



*Ash Lidice Göktürk-Sağlam, Raees Calafato,
Shaun Nolan, Anna Wärnsby, and Kenan Dikilitaş*

Teacher Research Literacy Development

A Toolkit for Teachers and Teacher Educators

This impressive publication is the outcome of a cross-country collaboration in the Nordic-Baltic Region among teachers, administrators, and academic researchers to strengthen the research literacy of teachers. Anyone interested in understanding and fostering practitioner pedagogical research and learning about effective evidence-based classroom practices will gain deep and important insights from this invaluable handbook. The TREL Project Team is to be congratulated on this outstanding initiative.

Anne Burns

Professor Emerita, Aston University

An internationally invaluable publication; it adds a wide range of Nordic case studies to the international literature on linking teaching and research. But perhaps more fundamentally - in the wider conceptual theme of "research literacy" - it develops our scholarly and practical understanding of how this can be developed in a wide range of contexts from school to higher education, with interventions from individual teachers to institutional policies and drawing on the international research literature on teaching research relations.

Alan Jenkins

Professor Emeritus, Oxford Brookes University, UK

MALMÖ UNIVERSITY PRESS
205 06 MALMÖ, SWEDEN
MAU.SE

ISBN 978-91-7877-787-7

DOI 10.24834/isbn.9789178777884

**TEACHER RESEARCH LITERACY DEVELOPMENT:
A TOOLKIT FOR TEACHERS AND TEACHER EDUCATORS**

Malmö University Studies in Languages and Literature in Education, 1

Copyright the authors, licensed under CC BY 4.0 unless otherwise stated.

Cover design by Anna Wårnsby and Mats Blomberg

DOI 10.24834/isbn.9789178777884

ISBN 978-91-7877-787-7 (print)

ISBN 978-91-7877-788-4 (pdf)

Printed in Sweden by Media-Tryck, Lund University,
Lund 2026



Media-Tryck is a Nordic Swan Ecolabel
certified provider of printed material.
Read more about our environmental
work at www.mediatryck.lu.se

MADE IN SWEDEN 

Aslı Lidice Göktürk-Sağlam, Raees Calafato,
Shaun Nolan, Anna Wärnsby, and Kenan Dikilitaş

Teacher Research Literacy Development:
A Toolkit for Teachers and
Teacher Educators

Malmö University
Department of Culture, Languages and Media

This publication also available at:
mau.diva-portal.org

ACKNOWLEDGEMENT

This handbook is one of the deliverables of the Teacher Research Literacy (TREL) Project: Comparative Trajectories in the Nordic-Baltic Region, made possible through the generous support of the Nordplus Horizontal Scheme in 2023 (Project number: NPHZ-2023/10004).

We extend our sincere gratitude to Nordplus for funding this initiative, enabling us to explore and support the development of research literacy in teacher education across the Nordic-Baltic region.

Their support has allowed the project partners, including university-based educators, school-based teachers, and school administrators, to collaborate in developing best practices by investigating their practices and integrating research into teaching. Through this project, we aimed to foster a deeper understanding of supporting teacher research literacy development and see how we could as educators design and deliver our research courses for pre-service students. The process has also empowered teachers by providing them with a space where they negotiated their identity as teachers and emerging teacher researchers. The project in particular contributed to the building of a more interconnected Nordic-Baltic network among the teacher education departments.

We also appreciate the contributions of our partner institutions and all participants who have shared their expertise and experiences, ensuring the success of this endeavour.



ENDORSEMENTS

This impressive publication is the outcome of a cross-country collaboration in the Nordic-Baltic Region among teachers, administrators, and academic researchers to strengthen the research literacy of teachers. Anyone interested in understanding and fostering practitioner pedagogical research and learning about effective evidence-based classroom practices will gain deep and important insights from this invaluable handbook. The TREL Project Team is to be congratulated on this outstanding initiative.

Anne Burns, honorary professor, University of New South Wales; adjunct professor, Curtin University; professor emerita, Aston University

An internationally invaluable publication, it adds a wide range of Nordic case studies to the international literature on linking teaching and research. But perhaps more fundamentally, in the wider conceptual theme of “research literacy,” it develops our scholarly and practical understanding of how this can be developed in a wide range of contexts: from school to higher education, with interventions from individual teachers to institutional policies, and drawing on the international research literature on teaching research relations.

Alan Jenkins, professor emeritus, Oxford Brookes University, UK

Teacher Research Literacy Development: A Toolkit for Teachers and Teacher Educators illuminates a formidable responsibility for teacher educators/education – developing agentive teachers who confidently, systematically, and collaboratively integrate research into their teaching practices. Teachers, teacher educators, and administrators can imagine viable training workshops, classroom interventions, and transformative goals for their own local contexts after reading the accessible and instructive chapters, each demonstrating the power of school and university partnerships and teacher research as a form of professional development.

Paula Golombek, University of Florida

This volume reports on an exciting project to develop teacher research literacy in Nordic and Baltic countries. Highly systematically organized and including richly detailed accounts of practice to support the reader, the toolkit includes multiple perspectives of work done in recent years to develop teacher research literacy in Scandinavia. Pre-service teacher educators may find the first section of case studies from five countries particularly valuable, while in-service teachers and school leaders will likely find that the following sections cater closely to their own needs. The editors draw on extensive international experience of supporting the development of teacher research literacy in a variety of settings, and their conclusion suggests strategies of great practical value to practitioners in the Nordic-Baltic region and beyond. The importance of teacher research literacy is increasingly well understood but needs to be developed further and this volume offers an essential contribution to the field.

Mark Wyatt, University of Hull

TABLE OF CONTENTS

THE TREL PROJECT TEAM	11
PREFACE	21
INTRODUCTION: TEACHER RESEARCH LITERACY AND TEACHER VOICES IN A NORDIC-BALTIC PROFESSIONAL LEARNING NETWORK....	23
Anna Wärnsby, Aslı Lidice Göktürk Sağlam, Raees Calafato, Shaun Nolan, and Kenan Dikilitaş	
PART 1 TEACHER RESEARCH LITERACY IN EDUCATION AT UNIVERSITIES	
CHAPTER 1 FROM POLICY TO PRACTICE: ADVANCING RESEARCH LITERACY AT OSLOMET, NORWAY	45
Dragana Surkalovic, Dina Tzagari, Lynell Chvala, and Beverley Goldshaft	
CHAPTER 2 CULTIVATING RESEARCH LITERACY IN SWEDISH TEACHER EDUCATION: CASE STUDIES FROM MALMÖ AND GOTHENBURG UNIVERSITIES, SWEDEN.....	63
Shaun Nolan, Anna Wärnsby, Irma Brkovic, and Ali Yildirim	
CHAPTER 3 TEACHER RESEARCH LITERACY IN LITHUANIA THROUGH NATIONAL FRAMEWORKS AND ACTION RESEARCH CASE STUDIES.....	77
Milda Ratkevičienė, Jolita Horbačiauskienė, Berita Simonaitienė and Edita Štuopytė	
CHAPTER 4 THE TALLINN UNIVERSITY CASES, ESTONIA.....	89
Anna-Liisa Jõgi, Merilyn Meristo, Maarja Tinn, Maile Käsper and Meril Ümarik	
CHAPTER 5 THE UNIVERSITY OF LATVIA CASE.....	99
Indra Karapetjana and Gunta Roziņa	

**PART 2 TEACHERS' VOICES:
TEACHER RESEARCH AND REFLECTIONS AT SCHOOLS**

CHAPTER 6 THE BENEFITS AND THE CHALLENGES OF
SELF-ASSESSMENT AS A TOOL THAT PROMOTES LEARNING..... 109

Lana Chernik

CHAPTER 7 THE TEACHING OF ACADEMIC ENGLISH
TO UPPER-SECONDARY STUDENTS IN NORWAY 117

May Britt Kleppe Baadstø

CHAPTER 8 MOTIVATION AROUND ORAL ASSESSMENTS
IN ENGLISH 127

Nikoline Holmøy Ellefsrød

CHAPTER 9 THE ROLE OF TEACHER FEEDBACK
IN STUDENTS' REVISION OF TEXTS 147

Siri Hunstadbråten

CHAPTER 10 DO READING STRATEGIES HELP? UNDERSTANDING
WHAT MOTIVATES NORWEGIAN HIGH SCHOOLERS TO READ
IN ENGLISH CLASS 161

Kimberly Wynne

CHAPTER 11 VOCATIONAL STUDENTS' ORAL PERFORMANCE
IN CLASSROOM ACTIVITIES AND EVALUATIVE PROFESSIONAL
CONVERSATIONS 181

Vanja Renee Larsen and Mats Berg-Berthinussen

PART 3 SCHOOL LEADERS' PERSPECTIVES ON TEACHER RESEARCH

CHAPTER 12 DRAMMEN UPPER-SECONDARY SCHOOL CASE, NORWAY 197

Christine Funtek

CHAPTER 13 LIER UPPER-SECONDARY SCHOOL CASE, NORWAY .. 203

Nina Forsberg

**REFLECTIONS AND OUTLOOK: STRATEGIES AND FUTURE
DIRECTIONS FOR RESEARCH LITERACY IN TEACHING AND IN
TEACHER EDUCATION** 213

Shaun Nolan, Aslı Lidice Gokturk-Saglam, Raees Calafato,
Anna Wärnsby, and Kenan Dikilitaş

INDEX 225

THE TREL PROJECT TEAM

University of South-Eastern, Norway



Aslı Lidice Göktürk Sağlam, PhD, is a faculty member in the English Language Teaching department at MEF University (Turkey). She previously worked as a postdoctoral researcher at the University of South-Eastern Norway in the Department of Languages and Literature Studies. From 2023 to 2024, she coordinated the Teacher Research Literacy (TREL) project, funded by Nordplus Horizontal. Her research focuses on assessment, teacher education, and educational technology.



Raees Calafato is an associate professor of English at the University of South-Eastern Norway (USN), where he is co-leader of the research group Flerspråklighet, læring og utvikling. His current research interests cover multilingualism in education and society, teacher education and self-development, learner and teacher psychology, and literature in language education, including multimodal texts.

