you calling me 'Åland'; I am still not sure if you once thought I originated from there or if you just picked up on my connection to the place. Karin Nilsson: words are not enough to express my gratitude for your presence at the department. Thank you!

Lastly, I wish to write a few sentences about Dieter Müller, who left us all too soon. You meant so much to so many people, both academically and personally. While our research interests were perhaps not the most closely aligned, every time we spoke, you showed sincere attention and curiosity in my work, even stating that you would happily sit on the grading committee for my defence. About a month before your passing, you took time from your busy schedule to meet with me to discuss my future career possibilities and even offered to help me with grant applications. While that will no longer come to pass, I am so thankful that someone of your stature took such an interest in my work and gave so generously of your time. I know you felt it was your responsibility as a senior academic not only to ‘talk the talk’ but to ‘walk the walk’, and that commitment made a huge impact. Sleep well.

This thesis was conducted within the framework of the Postgraduate School in the Educational Sciences, another neighbourhood of my ‘village’. I wish to thank everyone I have met there for fostering such a supportive and interdisciplinary research environment. I was the first doctoral student from the Department of Geography to be part of this research school; however, as I have said on several occasions, I sincerely hope I will not be the last. To my fellow peers within this group: thank you for the many hours we have spent together in courses, at board meetings, and during our leisure time. It has been both fascinating and educational to listen to colleagues from so many different fields to discussing topics concerning education, teaching, and learning, and to share experiences — whether during a lecture break or on a bus in North Wales.

Beyond those who have already been mentioned, the ‘village’ also consists of more transient visitors who have left their mark. My time as a doctoral student has been greatly enriched by numerous external encounters; these include everyone who ever visited the department, as well as those I met at national and international conferences. While I have already mentioned Uppsala, my conference experiences crossed international borders and even led to a two-week French adventure in Rennes and Paris in 2022. I am grateful for the feedback I received on my work on those occasions, which significantly aided the maturation of my research. However, even more important to me were the people I met: from Brazil in the West to China in the East, via South Africa in the South, and everyone in between. All your stories and experiences have helped me grow personally and

made me truly appreciate the opportunities I have been given during my doctoral studies.

Besides my long-suffering supervisors – who have had to read draft after draft after draft, especially in the final stages of this project, there have been many other readers who have engaged with my work. They have offered new ideas and prompted me to see my research from new perspectives. Your feedback and careful reading have been instrumental in bridging the gaps in my reasoning and refining my arguments. However, the readers would not have had anything to read had it not been for the people involved in the data collection. Firstly, I wish to thank the archivist(s) at the Swedish National Agency for Education (SNAE) who assisted me in obtaining the documents for my initial study and helped me collect material that I did not find while in Upplands Väsby. It was a pleasure to be in contact with you; and to the one archivist who is now retired, thank you for your emails, which contained more than information about the documents. Secondly, and even more importantly, I am profoundly grateful to all the teachers whom I had the opportunity to interview. I am so thankful that you agreed to share your views and experiences regarding your profession with me. Of all the people that may read (at least parts of) this thesis, I sincerely wish that you, more than anyone else, will derive something meaningful from my work.

Another group of people who have been equally important to me are those who joined the weekly floorball sessions with the Geographical Floorball Society, *GIS (Geografiska innebandysällskapet)*. We began as a small group from the department but later joined forces with EMG, SLU, IceLab, and others. As I have often said, and genuinely meant, these Wednesdays have been the highlight of my work week. Even though it took time away from my desk, I believe that, in a broader context, it provided a necessary respite from academic writing and thinking. It is remarkably easy to be distracted when chasing a ball with a stick alongside a bunch of happy people. Thank you for all the laughs and the exercise – which did not always feel like exercise, but simply like fun times, occasionally with some aches afterwards.

On a more personal level, I am deeply indebted to my extended families. To my family in Alcalá de Henares and Zürich – Epifanía, Luis, Alberto, Veronica, and Triana: I am so happy that we have met and that we

continue to see each other, even when years pass between the times we can give each other a kiss on the cheek and share some amazing Spanish food. *‘Si se cree y se trabaja, se puede!’*

There is also the Åland family: Eva, Henrik, Mia, Emil, Enzo, Hanna, and David (not ‘Åland’, but I will include you in that gang) and everyone else, including those who have ‘outsourced’ to Vaasa, Helsinki, and Stockholm; thank you for taking me in and showing me the best that Åland has to offer. Since Hugo arrived, it has been wonderful to see how he interacts and grows with all of you. In some respects, we will never be the same – some simply cannot learn to appreciate Swedish mustard – but it has been a joy to complain about (Swedish) tourists during the summers like a true local. Lasse: thank you for many things, but especially for the motivation to ski *Öppet spår* and *Vasaloppet*; I hope to do so many more times. Staying with you in Mora, taking the ‘Åland bus’ to the start in Berga by, and finishing the day with a joint dinner in Mora after 90 km of skiing is difficult to top.

To my own family – Mamma, Pappa, Filip, and Nadja: thank you for your encouragement and for all the wonderful times together. As with the family on Åland, it is always a delight to see you interact with Hugo and to see how much you care for him. I am not entirely sure you know exactly what I have been doing these past years, but it does not matter; you have always been unwavering in your support.

Finally, to the most important people in my ‘village’: this would not have happened without ‘my’ Sofia. I simply do not have the words to explain what your support has meant throughout the work on this thesis. Thank you for helping me and for motivating me to see this through to the end. Sharing my life with you is the most important thing to me, and I look forward to everything the future holds for us. One thing is certain: we will continue to watch our son, Hugo (depicted on the front cover), grow into an even more fantastic person. Hugo: it is so inspiring to see you learn and develop new skills every day. From a geographical perspective, I am very impressed by your spatial awareness, which became apparent from a very early age. You have been my greatest motivation, especially when work has been tough. To see you again after a long day is the best feeling I have ever known, and I would not trade that for anything in the world.

To everyone who recognises themselves in these pages, even if your names are not explicitly mentioned: I could have shared memories with all of you, but as I have already written, the thesis would then have been twice as long. However, if you have read these lines and wondered, ‘Is he thinking of me here?’, the answer is yes: you are one of the people who made this thesis possible, and I am so happy for the impact you have had on this work. You are all great residents of this village – ‘Hamp-us-ians’ as I have taken the liberty of calling you. You have been the best village I could have ever wished for!

Hampus Hallingfors  
Umeå, April 2026



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# List of papers

This is a compilation thesis that consists of the following three papers:

## **Paper I:**

Hallingfors, H., & Åström Elmersjö, H. (2025). Guarding the boundaries: a Swedish policy debate about geography and education for sustainable development. *Nordic Journal of Studies in Educational Policy*, 11(3), 218–230. doi: [10.1080/20020317.2025.2457171](https://doi.org/10.1080/20020317.2025.2457171)

Hallingfors is responsible for collecting and handling the material, while the analysis and writing are a joint effort by both authors.

## **Paper II**

Hallingfors, H. (forthcoming). The importance of ‘place’ in geographical sustainable development teaching: Experiences from northern Sweden. Manuscript submitted to the *Journal of Northern Studies*.

Hallingfors is responsible for collecting, analysing, and writing.

## **Paper III**

Hallingfors, H., Eriksson, M., & Sandow, E. (submitted). Teacher Agency and Sustainable Development: Negotiating Curricular Demands and Contested Knowledge in Sweden.

Hallingfors is responsible for collecting and handling the material, while the analysis and writing are a joint effort by all authors.

# Sammanfattning (Swedish summary)

Den samhälleliga debatten om hållbar utveckling har sedan begreppet myntades 1987 blivit alltmer påtaglig. Denna debatt berör ofta frågor om nödvändigheten av en omställning, bland annat för att undvika oåterkalleliga konsekvenser för människor och livsmiljöer. En betydande del av förhoppningarna om mänsklig anpassning till planetens resurser vilar på utbildningsväsendet, där elever ges möjlighet att lära sig om och kritiskt granska metoder för att främja hållbar utveckling. För att implementera hållbar utveckling i nationella utbildningssystem erbjuder bland annat Unesco stöd till FN:s medlemsländer. Det finns emellertid olika tillvägagångssätt för att integrera hållbar utveckling och lärande för hållbar utveckling (LHU) i en utbildningskontext. I Sverige delas ansvaret för att utbilda elever *om*, *i* och *för* hållbar utveckling mellan åtta grundskoleämnen. Ett av dessa är geografiämnet, vars styrdokument inkluderar ett omfattande innehåll rörande hållbar utveckling. Detta gäller för ämnet på såväl grundskole- som gymnasienivå.

I denna avhandling studeras geografiämnet och dess relation till hållbar utveckling utifrån tre teman: geografiämnet och dess status, platsen som pedagogisk resurs i lärande för hållbar utveckling samt geografilärares erfarenheter av hållbarhetsundervisning. Dessa teman belyser olika dimensioner av ämnets förhållande till hållbar utveckling och utgör samtidigt avhandlingens strukturella ramverk. Det första temat, *ämnet*, adresserar hur relationen mellan geografi och hållbar utveckling har tagit form på policynivå inom en svensk utbildningskontext. Det andra temat, *plats*, skiftar fokus från läroplansnivån till de förutsättningar under vilka geografiämnet behandlar hållbar utveckling inom ramen för gällande styrdokument. Syftet är att lyfta fram ämnets bidrag till LHU, däribland ett holistiskt perspektiv och förståelsen för sambanden mellan platser och människor. Det avslutande temat, *lära*, adresserar det handlingsutrymme som formas av styrdokument, pågående samhällsdebatt och pedagogisk praktik. Här undersöks hur lärare, genom sin professionella agens, balanserar dessa förutsättningar och förväntningar när de undervisar i hållbar utveckling.

Syftet med avhandlingen är att undersöka hur lärande för hållbar utveckling (LHU) konceptualiseras, gestaltas och förankras geografiskt

inom geografiämnet på högskolan och gymnasiet. För att uppnå syftet utgår avhandlingen från följande forskningsfrågor:

1. Hur ramar hållbar utveckling in och förhandlas inom geografiämnet?
2. Hur kan geografiska perspektiv främja en undervisning som behandlar komplexiteten i hållbar utveckling?
3. Hur upplever och hanterar geografilärare undervisning i hållbar utveckling?

Frågorna är i huvudsak kopplade till varsitt tema, men eftersom temana kompletterar varandra besvaras frågorna till viss del av samtliga delstudier. För att samla in material har en arkivstudie genomförts, där dokument från en läroplansrevision för gymnasiet under mitten av 2000-talet har sammanställts. Detta material har undersökts genom en riktad innehållsanalys där gränsdragningsteori fungerar som teoretiskt ramverk. Därtill har åtta geografilärare i Västerbotten intervjuats rörande deras praktiska arbete med hållbar utveckling. Detta material utgör grunden för de återstående två studierna och bearbetas genom tematisk analys.

I fokus för det första temat, *ämnet*, står den debatt som uppstod i anslutning till en läroplansrevision där Skolverket föreslog att hållbar utveckling skulle inrättas som ett självständigt ämne och ersätta geografiämnet som karaktärsämne på samhällsprogrammet. Gränsdragningsteori strukturerar studien med hjälp av de teoretiska begreppen *exkludering*, *expansion* och *skydd av autonomi*, vilka identifierades som bärande argument i debatten. Inom kategorin *exkludering* görs gällande att hållbar utveckling är ett ovetenskapligt och politiskt begrepp. Det påtalades till exempel att förslaget var en tjänstemannaprodukt utan koppling till en vetenskaplig miljö. Kritiken riktades mot att hållbar utveckling föreslogs bli ett eget ämne; begreppet ansågs snarare vara ett centralt perspektiv inom geografiämnet. Gällande argument som rörde *expansion* med hänvisning till geografiämnets innehåll framhölls att hållbar utveckling passar väl in i ämnets holistiska ansats. Frågor som relaterar till hållbar utveckling har sedan länge behandlats av både disciplinen och skolämnet. Därför ansågs det naturligt att geografiämnet skulle vara ett av de ämnen som tillskrevs ett särskilt ansvar för att hantera dessa frågor. Den sista uppsättningen argument

fokuserade på *skydd av autonomi* och pekade på att geografi var en väletablerad vetenskaplig disciplin och det mest holistiska ämnet i läroplanen. Analysen visar dock att även om geografiämnet bedömdes som lämpligt för undervisning i hållbar utveckling, fanns det utmaningar för ämnet, främst kopplade till otydliga syften och en svag ämnesstatus.

Det andra temat, *plats*, fokuserar på geografiämnets potentiella bidrag till LHM. En central teoretisk utgångspunkt är rumslig teori, där plats konceptualiseras som en relationell process. Denna kombineras med ramfaktorteori för att belysa de villkor lärare förhåller sig till vid planering och genomförande av undervisning. Här får den relationella konceptualiseringen av plats ett stort fokus. För det första framträder en hierarkisk ordning där Västerbottens landsbygd positioneras lägre än urbana miljöer i länet, vilka i sin tur positioneras lägre än platser i södra Sverige. Denna ordning kan resultera i ett upplevt utanförskap. Vidare kunde lärarna beskriva hållbar utveckling som ett abstrakt begrepp, svårt för elever att förstå på ett djupare plan. För att göra hållbarhetsutmaningarna mer relaterbara och underlätta lärandet använde lärarna därför den lokala platsen som pedagogisk resurs. Den lokala platsen fungerade även som en arena för handlingskompetens. Genom att identifiera hållbarhetsutmaningar lokalt gavs eleverna möjlighet att agera och påverka sin omgivning. Skogen var ett återkommande exempel där närheten till naturen sågs som en möjlig drivkraft för engagemang. Här belystes relationen människa–miljö och naturens värde diskuterades i andra termer än rent ekonomiska. Den lokala platsen framstår som avgörande för hur lärarna strävar efter att göra undervisningen mer tillgänglig för eleverna. Baserat på analysen av lärarintervjuerna argumenterar jag för att platsen är så central att den bör betraktas som en ramfaktor för lärarnas arbete.

Slutligen fokuserar det sista temat, *lärarna*, på hur de i praktiken genomför undervisning i hållbar utveckling. Här blir begreppet *lärarens* centralt, eftersom det belyser hur lärare navigerar mellan styrdokumentens formuleringar, samhälleliga förväntningar och lokala kontexter i undervisningen. I intervjuerna framkom utmaningar som ofta härrör från sammanhang utanför skolan. Exempelvis beskrevs en växande acceptans för ”alternativa fakta” och provocerande utspel från elever, som utmanande för undervisningen, men det beskrevs för den skull inte utgöra skäl att undvika hållbarhetsfrågor. Klimatångest bland elever var en

annan aspekt som lärarna hanterade genom att försöka omsätta elevernas oro i engagemang. Geografins status beskrevs som en utmaning, ofta kopplad till tidspress och en önskan om mer utrymme i kursplanen för att kunna behandla ämnets bredd. Slutligen uttrycktes ett stort behov bland lärarna av fortbildning, i synnerhet ämnesspecifik sådan. Kritik riktades mot Skolverket för bristande stöd och lärarna beskrev hur egna initiativ togs för att utveckla sin kompetens. Temat visar att lärarna, trots utmaningar, utövar sin läraragens för att engagera elever i LHU. Genom sitt arbete framstår de som förändringsaktörer som skapar förutsättningar för eleverna att själva bli förändringsaktörer för att främja hållbar utveckling.

Det sammanfattande budskapet från avhandlingen är att geografiämnet besitter goda möjligheter att bidra med kunskap inom hållbar utveckling. Detta stöds i samtliga teman. Dels handlar det om hur relationen mellan ämnet och hållbar utveckling har förhandlats fram, dels om hur en geografisk konceptualisering av den relationella platsen kan bidra att fördjupa elevers förståelse av hållbar utveckling. Slutligen belyses hur lärarna genom sin agens navigerar de förutsättningar som påverkar arbetet. Det finns dock utmaningar som bör understrykas. En central utmaning är ämnets status, vilken bidrar till en utsatt position som påverkar både ämnets utrymme i skolan och dess legitimitet. Ytterligare en utmaning är brister inom ämnesspecifik lärarutbildning, fortbildning och stöd från Skolverket, något som lärarna uttryckligen efterfrågar.