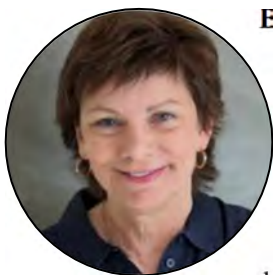
Oslo Metropolitan University, Norway



Dina Tsagari, PhD, is a professor at the Department of Primary and Secondary Teacher Education, Oslo Metropolitan University, Norway. She has also worked for the University of Cyprus, Greek Open University and Polytechnic University of Hong Kong. Her research interests include language testing and assessment, materials design and evaluation, differentiated instruction, multilingualism, distance education, learning difficulties and inclusive education. She coordinates research groups, e.g., CBLA SIG – EALTA, EnA OsloMet and is involved in EU-funded and other research projects (e.g. SCALED, KIDS4ALL, NORHED, KriT, DINGLE, TRIBES, ENRICH, TALE, DysTEFL, and PALM)



Lynell Chvala is an associate professor at the Faculty of Teacher Education and Development Studies at Oslo Metropolitan University (OsloMet). She specialises in English language teaching. Her research interests include teacher professionalism and research literacy, English as a lingua franca (ELF) and awareness of ELF, and sociolinguistics. She has been a teacher educator in the Department of Primary and Lower Secondary Education since 2006, supervising both MA theses for pre-service teachers and research and development work for in-service teachers.



Beverley Goldshaft is an associate professor at the Norwegian Centre for Learning Environment and Behavioural Research. She has extensive experience as a teacher, having worked in schools for many years. She recently defended her PhD thesis at OsloMet – Oslo Metropolitan University, exploring observation-based mentoring in student teachers' period of practicum. Her research delves into the dynamics of mentoring and the role of observation in fostering effective teaching. Beverley has also contributed to studies on collaborative professional learning, including her research on lesson study as a model for teacher development.



Dragana Surkalovic is an associate professor of English at the Department of Primary and Secondary Teacher Education at OsloMet – Oslo Metropolitan University. She has 15 years of experience as a teacher educator and educational researcher. Her professional interests include English linguistics and subject didactics, multilingualism, research literacy, the use of AI for communication and language learning, and school-based teachers' professional development.

University of Bergen, Norway



Kenan Dikilitaş is a professor at the Department of Education at the University of Bergen. He has published extensively on teacher development, with a focus on identity development and engagement in action research. He often adopts sociocultural theoretical perspectives as a lens for methodology and teacher learning and development. Kenan has co-edited several books on teacher development and research engagement, and he has also co-authored four books that focus on various aspects of teaching and learning, as well as pedagogy. He also serves as a reviewer for numerous journals and leading conferences.

Tallinn University, Estonia



Anna-Liisa Jõgi works as an associate professor of research methods at Tallinn University, Estonia. Outside the university, she has worked as a high school teacher of biology, psychology, and research methods, and as a chief analyst of external evaluation in the Ministry of Education. Her current research interests include the effects of physiological and psychological stress on teaching and learning, as well as the implementation of inclusive education in classrooms.



Maarja Tinn is a PhD student at the School of Educational Sciences, Tallinn University, Estonia. Her thesis focuses on the contextual factors that influence teacher agency. She also works as an analyst at the think tank Praxis, focusing on areas such as governance, gender equality, and education. Previously, she worked for 13 years at an upper-secondary school as a history, civics, and philosophy teacher. Currently, she is the head of the Estonian History and Civics Teachers Association.



Maile Käsper, PhD, is a lecturer in teacher education at the School of Educational Sciences, Tallinn University, Estonia. Before starting work at Tallinn University, she worked as a kindergarten teacher for several years. Her courses primarily focus on teaching didactic subjects, research methods in teacher education, and quantitative data analysis in both BA and MA programmes. Her research is related to teaching strategies in primary grades.



Meril Ümarik, PhD, is an associate professor of educational research at the School of Educational Studies, Tallinn University. Her research interests include educational changes in vocational education and higher education, as well as the adoption of educational innovations and the development of teachers' professionalism. She has served as the national coordinator of the IEA International Civic and Citizenship Study (ICCS) 2022 in Estonia and as the lead of the EMP and Norway Grant project (EmpowerVET) (2021-2023).

Malmö University, Sweden



Shaun Nolan is PhD in sociolinguistics and associate professor/reader in English and sociolinguistics at Malmö University. He is also a certified upper-secondary school teacher of English and French (Denmark). His research primarily explores sociolinguistics within educational contexts. Shaun's recent work focuses on the impact of multimodality in language learning and communication, as well as teacher research literacy.



Anna Wärnsby, PhD, is an associate professor/reader in English linguistics and Director of Studies for the PhD education programme Language and Literature Didactics at the Department for Culture, Languages and Media, Faculty of Education and Society, Malmö University. Her main research contribution so far has been in academic literacy with a focus on writing and situated orality, research communication, assessment, subject didactics, and linguistics.

University of Gothenburg, Sweden



Irma Brkovic is a psychologist, with over 20 years of experience as researcher and university teacher in human development and pedagogical work. She received her doctoral degree in developmental psychology, applying multilevel data analysis in cohort-sequential research design. As an assistant professor in developmental psychology and associate professor in pedagogical work, she has developed and delivered numerous courses in quantitative research methodology and statistics to psychology and teacher students on bachelor's, master's and doctoral levels. She currently leads the FOKUS project on developing research competencies among student teachers at the University of Gothenburg.



Ali Yildirim is a professor of pedagogical work at the University of Gothenburg in Sweden. He leads didactic classroom studies research environment in the Department of Didactical, Pedagogical, and Curricular Studies. He currently serves as the scientific leader for two Swedish Research Council research projects focusing on novice teachers' assessment literacy and mentor teacher professional development. His research interests include teaching and learning processes, curriculum planning and assessment, teacher education, and social studies education. He has published books and articles focusing on teacher education, instructional planning, thinking and learning skills, teaching of social studies and qualitative research.

Kaunas University of Technology, Lithuania



Jolita Horbačauskienė is a professor at the Faculty of Social Sciences, Arts and Humanities at Kaunas University of Technology (KTU), Lithuania, and Principal Investigator of the Educational Studies research group. She teaches a range of subjects related to research methodology, and her research interests include language of instruction, crowdsourcing in language learning, intercultural competence development, and technopedagogy in language learning.



Milda Ratkevičienė is an assistant professor at the Faculty of Social Sciences, Arts, and Humanities at Kaunas University of Technology (KTU), Lithuania, and a member of the Educational Studies research group. She has more than ten years of experience in study programme quality assurance and is involved in teaching across all study levels. Her research interests include bi- and multilingual disciplinary literacies across educational levels, analysis of national curricula in terms of disciplinary literacies, and teacher research competencies.

University of Latvia



Indra Karapetjana is a professor and senior researcher at the Faculty of Humanities, University of Latvia, where she also serves as Vice-Dean for Studies. Her main research focuses on applied linguistics and aligns with the courses she teaches, including introduction to linguistics, research methodology in linguistics, English for specific purposes teaching methodology, (critical) discourse studies, and visual communication. She is an expert in linguistics and literary studies for the Latvian Academy of Sciences and the University of Latvia, and an external expert at the Quality Agency for Higher Education, Latvia.



Gunta Rozina is Professor of Applied Linguistics and Head of the English Study Department, the University of Latvia. As a senior researcher, Gunta has participated in international and national research projects, including ERASMUS+ Capacity Building project (India), ESF project “Law Administration for Development”. Her academic publications focus on cognitive and applied pragmatics and communication studies.

Drammen Upper-Secondary School, Norway



Christine Funtek is the Head of Department of Drammen International and Art, Design and Architecture at Drammen VGS, where she oversees foreign languages and English and serves as the school’s international coordinator. She has extensive experience as a teacher and school leader and holds a master’s degree in French and school management. Her interests include promoting language learning, and innovative methodologies such as strength-based learning and appreciative inquiry in teaching and assessment.



May Britt Kleppe Baadstø is a teacher at Drammen VGS in Norway, where she teaches English, social studies, history, tourism, and languages. Throughout her career, she has served as a teacher, a coordinator, and Head of the Languages Department. She has co-authored an English textbook and participated in various professional courses. In 2013, as Head of the International Department, she helped establish Drammen International, a three-year programme at Drammen VGS. May Britt believes that educators must adopt a growth mindset to continuously develop and refine their teaching practices.



Nikoline Holmøy Ellefsrød is a teacher at Drammen VGS in Norway, where she teaches English, French, and social science. She is actively involved with the school's Erasmus+ programme with a partner school in Le Havre, France. Nikoline holds an MSc in political science from NTNU in Trondheim and completed her practical teacher training at the University of Oslo.



Siri Hunstadbråten teaches English, French, and social studies at Drammen VGS. She holds a master's degree in English from the University of Oslo, where she also completed her teacher training. With over 30 years of experience in secondary school, Siri has worked as a teacher, head of department, and deputy principal. She has co-authored English textbooks, worked in publishing, and contributed to designing national examinations in English for upper-secondary schools. Throughout her career, Siri has actively collaborated in international school projects, student exchanges, and digital educational projects.



Lana Chernik is an English and German teacher at Drammen High School in Norway. With a master's degree in linguistics and 15 years of experience, she has been teaching English to both general studies and vocational education students. Driven by a deep passion for didactics and innovative teaching methods, Lana has actively participated in several Erasmus+ courses and has been involved in educational research to enhance language learning experiences.

Lier Upper-Secondary School, Norway



Mats Berg-Berthinussen is a lecturer and contact teacher at Lier Vocational Upper-Secondary School in Norway, specialising in child and youth care work. A trained kindergarten teacher, he previously worked as a kindergarten director before transitioning to primary and vocational education. He completed his master's degree in 2024 at Oslo Metropolitan University with a thesis entitled *A Bigger Picture of Belonging – A Qualitative Photovoice Study of Students' Experience of Belonging in Upper Secondary Vocational School*. His work focuses on fostering academic success, social development, and a sense of belonging among students.



Vanja Larsen is a teacher at Lier Vocational High School in Norway. She teaches pedagogy, communication, and vocational studies, and is part of an Erasmus+ programme linking the school with West London College. Vanja is enrolled in a master's programme in pedagogy and educational leadership at USN. She worked as a preschool teacher for over 15 years before becoming a high school teacher. Vanja is passionate about student participation, mastery, and developing a social community in the classroom.



Kimberly Wynne teaches English and social sciences at Lier high school near Drammen, Norway. With an academic background in social anthropology and teacher training, she brings a holistic and interdisciplinary approach to education. Her teaching career spans all levels of the Norwegian education system, from primary school to university. Kimberly is dedicated to cultivating critical thinking and curiosity and continuously explores innovative methods to enhance classroom learning, with a particular focus on learning design and educational technology.



Nina Forsberg is the Assistant Principal at Lier Upper-Secondary School, located in Lier, Norway. She has been a dedicated member of the school's staff since 1995, bringing extensive experience in educational leadership. In her current role, she oversees the FBIE department and the student services division, contributing significantly to the school's administrative and academic functions.

PREFACE

In an increasingly complex and knowledge-driven world, the role of teachers as research-literate professionals is more critical than ever. This handbook is a product of the Teacher Research Literacy (TREL) Project – Comparative Trajectories in the Nordic-Baltic Region – and represents a collective effort to address this pressing need. Supported by the Nordplus Horizontal Scheme (Project No. NPHZ-2023/10004), the TREL initiative brought together teacher educators, upper-secondary school teachers, school administrators, and research mentors from six countries – Norway, Sweden, Latvia, Lithuania, Estonia, and Finland – to investigate and promote teacher research literacy.

The handbook is the culmination of a remarkable partnership that exemplifies the power of cross-sector collaboration in education. At the heart of TREL initiative lies a shared commitment to professional development and the conviction that teachers empowered with research competencies are better prepared to critically address classroom challenges, innovate pedagogical practices, and foster student learning. By cultivating collaboration between academic and school-based communities, the project demonstrates that meaningful research engagement is both possible and impactful when supported by trust, mentoring, and institutional alignment.

We gratefully acknowledge the contributions of our university-based partners for providing foundational training and mentorship; to the in-service schoolteachers, whose classroom-based research forms the core of many case studies in this volume; and to the school administrators and mentors, whose support structures and reflections on research-led development were indispensable. Their collective insights ensure that this handbook is not merely theoretical but firmly grounded in the lived realities of teachers navigating complex school environments.

This handbook seeks to offer accessible, practical tools, conceptual models, and reflections for developing research literacy in both pre-service and in-service teacher education contexts. It highlights real-world classroom inquiries and policy-aligned strategies for embedding research into teacher education. We invite teacher educators, policymakers, school leaders, and teachers to engage

critically with this resource: adapt it, challenge it, and, most importantly, extend its ideas within their own professional learning communities.

We hope this volume serves both as a catalyst for change and as a trusted companion in the ongoing pursuit toward building a more research-literate, critically engaged, and collaborative teaching profession.

INTRODUCTION: TEACHER RESEARCH LITERACY AND TEACHER VOICES IN A NORDIC-BALTIC PROFESSIONAL LEARNING NETWORK

Anna Wärnsby, Aslı Lidice Göktürk Sağlam, Raees Calafato, Shaun Nolan, and Kenan Dikilitaş

This project was initiated in 2022 as part of Aslı Lidice Göktürk Sağlam's postdoctoral research at South-Eastern Norway (USN), under the mentorship of Kenan Dikilitaş and in collaboration with Dina Tsagari. Kenan and Aslı have been collaborating since 2016 through their initiative, *Classroom-Based Research for Professional Development* within the TESOL's Electronic Village Online, where they designed online teacher education courses. When both relocated to Norway, their goal was to adapt these ideas to the Nordic-Baltic context by creating opportunities for teachers in the region to develop their skills as teacher-researchers and disseminate their work through publications. Their work included recruiting schools willing to engage their teachers in the project and providing them with long-term training on how to conduct classroom-based research. This training involved three in-person, two-day workshop sessions: the first at Oslo Metropolitan University (OsloMet), the second in Drammen Upper-Secondary School, and the final at the University of South-East Norway (USN) campus.

Part I of this volume presents chapters developed from visits to Nordic-Baltic partner higher education institutions' research methods courses for pre-service teachers. During these visits, partners participated in observation and reflection sessions, offering written feedback to host universities: feedback that shaped the development of these chapters. Part II draws on the intensive training workshops held at OsloMet, Lier Upper-Secondary School, and the USN campus in Drammen with teachers, spanning 6 days in total. Delivered by Kenan Dikilitaş

and Aslı Lidice Göktürk Sağlam, these sessions supported participating teachers in understanding the practicalities of classroom-based research: designing research, identifying key issues, problematising teaching practices, and developing tools for data collection and analysis. Teacher participants were also guided in interpreting their findings and reflecting critically on their pedagogical approaches. This process lasted several months and was supported by sustained mentoring and collaboration with colleagues from partner universities. Part III features reflections from school leaders, providing administrative perspectives on how they understood and supported their teachers' engagement in research. This handbook represents the culmination of a sustained and collaborative effort.

All contributors received guidance, support, and encouragement throughout the process of developing their chapters based on their participation in pedagogical activities such as reflection, observation, classroom research workshops, and mentoring during the writing process. The resulting chapters in this volume are not only products of a well-structured programme but also illustrations of teacher educators and teachers actively engaging with research as a form of professional development.

This handbook is a timely response to evolving teacher development paradigms that position teachers as the practical knowledge producers and critical inquirers into their teaching practices. This movement has also encouraged teachers to undertake new roles that helped cultivate multiple identities, including being researchers of their practices along with their teacher identity. Teachers are engaged in being at the centre of their own development and increasingly called upon to act as reflective practitioners, critical thinkers, agents of change, and pedagogical innovators within their classrooms. At the heart of this transformation lies their ability to develop research literacy – a competency that empowers them to engage with, critically evaluate, and apply research to their practice. This handbook responds to the pressing need to explore how research literacy is cultivated, enacted, and sustained among teachers in the Nordic and Baltic regions, where education systems are renowned for their equity and quality yet may face unique challenges in preparing teachers to address the complex issues and questions arising in their classrooms. Over the past decade, calls for teacher education programmes that develop teachers' research literacy have intensified globally. The introduction of the Bologna Process – an initiative to harmonise higher education across Europe – along with advocacy from international organisations such as the Organisation for Economic Cooperation and Development (OECD), has placed significant pressure on universities to

align their curricula with research-informed practices. Indeed, higher education institutions are increasingly expected to bridge the gap between teaching and research, positioning research literacy as a foundational pillar of teachers' developmental process. A robust body of recent scholarship underscores this shift, with research-based teacher education now representing a central tenet of academic discourse (Darling-Hammond, 2017). However, scholars and policymakers continue to grapple with two pivotal questions:

- 1) Why do teachers need to become research literate?
- 2) How can teacher education programmes be redesigned and implemented in a way that supports such teacher research (TR) literacy development?

The answers to these questions are multifaceted. First, global competitiveness necessitates the cultivation of 21st-century skills such as critical thinking, problem-solving, and adaptability (Greiff et al., 2014). Teachers equipped with research literacy are better positioned to innovate curricula, respond to shifting student needs, and transition from passive knowledge recipients to active knowledge creators (Niemi & Nevgi, 2014). Research-literate teachers can autonomously integrate theory and practice, grounding pedagogical decisions in evidence while remaining responsive to classroom realities (Cochran-Smith & Lytle, 2009; Zeichner, 2010). Studies by Parkison (2009) and Dunn et al. (2019) demonstrate that research-based teacher education fosters lifelong professional learning, thereby enabling teachers to recognise emerging student needs and adapt their teaching practices accordingly. Despite the benefits of research-focused teacher education, its implementation remains uneven across geopolitical contexts. Studies reveal that in many regions, from upper-secondary schools to tertiary institutions, teacher research has yet to become a widespread practice (Bai & Hudson, 2010; Borg & Liu, 2013). A synthesis of barriers identified across diverse educational systems highlights four critical challenges:

- 1) Teachers often operate in isolation, without access to collaborative networks or a sense of community in their research endeavours (Curtis & Uştuk, 2024; Dikilitaş et al., 2022; Dikilitaş & Göktürk Sağlam, 2023; Göktürk Sağlam & Dikilitaş, 2020). This stifles innovation and limits opportunities for peer feedback.
- 2) Many teachers report low confidence (Wyatt & Dikilitaş, 2016) in their ability to design or execute research, often due to inadequate training in methodologies or data analysis (Yuan et al., 2016; Zuo & Yang, 2019).

- 3) Research engagement is frequently driven by external pressures, such as institutional mandates or performance metrics, rather than intrinsic interest (Peng & Gao, 2019). In contexts like China and Vietnam, where research productivity is increasingly tied to career advancement, teachers exhibit mixed motivations, with extrinsic incentives often overshadowing genuine curiosity (Bao & Feng, 2023; Bao et al., 2024).
- 4) Teachers undertake and perform multiple roles, including teacher, mentor, and administrator, leading to tensions between their identity as practitioners and emerging expectations to act as researchers (Barkhuizen, 2021; Eryılmaz & Dikilitaş, 2023; Nana & Jing, 2017). These barriers are not merely logistical; they reflect systemic inequities and cultural attitudes toward teacher professionalism.

These challenges highlight the need for systematic support mechanisms, including TR communities, continuous TR mentoring, and institutional incentives, such as dedicated time, recognition badges, and promotion pathways for research engagement.

The “how” of research-based teacher education has been explored in certain national contexts, with studies emphasising that student teachers must actively participate in research processes to develop analytical and reflective competencies (Cochran-Smith & Fries, 2005; Jyrhämä et al., 2008; Munthe & Rogne, 2015). This engagement involves immersing prospective teachers in scientific methodologies and developing critical interaction with research literature (van Ingen & Ariew, 2015). As Griffiths (2004) argues, research-based teacher education cultivates a style of thinking and acting rooted in empirical inquiry. However, as Dobber et al. (2012) caution, such efforts only bear fruit when inquiry is purposeful, deliberate, and reflective – embedded within programmes that treat teaching as an ongoing, research-informed practice. Despite this growing consensus on its value, debates persist about the implementation of research-based teacher education. Moreover, few studies offer granular insights into how specific research activities are designed, executed, or evaluated within teacher education programmes. This handbook addresses the gap by presenting explorations of research-based course design and teacher reflections, with a particular focus on the Nordic-Baltic context. It represents the culmination of the two-year *Teacher Research Literacy (TREL): Comparative Trajectories in the Nordic-Baltic Region* project, funded by the Nordplus Horizontal programme.

The TREL Project aimed to develop a collaborative network that explored research engagement in teacher education programmes and provided insights on how in-service teachers can integrate research into their teaching. An integral aim was to promote professional development by strengthening teachers' research literacy: the knowledge and skills required for conducting research in both pre-service and in-service contexts. Within this professional learning network, participants engaged in collaborative and reflective dialogue concerning the application of research knowledge acquired at university to school-based situations, generating critical inquiry, reflection, and continuous professional learning. University partners supported this process by delivering in-service teacher education workshops and mentoring school-based partners in conducting classroom-based research to explore and strengthen their practice.

The TREL project aimed to enhance collaboration between schools and universities across the Nordic and Baltic regions, promoting teacher-initiated research in schools and the systematic incorporation of research into teaching practices. To create a multidimensional impact on teacher education, the TREL network focused on three key levels:

Participant Level: Enhancing how teachers and develop both practical and theoretical insights into research-based learning and teaching.