# Introduction

Worldwide, societies today face challenges related to climate crises and rising inequalities (Bianchi et al., 2024). Research (e.g., see Wildemeersch et al., 2023; Figueira & Fullman, 2025; Kulin & Rhodes, 2026) increasingly highlights the urgency of questions concerning our ecology and the exploitative ways in which humans interact with the natural world, even as polarisation and climate denialism, however much they may be decreasing, remain persistent realities. Yet, in this era of polycrisis, there are international agreements (though not always legally binding, e.g., UNDRR, 2015) that commit states to working towards a more sustainable world, i.e., sustainable development. Sustainable development has been defined as modes of societal progress that meets the essential needs of people today while safeguarding the ecological, social, and economic conditions required for the well-being of future generations (WCED, 1987). Following Maude (2023), sustainable development refers to a process of economic and social transformation that aims to achieve an environmentally sustainable economy and a socially just society. Waas et al. (2011) argue that the concept of ‘sustainable development’ implies that humans, both now and in the future, should protect the environment so that humans and nature can coexist.

Global efforts to address the escalating socioecological challenges of today have placed sustainable development at the forefront of international policy agendas. A key framework is the United Nations’ 2030 Agenda, operationalised through the 17 Sustainable Development Goals (SDGs), which articulate an integrated vision encompassing the environmental, social, and economic dimensions of sustainability (United Nations, n.d.; United Nations General Assembly, 2015). SDG 4, which aims to ‘ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’ (United Nations, n.d.). This goal underscores the transformative potential of teaching and learning in fostering the competencies and values needed to respond to complex sustainability issues.

To further emphasise the importance of the educational context, the United Nations Educational, Scientific and Cultural Organisation

(UNESCO) has focused on education for sustainable development (ESD). Similar to sustainable development, there are several definitions of ESD. UNESCO emphasises that, through ESD, learners, regardless of age, should acquire the knowledge, skills, values, and agency required to address interdependent global challenges. It also empowers learners to make informed decisions and take action, at both the individual and collective levels, to transform society and care for the planet. The perspective on the ESD learning process is that it is lifelong and it is an essential part of quality education. It aspires to strengthen the cognitive, socio-emotional, and behavioural dimensions of learning and encompasses content, outcomes, pedagogy, and the learning environment itself (UNESCO, 2014, 2025).

UNESCO advocates this issue and supports UN member states in integrating ESD into their education systems (UNESCO, 2019). When making the case for the crucial urgency of enhanced sustainability efforts, children are often highlighted as future leaders who could change patterns and create a brighter future for all (e.g., see Lindley, 2024). Hence, research on ESD in relation to schools, teachers, and pupils has been growing (Bezljak et al., 2020; Opuni-Frimpong et al., 2022). ESD concerns more than information about sustainable development; it is often combined with ‘21st-century skills’ such as collaboration, communication, creativity, critical thinking, and problem-solving (González-Salamanca et al., 2020; González-Pérez & Ramírez-Montoya, 2022). This suggests that sustainable development is not just a subject matter to be memorised and repeated. Understanding how sustainable development is conceptualised, enacted, and negotiated within educational settings is essential for analysing how societies prepare future citizens to engage critically and constructively with complex sustainability issues (Huckle, 2002).

In this thesis, to provide structure, three themes are explored that each concern the school subject of Geography,<sup>1</sup> and the education *about, for,* and *as* sustainable development: *‘The subject and status of Geography’*,

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<sup>1</sup> When the subject of Geography is considered, it is written with a capital ‘G’; the same decision is made in relation to other subjects and proposed subjects. This choice originates from Paper I, where the decision was made to differentiate between the proposed subject of Sustainable Development and sustainable development as a theoretical concept or perspective within, for example, the subject of Geography.

*'Place in teaching sustainable development'*, and *'Geography teachers' experiences of teaching sustainable development'*. The first theme focuses on *the subject* and provides insights into how the relationship between Geography as a school subject and sustainable development is constructed at the curricular level within the Swedish educational context. In Sweden, it is not explicitly stated which subjects are responsible for covering ESD. Instead, the current and previous school curricula and syllabuses include perspectives on sustainable development (Skolverket, 2011, 2019, 2022, 2025a, 2025b). Sustainable development and sustainability are mentioned in the syllabuses for eight subjects in the current governing documents for compulsory school, of which the subject of Geography is one (Skolverket, 2022).

The second theme, *place*, shifts the focus from the curricular level to the conditions under which the subject of Geography covers sustainable development in its syllabus. Educational research has also highlighted the contributions that geography can make to sustainable development through a holistic perspective and by employing geographical concepts to understand the interrelatedness of places and people (Manning, 1990; Molin et al., 2015). What is of interest in this thesis is how place can provide guidance in teaching *about, for, and as* sustainable development.

Finally, the third theme emphasises the teachers and the conditions outlined in the governing documents, as well as in relation to societal debate and expectations (Isgren Karlsson & Backman, 2023). How Geography teachers balance these expectations and conditions when teaching sustainable development is the focus of this final theme. Each of these themes corresponds mainly to one of the three papers in this thesis, but as they are intertwined, it is appropriate to emphasise the themes rather than each individual study.

## Aim and research questions

This thesis aims to investigate how sustainable development is conceptualised, enacted, and geographically grounded within the secondary school subject of Geography. The thesis examines the scientific and disciplinary boundaries at stake in these negotiations, as well as how teachers mobilise geographical concepts, local place relations, and pedagogical strategies to navigate political and ethical tensions. The focus

includes both how education for sustainable development (ESD) has been institutionally framed and how these frames are negotiated, as well as how teachers navigate the sustainability perspective. This approach allows for research into how sustainable development first became considered part of the subject of Geography in the beginning of the 2000s, and how teachers work with the concept regularly in an educational context.

The research questions that guide the thesis are the following:

1. How is sustainable development framed and negotiated within the subject of Geography?
2. How can geographical perspectives support teaching that engages with the complexities of sustainable development?
3. How do Geography teachers experience and navigate teaching for sustainable development?

# Setting the scene

## Geography as an academic discipline and a school subject

Geography is both an academic discipline and a school subject. While they are related, their objectives have diverged (Molin, 2006). In academia, geography dates back to the 18th century, and was introduced as a Swedish academic discipline in 1897. An important reason for establishing the discipline was to meet the demand for Geography teachers. At the time, the focus was on synthesis, which emphasised competence in both human and physical geography (Dessen Jankell, 2025). In Sweden, the academic discipline of geography has been divided into human and physical geography since the 1960s (Helmfrid, 1999). This disciplinary split was caused by specialisation in both human and physical geography, with their respective focuses shifting toward spatial science in a societal context and earth science. Therefore, it was not considered possible to maintain a synthesised academic discipline (Bladh & Molin, 2012; Dessen Jankell, 2025). According to Pred (1984) and Bladh and Molin (2012), these changes led to teacher education losing its connection to research developments in the two fields. The division of the discipline fostered greater specialisation in Swedish academia and, in turn, closer collaboration between geography and other disciplines (Buttimer & Mels, 2006). The Swedish way is not the only possible structure internationally; for example, in England, France, and Germany, geography is still organised as a holistic discipline. In those countries, specialisation is organised within geography departments (Dessen Jankell, 2025).

As a Swedish school subject, Geography became an independent subject in compulsory school (*folkskola*) in 1895 and in upper-secondary school (*gymnasiet*) in 1909 (Dessen Jankell, 2025). At this time, the subject of Geography, together with History, had an important role to play in connection to nationalism, as it helped to build a perception of 'Swedishness' (Evertsson, 2015). Because of this nationalistic focus and its role in providing general knowledge, Geography held a strong position within the educational system. This contributed to the establishment of the discipline, and until the 1950s, the discipline and the school subject

had close ties and developed in parallel (Bladh & Molin, 2012). Around the time when the academic discipline of geography was divided in two in the 1960s, the school subject matter was divided between the new subjects, Social studies (*Samhällskunskap*) and Science studies (*Naturkunskap*), in upper-secondary school (Molin, 2006). This resulted in Geography being absent from this level of education as an independent subject from 1965 (Skolöverstyrelsen, 1965) until its reintroduction in 1994 (Skolverket, 1994b). In compulsory school (*grundskola* since 1962), Geography remained a holistic subject, bridging human and physical geography, until 1980, when it became part of the social science subjects, together with Civics, History, and Religious Education (Dessen Jankell, 2025). With the introduction of the 1994 curriculum (Skolverket, 1994a), Geography was again re-established as an independent subject.

From the 1970s to the beginning of the 2000s, with a few exceptions (e.g., Olsson, 1986; Wennberg, 1990; Molin, 2006), hardly any research attention was given to Geography education and teaching. From the 2010s and onwards, however, more research has been conducted within the field, including a more direct focus on the relationship between the subject of Geography and sustainable development (Torbjörnsson, 2011, 2014; Kramming, 2017; Örbring, 2021; Dessen Jankell, 2023; Bladh, e.g., see 2014, 2020).

Dessen Jankell (2023) argues that the upsurge in this field of research is likely due to an identified need for more contextual knowledge of the Swedish context. One reason for the previous lack of research interest shown towards the subject of Geography could have been the fact, mentioned above, that the subject was removed as an independent subject from the 1965 upper-secondary school curricula (Skolöverstyrelsen, 1965), as pointed out by Grahn (2021), with similar challenges in compulsory school (Skolöverstyrelsen, 1980). It is possible that since the subject did not have its own place within the curriculum, let alone the syllabus, it was not as visible or attended to. In compulsory school, Geography is a subject in the curriculum. Still, it is not uncommon for it to be identified only as a social studies subject, alongside Civics, History, and Religious Education.

Both the studies by Torbjörnsson (2011, 2014) and the study by Molin (2006) emphasise the upper-secondary school. More recently, Dessen

Jankell and Örbring (2020) edited a book focused on Geography didactics that could serve as a tool for Geography teachers from compulsory school (Year 4) through upper-secondary school. The book has a general focus on geography while also addressing sustainability issues.

## Previous research and theoretical research context

### Geography didactics research

The research field of didactics can be divided into general didactics, which covers generic issues, and subject didactics. Subject didactics relate to specific subjects. Within this form of didactics, dependencies become clear, as it is tied to educational policy and is a factor in curriculum making. Included in subject didactics are what content pupils are to learn and why, as well as what approaches to use in teaching (Kansanen & Meri, 1999). Subject didactics combine specialised knowledge with the question of what knowledge is to be transformed into content that pupils are to learn during their education (Janík et al., 2025).

Within didactical research in Geography, the focus is on how pupils understand the world through geographical thinking, which is achieved through knowledge of key geographical concepts and subject-specific perspectives (Dessen Jankell, 2025). For example, attention has been given to space and place in relation to education for sustainable development (ESD). Maude (2023) and Dessen Jankell et al. (2021) argue that effective geography teaching hinges on making pupils think with the discipline's conceptual 'tools', such as space and place, rather than merely accumulating topical facts. Maude (2023) offers the '*what*' and '*why*' of conceptual content for ESD. His framework centres on three core concepts, 'environment', 'interconnection', and 'place', through which learners frame questions, organise evidence, and construct explanations about sustainability and sustainable development. These concepts enable pupils to distinguish states (sustainability) from processes (sustainable development), trace causal chains across scales, and evaluate environmental functions in ways that directly support ESD aims. Dessen Jankell et al. (2020, 2021) provide a '*how*' for orchestrating those concepts into teachable, inquiry-rich sequences. They propose a structured model for organising concepts that fosters 'geographical

knowing' by coupling disciplinary lenses with inquiry. Their model's inner layer (place, space, scale) initiates geographical questioning; the second layer (processes, connections and relations, human–nature; change) focuses analysis; and, finally, the outer layer (patterns, systems, perspectives, and values) shapes how pupils present and deliberate knowledge. The model is explicitly designed to scaffold planning, feedback, and pupil inquiry in classroom practice. Hence, both the didactical framework and the model share a commitment to disciplinary geographical concepts as vehicles for deep learning and ESD-relevant competencies: systems/relational thinking, causal reasoning, scale awareness, and an emphasis on inquiry, where pupils pose geographically meaningful questions and evaluate contested sustainability issues.

## Education for sustainable development

There is an expectation that ESD will diverge from other forms of education in how it is intended to impact learners of all kinds and societies. Activities are centred on the pupils, based on inquiry, promote action, and focus on transformative learning (Carrió Llach & Llerena Bastida, 2023; Kolenatý & Činčera, 2025). According to Bränberg et al. (2020), no teaching method is necessarily better than another; it is important that the state of mind is focused on learning as something more than conveying or receiving facts, and that the importance of interdisciplinary work is recognised. As a result, learning crosses boundaries to focus on holistic values. Three views on learning relating to sustainable development can be identified as learning *about*, *for*, and *as* sustainable development<sup>2</sup> (Vare & Scott, 2007; Vare, 2022). To learn *about* means that the learner basically becomes aware of what sustainable development is. When being educated *for* sustainable development, the focus shifts not only to being knowledgeable and understanding what the concept entails, but also to critically reflecting on the ideas, values, and beliefs at the heart of sustainability. Learning *as* emphasises, among other things, empowerment, the competence to take action, and the ability to navigate complexity, uncertainty, and ambiguity, as well as to learn from engaging with the world, including critically assessing the ambiguities inherent in the concept (Vare, 2022; Detroz et al., 2025). A challenge is that the concept of *sustainable development* has been subject to scientific

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<sup>2</sup> Vare (2022) writes includes both learning and assessment of ESD. In relation to learning, the terminology is *about*, *for*, and *as*, which is relevant in this thesis. However, when discussing the assessment of learning, the terms utilised are *of*, *for* and *as*.

critique for various reasons. For one, its vagueness is problematic because it offers no guidance, leaving it open to ‘greenwashing’ and failing to take environmental integrity seriously. Depending on how the concept is used, it could mean anything and, consequently, nothing (Farley & Smith, 2020). Another issue is that the ecological and economic dimensions cannot be combined, according to research (Castro, 2004; Maude, 2023).

To meet these views (*about, for, and as*) and expectations regarding ESD teaching, approaches to education have been developed to facilitate learners' understanding. There is no need to present all teaching methods, but a couple will be briefly outlined below. The first approach used in ESD teaching is place-based education (PBE), which centres on how sustainability issues manifest in a specific place (Ito & Igano, 2020). This encourages pupils to develop and strengthen a sense of place, which can lead to a sense of responsibility toward that location (Li & Shein, 2023). A second strategy, well-suited to addressing sustainable development in teaching, is problem-based learning (PBL) and project-based learning (PjBL). In these approaches, pupils are faced with a real-world issue and work in small groups on tasks related to professional situations. The main difference between the two approaches lies in the learning process. In PBL, it is driven by the questions posed by pupils, while in PjBL, learning focuses on the product pupils are supposed to develop to address an identified sustainability issue (Carrió Llach & Llerena Bastida, 2023). Finally, a third approach is a participatory one that focuses on transforming learners on different levels, such as cognitive, behavioural, and social. This is targeted at helping pupils become empowered citizens who can take responsibility for their own actions and influence others (Kartsoukis & Kesidou, 2025).

How the work to achieve this has been implemented in Sweden can be said to have started in 1994. That is the year when the concept of sustainable development first appeared in the curriculum for compulsory school in 1994 (Skolverket, 1994a). At that time, the term was mentioned only twice and was not included in the syllabuses for any subjects. The Geography syllabus from 1994 focused on understanding the use of resources and reflecting on how this use could affect local environments, as well as the global level, and on considering alternative uses and distributions of resources (Skolverket, 1994a; 1994b). Before that, in the 1980 combined curriculum and syllabus (Skolöverstyrelsen, 1980), Geography was

grouped with Civics, History, and Religious Education, referred to as social studies, and the boundaries were not always clear. In that document, what could be considered to bear a resemblance to sustainable development was referred to as international cooperation regarding the use of resources, environmental protection, and environmental degradation. In other words, the teaching was environmental education (Skolöverstyrelsen, 1980). The current curriculum for compulsory school, emphasises the importance of providing pupils with appropriate knowledge and understanding of sustainable development, for example, in a geographical context, as it is included in the Geography syllabus (Skolverket, 2022).

The research interest in ESD has been significant, both internationally (e.g., see Kopnina & Meijers, 2014) and within Sweden. In the Swedish context, research, for example, has studied how to implement ESD at different levels of education (Berglund et al., 2014; Manni, 2023; Gillberg, 2025). It should be noted that, in the Swedish context, education on the human–nature relationship existed before 1987, when the concept of sustainable development was first formulated (Skolöverstyrelsen, 1980; WCED, 1987). In the compulsory school curricula from 1980 onward, the human–nature relationship was incorporated into the syllabi for social studies subjects. The focus was primarily ecological, but one can also detect content on social and economic dimensions (Skolöverstyrelsen, 1980). With that said, in a Geography (social studies subject) context, including questions that concern the human–nature relationship is nothing new. Still, with the introduction of ESD, it might be said that the approach and focus have become more central in education and that the different dimensions can be considered simultaneously.

# Theoretical framework

The three themes, presented in the previous section, are addressed across the theories and studies in this thesis. For the first theme, '*the subject and status of Geography*', boundary-work theory (Gieryn, 1983, 1999) serves as an analytical lens. The theory plays a central role in understanding how Geography's place in upper-secondary school was negotiated. The second theme, '*place in teaching sustainable development*', is explored through spatial theory, which is well established within geography (see, for example, Massey, 2005, and Harvey, 2006). It is connected to educational research to conceptualise place within the scope of this thesis. The third and final theme, '*Geography teachers' experiences of teaching sustainable development*', draws on teacher agency theory (e.g., Biesta et al., 2015). Here, the focus is on how teachers exercise agency in Geography teaching in relation to sustainability.

## Boundary-work [The subject and status of Geography]

The first theme, 'the subject and status of Geography', is approached through boundary-work theory (Gieryn, 1983, 1999). In this thesis, the focus is on how the epistemic authority of Geography is negotiated, particularly in relation to the positioning of sustainable development within the subject. Boundary-work theory was developed by the sociologist Thomas F. Gieryn (1983, 1999), who defined it as the selection of qualities by scientists that constructs a symbolic boundary separating science from non-science. Boundary-work can also be described as a competition for credibility (Carlson, 2019). The central idea underpinning boundary-work theory is that conflicts emerge when different bodies of knowledge each claim legitimacy and reliability (Clark et al., 2016). In these arenas, different actors present their claims as science by arguing why one particular field is more credible than another. These disputes are rarely settled by scientific authorities through mere knowledge production. Instead, they move beyond academic settings and are settled in broader contexts by those who consume and operationalise these facts (Gieryn, 1999). Hence, it is through the circulation and appropriation of knowledge that scientific authority and credibility are ultimately

established (Falk, 2024; Gieryn, 1983, 1999). The theory emphasises that credibility, epistemic authority, methods, and facts are guarded within the boundaries of a scientific discipline (Gieryn, 1999; Johnston & Sidaway, 2015).

All disciplinary boundaries are porous to some extent, facilitating interdisciplinary connections (Johnston, 1986). If a boundary is too porous, there is a risk that the distinction between different academic fields will disappear. The discipline of geography can be positioned at the more porous end of this spectrum (Massey, 1999), where personal opinions and political perspectives may become intertwined with validated knowledge and science (Clark et al., 2016). This illustrates that boundary-work is not fixed but is responsive to ongoing negotiations. Indeed, these disagreements are continuous negotiations in which different areas of knowledge strive to convince others of their legitimate authority in a specific context (Carlson, 2019).

Three distinct forms of boundary-work, each constituting particular modes of demarcating disciplines, were originally presented by Gieryn (1983). Subsequent research, in a slightly different context yet focusing on sustainable development, has suggested that there are as many as six types of boundary-work (Clark et al., 2016). However, for the purposes of this thesis, the focus is on the original three forms: *expulsion*, *expansion*, and *protection of autonomy*. Firstly, '*expulsion*' refers to disputes between authorities asserting themselves as genuine science, distinguishing their domain from pseudoscience, popular science, or other non-scientific forms of knowledge. What is contested is the allocation of epistemic authority: what falls within the boundaries of science and what does not (Gieryn, 1999, p. 16). In this thesis, the epistemic authority of the discipline of geography, and by extension, the school subject of Geography, is being challenged. This is reflected in arguments suggesting that geography's disciplinary status has been perceived as less prominent (see Houghton & Houghton, 2016), thereby making geographical knowledge more open to challenge. Secondly, '*expansion*' refers to the extension of a pre-existing discipline by incorporating additional ontological fields (Gieryn, 1999). This form of boundary-work is relevant to the first theme because sustainable development represents a central perspective within the discipline of geography and, by extension, within the subject of Geography. The fact

that the school subject embodies a more holistic character than the academic discipline does not diminish the significance of this boundary-work; rather, it strengthens the arguments for expanding Geography to encompass issues of sustainability. Finally, '*protection of autonomy*' is somewhat different from the previous two forms of boundary-work. It illustrates how scientists safeguard the boundaries and autonomy of their discipline at a given moment. Such protection may arise in response to authorities external to the discipline, such as legislators, who may propose or enact decisions that could compromise the authority of those within the boundaries (Gieryn, 1999). The boundaries between scientific fields are inherently flexible and fluid, which gives rise to ongoing disputes and helps explain why efforts to protect disciplinary autonomy emerge (Gieryn, 1983, 1999; Carlson, 2019; Clark et al., 2016; Falk, 2024).

Since boundary-work is a constantly ongoing negotiation, it is rarely straightforward; this becomes apparent in disputes over disciplinary boundaries. However, such disputes may arise under either of the following conditions: (i) when the boundary of a scientific discipline is contested, particularly during the process of establishing a new discipline (Larsson, 2001); or (ii) when a new school subject is proposed. The likelihood of such disputes increases when it is necessary to clarify the relationship between the proposed subject and an existing one (Bernstein, 1996/2000; Elmersjö, 2017). An example of the latter is the proposed subject of Sustainable Development, which challenges the scientific boundaries of the existing subject of Geography (Östman, 2005). In this thesis, boundary-work theory has been utilised to study the debate during the curriculum reform process for the Swedish upper-secondary school curriculum that occurred between 2004 and 2006. The first theme, 'the subject and status of Geography', serves as an illustration of boundary-work in action where the curricular place of Geography was negotiated, alongside discussions of how sustainable development could be situated within the boundaries of the geography discipline.

## Spatial theory [Place in teaching sustainable development]

In this theme, 'place in teaching sustainable development', particular attention is given to *place* as an analytical concept for understanding how sustainable development is situated and made meaningful in Geography

teaching. Spatial theory refers to a set of ideas and frameworks that examine the interdependence between space and social, cultural, economic, and political processes.

A range of theoretical perspectives illustrates that *space* and *place* are far from uniform concepts, and different scholars emphasise distinct qualities of their relationship. For instance, Yi-Fu Tuan (1977) distinguishes space as openness, possibility, and movement, while place represents security, attachment, and the experiential meanings individuals develop through dwelling and practice. In contrast, David Harvey (1990), inspired by Lefebvre, approaches space and place through a political-economic lens, understanding both as produced through material conditions, power relations, and capitalist processes. Place becomes a temporarily stabilised configuration within broader spatial relations shaped by economic and social forces – absolute, relative, and relational. Doreen Massey (2005) complicates these distinctions further by conceptualising space as relational, multiple, and constantly under construction, arguing that places (and spaces) are not bounded or static but intersections of flows, connections, and trajectories. John Agnew (1987) offers another angle, analytically separating place into three dimensions: location (the geographical position), locale (the material setting of social life), and sense of place (the subjective meaning attached to place), thereby highlighting that place involves both spatial positioning and social interpretation. These different perspectives underscore that there is no single way to conceive of space and place; instead, they are theorised differently according to methodological orientation, disciplinary context, and the social processes researchers aim to illuminate.

How researchers conceptualise space and place shapes the questions they pose and influence their understanding of both context and society at large. Space and place are foundational concepts in geography; to grasp how spatial contexts continuously influence social processes and individual actions, space must be treated as an active and integral dimension of analysis (Thrift, 2003; Harvey, 1973, 2006). Within an ESD context, multiple conceptualisations of space can be relevant, but a relational perspective is especially productive because it foregrounds how places are shaped through global connections and interdependencies (Israel, 2012; Dessen Jankell et al., 2021). Seeing space as active and processual draws attention to how spatial contexts both shape and are shaped by social, economic, and political processes, including those that underpin sustainability challenges such as climate change, resource distribution, and environmental inequality. This perspective, therefore,

helps explain how abstract global issues become meaningful to learners when situated in specific places. It also clarifies why educational practice can never be detached from wider spatial dynamics: classrooms, communities, and regions are all embedded within global systems of production, mobility, and power (Massey, 2005; Lefebvre, 1991; Thrift, 2003). A relational approach thus offers educators alternative ways of conceptualising global processes, not as distant or external, but as present within everyday places through the networks and relations that constitute them. However, for such an approach to be meaningful in educational research and practice, spatiality must be taken seriously rather than treated as a decorative backdrop or mere physical setting on which activities unfold (Israel, 2012). Instead, space and place should be understood as active components of how sustainability is taught, experienced, and interpreted.

Geography scholars have sought to demonstrate what the subject can offer ESD by clarifying the value of geographical thinking, particularly how concepts such as space and place can enrich pupils' understanding of sustainability. In the Swedish context, Dessen Jankell et al. (2020, 2021) have contributed to this agenda by organising central geographical concepts to support pupils' learning. Drawing on earlier work identifying space and place as core disciplinary concepts (Taylor, 2008a, 2008b; Roberts, 2013), they collaborated with teachers to develop a model suited to the Swedish school context. The model consists of three conceptual layers. At its core are the concepts of *space*, *place*, and *scale*, which form key geographical knowledge. The second layer identifies what geographers study: human–nature relationships, connections, change, and processes. These concepts help pupils recognise dependencies between humans and the environment, understand that both natural and societal phenomena are dynamic, and develop tools for analysing transformations over time. The outer layer concerns geographical inquiry and includes patterns, systems, perspectives, and values. Patterns and systems support pupils in visualising spatial relations and interconnections, while perspectives and values encourage the recognition of multiple viewpoints on sustainability issues, thereby avoiding overly simplified accounts (Dessen Jankell et al., 2020, 2021).

Through this structuring of geographical ideas, concepts such as space and place become operational tools in ESD. They enable pupils to analyse how sustainability issues manifest differently across contexts and to make

sense of global processes as they appear in concrete localities. In this way, place functions as a key analytical concept in this thesis, supporting an examination of how sustainable development becomes situated and meaningful in Geography teaching.

## Teacher agency [Geography teachers' experiences of teaching sustainable development]

The final theme, 'Geography teachers' experiences of teaching sustainable development', draws on teacher agency theory (e.g., Biesta et al., 2015). Teacher agency refers to how teachers act in relation to their contexts, shaped by a 'chordal triad' consisting of past experiences (iterational), oriented towards the future (projective), and engaged with the present (practical-evaluative), including local school cultures (Emirbayer & Mische, 1998). In this thesis, the focus is on how teachers exercise agency in navigating the complexities of sustainable development in Geography teaching. From an implementation perspective, this also highlights the gap between policy formulation and classroom practice, where teachers play a central role in interpreting and enacting educational policy (Vedung, 2016; Lipsky, 2010). These three dimensions — the *iterational*, *projective*, and *practical-evaluative* — can both empower and constrain teacher agency (Priestley et al., 2013, 2015, 2016). Biesta and Tedder (2007) and Biesta et al. (2015) argue that agency is not something that can be possessed but is achieved through active engagement in situations. This agency is exercised in response to the diverse and changing needs of pupils (Morales et al., 2025) and enables teachers to both educate their pupils and decide on activities aimed at their own professional development (Brevik et al., 2019). To achieve this agency, it is important to provide opportunities for its development (Morales et al., 2025).

Biesta et al. (2015) examined how teachers' beliefs relate to agency and identified three types of beliefs that influence whether teachers achieve or relinquish agency in their profession: beliefs about children and young people in relation to learning, beliefs about the teacher role, and beliefs about the purpose of education. Firstly, regarding beliefs about children and young people in relation to learning: teachers who achieve agency assume responsibility for their pupils' learning and, when necessary, protect them from an education system that may not work in their favour. Conversely, teachers who do not achieve agency place responsibility for

learning on the pupils themselves, potentially abandoning some professional responsibilities. Secondly, with respect to beliefs concerning the teacher's role: a shift is identified from being a possessor and transmitter of knowledge to being an enabler of pupils' learning, with teachers acting as managers of transformation. This shift can generate anxiety and reduce motivation to take responsibility for systemic problems. Finally, concerning beliefs about the purpose of education: it was found that teachers tend to focus on short-term approaches, such as structuring classes to engage pupils' immediate interests, rather than on long-term perspectives, which include democratic values or social justice.

# Methodology

This thesis comprises three papers that cover the relation between the subject of Geography and the sustainable development perspective. Table 1 provides an overview of the papers and the author constellations. My contributions to each of the co-authored papers, i.e., Papers I and III, can be described as follows. For Paper I, the material collection was undertaken solely by me, while the categorisation, analysis of the material, and writing were conducted together with my co-author. For Paper III, the collection of the material as well as initial coding and interpretation were conducted by me. The analysis and writing were then conducted together with the co-authors.

Table 1. Paper overview

<b>Paper title</b>	<b>Authors</b>	<b>Material</b>	<b>Focus</b>	<b>Status</b>
<b>Guarding the boundaries: a Swedish policy debate about geography and education for sustainable development</b>	Hampus Hallingfors, Henrik Åström, Elmersjö	Archived documents	Scientific boundaries between geography and sustainable development	Published in <i>Nordic Journal of Studies in Educational Policy</i>
<b>The importance of ‘place’ in geographical sustainable development teaching: Experiences from northern Sweden</b>	Hampus Hallingfors	Interviews	How teachers work with local place to facilitate pupil understanding of sustainable development	Under review in <i>Journal of Northern Studies</i>
<b>Teacher Agency and Sustainable Development: Negotiating Curricular Demands and Contested Knowledge in Sweden</b>	Hampus Hallingfors, Madeleine Eriksson, Erika Sandow	Interviews	Complexities Geography teachers navigate when teaching sustainable development	Submitted

## Epistemological framework: Critical realism

Philosophy of science constitutes a spectrum of different perspectives on science. At one end, we find positivism, and at the other, constructivism. Critical realism lies between these two philosophies (Danermark et al., 2019). Ontology, which concerns the worldviews and assumptions central to the researcher in the search for knowledge (Lincoln et al., 2018), is viewed by critical realists as an objective reality. However, this reality consists of events that can be caused by obscured structures. Applying this ontological perspective allows for the objective and subjective aspects of knowledge to be combined. This means that while an objective reality can be observed, the underlying mechanisms that shape it are not always directly observable (Pretorius, 2024). Critical realists argue that knowledge can be improved and that some knowledge is more certain than other knowledge. This can be connected to sustainability and climate change, in the sense that what we are experiencing now is climate change linked to CO<sub>2</sub> emissions from human activities (Buch-Hansen & Nielsen, 2020).

In epistemology, which concerns what we can know (Lincoln et al., 2018), it is argued that knowledge involves understanding both the events we can observe and the hidden processes that cause them to unfold. Individuals perceive the world as subjective, influenced by various contexts, including societal and cultural factors. Hence, the objective reality is influenced by our individual interpretations of it (Pretorius, 2024). Knowledge is always considered to be produced and fallible (Buch-Hansen & Nielsen, 2020). Again, to situate this in a sustainability context, people can experience the same thing – for example, a warmer climate – but how they perceive it can vary due to their previous knowledge and experiences.

Regarding axiology, which involves how research affects how researchers act, as well as the role values and value judgements have in research (Lincoln et al., 2018), researchers acknowledge that values play a part in research as it is value-laden, and that they ought to be reflexive in relation to biases. This is because researchers bring their experiences, shaped by beliefs and values, into their professional roles. Therefore, it is essential to reflect critically and to be transparent about how one's values can impact research (Pretorius, 2024).

## Interviews in Västerbotten

The participants in this thesis are all teachers in Västerbotten County, located in northern Sweden and part of the Swedish Arctic region

(Frederiksen & Kadenic, 2016). The county stretches from the Norwegian border in the west, characterised by mountains, to the plain landscape in the east along the northernmost part of the Gulf of Bothnia, the Bothnian Bay. With 55,013 square kilometres, of which about 70% is covered by forest, it is the second largest county in Sweden, accounting for one-eighth of the country (Länsstyrelsen Västerbotten, n.d., 2020). With approximately 280,000 residents, of whom 80% live in the coastal region, the county is generally sparsely populated (Statistics Sweden, 2025). There are sparsely populated areas in the inland and mountain regions, as well as more densely populated regions along the coast. In the east, there are also rural regions close to urban areas, and this dynamic offers interesting insights into how teachers perceive their work and the possibilities and challenges each place offers. For example, challenges may look different depending on available resources and local ways of life, whether working in a mountain region or a rural area near a larger town. Similarly, conditions in towns can affect perceptions and understanding of ESD. Umeå, the administrative capital, and Skellefteå, in the north, are the largest urban areas in Västerbotten County; both are situated in the coastal region (Länsstyrelsen Västerbotten, n.d.). Umeå University serves as the region's principal university and is also the institution where this dissertation was written.