Organisational Level: Supporting schools and higher education institutions in integrating practical pedagogical research into teaching and learning processes.

Regional Level: Contributing to research-based educational strategies aligned with the mandates of ministries of education in the Nordic-Baltic regions.

Spanning six countries – Norway, Sweden, Latvia, Lithuania, Estonia, and Finland – the TREL initiative united universities and upper-secondary schools to investigate how research literacy is taught to future teachers and how practicing teachers can harness research to understand and address classroom dynamics. By juxtaposing pre-service training in university programmes with in-service experiences in Norwegian upper-secondary schools, the project offers a unique comparative lens into the trajectories of research literacy development across the Nordic-Baltic region.

The Nordic and Baltic countries provide a compelling backdrop for the study of teacher research literacy development in teacher education. Renowned for progressive education systems that prioritise equity and student autonomy, these nations have also embraced research-based teacher education as a policy

imperative. In Norway, for instance, the Higher Education Act (2005) and subsequent white papers (Ministry of Education and Research, 2007–2009; 2012–2013) mandate that teacher education programmes be “profession-oriented, integrated, and research-based”. The 2010 national teacher education curriculum codified these principles by requiring student teachers to do the following: engage with national and international research relevant to teaching; plan and reflect on teaching using research and experience-based knowledge; assess school practices and contribute to the ethical and pedagogical development of the profession; and develop systemic competencies to address future educational challenges (Ministry of Education and Research, 2010).

In Sweden, the Education Act requires that all education be grounded in “scientific principles and proven experience” (Swedish Government, 2010, p. 5), a mandate with long-term implications for both in-service teachers and teacher education programmes. Teacher education is defined as an “academic vocational education” (Swedish Government, 2008) and must be research-based. Student teachers should be provided with opportunities to learn from the latest educational research, be taught by educators who are active researchers, and develop academic and research literacy. This includes consuming original research to understand scientific methods, posing relevant and critical questions, and independently conducting research within the profession. Sweden’s national structure plan for school professional development (Swedish National Agency for Education, 2024) reinforces this priority, emphasising that practice-based research and participation in research and development projects should be integral to teachers’ competence development. Additionally, it specifies that school leaders play a crucial role in initiating and creating conditions for teachers and preschool teachers to engage in research.

Similar reforms have unfolded across the Baltic states. In Lithuania, the Ministry of Education, Science, and Sport, along with the Centre for Quality Assessment in Higher Education, mandates that all undergraduate teacher education programmes develop research skills. Future teachers must apply educational research, analyse literature, design and conduct studies, and use findings to address educational challenges. In Estonia, teacher education also emphasises the importance of research engagement. The Estonian teachers’ professional standard, adopted in 2005, defines teachers as reflective practitioners and lifelong learners (Pedaste et al., 2019).

This handbook is designed to support teachers in developing TR literacy by offering an accessible approach to TR. It brings together contributions from teachers, school leaders, and teacher educators across the Nordic-Baltic region, providing a comprehensive resource for all stakeholders in the field of teacher education. Our handbook is organised into three parts:

- 1) Teacher Research Education at Universities
- 2) Teachers' Voices: Teacher Research and Reflections at Schools
- 3) School Leaders' Perspectives of Teacher Research

The first part, Teacher Research Education at Universities, consists of five chapters, each representing a different country from the Nordic and Baltic regions involved in the TREL project. These chapters function as case studies from universities in the participating countries, examining teacher education programmes and strategies for developing research literacy among teachers. Alongside programme analysis, each chapter includes observations and reflections from TREL partners who attended the featured courses. This part aims to provide detailed, first-hand accounts of how research literacy development takes place within universities across the region, emphasising approaches that prepare pre-service teachers to engage with research and apply it effectively in their future classrooms. The second part shifts the focus to reflections by in-service teachers on projects conducted in collaboration with university faculty from the TREL project. It highlights how upper-secondary school teachers, partnering with academics, can apply and critically reflect on research-based practices in their teaching. In this part, teachers describe their own research experiences and offer reflections on them in their own voices. The third part offers further professional perspectives from school administrators, who provide observations and reflections on teacher research literacy and its broader significance for professional development and educational outcomes.

School teachers' perspectives focus on classroom-based research cases that detail teachers' experiences integrating research into teaching practice. These personal and independent accounts illustrate how teachers identified classroom challenges, conducted research, and applied findings to enhance student learning. The teacher reports include details on classroom contexts, student demographics, subject-specific research topics, teachers' motivation for exploring these issues, and reflections on professional development outcomes.

School leaders' personal perspectives are based on case studies and interviews that illustrate how they fostered professional development and research engagement among teaching staff. These chapters provide insights into school-wide professional development strategies, support structures, and the impact of teacher research on institutional practices. They highlight strategies for fostering reflective culture in schools, professional development initiatives, and understanding the long-term impact on school policies. The following parts offer a more detailed description of each part and its chapters.

Part 1: Teacher Research Literacy in Education at Universities

This part examines how research literacy is woven into university-level teacher education programmes. Case studies from Nordic and Baltic universities reveal both commonalities and distinctive approaches to integrating research into teacher preparation.

Chapter 1 examines the integration of research literacy within teacher education at OsloMet, situated within Norway's national framework. Following the 2017 reform, Norway's teacher education system emphasises research literacy as a core competency, defined as the ability to “find, understand, assess, use, and contribute to research.” The five-year integrated master's programme embeds a research and development (R&D) pillar across its curriculum, progressing from foundational academic writing and practicum observation in the early years to advanced methodology courses and a master's thesis. Despite policy mandates, challenges persist, including fragmentation between theoretical and practical knowledge domains and varying understandings of research literacy among educators.

The chapter presents two case studies. Case 1 examines a second-year English module for novice researchers, where students undertake a small-scale research project supported by workshops on proposal writing, literature reviews, and data analysis. Case 2 explores a fifth-year English module preparing students for their MA thesis. Here, advanced research literacy is cultivated through empirical research tasks, methodological distinctions (qualitative/quantitative), and student-led seminars. The module emphasises ownership, critical reflection, and alignment with broader academic practices. The chapter illustrates a developmental approach: early stages prioritise low-stakes, scaffolded tasks to build confidence, while later stages demand independent accountability. Challenges include reconciling student-centred pedagogy with research

community expectations, such as allowing novices to adjust research questions versus enforcing rigid methodologies. Additionally, fostering coherence between research and teaching identities remains contentious, as students may view research as peripheral to classroom practice.

Chapter 2 examines Sweden's teacher education system, shaped by a national teacher shortage and policy mandates promoting research-based practice that aim to bridge academic rigor with classroom relevance. This chapter investigates research literacy development at Malmö University (MAU) and the University of Gothenburg (GU), highlighting pedagogical strategies and systemic challenges. At MAU, the fourth-year course, Sociolinguistics and Intercultural Communication, prepares upper-secondary teacher candidates for their MA thesis through an annotated bibliography workshop. Students formulate research questions, analyse empirical articles, and engage with international databases. Scaffolded tasks, such as a structured annotation table, support critical analysis and methodological awareness.

At GU, the penultimate course for lower-secondary teachers (L9K81A) combines lectures on educational research methods with hands-on qualitative (interview) and quantitative (survey) workshops. Both cases underscore Sweden's commitment to embedding research literacy within teacher education: in these cases, MAU emphasises academic writing, while GU prioritises methodological rigor, thereby reflecting strategies to balance theoretical and practical demands. However, systemic barriers include restricted school access to research databases, which limits direct classroom application, and student workloads coupled with optional workshop attendance, which hinders consistent engagement. Additionally, tensions remain between cultivating research identities and addressing immediate classroom needs.

Chapter 3 examines Lithuania's teacher education system, which offers multiple pathways to teacher certification, including undergraduate pedagogy degrees, supplementary modules, non-degree programmes, and prior learning recognition. Integration of research literacy varies across several routes: degree programmes emphasise research skills such as problem identification and methodology design, while non-degree programmes focus on practical competencies, with limited research training often confined to final projects. Although national policy prioritises research-based pedagogy, challenges persist, including teachers' limited data analysis skills and a perception of research as separate from classroom practice. This chapter focuses on a one-year, 60 ECTS teacher

qualification programme offered by a Lithuanian university as a case study. The programme, designed for bachelor's degree holders seeking teaching credentials, blends pedagogy courses with a mandatory internship. A central component is an action research (AR) project addressing classroom challenges, divided into two phases: research design (fall semester) and implementation and reporting (spring semester). The AR assignment aims to cultivate reflective practitioners who apply research to improve teaching practice. The chapter underscores the persistent tension in Lithuania between practical teacher training and the cultivation of research literacy. Action research is championed as a bridge between policy and practice, thus enabling teachers to investigate classroom issues while aligning with policy goals. However, systemic barriers – such as the limited scope of non-degree programmes and limited legislative support for research competencies – highlight the need for curricular reforms. The case illustrates the iterative process of aligning teacher education with national priorities, emphasising the role of reflective practice and the ongoing need to integrate research literacy into all pathways of teacher preparation.

Chapter 4 presents a case study related to Estonia's teacher education system, which emphasises research literacy as a cornerstone of professional practice, integrating evidence-based approaches into policy and pedagogy. Governed by regulations such as the *Requirements for Teacher Training (2023)*, educators must complete rigorous academic and practical training, including supervised internships and a certification examination assessing pedagogical and research competencies. Teacher education programmes at Tallinn University and the University of Tartu blend subject mastery with research methods courses, thereby preparing educators to critically engage with research, conduct action studies, and analyse student learning outcomes. A national focus on evidence-based policy and upper-secondary student research projects further reinforces teachers' roles as research supervisors, thus fostering a culture of continuous professional development. The chapter covers two cases. The first case examines a master's-level course at Tallinn University designed to equip in-service teachers and education professionals with the skills to design and execute empirical studies. Delivered through a blend of lectures, discussions, and hands-on tasks, the course is structured around mixed teaching methods and introduces software such as Jamovi for quantitative analysis and QCAMap for qualitative data analysis. Students conduct interviews, design surveys, and analyse data, culminating in assignments aligned with their thesis work. The second case examines a seminar within a foreign language teacher programme focused on questionnaire design,

addressing objectives, feasibility, validity, and ethics. Participants, novice teachers with limited research experience, engaged in hybrid sessions discussing instrument development, sampling, and ethical dilemmas. Both cases underscore a challenge of balancing methodological rigor with pedagogical accessibility.