## Research design

The research design was not fixed from the outset but evolved throughout the process, informed by readings and discussions during the work on this thesis. Except for the first study, which focused on Geography in upper-secondary school, the focus was on Geography education in lower-secondary school (Years 7–9). Secondary school, which includes both lower secondary and upper secondary levels, was chosen because in earlier years (Years 1–6) Geography is largely integrated with other social study subjects, such as Civics, History, and Religious Education. From Year 7 onwards, Geography assumes a more distinct character as an independent subject. Throughout the process, I was interested in how boundaries were negotiated and enacted between the subject of Geography and the sustainable development perspective, which motivated Paper I on disciplinary boundaries.

From there, the thesis took a more practical turn, focusing on aspects of the subject of Geography in schools and on how sustainable development is taught. Consequently, teachers were interviewed for Papers II and III to obtain first-hand material based on their knowledge and experiences. In doing so, it was possible to gain insights into the daily work with ESD within Geography and into the negotiated framework studied in Paper I. Simultaneously, as they educated pupils *about, for, and as* sustainable development, teachers navigated complexities and negotiated contested knowledge. Both papers focus on teachers to gain a better understanding of how they practically work with transforming the governing documents (e.g., curriculum and syllabuses), for example, by relating to and utilising local ‘place’ as a mediator of knowledge. This, whilst simultaneously interacting with pupils who could have their own perceptions of sustainability, sometimes based on ‘alternative facts’.

## Archival research

For Paper I, which examined a curriculum reform process in upper-secondary school, it was necessary to consult archived material. As noted by Wideman (2023), archival research has long been a method within the discipline of geography. In the archive, it is possible to find historical impacts on current situations. As argued by Kecskeméti (1999), archives can be seen as a form of national memory, where documentation is kept to facilitate information retrieval. Not only are materials kept and guarded in archives, but they also manufacture memories, since it is not possible to keep everything (Brown & Davis-Brown, 1998). Government departments, such as the SNAE, have material organised in archives and have experience of maintaining official records (Hurley, 2001).

By reading Östman (2005, 2006) and Molin (2006) to prepare for the material collection conducted in September 2021, I decided to focus on three types of documentation. Firstly, I identified documents concerning the subject of Geography and its intended structure. Secondly, I focused on documents relating to the context in which the subject of Sustainable Development was proposed, including the rationale for its introduction and its syllabi. Finally, I included debate posts and referral statements that addressed either or both of geography and sustainable development as disciplines, subjects, concepts, or perspectives. The debate unfolded on the SNAE website in an online forum during the curriculum reform process. It served as an open, consultative space where participants asked

questions, proposed additional content, and offered critical feedback on the draft curriculum materials.

To access the material and make my own photocopies of the printed sources, I contacted the SNAE centrally, and an archivist helped to retrieve the relevant documents. I was informed that the material of interest was not available digitally, which necessitated a visit to an archival repository. Everything was coordinated with the repository so that the requested material was sent there, for me to make photocopies of the relevant documents. While making photocopies of the documents of interest, their content was continually considered (Ogborn, 2003). By doing so, it was easier to limit the amount of material. Despite this, a substantial amount of material was collected from the archival repository. However, during the analysis, certain documents nonetheless proved to be absent, though they were ultimately provided by the SNAE archivist. As with archival research, there is always a risk that not all material is available (Ackerman & Glekas, 2017).

The documents containing information on the two subjects, Geography and Sustainable Development, were scanned along with debate posts and referral statements. When the documents were read more carefully, it was possible to reduce the volume of material, resulting in a more manageable selection. For Paper I, debate posts were directly included in the material that was analysed. More documentation beyond the immediate scope of the study was also deliberately collected, as it is methodologically more robust to undertake reduction and delimitation during the subsequent analytical phase than to risk discovering gaps in the evidentiary base at a later stage.

### *Qualitative directed content analysis*

The overall purpose of the analysis was to understand how arguments related to Geography and Sustainable Development were constructed, positioned, and justified within the debate. Qualitative content analysis allows for a thorough examination of the multidimensional meanings of documents and the identification of both underlying intentions and their effects on those receiving the message (Kracauer, 1952). Using a directed content analysis approach, all text was considered potentially relevant, without the need to focus on frequency. Instead, relevance was

determined by whether text excerpts corresponded to the categories used to organise them (Kracauer, 1952). In this study, the frequency of arguments was not the primary consideration, although similar argumentation to that found in the excerpts used in Paper I appeared across multiple debate posts.

A directed content analysis was chosen to guide the analysis. This was particularly appropriate because manifestations of boundary-work ‘in action’ are rarely studied; they tend to be observable when scientific subjects are challenged or when a new scientific subject is proposed (Larsson, 2001). In the curriculum reform process examined in Paper I, it was possible to study boundary-work in action, providing an opportunity to employ a method that could contribute to theory development (Hsieh & Shannon, 2005). Accordingly, a deductive approach was adopted (Mayring, 2000).

Of particular interest were meeting notes, letters, emails, and debate posts relating to either Geography or Sustainable Development as subjects, or to the discipline of geography and the concept of sustainable development. From an initial volume of approximately 3,300 pages, the material was reduced to 456 pages, and the number of debate posts decreased from 848 to 104, retaining only those relevant to the scope of the thesis. During the initial analysis, boundary-work theory (Gieryn, 1983, 1999) provided the categories into which the codes were sorted. These categories were originally named according to how they were expected to relate to the two disciplines and subjects. In boundary-work theory, the categories are: ‘*expulsion*’, ‘*expansion*’, and ‘*protection of autonomy*’ (Gieryn, 1983, pp. 15–18). For Paper I, these boundary categories were renamed to align with the study, resulting in the following labels: ‘Excluding proponents of a new subject’ (expulsion), ‘Expanding or protecting boundaries’ (expansion), and ‘Protecting the autonomy of geography as a scientific discipline and as a school subject’ (protection of autonomy).

### Semi-structured interviews

For Papers II and III, semi-structured interviews were used to gather material. Interviews are the dominant method employed in most qualitative studies published in academic journals (Silverman, 2017); and because they are familiar to many and can generate rich material, it is not

surprising that they are frequently utilised (Dunn, 2021). Semi-structured interviews, in particular, were chosen because they are among the most common interview formats in the human and social sciences (Brinkmann, 2018).

The widespread use of semi-structured interviews in the social sciences underscores their relevance for collecting material and conducting research in this field. In this thesis, they were chosen for Papers II and III primarily because they provide access to first-hand information from individuals with specialised knowledge (Brinkmann & Kvale, 2015). In addition, several methodological features made this format suitable. Firstly, semi-structured interviews offer a degree of structure through their predetermined themes and questions, distinguishing them from more unstructured formats. Secondly, they allow the interviewer to pose follow-up and probing questions (Brinkmann & Kvale, 2015), which is not possible in highly structured interviews that constitute the opposite end of the spectrum (Brinkmann, 2018; Dunn, 2021).

The interview guide was based on literature on Geography education, geographical knowledge, sustainable development, and teaching to identify areas of interest to cover during the interviews. To begin with, some questions about the participants' role as teachers were asked to gain insights into why they started teaching Geography. Following that, questions on the focus area of geography, as both a discipline and a subject, were asked to better understand how the teachers perceived the relevance of geographical knowledge and the subject itself. After those topics, the guide became more specific in its investigation of the relationship between Geography and the sustainable development perspective. Questions were formulated to understand how teachers conceptualised sustainable development and how the subject of Geography could facilitate the transformation of knowledge about it. The last topic concerned what difficulties the teachers identified when teaching sustainable development.

These interest areas were intended to correspond to topics formulated beforehand, where one study, Paper II, was planned to cover the strengths of Geography in relation to sustainable development. The other study, Paper III, was intended to be more focused on issues identified by the teachers in their work within the sustainability perspective. To ensure that

teachers were not too steered in their answers, the questions initially had a broader character, allowing them to answer from their own experiences. If an initial question needed clarification or a teacher's answer was too general, follow-up questions were asked. This structure allowed the teachers to influence the pace of the interviews (Loosveldt & Beullens, 2013).

The characteristics of semi-structured interviews were well-suited to the data collection for Papers II and III, as they allowed for adjustments throughout the interview process. For example, some questions were rephrased or removed from the interview guide after the initial interviews. Additionally, the order of certain questions and themes was sometimes rearranged during the interviews to better follow the natural flow of the conversation. The format also allowed for the use of clarifying questions and provided the opportunity to redirect teachers to focus on Geography when necessary.

Many teachers taught all four social studies subjects (i.e., Civics, Geography, History, and Religious Education), which occasionally led to digressions from Geography. While such digressions sometimes enriched the teachers' perceptions of Geography by providing contrasts with other subjects, the primary focus could occasionally be lost. Nevertheless, when prompted to return to the subject of Geography, the teachers readily refocused their discussions and reflections accordingly.

### *Data collection*

Eight interviews, lasting between 52 and 86 minutes (with a mean of approximately 65 minutes), were conducted during the period between November 2024 and February 2025. Six interviews were conducted in person at the respective schools, and two online via video conferencing software. To facilitate post-processing and enable a more nuanced understanding of the teachers' responses, the interviews were audio-recorded (Dexter, 2006; Dunn, 2021). This also allowed for a focus on the conversation while posing appropriate follow-up or clarifying questions, instead of taking extensive notes during the interviews (Dunn, 2021). However, some notes were taken to highlight interesting teacher responses or indicate where a follow-up question was needed.

To recruit participants, headteachers from all lower-secondary schools, both public and private, in Västerbotten County (N=55) were contacted and asked to provide contact information for the teachers responsible for Geography in their schools. Headteachers were initially contacted at the end of June and followed up in mid-August if they had not responded. In total, headteachers representing 36 schools provided contact details for 93 teachers, covering all municipalities in Västerbotten County except one. Purposeful sampling was employed, as it is a method utilised when specific and appropriate knowledge is of significance (Kelly, 2010). In the context of this thesis, this meant identifying participants who possessed the relevant knowledge to provide useful insights into the research area. Consequently, Geography teachers possess the professional experience required to explore how Geography is perceived in general, its relationship with sustainable development, and its implementation in teaching.

The email sent to the headteachers included brief information about the study and the reason why they were being asked to provide contact information for the Geography teachers at their schools. The information specified what was to be asked of the teachers: an interview expected to take about one hour, and, if possible, a classroom observation.

When the teachers were contacted, they were asked to participate in a research study on the subject of Geography and sustainable development. They were also provided with further information about the study and their rights as potential participants. Teachers who did not respond were sent reminders before other teachers were contacted. In the end, eight teachers (three women and five men) of the 45 contacted agreed to participate, with teaching experience ranging from about 4 to 26 years. Table 2 presents some data from the three selection processes. Slightly more men than women participated, but the distribution was relatively even. This reflects the initial pool of 93 teachers, of whom 51 were men and 42 were women.

Table 2. Overview of the teacher interviews

Selection	Number of teachers contacted	Sex		School form		Location	
		Men	Women	Public	Private	Urban	Rural
<b>Selection 1</b>	25	3	2	4	1	1	4
<b>Selection 2</b>	10	2	1	1	2	3	0
<b>Selection 3</b>	10	0	0	0	0	0	0
<b>Total</b>	<b>45</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>4</b>

Regarding school locations, the participating teachers were evenly distributed between rural and urban municipalities. In contrast, the full pool of 93 teachers was skewed toward urban schools, with 60.2% (56) working in urban areas and 39.8% (37) in rural areas. It should be emphasised that these 93 teachers do not represent all Geography teachers in Västerbotten County, as headteachers from 17 schools did not provide contact information for their teachers. Of these, 15 (34.1% of 44) were public, and two (18.1% of 11) were private, leaving the total number of Geography teachers in the county unknown. Participating teachers worked at private schools with either religious, international, or language profiles; to maintain anonymity, the specific profiles of individual schools are not disclosed. Among teachers who provided a reason for not participating, lack of time was the most frequently cited explanation.

### *Thematic analysis*

After the interviews were conducted for studies II and III, they were transcribed using artificial intelligence (AI). An AI-powered transcription software compatible with Swedish, provided by Umeå University in collaboration with three other Swedish universities was utilised. The tool converted audio to text and facilitated time efficiency during the transcription process. However, the transcripts were also reviewed manually for two reasons. Firstly, it was necessary to correct errors made by the software; as the interviewees' speech became more dialectal, the

frequency of inaccuracies increased. Secondly, and more importantly, the transcripts were reviewed while listening to the recordings to ensure deeper immersion in the interview material.

A thematic analysis was used to analyse the interview material. As the interviews were structured around different topics, this method was appropriate. The material was inductively analysed by grouping quotations that appeared to concern similar issues (Saldaña, 2009, 2021). Through this process, patterns that emerged and recurred were collated (Spencer et al., 2014). This facilitated a clearer understanding of the material and directed attention to tendencies in what the teachers emphasised during the interviews, for example, complexities that, in some respects, were specific to certain spaces or places.

The work process involved creating codes that initially formed subcategories, which were later grouped into broader categories, and finally themes (Saldaña, 2021). The grouped codes yielded 31 subcategories that encompassed material covering a wide range of topics discussed and reflected on by the teachers. Some of these subcategories included ‘Teachers’ views on Geography’, ‘Geography and Sustainable Development’, and ‘Pupils’ attitudes and feelings connected to Sustainable Development’. Once the codes had been sorted into subcategories and grouped into categories, they were further abstracted and grouped into 12 themes. For example, the categories ‘Incorporate local aspects into teaching’, ‘Perceptions of places’, and ‘Inequality’ were combined into a theme named ‘The local place’s contribution’, while the categories ‘Geography’s contribution to knowledge’, ‘Geography’s place in school’, and ‘Government document/authority’ formed a theme called ‘Does Geography have a contribution?’. Of these 12 themes, five were relevant to Paper II, five were more pertinent to Paper III, and two were not used in either paper as they were not relevant to the aims of the respective papers.

## Ethical considerations

To minimise potential harm to participants in the research, the ethical guidelines of the Swedish Research Council (2024) were carefully followed. An initial application (Swedish Ethical Review Authority, n.d.) was submitted to the Swedish Ethical Review Authority (SERA) for the interview studies. In the application (Dnr 2024-04865-01), it was

specified that no sensitive personal data would be intentionally collected during the interviews, which instead focused on teachers' reflections and their views on topics relating to their profession.

The research plans were approved by the SERA prior to inviting teachers to participate. Two points regarding the ethical application should be noted: (i) the decision to seek approval was motivated by the potential for sensitive personal information to arise during the interviews. While such information was not relevant to the aims of the studies, a procedure was in place to handle any such data if participants mentioned it, and (ii) classroom observations were initially considered a complementary method to the interviews. These observations were never intended to be the primary material. Teachers were first asked to participate in an interview and, secondarily, if possible, in a single classroom observation in which sustainable development was addressed in any form. Classroom observations were therefore included in the ethical application to clarify that the focus would be on the teachers' pedagogical approaches to sustainable development, not the pupils, who were aged 12–16. Ultimately, only one classroom observation was conducted; while not directly used as empirical data in the studies, it provided contextual insight into how teachers could engage with sustainable development and offered a better understanding of their everyday professional practices.

When contacted, the teachers were provided with information about the study and how their data would be handled if they chose to participate. This information included details on confidentiality, the participants' rights, and a note that self-reflective questions could potentially evoke negative emotions (Poster & Greenwood, 1998). After the interviews, teachers were encouraged to contact me if they felt it necessary. In addition, they were sent a document for informed consent to sign upon agreeing to participate. For the two online interviews, teachers returned the signed document prior to the interview. For the in-person interviews, teachers provided a signed copy either before or after the interview. All teachers were reminded that participation was voluntary and that they could withdraw their consent at any time; however, none chose to do so.

During the review of the transcribed interviews, the material was anonymised to further protect the participants' identities. As the headteachers at the respective schools had provided me with contact

information for the interviewed teachers, they could have identified whether and, potentially, when a teacher from their school had participated (Persson, 2022). Consequently, any information in the teachers' statements that could have facilitated identification was removed. To further enhance anonymisation, translating the quotes from Swedish into English may have served as an additional safeguard, as it reduced personal linguistic nuances.