Chapter 5 explores Latvia's teacher education system, which prioritises research literacy as a cornerstone of professional development. Under Regulation No. 569 (2018), teachers must hold subject-specific higher education qualifications and pedagogical training of at least 3 ECTS. The University of Latvia, recognised as a "science university", embeds research literacy across its programmes to equip educators for evidence-based practices in classrooms. This chapter explores these developments within the national context and presents a case study of the *Research Methodologies* course in the English Studies master's programme (MSP). Offered in the third semester of the MSP, the course prepares students for thesis work through hands-on engagement with applied linguistics research, balancing theoretical rigor with practical application. Students analyse real-world scenarios, such as improving reading comprehension through targeted strategies, and apply methodologies to their teaching contexts. By semester's end, students produce draft thesis proposals that outline research questions, methods, and ethical considerations. The case study illustrates that, despite prior experience such as bachelor's theses, students struggle with hypothesis formulation and methodological precision. The course mitigates these challenges through iterative feedback and peer review. Reported outcomes include enhanced critical appraisal of research, heightened ethical awareness, and strengthened competence in designing classroom-relevant studies.

Part 2: Teachers' Voices: Teacher Research and Reflections at Schools

The second part shifts focus to practicing teachers in Norwegian upper-secondary schools, where collaborative action research projects undertaken under the aegis of TREL illuminate the realities of research literacy in classroom settings.

Chapter 6 presents a project designed and implemented by Lana Chernik at Drammen Upper-Secondary School, investigating the role of self-assessment in enhancing learning outcomes among first-year upper-secondary students enrolled in a general studies programme. Although self-assessment practices are embedded in Norway's English curriculum and course materials, they were inconsistently applied and poorly understood by students. Chernik sought to

bridge the gap between theoretical expectations of self-assessment and practical implementations through a seven-week Literary Project, during which students analysed short stories and engaged in peer discussions, and concluded with recorded “Literary Conversations”. Students were guided to assess their own performance using criteria aligned with curriculum goals, including language proficiency, critical thinking, and communication skills. Pre- and post-project surveys revealed initial student scepticism towards self-assessment, with only 20% initially believing it promoted learning. However, training students in applying assessment criteria, combined with regular practice, led to significant shifts: by post-project, over two-thirds reported greater awareness of their strengths, and 85% identified areas for improvement. Chernik discusses how the project contributed to her professional development, reinforcing the need for teachers to model self-assessment strategies and provide explicit guidance.

Chapter 7 presents a project by May Britt Baadstø from Drammen, aimed at enhancing academic writing skills among first-year students in the bilingual Drammen International Programme. Recognising that previous instruction had not adequately addressed the distinct demands of academic English, she designed a focused intervention to bridge the gap between everyday language use and the formal register required in higher education. The project began by engaging students with a diagnostic survey that probed their preconceptions about academic language and writing, asking them what these terms meant and how they thought academic writing could best be learned. Following the survey, Baadstø conducted a two-session workshop using multimedia resources to elucidate key academic writing concepts, such as organisation, clarity, evidence-based arguments, and formal tone. Baadstø’s approach exemplifies the integration of reflection and teaching, simultaneously enhancing students’ academic language proficiency while gathering data to refine her pedagogical methods. The project provided immediate benefits by preparing students for the rigors of university-level writing and offered valuable insights for continuous improvement in teaching practices.

Chapter 8 details a study by Nikoline Holmøy Ellefsrød from Drammen, exploring how student autonomy and peer collaboration impact motivation in oral assessments. The project involved 50 students across two cohorts (VG Year 1 and VG Years 2 and 3), who created TED-style presentations on self-chosen topics and conducted peer interviews to discuss their subjects. Results from post-project surveys revealed that 84% of students felt more motivated when selecting their own topics, 55% gained substantial new knowledge, and 74% reported

heightened responsibility when collaborating with peers rather than teachers. Reported challenges included technical issues with recordings, uneven dynamics in unfamiliar student pairings, and limited access to resources for certain topics. The study underscores the value of student agency and authentic peer interaction in fostering engagement, while highlighting the need for guidance on critical questioning and logistical support. Ellefsrød discusses how shifting the teacher's role to a facilitator promoted democratic classroom dynamics and strengthened student ownership of learning. Future refinements include strategic peer-matching and the digital integration of tools to address technical hurdles.

Chapter 9 details a project by Siri Hunstadbråten at Drammen, investigating the effectiveness of constructive feedback in improving academic writing skills among second-year bilingual students. Despite students' general proficiency, persistent challenges in grammar, syntax, and formal tone prompted the implementation of a color-coded feedback system (such as yellow for grammar, blue for vocabulary, purple for sentence structure) alongside rubrics to guide revisions. Data were collected through pre- and post-revision surveys, asking students to reflect on the clarity, utility, and motivational impact of her feedback. Results revealed that 62% found the feedback "completely understandable", while 57% felt "highly motivated" to revise, citing the specificity of margin comments and colour codes as key strengths. However, 38% of students expressed uncertainty about how to apply feedback, noting challenges in translating critiques into actionable improvements. Post-revision, 55% reported satisfaction with their revised texts, citing improved precision and reduced errors, though some felt limited by time constraints or persistent stylistic habits. Hunstadbråten argues that constructive feedback enhances metacognition and self-editing skills but requires balancing detailed critique with scaffolded guidance to empower students as autonomous writers. Her findings reinforce the importance of iterative practice and reflective dialogue, prompting plans to integrate peer-review workshops and digital tools to sustain motivation and address individual learning gaps.

Chapter 10, by Kimberly Wynne from Lier Upper-Secondary School, examines the challenges Norwegian high school students face in developing robust English reading skills and explores whether explicit instruction in reading strategies can boost their motivation and comprehension. The chapter opens by noting a troubling decline in both reading stamina and proficiency, prompting questions about potential causes such as digital distractions, curriculum shifts, or the lingering impact of the COVID-19 pandemic. Wynne outlines a mixed-methods

study combining quantitative surveys with qualitative methods, including think-aloud protocols and semi-structured interviews, to address two main questions: What reading strategies do students know and use, and does employing these strategies enhance their motivation to read? Findings indicate that while students frequently rely on surface-level strategies like skimming and scanning – techniques that align with their existing classroom practices – they seldom employ deeper, critical reading approaches. This gap between the national curriculum’s emphasis on reflective, analytical reading and students’ actual practice suggests the need for more explicit instruction and modelling of close-reading techniques. Wynne’s chapter offers both an insightful analysis of current reading practices and a call to reframe teaching methods to better support students in becoming more engaged, critical, and effective readers.

Chapter 11, by Mats Berg-Berthinussen and Vanja Larsen from Lier, examines the challenges vocational students face in developing academic orality: a critical skill for professional interviews and workplace communication. The chapter details an action research project conducted in a childcare class where students frequently expressed feelings of insecurity and reluctance to participate in oral academic tasks. Using surveys, group activities, and teacher-facilitated sessions, the teachers addressed three key questions: What do students need to become verbally proficient in academic settings? Which activities most effectively boost their oral engagement? What prerequisites are necessary for developing academic language for professional interviews? Findings indicate the critical role of creating a safe and supportive classroom environment. Students highlighted that a sense of security – achieved through clear instructions, teacher-assigned small groups, and opportunities for social interaction – greatly influenced their willingness to participate in academic discussions. Findings suggest that varied oral activities not only build confidence but also enable students to express their professional competence more effectively. While short-term interventions can lead to improvements, the chapter concludes that sustained and systematic efforts are needed to foster lasting oral proficiency among vocational students.

These chapters are written by practising in-service teachers who participated in the TREL project while continuing to teach full-time. They are written in the teachers’ own voices. Readers will notice moments of self-questioning, honest acknowledgement of limitations, and reflections on the tension between daily teaching life and the demands of formal research. These qualities are precisely the kind of practitioner knowledge this book seeks to document and value.

Part 3: School Leaders' Perspectives on Teacher Research

This part explores school leaders' perspectives on teacher research literacy – a viewpoint rarely examined in educational research. It seeks to bridge that gap by collating school leaders' insights drawn from both their written contributions to the handbook on reflective practices within their schools and from in-depth interviews. These narratives offer readers a unique understanding of how school leaders view and value teacher research literacy in their institutions.

Chapter 12, by Christine Funtek, offers an in-depth examination of Drammen Upper-Secondary School, one of Norway's largest and most diverse institutions. Funtek introduces the school's unique context, highlighting its wide-ranging programme offerings, which range from general studies to specialised tracks in internationalisation, entrepreneurship, and research. Funtek also highlights the school's diverse student body and its strong commitment to continuous professional development, promoted through collaborative practices, subject group reflections, and international partnerships. Funtek explores how teachers at Drammen engage in small-scale, classroom-based action research projects that integrate practical, actionable strategies into their everyday teaching. This approach is presented as a means of bridging the gap between theory and practice, ultimately enhancing pedagogical methods and student learning outcomes while fostering a culture of reflective inquiry and sustained professional development.

Chapter 13, by Nina Forsberg, paints a comprehensive picture of Lier Upper-Secondary School as a dynamic vocational institution committed to innovation, flexibility, and international engagement. The chapter highlights the school's curricula reforms since 2014, which merge practical vocational training with academic pathways to prepare students for both professional certifications and further education. Central to this transformation is the school's robust international collaboration through Erasmus+ projects, which enriches learning and fosters cross-cultural exchanges. Forsberg emphasises the importance of shared responsibility in school development, detailing how collaborative practices among teachers, school leaders, and other staff drive curriculum innovation and professional development. Additionally, the chapter discusses the practical challenges and successes in integrating teacher-led reflection into everyday classroom practice, underscoring the need for manageable, classroom-friendly models that translate theory into actionable strategies.

This handbook serves both as a diagnostic and a call for action. It acknowledges the progress achieved in Nordic-Baltic teacher education while urging stakeholders to resist complacency. In a world marked by misinformation and persistent educational inequities, research-literate teachers are not merely desirable – they are essential. By equipping teachers to investigate their teaching, innovate responsively, and generate practical knowledge, the TREL project envisions a future where teachers see themselves not only as teachers but also as reflective practitioners, engaging in professional development through sustained research engagement.

This handbook reflects the collective efforts of the TREL project partners, showcasing teacher engagement in reflective practice both at the faculty level and within in-service contexts. Through collaboration with faculties and schools, the project members gained a deeper understanding of how teachers are prepared to conduct research during pre-service education and how they integrate research into their classrooms at the in-service level. The chapters written by the in-service teachers reveal their voices from the classroom and, indirectly, those of their students across the Nordic-Baltic teacher education network. These contributions provide contextualised examples of TR practices and outline implications for future initiatives.