While the interviews were recorded, it should be noted that some participants may experience discomfort when being recorded (Dunn, 2021). Recordings can also lead interviewees to withhold information they consider sensitive or inappropriate (Dexter, 2006). This aligns with Boudah's (2020) assertion that material derived from interviews is inevitably filtered, as participants tend to disclose what they perceive as expected or desirable within the interview context. In one instance, a teacher appeared somewhat anxious about the recording; however, once assured that all material would be anonymised to prevent attribution to any individual, the teacher consented to the interview being recorded.

A methodological decision regarding ethical precautions was also made in the work for Paper I. The material involved a public debate hosted on the Swedish National Agency for Education (SNAE) website. During the writing of the paper, it was a deliberate decision not to include the names of the contributors, primarily because the focus of the study was on the arguments presented, rather than on the individuals, university departments, teaching teams, or organisations involved. This approach was mutually agreed upon with my co-author; we considered it more important to focus on the content of the arguments rather than their source. If arguments were considered relevant, it was immaterial whether they were made by a Geography teacher, a Geography professor, or anyone else. An emphasis on individuals was also considered redundant, as most participants opposed the SNAE's proposal. Instead, the publication date of each post was recorded, allowing readers to consult the original documents to review the debate in its entirety.

## Methodological discussion

The design and data collection for the first study in this thesis were conducted during the COVID-19 pandemic, which influenced both the

methodology and the timing of the research. While the first document study was not affected, conducting interviews or observations, particularly in a school context, would have been difficult at that time. When the pandemic recommendations were gradually relaxed (Swedish Work Environment Authority, 2023), it became possible to plan the second and third studies, which utilised interviews.

Since rigour, which is traditionally framed within a quantitative research paradigm, cannot be assessed in the same way in qualitative research (Denzin & Lincoln, 2018), alternative criteria must be employed to evaluate research conducted from a qualitative perspective (Tracy, 2010). As Morse (2018) emphasises, representation is central to research. Discrepancies inevitably exist between the material and the specific phenomena under investigation: the material is always a representation rather than a direct reflection of the phenomena. Moreover, statements obtained in interviews are never entirely objective; they may approximate objectivity, but they can also be understood as subjective accounts (Dexter, 2006).

Given that both the archive and interview materials are perceived and interpreted by the researcher, it is crucial to establish that the findings reflect how the teachers, scholars, and other relevant stakeholders in the studies articulate the phenomena under study. Ensuring that research findings accurately correspond to the representation of these phenomena is a significant and demanding task, supported by various methodological strategies (Morse, 2018). Notably, in the interviews, patterns quickly emerged in which the teachers shared similar experiences regarding the topics discussed. This suggests that teachers may share an underlying professional culture, which could manifest in similar perceptions of phenomena within the group (Borgatti & Halgin, 2011). Moreover, as the interviewer interprets what is said during both the interview and the analytical phase, it is important to be critical and reflexive (Alvesson, 2023).

The decision to use archives was made because interviewing individuals or relying solely on documents published online would have been neither feasible nor resource-efficient. Each data collection method has inherent limitations. However, the difficulty in conducting historical geography does not stem solely from the fact that potential informants may no longer

be alive. A more common challenge is that people tend to forget the sequence of events or confuse *what* happened and *when* (Baker, 1997; Baddeley, 2014). Thus, when historical material is available, it can serve as a valuable resource for examining past events, as ‘[archives] are the sites of memory’ (Ogborn, 2003, p. 105). However, archives are not always organised to facilitate research, which means that the selection and organisation of material may reflect administrative, rather than research, needs (Nygren et al., 1982).

For Paper I, the use of a directed approach to document inclusion offered a couple of advantages. Firstly, it offered more structure than an undirected approach, which was helpful given the extensive material (Hsieh & Shannon, 2005). Secondly, the results could be discussed in relation to existing knowledge. However, as noted by Elmersjö (2021), a limitation with this approach is that the analysis is not free from the assumptions embedded in boundary-work theory. Consequently, the content of the debate posts was interpreted within a new context, leading to conclusions guided by a predetermined path defined by the boundary-work framework, as explained by Gieryn (1983, 1999) and Johnston (1986), as well as by Johnston and Sidaway (2015).

For Papers II and III, the decision to interview Geography teachers was quite natural, as it offers good opportunities to collect first-hand information from key informants (Brinkmann & Kvale, 2015). This approach parallels everyday life through the sharing of experiences, the exploration of our local environment, and the attempt to make sense of the world at large. Naturally, there are distinctions between everyday social life and formal research, yet notable similarities can still be observed (Cope & Hay, 2021). By interviewing teachers, it was possible to gain a deep understanding regarding their perceptions of how Geography can serve as a tool for developing knowledge of sustainable development. On the other hand, the complexities of doing so based on their own interpretations and experiences were also discussed (Urberg, 2025).

Both in-person and online interviews were conducted. Most interviews were conducted in person, consistent with traditional practice, as it is argued that they create a more favourable setting than telephone interviews (Yeo et al., 2014). Two of the interviews were conducted online. Oliffe et al. (2021) identify several advantages of using video conferencing

for interviews. Firstly, it provides location independence, allowing participants to be in any comfortable setting with a stable internet connection while the researcher remains in their office. Secondly, it promotes greater inclusion by reducing participation costs. Finally, it saves time, because participants do not need to accommodate the researcher before or after the interview (Dunn, 2021).

There are, however, some disadvantages to online interviews, primarily associated with technical issues (Boudah, 2020; Dunn, 2021; Oliffe et al., 2021). During one online interview, the sound was intermittently lost. Although the issue was quickly resolved, the interview's coherence was temporarily disrupted. Another limitation of online interviews is the sense of physical separation that they create. While a visual connection is possible, the researcher is not fully present as they are during an in-person interview (Oliffe et al., 2021). This occasionally resulted in slight timing overlaps, when both parties spoke simultaneously, which occurred more often than during the in-person interviews. However, the visual connection allowed for some reading of body language and facial expressions, mitigating these potential limitations to some extent.

Recruiting teachers for the interviews was difficult; for example, time limitations were frequently cited as a reason why teachers could not partake in the studies. However, one particular reason discussed in the research is the role of gatekeepers (Herbert, 2000; Digby, 2023; Wanat, 2008). Several headteachers did not respond at all, and when information was to be forwarded to teachers of interest, it was difficult to know whether it had been done so. When gatekeepers deny access to potential participants, it can affect the diversity of participants and obstruct the possibility of studying institutions, such as schools, and how they function (Gřundělová et al., 2025). However, the eight interviews conducted provided a rich understanding of how teachers approach geographic knowledge, the syllabus, and classroom interaction, forming a solid foundation for Papers II and III. The objective of the sampling procedure was to capture a range of perspectives, aiming at data saturation (Glaser & Strauss, 1967). As saturation requires diversity within categories, a heterogeneous group of teachers increases the likelihood of achieving it. The sample was therefore designed to include teachers with potentially diverse experiences. Considering that places carry specific meanings and experiences (Massey, 2005; Persson & Berg, 2022; Berg & Persson, 2023),

it was assumed that teachers from the same school might share similar experiences.

Still, eight interviews with teachers as the basis for Papers II and III may be criticised for a lack of statistical generalisability due to the small number of participants (Carminati, 2018) and the uncertainty regarding data saturation. However, for this thesis, transferability (Drisko, 2025) has been the objective. As for interpretivist research, in which this thesis can be categorised, analytical generalisation is of interest (Ryan et al., 2002). Understanding how the results from interviews with teachers in the county of Västerbotten County, northern Sweden, may be applicable to other contexts is of significant interest. This is particularly relevant for other regions within Sweden; however, as education for sustainable development (ESD) is a global field of study and practice, these findings may also hold relevance in an international context. Analytical generalisations about how the geographical 'place' concept can facilitate pupils' understanding of sustainable development, or what difficulties teachers must navigate when working with ESD, are likely to be applicable in classrooms around the world.

For the work with this thesis, two different analytical strategies have been employed: a directed content analysis for Paper I and a thematic analysis for Papers II and III. The reasons for using these two strategies were pragmatic, as they have different strengths and complement each other in this thesis. The first study derived from (boundary-work) theory, and the material from the curriculum reform process was well-suited to test and potentially develop the theory (Hsieh & Shannon, 2005). Since debate posts and referral statements could be categorised according to the arguments found in boundary-work theory (Gieryn, 1983, 1999), the negotiation of the institutional framework for ESD within Swedish upper-secondary schools was considered a suitable analytical approach. Papers II and III had a different focus. In those studies, the teachers' interpretations of and approaches to ESD were of interest. Here, it was essential to be more flexible and not be directed by theory, as the narratives from the interviewed teachers were more open than the debate about Geography and sustainability. The thematic analysis provided space to explore the teachers' understandings, experiences, and perspectives on sustainability in their professional roles. Hence, by employing both

directed content analysis and thematic analysis, it was possible to explore both of these avenues of ESD in a Swedish educational context.

## Reflexivity and research positionality

The influence that researchers may exert on the research process is well recognised, particularly within qualitative research. One reason for this, as noted by Mruck and Breuer (2003), is that qualitative research involves interaction between the participant and the researcher. In this thesis, especially in relation to the interviews, where interpretation constitutes a central part of the analytical work, my own positionality may therefore have shaped the final papers.

Coming from a family of teachers, I have the utmost respect for the work that educators do for children, pupils, students, and adult learners. I have also had the opportunity to teach at the university level during my doctoral studies, which further deepened my appreciation and respect for the profession. Hearing these capable and engaged teachers explain that they have had restricted access to subject-specific professional development in Geography throughout their teaching careers motivated me to highlight this issue, together with other conditions shaping their professional work, in Paper III. Therefore, the final paper in this thesis focuses on the conditions under which Geography teachers teach sustainable development, how they exercise professional judgement within these conditions, and how professional development can enhance their competencies and support their ongoing pedagogical work. If I had not grown up immersed in discussions about schools, education, and teachers during my upbringing, it is possible that professional development would not have emerged as a central focus of study.

As geography has also been a lifelong interest, which began with flags and progressed to capitals and maps, I considered identifiable geographical relationships during my early school years. While these reflections were not necessarily at a highly analytical level, the interest has nonetheless been there for as long as I can remember. Trying to see how people from places with different geographical conditions perceive, consider, and understand phenomena has interested me, and I have taken opportunities to explore this whenever possible. Having had the opportunity to travel from a young age led me to expand my understanding of how people in

other countries live their lives, for example, regarding the complexity of sustainable development issues.

For these reasons, I hope that certain sections of this thesis may prove helpful and inspire teachers of Geography. Their job is undeniably challenging, yet highly significant and meaningful. Geography is a small subject in the Swedish curriculum, but the subject matter is very present, not least considering ongoing national and international discussions on sustainability. However, given these interests and context, it has been crucial to remain reflexive and transparent, demonstrating how the findings have emerged throughout the research process (Dodgson, 2019). Related to this, there are two perspectives that can influence how research is conducted: (i) that of an insider and (ii) that of an outsider. Since I have experience working in classrooms as a former learning support or teaching assistant in primary school, I possess some insider knowledge of the teaching profession. However, lacking professional teaching experience, I consider myself an outsider in that context. This is not necessarily a disadvantage; if one is aware of this position, it is still possible to obtain rich, detailed material from interviews (Tinker & Armstrong, 2008). Furthermore, being an outsider does not imply a lack of competence or understanding regarding the topic of study (Cohen et al., 2011). This is also emphasised in § 11 of the Ethical Review Act (SFS, 2003:460). The degree of pre-existing knowledge required is difficult to define; however, through extensive reading of academic publications, books on the subject, and relevant policy documents, I consider my pre-existing knowledge to have been sufficient when conducting the interviews. I have remained aware of current research debates on sustainable development education within the subject of Geography and the structure of Geography education in Sweden and internationally.

Hence, to this work I have brought both personal and professional experiences that affect how I perceive education in general and ESD in particular. These lived experiences may offer an explanation of the reflexivity, providing a picture of the introspective process through which the researcher reflects. It thereby becomes more transparent how the researcher incorporates their own subjectivity into the research process and how this subjectivity influences the work (Darawsheh, 2014; Houghton et al., 2013).

## Use of artificial intelligence

In the preparation of this thesis, artificial intelligence (AI) tools were utilised, as previously noted. More specifically, AI-powered transcription software and generative AI-powered editing tools (notably Grammarly) were employed to assist with linguistic refinement and the translation of specific terminology. Both technologies were used iteratively; the AI offered suggestions for both transcription and stylistic adjustments to ensure clarity and to adapt Swedish nuances into British academic English. However, throughout this process, I maintained full agency and made all final decisions. For example, I did not uncritically accept the automated transcripts; as previously stated, I reviewed the recordings and manually corrected the text whenever necessary. Furthermore, the fact that the transcription software was provided by Umeå University in collaboration with other Swedish institutions provided assurance regarding data security and storage protocols.

A similar approach was adopted in relation to the editing software; all suggested changes were carefully considered rather than accepted by default. In most instances, the software proposed alternative vocabulary or sentence structures to enhance readability. To some extent, I would compare this process to the support provided by a professional language editor. Nevertheless, the intellectual content, the analytical transitions, and the final synthesis of the material remain the sole responsibility of the author. The AI served as a consultative advisor as opposed to a primary source of knowledge.

# Geography as a disciplinary and educational space for sustainable development

In this thesis, education for sustainable development (ESD) in Swedish secondary schools was examined within the scope of Geography education. The three studies contribute to three themes: Geography's disciplinary boundaries and its relationship to sustainable development; Geographical place as a contribution to education for sustainable development; and Teachers' professional approaches to the contested and politicised field of sustainable development. The first theme examines how the subject of Geography was negotiated through three types of arguments. The first argument being *'Excluding proponents of a new subject'*, where sustainable development was argued to be non-scientific. The second argument was *'Expanding or protecting boundaries'*, positioning sustainable development as a vital part of the geography discipline. Finally, arguments categorised as *'Protecting the autonomy of geography as a scientific discipline and as a school subject'* positioned geography as both a well-established academic discipline and a holistic school subject, well-suited to cover sustainability within its subject framework. The second theme covers how teachers situated global sustainability issues in local contexts known to both pupils and teachers, thereby facilitating deeper understanding and engagement among pupils. The third theme shows how teachers negotiate contested, politicised knowledge that can provoke strong emotions among pupils. The theme also identifies a need for professional development for Geography teachers, both in general and specifically in relation to ESD. These results will be further elaborated in this section.

## Geography's disciplinary boundary and its relationship to sustainable development

When the Swedish National Agency for Education (SNAE) proposed introducing a new school subject, *Sustainable Development*, there were two main concerns. First, it could be seen as a question of whether Geography, as a school subject, could provide knowledge on sustainable

development. Second, the background of the concept ‘sustainable development’ was discussed as it is a political concept rather than a discipline. Consequently, the proposal generated substantial opposition, primarily from geographers, including academic researchers and upper-secondary school teachers.

Arguments were identified that positioned proponents of the new subject as lacking sufficient disciplinary legitimacy, thereby excluding them from defining curricular content (*expulsion*). Further arguments emphasised the scope and breadth of geography as a discipline, framing sustainable development as already encompassed within existing geographical knowledge (*expansion*). Finally, arguments stressed the need to maintain Geography’s autonomy as both a scientific discipline and a school subject, particularly in relation to curriculum design and subject integrity (*protection of autonomy*). On this basis, the arguments were categorised into three analytical categories: *expulsion*, *expansion*, and *protection of autonomy*.

In the first category, ‘*Excluding proponents of a new subject*’, arguments framed Sustainable Development and the civil servants at the SNAE involved in developing the proposal as being situated outside the scientific community and, therefore, as non-scientific. The subject of Sustainable Development was referred to as a ‘product of civil servants’ rather than from the academic community. For example, the expert group assigned to develop the social science programme, with representatives from established academic disciplines, participated in the debate, criticising the subject proposal.

Critique directed at civil servants implied that their work was seen as less scientifically grounded, as reflected in the language used in texts describing Sustainable Development. The scientific foundation was further questioned due to the close links between sustainable development and politics, problematising the adoption of future ‘trends’ as school subjects. Science was characterised as being timeless, while policy is tied to time and context, making it more susceptible to interpretation. Another aspect of political involvement emphasised that when geographers have allowed their agenda to be influenced by societal priorities, scientific integrity has been vulnerable to compromise.

Related to policy, the debate shed light on a situation that may constitute a general problem across school subjects: school policies are continually subject to political discussion, resulting in blurred boundaries between policy and science. This may be even more challenging for interdisciplinary school subjects. However, sustainable development as a concept was not criticised; instead, it was acknowledged as an important concept and perspective to consider within existing subjects, such as Geography. The issue raised in Paper I was the absence of disciplinary theories and the source of the ideological ideas from which the proposed subject originated. If sustainable development were seen by the SNAE as scientific, it would have been appropriate to present theories, methods, and research directions.

The next group of arguments, categorised as *‘Expanding or protecting boundaries’*, shifted the focus to the discipline of geography. Here, debaters argued that although sustainable development is not classified as a scientific discipline, it should still be respected as a perspective. As such, it *is*, and *always* has been, an integral part of geography. Therefore, sustainable development should be understood as a perspective or thematic focus for other subjects, rather than as an independent subject. In this way, debaters brought sustainable development into the scientific realm, not as a subject but as a part of existing disciplines. A recurring explanation was that Geography offers a holistic perspective, which was presented as unavoidable when addressing issues related to sustainable development. Geographic knowledge focusing on the human–nature relationship at different levels, i.e., local to global, was considered important in an ever-increasing globalised world.

This argument, particularly the emphasis on different levels, also emerged in the teacher interviews conducted for Papers II and III. Teachers argued that Geography, as a school subject, especially in relation to sustainable development, offers productive ways of engaging with complex societal issues through its capacity to address phenomena across multiple scales. As the interviews primarily focused on the relationship between the subject and different spatial perspectives, Geography was described as providing analytical tools that enable movement between local, regional, and global levels. Sustainable development was formally articulated as a cross-cutting perspective across all levels of education. According to teachers, the perspective held a particular position in Geography where

sustainability was addressed in ways that encouraged pupils to critically examine what sustainable development entails and how it may be realised.

As the results of Paper I also indicate, sustainable development was not considered an endeavour for Geography alone. Rather, due to its holistic character, it was argued sustainable development needs to be addressed and taught across multiple subjects and perspectives. As found in Paper I, Geography could be assigned responsibility alongside Social studies (*Samhällskunskap*) and Science studies (*Naturkunskap*). The intention, however, was not that this should prevent other subjects from raising sustainability issues within their syllabuses.

Those debaters who welcomed a freestanding subject of Sustainable Development argued that such an interdisciplinary subject would promote the position of natural science in the curriculum. This was highlighted as necessary to be included in the Social Science Programme. Those who argued for an independent subject, except the SNAE debaters, did not address the relationship between the subjects of Sustainable Development and Geography, as these arguments were published before it was proposed that Geography would be replaced as a characteristic subject (*karaktärsämne*).

Finally, the category '*Protecting the autonomy of geography as a scientific discipline and as a school subject*' comprised arguments that emphasised geography as both an established academic discipline and the school subject with the most holistic character. As the results of Paper I demonstrate, the subject of Geography was the one with the strongest need for protection, but other subjects would also have been affected. The debaters pointed out that, unlike the proposed subject of Sustainable Development, Geography possesses distinct concepts, established theories, and scientific methods. The already existing subject of Geography was consequently internationally recognised as a field of knowledge.

The debate also emphasised the connection between geographical knowledge and current societal issues, including events extending beyond sustainable development. Some of the concerns in mind were globalisation, climate change, and asylum issues, which geography, because of its scope, can provide knowledge about. Results from Paper II

show that the interviewees similarly supported this view, adding that geographical knowledge can be easily visualised. This may enhance pupils' learning, as theoretical ideas can be reinforced through visualisation or through outdoor teaching. However, one issue that emerged in the interviews was that the otherwise concrete character of Geography could become less tangible when addressing sustainable development, due to the complexities in this perspective.

Results from Papers I and II show how geographic knowledge is argued to contribute to an educational context, particularly through its connections to contexts beyond the school setting. These arguments were mainly presented by geographers, including scholars and Geography teachers. Contrary to the SNAE proposal to reduce the time allocated to Geography due to the introduction of the new subject, Sustainable Development, it was argued that Geography should have been allocated additional time instead. A reason given for this was to enable Geography to address current national and international issues. Although sustainable development was not explicitly mentioned, it can be understood as falling in under the phrase 'major issues'. Other debaters more explicitly linked Geography to a sustainability perspective, arguing that Geography should be given more time to address sustainable development effectively. A similar argument emerged during the teacher interviews conducted for Papers II and III. In addition, international contributors participated in the debate covered in Paper I, offering comparative perspectives on how Geography is positioned in upper secondary education in the other Nordic countries, where the subject was described as occupying a more prominent place in the curriculum than in Sweden.

Paper III shows how structural constraints within the work environment affect the manoeuvrability teachers have in their profession. One condition was limited time and pedagogical tools to help pupils fully comprehend either the global or structural aspects of sustainability. This was a paradox highlighted during the teacher interviews: sustainable development is widely addressed in society, yet the time allocated to Geography to cover it is limited, especially given other content to be taught. Teachers draw parallels between the limited time allocated to the subject and its inconsistent status. While Geography is held in high regard within the school context and is generally appreciated by pupils, teachers feel that geographical knowledge remains undervalued in wider society.

An example of undervaluing geographical knowledge is that, in interests and societal debates, geography can be present, but it is not recognised as such. This discrepancy may create tensions around teachers' professional roles and the legitimacy of the subject of Geography. Limited time caused frustration and anxiety concerning what to prioritise for teaching within the available time.

## Geographical place as a contribution to education for sustainable development

Paper II focuses on place and how a deeper understanding of sustainability issues can be achieved through situating teaching in settings known to both pupils and teachers. However, another result surfaced concerning hierarchies of place, based on imagined 'centrality' and urbanity. This 'ranking' was inferred from how places were conceptualised during the teacher interviews. All places were described as having place-specific advantages, including proximity to nature, higher socio-economic status, and more opportunities. It could be understood as if urban areas in Västerbotten County had better opportunities than rural places, too. These opportunities were discussed in general, not necessarily linked to education for sustainable development (ESD), but they were largely ESD-related. Teachers could share pupils' experiences of exclusion, specifically regarding car dependency, even as politicians nationally advocated public transport, which is not possible everywhere. Fuel costs were another topic where pupils felt excluded from the rest of Sweden. These feelings did not originate at school; the pupils had acquired them elsewhere and then expressed them within the school context.

These thoughts about place surfaced during the interviews as teachers explained how they approached sustainability in their teaching. Teachers found that a global focus made it more difficult for pupils to gain a deeper understanding of the issues due to a high level of abstraction, resulting in more complex content for teachers to teach. To facilitate learning, teachers argued that tying sustainability content to places that pupils are knowledgeable about can facilitate a deeper understanding of its complexities. An advantage of situating ESD locally, as the results from Paper II demonstrate, was the possibility of using easily relatable examples, which helped pupils better understand sustainability issues and, in some cases, enabled them to influence their families and local

communities. In doing so, pupils were encouraged to become more aware of these issues and to adapt the content to local settings and ways of life. Teachers argued that there is much to be learned locally, and that this may be more relevant to pupils in lower-secondary school.

The role of general world knowledge, not specifically tied to ESD but to broader subject matters covered in Geography and other school subjects, was highlighted in Paper II. This became apparent during the teacher interviews, where several teachers described how pupils developed an interest in geographical aspects during other lessons. These could include subjects such as History or Religious Education, where pupils wanted to understand more about the geography and geographical conditions of places relevant to the topic they were studying at the time. The teachers provided examples of this to varying degrees. It was argued, for example, that global-scale issues may be too complex for lower-secondary pupils. This view was not expressed as a criticism of pupils' knowledge or abilities, but rather as a need to establish a solid foundation through learning about local conditions and the local consequences of unsustainable practices.

Similarly, as shown in Paper II, the teachers described how both they and their pupils could engage with and contribute to sustainability issues within familiar local contexts. This involved presenting pupils with concrete ways they could act to support a more sustainable future. In schools, particularly where pupils had parents who owned forest land, teachers discussed forestry and forest ownership in the classroom. By demonstrating ways to address sustainability, pupils could bring this knowledge home, prompting discussions within their families. Occasionally, parents also contacted teachers to continue these discussions and learn more about sustainability-related issues. Thus, when discussing resources, the forest was an example teachers used to connect the topic to the local context. Beyond forestry, teachers described a range of additional ways in which locally grounded examples were used to encourage pupil engagement and agency. Another example teachers could use to engage pupils is to refer to small-scale actions, such as measures to support insect life and promote biodiversity, as well as activities aimed at fostering pupils' self-reflection on consumption.

Finally, the local place contributed through its relative closeness to nature, which was described as a factor promoting engagement with sustainable

development. This was primarily discussed by teachers working in rural schools, though not exclusively. They considered that proximity to nature constituted an advantage, as it was perceived to strengthen the human–nature relationship. These claims were illustrated both through teachers’ own experiences and through observations of their pupils. Teachers working in towns also noted that pupils enjoyed being outdoors and appeared to appreciate outdoor activities, particularly when guided and informed about what they encountered. This could be both in close proximity to the school and on field trips when educational activities were conducted elsewhere. While this closeness to nature was not limited to rural settings, teachers in urban schools did not address this phenomenon as readily.

## Teachers’ professional approaches to the contested and politicised field of sustainable development

The teachers who were interviewed shared experiences of how they worked with sustainable development and ESD to help pupils develop the skills to make conscious decisions and achieve a sustainable future. Results from Paper II demonstrate that, according to their narratives, teachers shared a commitment to engage and empower pupils to take responsibility for their local place and to help them become more sustainable in their everyday lives. The underlying motives teachers gave for this varied from more democratic ones, such as wanting pupils to participate in societal discussions, to more environmentalist ones, highlighting the value of nature beyond purely economic considerations. The methods teachers used to teach sustainable development were varied, ranging from more theoretical approaches, where pupils read school material, to practical approaches that encouraged pupils to take action in different ways. For example, writing to their local municipalities, discussing solutions, and educating people in their immediate communities on how to become more sustainable. During the interviews, when teachers discussed taking action, they perceived that educational resources focused on societal challenges about which lower-secondary school pupils were considered to have little agency to influence, because they are too young to do anything. Teachers emphasised that educational material covering ESD, for example, textbooks, began to become more

diverse, including topics beyond energy sources, but change was slow within this context.

Paper III demonstrates how teachers, when addressing sustainability, navigate a multifaceted intersection of curricular demands, societal expectations, and local realities. It was important to stick to facts to avoid becoming political actors and to preclude the conveyance of ready-made solutions. Since the task was to enable pupils to form their own opinions based on factual knowledge and an understanding of multiple perspectives, it could frustrate teachers if, for example, pupils did not engage with or consider new perspectives. On the other hand, when pupils engaged critically, reflected, and reconsidered their positions, teachers showed professional satisfaction and perceived a sense of meaningfulness. Teachers also derived professional fulfilment from introducing new perspectives unfamiliar to the pupils. In other circumstances, teachers could assume the role of being ‘annoying’ to provoke pupils to engage intellectually and learn, which led to a sense of professional purpose. Another challenge that teachers mentioned was the growing acceptance among pupils for ‘alternative facts’ and provocative interjections. Local ways of life, including provocative interjections related to EPA culture,<sup>3</sup> as well as views on meat consumption, and how these could interact with sustainability goals on a global level provided conditions that teachers needed to navigate. However, teachers made clear that this was not a reason to avoid engagement and to teach sustainable development. Instead, it could lead to constructive discussions in which different views on sustainability would be presented, questioned, and problematised. Mutual respect was key in these discussions, not only to learn about systems and impacts but also to confront the ideological bases that could perpetuate unsustainable practices. When discussing the meaning of sustainable development, teachers identified a societal overuse of the term, especially linked to corporate ‘greenwashing’, which hindered pupils from developing a deeper understanding of the concept that went beyond symbolic or political dimensions. Teachers themselves could also experience a moral stress, a further source of frustration, concerning the

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<sup>3</sup> EPA culture is a youth subculture predominantly present in rural areas of Sweden. It revolves around driving cars and modification of cars classified as A-tractors, that adolescents aged at least 15 years old can drive, however with a speed limit of 30 km/h.

fact that necessary societal changes were not taking place at the desired pace, or even at all.

During classroom discussions, concerns were also raised, as teachers observed that pupils did not necessarily perceive sustainability issues as significant problems. Other sentiments teachers could identify among pupils included negative perceptions of the future, driven by views on how a sustainable future was to be achieved. It could be exemplified by detachment based on the belief that nothing could be done to change the path on which society was headed. However, this societal path could also lead pupils to feel anxious about climate change. This anxiety was linked to social media, where content was made to be dramatic and misleading to generate emotional reactions. When encountering pupils who were upset, some teachers explained that they took it upon themselves to provide emotional support, showing pupils that it was a shared problem, validating their feelings. Yet, to avoid being stuck in a negative spiral, teachers encouraged pupils to channel these emotions and turn them into engagement, enabling pupils to influence the situation. Teachers also found it helpful to direct pupils' attention to place-based geographical narratives and to foster critical thinking and capabilities in line with the principles of ESD.

To overcome these challenges, the teachers, regardless of their professional experience as Geography teachers, expressed a desire and need for professional development and collegial learning. In addition, the teachers criticised the Swedish National Agency for Education (SNAE) because they believed the SNAE could provide further support. The personal responsibility inherent in the profession was appreciated, but the lack of support was an issue that required attention. In the interviews, the expressed needs ranged from minor to more substantial efforts requested by the teachers. One was a request to make information (facts, figures, and data) more accessible to teachers, as it can be difficult for individual teachers to obtain such data under current circumstances. According to the teachers, this could be achieved through more frequent contact between schools and academia. A further issue of greater concern arose when teachers stated that physical geography had been absent during their teacher training. When teachers discussed sustainable development, they recognised the importance of maintaining a holistic perspective.

As it currently stands, teachers perceive that the available professional development resources are primarily situated in the Stockholm region, thereby making participation more difficult in terms of cost and time for teachers working in northern Sweden. Consequently, teachers described a situation in which professional learning relies on more informal and self-initiated approaches. These may include self-reflection, discussions with colleagues, relevant media such as documentaries, or standard assessment tests (SATs) to better understand a vague syllabus. Teachers expressed different ideas on how to facilitate professional development; for example, material could be provided, to encourage flexibility, enabling teachers to access and review it independently at a time and pace that suit their professional schedules. Desires for a physical forum where teachers could meet colleagues from other schools with similar subject affiliations were also expressed during the teacher interviews.

# Discussion

This thesis examines how education for sustainable development is conceptualised, enacted, and situated within the Geography subject. Taken together, the findings illustrate a complex interplay of ongoing negotiations concerning disciplinary boundaries, the use of place to make sustainability meaningful, and teachers' agency in navigating these complexities. The discussion is structured around these three themes: the subject, place, and the teachers. Together, they provide a framework for understanding how sustainable development is interpreted and enacted within Geography teaching.

## Framing and negotiating sustainable development within the boundaries of the Geography subject

The debate recounted in Paper I, surrounding the proposed introduction of Sustainable Development as an independent school subject (Östman 2005, 2006; Molin 2006), foregrounded questions of disciplinary legitimacy, ownership, and curricular space. In this context, boundary-work theory (Gieryn, 1983, 1999) provides a useful analytical lens for understanding how Geography's scientific and educational boundaries were articulated and defended. The central idea underpinning boundary-work theory is that conflicts emerge when different bodies of knowledge each claim legitimacy and reliability (Clark et al., 2016).

The analysis identified arguments related to 'expulsion', 'expansion', and 'protection of autonomy', through which Geography's disciplinary position was negotiated. The subject of Sustainable Development was framed as either insufficiently scientific or inherently political. The non-scientific character of the concept and the proposed subject of Sustainable Development carry an underlying argument of significance: that what is taught in schools should be grounded in science. The Swedish Education Act (SFS, 2010:800, §5) emphasises that 'education should rest on scientific knowledge and proven experience'. Thus, sustainable development was argued not to meet the requirements for being considered an independent subject, but rather an important perspective

in other subjects. Debaters sought to exclude it as an independent subject, while simultaneously expanding Geography's scope to encompass sustainability-related knowledge. At the same time, arguments emphasising the need to protect Geography's autonomy highlighted concerns regarding the maintenance of disciplinary coherence and control over curricular content. Ultimately, the curriculum reform process was abandoned (Ledman, 2014).