As you progress through this handbook, you will encounter voices from lecture halls, staff rooms, and classrooms engaged in active experimentation. These narratives invite you to reimagine the role of the teacher and to join the vital endeavour of bridging research and practice for the benefit of all learners. Beyond showcasing examples of interinstitutional collaboration among teachers and teacher educators, this handbook demonstrates how teachers' reflective practice can be cultivated through mentoring within a supportive community of teachers, administrators, and educators.

References

- Bai, L., & Hudson, P. (2010). Examining research productivity of Chinese TEFL academics across departments and institutes. *International Journal for Researcher Development*, 1(3), 191-205.
- Bao, J., & Feng, D. W. (2023). When teaching and research are misaligned: Unravelling a university EFL teacher's identity tensions and renegotiations. *System*, 118, 103149.

- Bao, J., Hu, G., & Feng, D. (2024). En route to becoming researcher-teachers? Chinese university EFL teachers' boundary crossing in professional doctoral programmes. *System*, 127, 103514.
- Barkhuizen, G. (2021). Identity dilemmas of a teacher (educator) researcher: Teacher research versus academic institutional research. *Educational Action Research*, 29(3), 358-377.
- Borg, S., & Liu, Y. (2013). Chinese college English teachers' research engagement. *Tesol Quarterly*, 47(2), 270-299.
- Cochran-Smith, M., & Fries, K. (2005). Researching teacher education in changing times: Politics and paradigms. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education* (pp. 69-109). Lawrence Erlbaum.
- Cochran-Smith, M., & Lytle, S. L. (2009). Teacher research as stance. In: E. S. Noffke & B. Somekh (Eds.), *The Sage Handbook of Educational Action Research* (pp. 39-49). Sage.
- Curtis, J. H., & Uştuk, Ö. (Eds.). (2024). *Building a culture of research in TESOL: Collaborations and communities*. Springer Nature.
- Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291-309.
- Dikilitaş, K., Göktürk Sağlam, A. L., Serra, M., & Mazzei, R. D. (2022). Mentoring presence for supporting international teacher-researchers. In: M. Wyatt & K. Dikilitaş (Eds.), *International perspectives on mentoring in English language education* (pp. 269-285). Springer International Publishing.
- Dikilitaş, K., & Göktürk Sağlam, A. L. (2023). Exploring the practical impacts of research engagement on English language teaching: Insights from an online community of practice. *Journal on Efficiency and Responsibility in Education and Science*, 16(1), 46-54.
- Dobber, M., Akkerman, S. F., Verloop, N., & Vermunt, J. D. (2012). Student teachers' collaborative research: Small-scale research projects during teacher education. *Teaching and Teacher Education*, 28(4), 609-617.
- Dunn, R., Hattie, J., & Bowles, T. (2019). Exploring the experiences of teachers undertaking Educational Design Research (EDR) as a form of teacher professional learning. *Professional Development in Education*, 45(1), 151-167.
- Eryılmaz, R., & Dikilitaş, K. (2023). *Identity tensions of in-service teacher educators: A narrative inquiry*. Language Teaching Research.
- Greiff, S., Wüstenberg, S., Csapó, B., Demetriou, A., Hautamäki, J., Graesser, A. C., & Martin, R. (2014). Domain-general problem solving skills and education in the 21st century. *Educational Research Review*, 13, 74-83.
- Griffiths, R. (2004). Knowledge production and the research-teaching nexus: The case of the built environment disciplines. *Studies in Higher Education*, 29(6), 709-726.

- Jyrhämä, R., Kynäslahti, H., Krokfors, L., Byman, R., Maaranen, K., Toom, A., & Kansanen, P. (2008). The appreciation and realisation of research-based teacher education: Finnish students' experiences of teacher education. *European Journal of Teacher Education*, 31(1), 1-16.
- Munthe, E., & Rogne, M. (2015). Research based teacher education. *Teaching and Teacher Education*, 46, 17-24.
- Nana, L., & Jing, H. (2017). Exploring researcher identity construction of university EFL teachers in China. *Chinese Journal of Applied Linguistics*, 40(4), 371-391.
- Niemi, H., & Nevgi, A. (2014). Research studies and active learning promoting professional competences in Finnish teacher education. *Teaching and Teacher Education*, 43, 131-142.
- Parkison, P. T. (2009). Field-based preservice teacher research: Facilitating reflective professional practice. *Teaching and Teacher Education*, 25(6), 798-804.
- Pedaste, M., Lijjen, A., Poom-Valickis, K., & Eisenschmidt, E. (2019). Teacher professional standards to support teacher quality and learning in Estonia. *European Journal of Education*, 54(3), 389-399.
- Peng, J. E., & Gao, X. (2019). Understanding TEFL academics' research motivation and its relations with research productivity. *Sage Open*, 9(3), 2158244019866295.
- Sağlam, A. L. G., & Dikilitaş, K. (2020). Evaluating an online professional learning community as a context for professional development in classroom-based research. *TESL-EJ*, 24(3).
- The Swedish National Agency for Education. (2024). *Redovisning av uppdrag om ett nationellt professionsprogram*. The Swedish National Agency for Education. https://acrobat.adobe.com/id/urn:aaid:sc:EU:3bd9fcad-8704-4e84-8607-3131ca670c95/?viewer!megaVerb=group-discover&x_api_client_id=anonymous_home&x_api_client_location=signin
- The Swedish Education Act* (SFS 2010:800). Swedish Government. https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800/
- Swedish Ministry of Education. (2008). *En hållbar lärarutbildning* [Sustainable teacher education] (SOU 2008:109). Swedish Government. <https://www.regeringen.se/contentassets/d262d32331a54278b34861c44df8dbad/en-hallbar-lararutbildning-hela-dokumentet-sou-2008109>
- The National Agency for Higher Education. (2006). *Swedish universities & university colleges*. The National Agency for Higher Education. <https://www.uka.se/download/18.3024c77018b37fb62411a3e4/1697548564562/0638R.pdf>
- Van Ingen, S., & Ariew, S. (2015). Making the invisible visible: Preparing preservice teachers for first steps in linking research to practice. *Teaching and Teacher Education*, 51, 182-190.

- Wyatt, M., & Dikilitaş, K. (2016). English language teachers becoming more efficacious through research engagement at their Turkish university. *Educational Action Research*, 24(4), 550–570.
- Yuan, R., Sun, P., & Teng, L. (2016). Understanding language teachers' motivations towards research. *Tesol Quarterly*, 50(1), 220-234.
- Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college-and university-based teacher education. *Journal of Teacher Education*, 61(1-2), 89-99.
- Zuo, X. Y., & Yang, C. H. (2019). Exploration on EFL teachers' internal motivation for academic publication: From self-determination lens. *Higher Education Exploration*, 2, 110–115.

PART 1
TEACHER RESEARCH LITERACY IN
EDUCATION AT UNIVERSITIES

CHAPTER 1

FROM POLICY TO PRACTICE: ADVANCING RESEARCH LITERACY AT OSLOMET, NORWAY

**Dragana Surkalovic, Dina Tsagari, Lynell Chvala,
and Beverley Goldshaft**

National Context for Teacher Research Literacy Policy

In Norway, teacher education is offered through several different programmes across universities and university colleges. The main model is a five-year integrated master's degree in primary and secondary teacher education for grades 1-7, 5-10, or 8-13, as well as in practical and aesthetic subjects for grades 1-13. Vocational teacher education is structured as a 3-year bachelor's degree. Additionally, candidates already holding a bachelor's or master's degree can complete a one-year practical-pedagogical education to qualify as teachers. The cases discussed in this chapter pertain to the five-year integrated master's programmes (*Master i grunnskolelærerutdanning*, hereafter MGLU) in primary and lower-secondary teacher education for grades 1-7 and 5-10. These programmes, introduced in 2017, replaced the previous four-year bachelor's degree structure.

In Norway, research literacy in teacher education is defined as “the skills of finding, understanding, assessing, using and contributing to research” (National Council of Teacher Education (NRLU), 2016, p. 11). It is seen as a core component of professional knowledge in both initial teacher education and continuing professional development, and, crucially, in teachers' everyday practice (Munthe & Rogne, 2015; NRLU, 2016). The National Guidelines (NRLU, 2016) require all students to complete a research and development

(R&D) project related to a school subject before they can start on their master's thesis. Furthermore, the guidelines specify that "theory of science and research methods should be introduced early in the programme. There shall be progress in the topic throughout the education programme" (p. 11). Oslo Metropolitan University (OsloMet), the site of the cases discussed in this chapter, has implemented the requirement of integration and progression in the form of an R&D pillar embedded in the five-year teacher education programme. This structure begins with observation during teaching practicum and academic writing in the first year, continues with R&D exam papers in the second and third years, includes a 15-credit Theory of Science with Methods course in the fourth year, and culminates with the master's thesis in the fifth year.

Teacher education in Norway aims to bridge theory and practice through research-based and development-oriented teaching. Teacher education institutions participate extensively in school development initiatives and educational research. Nevertheless, teacher education is often criticised for fragmentation – both across learning arenas (campus and schools) and between components such as professional knowledge (pedagogy, subject didactics) and disciplinary knowledge (Ulvik & Smith, 2019). This tension between the different forms of knowledge has a long history in higher education, as outlined by Muller (2009). Teacher education programmes continue to face challenges in achieving coherence and integration across these knowledge domains (Afdal & Spernes, 2018; Caspersen & Smeby, 2023; Hermansen, 2019).

The increased emphasis on research literacy introduced by the 2017 reform seems to have amplified this fragmentation. Recent studies on student teachers' development of R&D competence demonstrate persistent tensions between university-based and practicum-based learning (Aalbergsjø et al., 2023; Goldshaft et al., 2022; Thorsen & Lundberg, 2021). Further, stakeholders hold diffused and varied understandings of the role of research within the different learning arenas of teacher education (Goldshaft et al., 2022; Pajchel et al., 2021; Smestad & Gillespie, 2020). Thorsen and Lundberg (2021) highlight that research literacy and professional practice remain poorly integrated and emphasise the need to strengthen the "D" in R&D – namely, the role of research literacy in teachers' professional development. In response, the Norwegian Ministry for Education and Research (2018) has called for a shared definition of research literacy in teacher education and in schools. However, despite these policy intentions, Norwegian teacher education programmes have yet to establish a mutual understanding (Thorsen & Lundberg, 2022).