An example of this is the proposed subject of Sustainable Development, which challenges the scientific boundaries of the existing subject of Geography (Östman, 2005). The first theme in this thesis, 'the subject and status of Geography', illustrates boundary-work in action, demonstrating how the curricular place of Geography was negotiated and how sustainable development was situated within its disciplinary boundaries. In this curriculum reform process, these negotiations were made visible, offering an opportunity to study how they unfold within an educational context. As disciplinary boundaries are continuously negotiated, often implicitly, this process creates opportunities to examine how such articulations emerge in specific contexts.

Taken together, boundary-work illustrates how Geography's position within the school curriculum is not fixed but continuously negotiated. In this thesis, this is demonstrated through the emergence of sustainable development. This negotiation not only reflects broader struggles over disciplinary authority, but it also has concrete implications for how sustainable development is conceptualised and taught in school Geography. Consequently, the challenge is not merely to negotiate whether sustainable development belongs within Geography or other subjects, but also how its inclusion reshapes the discipline's boundaries, purposes, and responsibilities within an educational context.

An issue for the subject within the Swedish educational system is that it historically has not had a significant role, and its main objective is perceived as less explicit than in other subjects. As a result, Geography has struggled to gain status, which may limit recognition of its relevance for sustainable development. The issue of low status, and a generally low awareness of the relevance of geographical knowledge, may help explain why Geography is not mandatory in more than a couple of upper-secondary school programmes. This may also partly explain why

Sustainable Development was proposed as an independent subject to replace it in upper-secondary school, apparently without considering what was already covered by the subject of Geography (Prop. 2003/04:140). Geography retained its place in upper-secondary school, as shown in this thesis, which likely shaped how the subject's boundaries were perceived in subsequent educational contexts. Limited time and pedagogical resources (Lindström & Pennlert, 2016) constrain the conditions under which teachers can work with the complexity of sustainability issues. These challenges can be understood in relation to the status of Geography and the conditions shaping teachers' professional practice. The issue of time was interrogated in relation to the prominent role sustainable development occupies in public debate. Teachers are expected to cover extensive subject content, including ESD, within limited curricular time, while also preparing pupils to engage in democratic debates and make informed decisions that promote sustainable development. Time constraints, combined with broad subject content including ESD, have been found to pose a general difficulty (Huh & Jo, 2025); a finding that is consistent across a range of subjects (Admiraal, 2025). The findings also indicate that additional curricular time for Geography has been advocated. For instance, since sustainability issues are holistic, they could benefit from interdisciplinary work to enable pupils to gain an understanding of perspectives from different subjects and the potential conflicts they may entail. However, due to insufficient time, this remains problematic. This is not only an issue for Geography, but it also limits opportunities for collaboration between subjects, as limited time was expressed as a general issue. It was further stated that Geography could serve as a forum to enable and facilitate such initiatives due to its holistic character.

## Utilising Geography to make the complexities of sustainable development more tangible

In this section, the ways in which teachers perceive and utilise local place within Geography teaching will be discussed, alongside how this is argued to facilitate pupils' understanding of sustainable development.

Teachers in the studies primarily expressed place as relational when addressing sustainability (Massey, 2005), arguing that places are connected to other places and to global processes, and that these

connections are part of, and result in, different local expressions and identities (e.g., see Berg & Persson, 2023). When discussing place, teachers in rural areas highlighted the distinctions between rural and urban regions, predominantly within Västerbotten County, whereas their counterparts in urban areas of the county primarily compared their conditions with those in southern Sweden. This spatial situatedness was presented under the theme of *'Perceived hierarchies of place'*, in which teachers tended to position their own location relative to others, generally characterising it as inferior in certain respects. For instance, in rural Västerbotten, pupils expressed a sense of injustice about their location, perceiving it as offering fewer opportunities than other regions. In urban regions, perceptions of injustice were more closely linked to regional disparities between the north and the south of Sweden. This could indicate that people in rural regions may feel marginalised compared to those in urban areas. An issue that has been addressed in research on 'the urban norm' (Björling & Rönnblom, 2023) and the uneven political and economic relations between northern and southern Sweden (Nilsson & Lundgren, 2015). The teachers who discussed and problematised the place identified both advantages and disadvantages relative to other locations, notably closeness to nature and socio-economic differences. Place may therefore be seen as a factor to include when considering how to approach ESD; the particularities of places and their relations to other places and people were important when teachers discussed their approaches to ESD.

Local circumstances directly shape how teachers practice their profession (Lundgren, 1999). For example, as exemplified in Paper II, resources and economic conditions provide frames to which education must be adapted (see also Lindström & Pennlert, 2016). These circumstances can be identified as frame factors. The frame factor theory, originally developed by Dahllöf (1967, 1971) and further developed by Lundgren (1972; 1999), can be linked to how teachers implement teaching for their pupils. Persson (2015) identifies several factors, including curricula, time, economic resources, school buildings, and classrooms. There are frame factors that indirectly relate to place, as they can indicate pupils' socio-economic backgrounds (Imsen, 1999) and the allocation of resources (Adolfsson & Håkansson, 2017). It may be argued that place must be considered when understanding frame factors, as discussed in this thesis. Place can establish preconditions that affect how teachers conduct their

profession; for example, the composition of pupils across different school years taught in the same class. By utilising the local context, teachers maintained that understanding among pupils increased, avoiding an excessive focus on the more abstract content of sustainability issues in distant places. The interviewed teachers emphasised the importance of world knowledge. Yet, for pupils to fully comprehend, most teachers saw the need to connect sustainability issues to a context with which the pupils were familiar. Consequently, teachers must consider the local context when planning and delivering their teaching, consciously utilising the places pupils and students are familiar with to facilitate understanding and promote learning. As argued by Dentzau (2014) and Butler and Sinclair (2020), the local place offers a setting where pupils can encounter examples of what they are taught (theoretically) in school. The focus need not be restricted to the pupils' immediate local environment; it can also extend to other settings where educational activities are conducted. This is highly relevant to the subject of Geography, as the field trip is a key geographical method that, as argued by Bullard (2003), allows learners to become more knowledgeable about their surrounding environment. As argued in this thesis, for pupils to learn from their local surroundings is essential in relation to sustainable development, since it benefits the understanding of the human–nature relationship, which is important in this context.

According to frame factor theory, teachers must adapt to different frames within the teaching process. This issue was further explored in the results from Paper II, where a geographical conceptualisation of place was contrasted with how place is treated within place-based education (PBE), which has been argued to be a viable approach to teaching sustainable development (Van Poeck et al., 2025). The findings indicate that teachers explicitly addressed the geographical location of their schools and articulated how contextual knowledge was intrinsically connected to their surrounding environments. In doing so, they situated their localities both spatially and temporally (cf. Massey, 2005), while also embedding these places within broader political contexts. Teachers referred to policy decisions and governance processes at both local and national levels that shape everyday life and influence how sustainability issues are understood and negotiated (cf. Persson & Berg, 2022). Situating knowledge in the local setting was a frequently utilised approach among the teachers in the current studies. What separated the teachers was the frequency with

which they did so; some were more eager to connect and focus on the local place, while others were more outward-looking. In accordance with Preston (2015), a geographical understanding of place can further develop place-based education. This is because, to be meaningful, spatial dynamics must be taken seriously rather than treated as a superficial add-on, where location is seen only as the stage upon which phenomena can be observed (Israel, 2012). In this regard, a geographical conceptualisation of place as an ever-changing process can contribute to PBE. However, as Israel (2012) points out, PBE focuses on situating pupils in the local community and engaging with the local development. Therefore, by allowing itself to be influenced by this teaching approach, Geography itself may gain increased relevance in teaching aimed at social transformation. Results from this thesis demonstrated that teachers highlighted the importance of including the local place in fostering environmental commitment, privileging rural contexts as especially favourable to such work. Teachers working in towns also described efforts to cultivate environmentally positive attitudes, though these were less frequently articulated. Meaning that local environments could shape both pedagogical possibilities and teachers' confidence in engaging pupils with sustainability issues. As it is important to comprehend phenomena occurring further away, it has here been indicated that, as perceived by the teachers, the pupils first require an understanding of the local context to further understand and explore the world.

## Teachers' agency in navigating the complexities of sustainable development

In the Geography curriculum from 2022 (Skolverket, 2022), it is emphasised, among other things, that sustainable development is complex and that Agenda 2030 should be integrated into Geography education to provide pupils with relevant knowledge and skills. While these ambitions are noteworthy, their interpretation and enactment rely heavily on teachers' professional judgment. As a result, curricula are enacted depending on teachers' personal experiences, values, and local contexts. Biesta et al. (2015) identified three types of beliefs that influence whether teachers exercise or relinquish agency within their profession: beliefs about children and young people in relation to learning, beliefs about the teacher role, and beliefs about the purpose of education. The

findings demonstrate that teachers perceived that utilising their agency enhanced pupils' understanding of ESD. Through their agency (Biesta & Tedder, 2007), teachers decide what to include in their teaching (Brevik et al., 2019), how it is enacted (Priestley et al., 2013), and in what sequence. These choices are shaped by the conditions teachers face and by pupils' needs (Morales et al., 2025).

As with all forms of teaching, teachers' agency is central when teaching ESD (Alsina & Vásquez, 2024). The findings illustrate that teachers perceived that they made a difference when applying their professional judgement in ESD teaching. This was especially evident in schools where pupils came from conservative homes where sustainable development issues might never have been addressed. In such situations, teachers reflected on making a substantial impact, particularly when encouraging critical discussion or when pupils reconsidered their views after being presented with new information. This relates to the importance of skills such as collaboration, critical thinking, and problem-solving in preparing pupils for contemporary and future knowledge societies (Joynes et al., 2019; OMNI – BE Aware Student, 2020; Voogt & Roblin, 2010; Geisinger, 2016).

Teachers, as reflected in the results, utilised different pedagogical methods, including diverse approaches to sustainable development. Some focused more on the global picture, while others emphasised spatial proximity to themselves and their pupils, thereby facilitating engagement and understanding. Regardless of the point of entry, it was described as natural to include sustainability perspectives within Geography topics when applicable. This may be compared with Torbjörnsson (2014), who demonstrated that ESD previously depended on individual teachers and their personal engagement with sustainable development. The current findings, by contrast, indicate that ESD was not exclusively tied to individual teachers' engagement with these issues. When teaching ESD, teachers transferred content and skills concerning sustainable development into local contexts and local communities, which fostered pupils' interest. Contrary to Biesta et al. (2015), the interviewed teachers argued that this engagement and interest were encouraged. It led to socialisation into the local community and the development of skills. This may enable pupils to become agents of change, thereby adopting more sustainable lifestyles. This suggests that engagement facilitates the

acquisition of skills, given the significance of motivation (Skaalvik & Skaalvik, 2016; Gasca-Hurtado et al., 2024). This is supported by Gericke and Torbjörnsson (2022), who state that a lack of engagement among pupils is related to scepticism. This became evident when teachers described pupils expressing strong opinions and, at times, polarised views on lifestyle choices. Teachers also perceived a greater acceptance of ‘alternative facts’ among pupils, reflecting shifts in how scientific knowledge is valued.

This tension between knowledge, values, and democratic responsibility is evident in the empirical findings, where some teachers described a need to navigate sustainability issues thoughtfully within classroom practice. Since sustainability is value-laden and contextual, and decisions depend on priorities, as argued by Martin (2015), teachers need to consider their approach to ensure every pupil is reached. The results demonstrate that teachers emphasised the importance of navigating controversial issues, such as sustainable development, through dialogue, critical reflection, and sensitivity towards pupils’ perspectives and emotions. The task was described as a professional responsibility. Teachers also described pupils expressing other strong emotions, such as climate anxiety and concerns about their future. It was emphasised that these emotions were relatively common in their profession. When encountering anxious pupils, teachers acknowledged their feelings while encouraging and empowering them to exercise agency. The aim was to help pupils to take action to envision a future they could perceive as both meaningful and hopeful. As highlighted by Lambert and Morgan (2011) and Standish (2024), teachers must avoid communicating an overly negative portrayal of modern society and development, a tendency that has been shown to constitute a tangible risk. For example, teaching has at times framed economic growth primarily in terms of environmental degradation and cultural imperialism. This highlights the professional judgements teachers make when selecting and framing sustainability issues. The findings indicate that teachers addressed these issues by contextualising them within locations familiar to the pupils; for instance, by demonstrating how distant global problems have local implications. Furthermore, teachers shared their own shortcomings to illustrate that while perfection is unattainable, one can always strive to make better choices, thereby avoiding a moralistic tone regarding sustainability. This may be related to previous research highlighting teachers’ capacity to influence pupils’ engagement with

environmental issues (Sjöblom, 2011; Gavinolla et al., 2022). These experiences illustrate how pupils' emotional responses to ESD, such as frustration and engagement, are linked with Geography teachers' navigation of their disciplinary identity and professional agency.

Relating this to research on beliefs and the taking or relinquishing of agency (Biesta et al., 2015), the results from the current studie instead indicate that teachers achieve agency while encouraging their pupils to learn. Biesta et al. (2015) also stated that teachers are not always eager to assume the role of an agent of change responsible for learning. However, the current results demonstrate that teachers readily accepted responsibility for their pupils' learning. Teachers encouraged their pupils to question and to think critically about sustainable development. In the context of ESD, teachers exercise agency by empowering pupils with the knowledge and skills required for appropriate action. Through their agency, teachers guide decisions regarding what to teach and when, which is highly relevant in sustainability teaching (Chang & Wi, 2018; Krause et al., 2025). This can also promote pupil agency, for instance, through geographical inquiry (Roberts, 2023). As highlighted in the previous section, empowering pupils to take action is a central component of ESD (Caiman & Lundegård, 2013; Ideland & Malmberg, 2014), underscoring the reciprocal relationship between teacher and pupil agency. Nevertheless, teachers retain a crucial role in ESD, as their agency facilitates pupils' learning (Remeidos Abalahin & Chang, 2019), including through collaboration with community stakeholders in developing the ESD curriculum (Corney & Read, 2007).

A general shift in education towards action competence can be identified (Sass et al., 2020). Previously, this was regarded an *approach* to teaching, but it has now become a formal educational outcome. This form of knowledge may also provide a better contextual understanding of sustainability issues and their causes, including variations in visions and strategies for change (Van Poeck et al., 2024). As research on action competence in ESD has shown, it requires substantial time to achieve, yet it remains at the core of this pedagogical approach (Olsson et al., 2022). This agency is further applied to meet the diverse and changing needs of pupils (Morales et al., 2025) and enables teachers to both educate pupils and determine activities aimed at their own professional development (Brevik et al., 2019). To achieve this agency, it is crucial to provide

opportunities for its development (Morales et al., 2025). Teachers viewed autonomy as an established professional norm. This stands in contrast to research describing teachers feeling hesitant about being autonomous in their profession (Biesta et al., 2015). However, the findings also reveal concerns regarding autonomy; specifically, teachers expressed a desire for additional support, such as opportunities to observe peers at other schools to enhance their professional development.

This relates to teachers' conditions for exercising agency, as teacher education may not have fulfilled expectations, making professional development even more significant. Unfortunately, teachers emphasised the scarcity of opportunities for this, particularly in northern Sweden. This is concerning, as research has shown that targeted professional development is necessary to advance teachers' understanding of ESD (Boeve-de Pauw et al. 2022). Such competence enhancement can, in turn, further promote pupil engagement with sustainable development (Berglund & Gericke, 2016). This points to the importance of place in shaping teachers' opportunities, or lack thereof, to develop professional skills. It was also stated by the participants that teachers in other subjects were offered more frequent opportunities for professional development. Teachers also expressed negative sentiments towards professional development due to the way such initiatives are organised and implemented. Such critique has been noted previously in Sweden by Molander (2017) and the Swedish School Commission (SOU, 2017:35), who stated that professional development is particularly challenging in relation to ESD due to the complexity of its implementation. Although sustainable development constitutes a central component of Geography education, previous research and national evaluations suggest that teachers often feel underprepared to teach ESD (Parry & Metzger, 2023). The current findings suggest that the SNAE needs to provide additional opportunities for Geography teachers to develop their professional skills. This demand for professional development was expressed regardless of teachers' length of professional experience, although the types of support requested varied. Previous research has shown that newly qualified teachers tend to have a greater need for professional support (Harju & Niemi, 2018, 2020). Among the reasons professional development was perceived as unsuccessful were the limited opportunities offered to Geography teachers and the perception that costs were the main criterion in planning professional development. Thus, the findings suggest that

Geography teachers exercise agency, but also require support in developing it, both from peers and from the relevant authorities.

However, the results demonstrate that concerns were raised regarding education and professional development, both in general and specifically concerning ESD. It has been suggested that teacher education plays a significant role in shaping teachers' capacity to enact ESD (Echegoyen-Sanz et al., 2024). While the quality of teacher education has not been assessed within the scope of this thesis, the findings reveal disparities within current teacher education. Teachers described physical geography education as insufficient or sometimes absent in their Geography teacher education. From a teacher agency perspective (Biesta et al., 2015), such experiences may limit the range of content and perspectives teachers feel confident utilising in their teaching. It also highlights a problem with how Geography approaches ESD holistically (Bagoly-Simó, 2023). If teachers do not receive physical geography education, the holistic potential of the subject becomes difficult to achieve.

Insufficient teacher education risks deficiencies in subject-specific preparation, which may limit the extent to which Geography can be taught as a truly holistic subject and diminish teachers' ability to exercise their agency. Within the Swedish context, Borg et al. (2014) indicate that teachers from different subject traditions generally identify all three sustainability dimensions. For instance, Maude (2023) has argued that geography should focus on the ecological dimension and on how the different elements relate to one another. The latter idea is crucial and aligns with the findings of this thesis. However, focusing exclusively on the ecological dimension does not reflect the holistic potential of Geography. While the ecological aspect is covered by the geography discipline and, subsequently, by the subject, but so are the social and economic aspects. Given the potential to provide pupils with an understanding for the interconnected character of the individual sustainable development dimensions, geography, both as a discipline and a school subject can assist in providing holistic ESD knowledge from multiple perspectives on sustainability. Moreover, Borg et al. (2014) show that the relative emphasis placed on each dimension varies by subject background. Teachers in the social sciences, including Geography teachers, tend to prioritise the social dimension. In relation to their study, it is important to emphasise that not all teachers of social science subjects

may cover all aspects of sustainability to the same extent as expected within the subject of Geography. From an agency perspective, teachers' professional judgements are shaped by prior education and disciplinary traditions, which may preclude a fully integrated, holistic approach. The findings demonstrate that teachers comprehend the holistic characteristics of sustainable development. However, they tended to focus on the ecological dimension of sustainability. This may indicate a need for additional professional development in ESD to fully address the holistic nature of the concept.

This may also relate to textbooks, which were described as one of several teaching resources. Textbooks were regarded as useful for presenting facts. Yet, uncritical trust in textbooks has been a long-standing issue within Geography (Wennberg, 1990), and it has been argued that they can convey an outdated description of the world (Molin, 2006). Teachers noted that educational materials often present limited perspectives on sustainable development. Previous research demonstrates similar patterns, with a predominant focus on ecological dimensions in Geography textbooks (Biström & Lundström, 2021). Consequently, such an imbalance could act as an impediment to a holistic approach when teaching ESD within Geography, particularly if there is an excessive reliance on standard educational materials.

# Conclusions

The aim of this thesis was to investigate how education for sustainable development (ESD) is conceptualised, enacted, and geographically grounded within the secondary school subject of Geography. In this thesis, three themes: ‘the subject and status of Geography’, ‘place in teaching sustainable development’, and ‘Geography teachers’ experiences of teaching sustainable development’, have helped to guide the work. These three themes illustrate how Geography and sustainable development are related. For instance, sustainable development has been argued to be a relevant perspective within the subject. Yet, as demonstrated, there are also challenges inherent in this relationship, as noted in the studies. In this section, the conclusions related to each theme are presented. Furthermore, the findings of this thesis provide both theoretical contributions and practical implications, which are elaborated upon below. In the last section, possible avenues for future research are presented.

In the first theme, ‘the subject and status of Geography’, the focus was on further understanding how the subject's position was negotiated in relation to sustainable development. Geography was argued to possess strong potential to partially cover and contribute perspectives on the individual dimensions of ESD, as well as on more holistic understandings of how the complexities surrounding the three dimensions are interdependent for sustainable development. The potential for Geography to address sustainable development can be understood through its core attributes, such as the capacity to move seamlessly between local and global scales, to examine human–nature relationships, and to employ analytical tools such as place and space. However, this position within Geography cannot be taken for granted. Constantly negotiated disciplinary boundaries, vague syllabus formulations, and societal contestations encompassing sustainability all constrain Geography’s contribution to ESD.

The second theme, ‘place in teaching sustainable development’, examines how a geographical conceptualisation of place can be relevant to ESD teaching. This can be tied to perceptions of the local settings, given that in practice, when ESD becomes place-dependent and diverse sentiments,

such as exclusion, can affect how sustainable development is experienced. Local settings provide social, political, and ecological contexts that shape local ways of life. Together with broader societal debates on sustainability operating at different levels, these discussions affect how ESD is approached in classrooms. When place is considered within an ESD context, it is the relational aspects that become particularly relevant. This is because the continuously evolving relations between places at different scales have a significant impact on sustainability issues. Content concerning sustainable development can, for instance, be complex because the effects of unsustainable practices in one specific place can manifest in other parts of the world. This can further elevate the level of abstraction associated with the concept. Consequently, the local setting can be utilised as a resource in teaching. ESD content risks becoming difficult to grasp if insufficient attention is paid to the societal conditions in which it is taught. Utilising local settings in teaching is not exclusively tied to the Geography subject, indeed, many subjects may employ local or familiar settings when teaching their subject matter, as this can make the content more easily attainable for pupils.

The third theme, ‘Geography teachers’ experiences of teaching sustainable development’, focuses on how teachers enact ESD in their daily practice. One approach is reflected in the title, which highlights how teachers perceive sustainable development and incorporate it into their teaching. The quote originates from one of the teacher interviews and can be understood both literally and metaphorically. While it refers to a direct action – namely, to leave the classroom and explore one’s surroundings – it can also be interpreted as an invitation to engage critically with the world beyond the classroom, while still being physically present. In this sense, it captures the potential of the subject of Geography to support experiential learning and critical reflection on sustainable development.

ESD is enacted through contextualised teacher agency rather than being solely driven by policy. Teachers continuously interpret, negotiate, and transform ESD content in relation to pupils, local conditions, available resources, time constraints, and their own professional experiences. In this process, teacher agency is crucial, as it is relational (with pupils and local ways of life), contextual (linked to the importance of local place), and professional. Teachers can and do relate their teaching to the local context to varying degrees, in order to facilitate a deeper understanding of

sustainability issues among pupils. When teachers navigate these conditions, both values and knowledge are involved, making professional judgement central. This is because normative dimensions are difficult to avoid in teaching about and for sustainable development. While teachers are aware of tensions between informing and influencing pupils, these do not lead them to withdraw from ESD. Instead, teaching ESD is understood as a professional responsibility that teachers are willing to assume. Consequently, teacher professionalism, rather than standardisation, emerges as the key to responsible ESD. This remains the case despite the challenges posed by views on sustainable development that may originate outside the classroom, including ‘alternative facts’, climate scepticism, expressions of local ways of life, and pupils’ occasionally strong emotional responses to sustainability issues. Such conditions do not necessarily hinder ESD teaching; rather, they characterise teaching as being shaped by recurring tensions. These tensions may arise between global ambitions and local conditions, as well as between engaging pupils and moralising. Classrooms become arenas in which these tensions are manifested and debated, and where teacher agency is enacted, as teachers encounter and respond to opposing or provocative views through dialogue and relationship-building with pupils. Ultimately, it is through teachers’ professional judgement and didactic choices that ESD is realised in classroom practice.

Closely related to teacher professionalism and competence is the unequal access to professional development, which constrains Geography’s potential contribution to ESD. Given the complexity of sustainable development, continuous professional development is a prerequisite for teachers’ confidence and competence. Teachers perceive professional development opportunities as unevenly distributed, reporting a disparity between limited access in northern Sweden and greater availability in southern regions. Strengthening teachers’ access to professional development, therefore, appears fundamental to advancing ESD.

Taken together, addressing ESD within Geography is demanding, however, the holistic character and disciplinary concepts, combined with teachers’ agency, make it a rewarding endeavour. Teachers describe it as a meaningful and worthwhile task – for instance, when pupils intellectually commit to the education and reconsider their positions. ESD is not experienced as paralysing or discouraging, but rather as complex,

demanding, and professionally significant. Teachers who engage with ESD take responsibility for pupils' learning and for fostering perspectives on the future. Within the subject of Geography, ESD is therefore less about overcoming problems and more about navigating complexities through teacher agency.

Overall, these findings suggest that Geography offers considerable potential for ESD. This potential is realised through teachers' active interpretation and negotiation of curricular goals and societal tensions. Teacher agency thus appears both indispensable and vulnerable within a contested educational field, where scientific knowledge, political discourse, and local contexts intersect. The findings also indicate a clear need for enhanced support through professional development, both within Geography more broadly and in relation to sustainable development.

## Theoretical contributions

This thesis makes theoretical contributions to the literatures on boundary-work, place, and teacher agency literatures to varying degrees. When studying the curriculum reform process in upper-secondary education, boundary-work was an essential theoretical framework guiding the research. This thesis provides empirical evidence of how boundary-work is enacted in practice. In the debate studied, stemming from a curriculum revision for Swedish upper-secondary school, commentators, predominantly geography scholars and practitioners, argued against the introduction of a new school subject, Sustainable development. As this thesis demonstrates, this was achieved through arguments that aligned with the theoretical concepts, '*expulsion*', '*expansion*', and '*protection of autonomy*' as presented by Gieryn (1983, 1999). These concepts were connected to sustainable development as a non-scientific, rather political concept; it was argued that the subject of Geography could expand to cover sustainable development and thereby protecting the autonomy of geography as both a discipline and a subject.

The theoretical contribution regarding place refers to frame factor theory, developed by Dahllöf (1967, 1971) and further elaborated by Lundgren (1972, 1973, 1999). Teachers argued that contextualising sustainability issues in local settings facilitated pupils' deep understanding of

sustainable development and its complexities. The local place was assigned a significant role when teachers provided examples of how abstract content on sustainability perspectives could be made more concrete. As it stands, frame factor theory identifies several preconditions that affect how teachers plan and deliver their teaching. Place can be argued to indirectly relate to a few frame factors, as demonstrated in this thesis; for instance, the cultural background of pupils (Imsen, 1999), how pupil groups are organised, and how resources are allocated (Adolfsson & Håkansson, 2017). However, the central argument is that place is such a key factor in providing conditions for teaching that the physical place itself can be considered a frame factor that teachers can consciously utilise in their teaching. In this thesis, sustainable development has served as an example of why this claim is advanced; however, it may be argued that teachers of any subject must consider the local setting when planning and enacting their pedagogical practice.

Finally, regarding teacher agency, and in contrast to Biesta et al. (2015), the findings demonstrate that teachers actively engage with and assume responsibility for the pupils' learning process. They do not avoid the professional responsibilities inherent in their role, rather, they act as agents of change to promote more sustainable practices, thereby encouraging pupils to become aware of how their own lifestyles may affect sustainable development. Consequently, these pupils gain the potential to act as agents of change themselves, disseminating knowledge within their immediate communities. In this process, Geography teachers negotiate tensions of varying character and navigate both complexities and emotions, thereby articulating their agency. All this, while simultaneously balancing their teacher agency against the pupils' capacity to engage in a meaningful way.

## Practical implications

Some practical contributions related to each theme have emerged through the work of this thesis. The first theme, 'the subject and status of Geography', highlights the significance of the curriculum reform process. Specifically, the debate negotiating the relationship between Geography and sustainable development proved pivotal in shaping the current connection between these two entities within the Swedish educational system. The analysis clarifies how ESD is institutionally framed within the

Swedish educational context and why Geography is well-positioned to be one of the primary school subjects that educate pupils on this perspective. Consequently, the subject of Geography may be a small subject in terms of allocated instructional time, but it nevertheless plays a crucial role in ESD within the Swedish educational context.

The second theme, 'place in teaching sustainable development', focuses on how the place concept is utilised within teaching. The practical contribution related to this concept is that teachers are encouraged to consciously consider the local physical place in their ESD teaching. In doing so, pupils' understanding of the complexities encompassing sustainability is facilitated. By contextualising complex issues within a setting familiar to both teachers and pupils, abstract topics become more tangible. This is because they can be observed or conceptualised since the location is known to those involved in the educational practice. Through learning about their immediate surroundings, pupils can contextualise knowledge and thereby become knowledgeable about similar sustainability issues in other locations as well.

The third theme, 'Geography teachers' experiences of teaching sustainable development', demonstrates how teachers, by engaging with sustainable development and ESD in their teaching, achieve agency as they negotiate tensions and contested knowledge while navigating complexities and strong emotions. Consequently, the provision of professional development in general, and ESD in particular, to Geography teachers is essential. Another contribution relating to this theme was the identified need for more holistic teacher education and professional development. Enhanced availability of professional development can, for instance, help promote action competence among pupils, as they can gain practical experience in actions to promote sustainability. Arrangements that foster collegial learning were requested, as was improved support from the responsible agency, the Swedish National Agency for Education (SNAE). This indicates that Geography teachers require additional support in their profession, as they themselves advocated for support in various forms.

## Future research

Throughout this thesis, several avenues for future research have emerged. Some were not pursued due to the specific trajectory and choices made

during this projects' research process. First, it would be relevant to compare the debate that was studied in Paper I with other analogous processes within other contexts. For instance, when the subject of Geography was removed from upper-secondary school in 1965, its content was distributed among other school subjects (e.g., see Lågnert, 1963; Hägerstrand & Nordström, 1964), and it did not return as an independent subject until 1994 (Skolverket, 1994b). One aspect worthy of further investigation would be why the capabilities within Geography in relation to sustainable development are not more highly regarded, and what the reasons for this discrepancy might be. Furthermore, identifying patterns concerning why these situations reappear would constitute a valuable area for future study.

Another avenue that formed part of the initial scope of this thesis was to dedicate the final study to pupil interviews and classroom observations, in order to better understand their perceptions of sustainability and its relation to Geography. Together with the findings from the second theme concerning 'place in teaching sustainable development', the importance of contextualising sustainability matters within a physical place known to both teachers and pupils warrants further study. Of particular interest is how pupils perceive local settings in relation to sustainable development, and whether this contextualisation strengthens their willingness to act on issues they observe in their everyday lives. It connects to a sense of place (Massey, 1991, 2008) and potentially to research on how closeness to nature may foster environmental engagement.

Other ideas that have emerged through the work with this first emerged during a conference, The Geography Days (*Geografdagarna*), and then again during the work on the third theme, 'Geography teachers' experiences of teaching sustainable development'. In this context, professional development was highlighted as being virtually absent within the profession, especially with regard to the subject of Geography. More broadly, there has been criticism of how professional development is organised and implemented, both in research and by the Swedish School Commission (Molander, 2017; SOU, 2017:35). A specific focus on Geography would be of interest. This interest stems from teachers with 4 to over 25 years of teaching experience teaching Geography expressed a need and desire for further competence-enhancing measures. This indicates that the lack of professional development is not only an issue for

newly qualified teachers; instead, it appears to be an overarching problem for Geography teachers. As teachers in Västerbotten County perceived it, professional development is more readily accessible in southern Sweden. Whether spatial factors influence this disparity constitutes a pertinent area of study. Furthermore, teachers highlighted alternative measures to compensate for this, ranging from engaging with relevant media to studying standard assessment tests (SATs) to develop their professional skills. How this affects teaching in relation to Geography in general, and ESD in particular, represents a potential avenue for research. With regard to ESD, it has been established that competence enhancement is essential to enact teaching (Echegoyen-Sanz et al., 2024). The extent to which the SNAE provides guidance to teachers remains a significant issue. Teachers interviewed for this thesis emphasised that existing supportive measures are inadequate; furthermore, they perceived that colleagues in other subjects receive more comprehensive assistance from the authority. Finally, it would be interesting to study how a physical forum, as requested by teachers, could be organised and managed to best serve as a resource for Geography teachers.

Teacher education is another issue that emerged during the teacher interviews, where some teachers expressed that physical geography had been present only to a limited extent, if at all. How this affects the holistic potential of the subject of Geography would be of interest to investigate, as would the feasibility of implementing changes in teacher education. This is of particular importance because, as highlighted by Bagoly-Simó (2023), deficiencies in physical geography education have a negative effect on ESD. Therefore, it is fundamental that teachers receive high-quality teacher education in both human and physical geography if the subject of Geography is truly to claim to be a holistic subject in relation to sustainable development content.

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