OsloMet Local Cases

Introduction Case 1

This case describes a class taught by Instructor 1 within a 15-credit English subject module (OsloMet, 2023). It constitutes the final 15 credits of a 60-credit English course available to students in the MGLU programme for grades 5-10 (MGLU5-10, 300 ECTS) during their first study cycle (previously the bachelor level). Students take the first 45 credits (Modules 1-3) in their first year and the remaining 15 credits (Module 4) in the fall of the second year. Concurrently, they take 15 credits of pedagogy in both the first year and the fall of the second year.

At OsloMet, students in the MGLU5-10 programme select English, Norwegian, or Mathematics during their first two years, with their initial experience of independent research work occurring in the third semester. In accordance with the National Guidelines (NRLU 2016), the assessment English Module 4 consists of a term paper presenting small-scale research – either an empirical study or a literature review – on a self-selected problem. The paper may be written individually (5,000 words), in pairs (7,000 words), or in groups of three (9,000 words). Thus, this module integrates several forms of knowledge (Hermansen, 2019, 2020; Muller, 2009): professional knowledge (subject-specific didactics), disciplinary knowledge, students' English competence, and research literacy. It also encompasses all aspects of the research-teaching nexus by being research-informed, research-led, research-tutored, research-oriented, and research-based (Griffiths, 2004; Healey, 2005; Healey & Jenkins, 2009). Students commence work on their term paper at the start of the semester, with all the classes and course requirements designed to support their research and writing process.

The module spans twelve weeks, with an additional three weeks of teaching practicum scheduled towards the end of the term. In-class activities consist of 58 hours of mandatory attendance supplemented by 12 hours of optional writing sessions. The first half of the semester features more in-class activity, while the second half prioritises self-study, data collection, analysis, and writing. Lessons are designed to be student-centred, with minimal traditional lecturing. Students are expected to complete preparatory readings and tasks before class. Many classes take the form of workshops guiding students through key stages of their research paper, including project proposal, peer review, literature search, data collection planning, and so on (see Appendix for the term outline). During weeks

5-8, students must attend classes related to the research methods employed in their projects, though they are encouraged to participate in all sessions.

The TREL observed class was the first of two two-hour Project Proposal Workshops held in week three of the module. It marked the start of research-oriented and research-based activities, following two weeks of research-led and research-tutored classes on topics in English subject didactics. The aim of this class was to initiate students' project work by guiding them in selecting a topic, refining their research question, and justifying its relevance for English language teaching in Norway. The class focused on the introduction, research question, and theoretical background sections of the project proposal, while the second workshop addressed research methodology and ethical considerations. Class activities included familiarising students with the proposal format and requirements through model text analysis, collective brainstorming on the nature and creation of the research question formulation using Padlet, and a five-minute free writing exercise on a chosen research topic, which they shared with a partner. The class concluded with students drafting an outline for their project proposal and beginning the writing process.

Feedback received from the observers

Instructor 1 received the most salient feedback in three areas: students' engagement and interaction patterns, tasks and instruction, and content.

Students' engagement and interaction

Several observers questioned the use of Padlet to elicit student responses and noted limited student-teacher interaction beyond Padlet use or one-to-one exchanges during individual writing. Instructor 1's choice of Padlet was made based on prior experience with this group: they were known as reluctant speakers in whole-class discussions but were more willing to engage in smaller groups or in written form. This rationale underpinned the use of paired and group brainstorming for research questions and anonymous topic suggestions via Padlet – strategies intended to lower students' affective filter early in the process. These participation formats also allowed students to share examples and enabled the teacher to respond and adjust to students' needs in real time.

Tasks and instruction

Observers noted that teaching effectively “unfolded” the research process by providing opportunities to discuss variation at different stages and consistently “bridging” different tasks with the requirements of the final research paper. Each

teaching moment was situated within the broader research process and aligned with the course activities (see Appendix for selected presentation slides). Instructor 1 sees this as positive feedback on the design of the chosen tasks and the commitment to coherent instruction that explicitly connects procedural steps in the process, course progression, and the structural expectations of the final paper. Instructor 1 acknowledges the difficulty of supporting beginner students in comprehending the research process without overwhelming them, especially as this is their first time conducting research and reporting research of this scope. To address this challenge, the instructor employs a stepwise approach (see Appendix), dedicating as much time as the course allows to each step. This approach is intended to develop a sense of mastery and sustain student motivation throughout the process.

Content

One observer questioned Instructor 1's suggestion that RQs could be adjusted after data collection if the data answered a slightly different RQ. The observer argued that such an approach might reflect "poor" methodological design, data collection, and/or literature review. As a researcher, Instructor 1 agrees with this critique from a research perspective. However, in a teaching situation, this decision was informed by students' novice status and the time constraints of their small-scale research. Therefore, the assessment of the research paper prioritises students' ability to understand and systematically carry out research, while critically reflecting on project limitations and challenges. This includes articulating what changes they would have made, or how they should or would have done things differently in response to the original or revised RQ. These initial research goals differ from those of publishable, peer-reviewed studies. However, an important takeaway is the potential risk of fossilising this beginner-level approach to RQ formulation as the students' progress towards more advanced research work, such as the master's thesis.

Critical insights into practice given the received feedback

Observer feedback and Instructor 1's reflections reveal three key issues in developing early-stage research literacy: a) determining how and when to highlight differences between beginner-level and professional research decisions and performance; b) managing a complex research process while allowing for individual variation; and c) socialising novice researchers into the epistemic practices of a research community, its ways of thinking, being, and doing. Each issue highlights the inherently iterative, trial-and-error nature of learning to perform appropriately in the largely unfamiliar role of researcher.

To contextualise novice research performance, Instructor 1 highlights the unique characteristics of student research using past examples and emphasises research feasibility within time and textual constraints. These examples illustrate how student research differs from the professional research students may read when preparing their research papers. Revising research questions after data collection illustrates the trial-and-error nature of the novice researcher, where critical reflection on the challenges and limitations of research choices constitutes an integral part of research paper assessment. While this focus allows for greater awareness of aspects of research students might approach differently – such as clearer formulation of research questions or more systematic data analysis – Instructor 1 acknowledges that such reflection must not only be made explicit but also followed up later in the process as students move towards more advanced research work. Failure to address these issues may lead to less rigorous or unsound research practices in the future.

Secondly, Instructor 1 not only provides an overview of the whole research process but also delineates its stages to support students in getting started. This approach combines both holistic and immediate perspectives, thus accommodating diverse learner needs and approaches to research. By discussing examples that illustrate different possibilities and variations, she seeks to prevent students from adopting a very narrow view of the research process and instead encourages more creative thinking and informed choices. Finally, to ease students' initial engagement with research, Instructor 1 creates opportunities for them to experiment with various research topics and questions anonymously in a digital environment and within the safety of smaller groups. Such participation also allows her to monitor student performance and adapt teaching to their emerging needs and concerns as novice researchers.

Introduction Case 2

This case focuses on a class taught by Instructor 2 within a 15-credit English subject module, English and English Didactics 3 (EngDid3), offered in the fall semester of students' fifth year (second study cycle). It constitutes the final 15 credits of the English module in the teacher education programmes for grades 5-10 and 1-7 (MGLU5-10 and MGLU1-7, 300 ECTS), preceding commencement of the master's thesis in the spring semester of the same year. The module builds on 60 credits from the first cycle and 30 credits from the second, amounting to a total of 105 credits in English. The module is designed to facilitate the development of advanced proficiency in academic writing in English. It provides

students with the opportunity to develop a critical approach to various aspects of the curriculum for primary and lower-secondary school, with an emphasis on English as a subject. Students are expected to deepen their knowledge of the English subject and its didactics while acquiring in-depth knowledge of relevant research, theoretical frameworks, research methodologies, scientific reasoning, and ethical considerations.

Within the module, students learn how to critically analyse national and international research and apply this knowledge to professional practice. Further, students learn to evaluate relevant academic and ethical issues, aiming to contribute to the development of academic communities at the local school level. This includes the systematic planning, evaluating, and revision of English language learning programmes. Through student-led seminars, participants present and discuss academic literature, focusing on self-selected research articles. A central component of EngDid3 is the preparation of a project proposal and a comprehensive review of relevant research literature, serving as a foundation for the subsequent master's thesis. Course requirements include submission of these components and completion of a 30-minute individual oral examination based on self-selected readings that inform the thesis work to be completed in the following semester.

The observed session was the first of two two-hour workshops on empirical research, taught during the second week of the module. This workshop introduced several classes addressing English subject didactics and research methodology. Its primary aim was to engage students in conceptualising and applying empirical research relevant to their projects. Students worked on identifying key characteristics of empirical studies in their literature review, justifying these studies' relevance and establishing connections between them and their own research foci. The session focused on defining empirical research, distinguishing between qualitative and quantitative research methods, formulating RQs, and understanding research literature sections. Activities included familiarisation with definitions and methodological approaches, identifying empirical research in academic texts, and aligning project proposals with the requirements of such research.

Students initially worked individually and then in small groups to distinguish empirical research papers from theoretical papers, analyse their structure and content, and relate these findings to their own empirical research projects. The session concluded with an opportunity for students to reflect on and connect

principles and practices of empirical research to their own research proposals. These activities built on students' prior experience and foundational knowledge, as they had previously completed short research papers in their third and fifth terms and earned 15 credits in a Theory of Science and Methods course in their seventh term.

Feedback received from the observers

Instructor 2 received feedback around three areas: content, tasks and instructions, and supporting student research efficacy.

Content

Most observers agreed that the purpose of the research was effectively conveyed in the definition presented on the slides. However, a few expressed concerns about using a Wikipedia definition of research. Despite alternative definitions in the literature, this was a conscious choice. The selected definition offered key terms – such as collection, organisation, and analysis – which aligned with the subtopics of this session. Instructor 2 considered this an effective way to introduce the lesson and frame the discussions that followed.

Tasks and instruction

Observers noted that distinctions between empirical and theoretical research, quantitative, qualitative, and mixed methods, online and web-based research methods, and different types of data analysis were effectively presented and reinforced through an interactive student task and a “mini quiz”, which initiated discussions among students. Moreover, observers praised the use of a video that aimed to identify features of empirical research articles, among other issues. This video was carefully selected and integrated into the session to consolidate students' existing knowledge and support their engagement with scholarly literature. This activity was directly linked to an in-class exercise where students analysed the titles and abstracts of several pre-selected articles to determine whether the research was empirical. Students seemed to have found the task both relevant and engaging. At this point, further resources were introduced, including a link to an entrepreneurial master's thesis from OsloMet, which was a new and challenging type of master's thesis for the students.

Supporting student research efficacy

Having been challenged very often on how to support students' motivation and perseverance in the task of preparing and working toward the completion of their master's thesis, Instructor 2 included a visual representation depicting basic

research phases as a way to allow students to reflect on their own progress and identify the steps that remained. The group work task, applauded by the observers, aimed to strengthen students' research confidence and indicate ways forward for their work.

Critical insights into practice given the received feedback

Feedback from observers and reflections from Instructor 2 reveal two key issues in developing research literacy and self-efficacy among late-stage teacher-researchers. The first issue was developing a clear understanding of the research purpose and identifying finer distinctions in research orientation, such as empirical versus theoretical approaches, methodological choices, and the form of data analysis. The second issue was fostering autonomy in navigating the research process, including acknowledging completed work, identifying remaining work, and planning next steps. Both issues highlight the importance of refinement, self-reflection, and independence in the research practices of late-stage student-researchers.

Firstly, the definition of research at this stage emphasised not only the purpose of conducting or reporting but also the rationale behind research choices – such as selecting a methodological approach, determining methods of investigation, and making textual choices in empirical research articles. Framing “research” as a set of researcher purpose(s) and choice(s) can enhance students' awareness of their own decision-making and its application. To achieve this, students engaged in actively identifying empirical versus non-empirical research articles by analysing defining features evident in titles and abstracts. This actively consolidated previous knowledge and provided late-stage student researchers with opportunities to practice the skill independently with the support of peers or the instructor. Awareness of researcher choices was further reinforced through an interactive sorting task and “mini quiz”. These engaging and interactive activities were designed to promote greater integration with – and possible alignment to – the research and writing practices of the larger research community. Following these exercises, students were offered additional optional resources intended to further support their research practices.

Secondly, the phases of the research process were reviewed using a visual representation (see Fig. 1). For late-stage research literacy development, students were not guided step-by-step by Instructor 2; instead, they were asked to independently identify their current position in the process, determine the remaining steps, and outline ideas for moving forward. Unlike novice

researchers, late-stage student researchers are expected to assume more ownership of their research, monitor both process and progress, and plan productive steps to advance towards completion. These expectations require a greater degree of independence, self-determination, and self-reflection than is typically expected of novice student researchers.

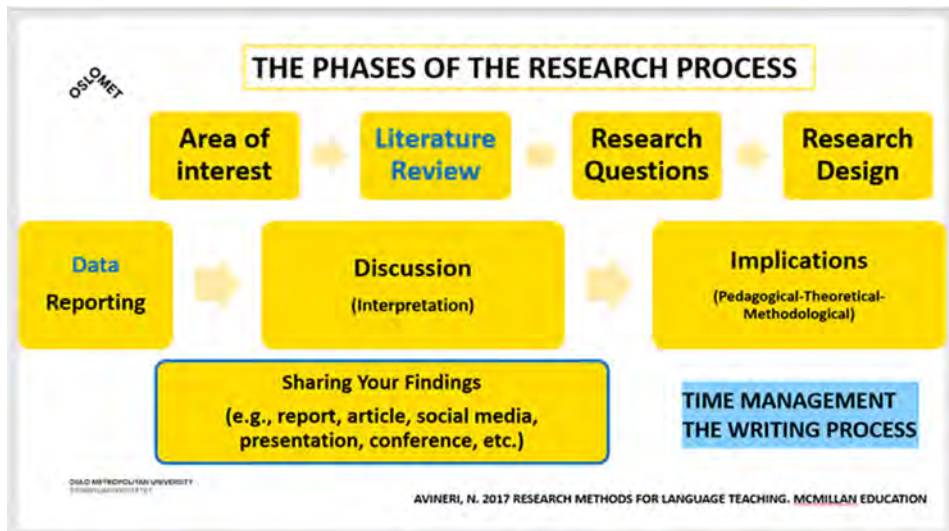


Figure 1. The phases of the research process.

Reflective Comments for Both Cases

These two cases reflect both novice and late-stage research literacy development among teacher education students, reflecting an upward spiral in research and R&D competence alongside evolving student identities and abilities. They also reflect certain challenges. The first concerns balancing the demands of student-centred teaching and the expectations of the research community. For novices, instruction often prioritises anonymity, trial-and-error, and identifying the limitations of research decisions. While similar emphases persist at later stages, advanced students are expected to account for their choices more rigorously. For example, Case 1 involves a practice that allows novice students to reformulate research questions after the fact, a strategy generally viewed negatively within the research community. Although this practice is allowed in the course, Instructor 1 emphasised the importance of clarifying that it may not be acceptable in the students' future research. Similarly, in Case 2, the use of a Wikipedia definition to frame student learning highlights pedagogical choices aimed at

scaffolding learners and socialising them into targeted research practices. Striking an appropriate balance between scaffolding and meeting the demands of the research community remains a key consideration in designing research literacy development in teacher education.

This challenge is also highlighted in research literacy development over time, which moves from greater teacher scaffolding and limited student independence to increased autonomy and reduced institutional support. In Case 1, novice learners engage in interactions that resemble those of the research community but are allowed to engage in this unfamiliar role anonymously, thereby easing their entry into unfamiliar roles. In contrast, Case 2 requires students to participate in an interactive task and assess their knowledge and understanding in a mini quiz, which reflects instructors' higher expectations for student accountability and engagement.

The amount and type of scaffolding provided for students' research processes varied between the two cases. In Case 1, scaffolding was operationalised through the course structure and models of research texts appropriate for this level. In contrast, Case 2 highlighted self-determination and accountability, particularly through the visualisation of the research process. While consideration has been given to extending examples of progression in Case 1 by incorporating master's theses samples, questions remain as to whether – and to what degree – such additions would benefit students, given the affective demands and time constraints at this stage of development.

A final observation concerns the relevance of research literacy within teacher education in Norway, where teachers' professional knowledge is expected to bridge theory, research, and everyday classroom practices, supporting teachers' continual professional development. However, merging teaching and research communities can be very challenging. The cases discussed primarily reflect socialisation into the researcher role, which some students and teaching professionals may view as less relevant to practical classroom contexts. This tension between the academic and professional domains can undermine efforts to integrate and align research and practice (Afdal & Spernes, 2018; Caspersen & Smeby, 2023; Hermansen, 2019). Conversely, the student-centred approaches illustrated in these cases may enhance pre-service teachers' perceptions of research relevance and encourage their own research initiatives as part of developing future teaching practices.

References

- Aalbergsjø, S. G., Henriksen, E. K., & Eklund, G. (2023). Fostering research literate science teachers: Science teacher educators' views on research-based teacher education. *Nordic Studies in Science Education*, 19(1), 20–34.
- Afdal, H. W., & Spernes, K. (2018). Designing and redesigning research-based teacher education. *Teaching and Teacher Education*, 74, 215–228.
- Caspersen, J., & Smeby, J.-C. (2023). Research-based teacher education in Norway – a longitudinal perspective. *International Journal of Educational Research*, 119, 102177.
- Goldshaft, B., Sjølie, E., & Johannesen, M. (2022). Student teachers' research and development (R&D) practice - constraining and supporting practice architectures. *Pedagogy, Culture & Society*, 32(3), 853–873.
- Griffiths, R. (2004). Knowledge production and the research–teaching nexus: The case of the built environment disciplines. *Studies in Higher Education*, 29(6), 709–726.
- Healey, M. (2005). Linking research and teaching to benefit student learning. *Journal of Geography in Higher Education*, 29(2), 183–201.
- Healey, M., & Jenkins, A. (2009). *Developing undergraduate research and inquiry*. Higher Education Academy.
- Hermansen, H. (2019). In pursuit of coherence: Aligning programme development in teacher education with institutional practices. *Scandinavian Journal of Educational Research*, 64(6), 936–952.
- Hermansen, H. (2020). Knowledge discourses and coherence in professional education. *Professions and Professionalism*, 10(1), 1–21.
- Muller, J. (2009). Forms of knowledge and curriculum coherence. *Journal of Education and Work*, 22(3), 205–226.
- Munthe, E., & Rogne, M. (2015). Research based teacher education. *Teaching and Teacher Education*, 46, 17–24.
- Norwegian Ministry of Education and Research. (2018). *Teacher education 2025. National strategy for quality and cooperation in teacher education*. Norwegian Government.
- National Council of Teacher Education. (2016). *National guidelines for the primary and lower secondary teacher education programme for years 5–10*. National Council of Teacher Education. https://www.uhr.no/_f/p1/iecd98eeb-d012-44ce-b364-c8787ca51a95/national_guidelines_for_the_primary_and_lower_secondary_teacher_education_programme_for_years_5_10.pdf
- Oslo Metropolitan University. (2023). Course Plan. M5GEN2100 Engelsk, emne 4 Emneplan [English, Subject 4]. Oslo Metropolitan University, Department of Primary and Secondary Teacher Education. <https://student.oslomet.no/studier/-/studieinfo/emne/M5GEN2100/2023/H%C3%98ST>

Pajchel, K., Jegstad, K. M., Eklund, G., Aalbergsjø, S. G., & Sollid, P. (2021). The role of school placement within research-based teacher education – through the eyes of science mentors. *Teachers and Teaching*, 27(5), 1–13.

Smestad, B., & Gillespie, A. (2020). Dimensions of teachers’ transdisciplinary competence based on a systematic review of three transdisciplinary areas. *Nordic Journal of Comparative and International Education*, 4(3).

Thorsen, K. E., & Lundberg, P. (2021). Studenters møte med en FoU-basert grunnskolelærerutdanning. *Uniped*, 44(3), 201–211.

Ulvik, M., & Smith, K. (2019). Teaching about teaching: Teacher educators’ and student teachers’ perspectives from Norway. In: J. Murray, A. Swennen & C. Kosnik. (Eds.), *International Research, Policy and Practice in Teacher Education* (pp. 123–137). Springer Cham. doi: 10.1007/978-3-030-01612-8_9

Appendix

Case 1: Semester Outline

Week	Teaching hours	Topic and link to class materials
1-2	16	Research-led and –tutored classes on various topics in English subject didactics
Deadline	End of week 2	Fill in a survey on: Chosen research topics and/or RQ (Co)authors, if any Groups of 3-4 members for the reading group AND peer review course requirement Supervisors are assigned based on this information
3	2	Workshop: Writing a project proposal (introduction, research question and theoretical background)
3	2	Workshop: Writing a research proposal (research methodology and ethics)
3	2	Research-led and tutored class on a topic in English subject didactics
Deadline	End of week 3	Submit project proposal draft for peer review
4	4	Research-led and –tutored class on a topic in English subject didactics
4	2	Peer review of the project proposal (group discussion in class)
4	2	Research-led and –tutored class on a topic in English subject didactics
Deadline	End of week 4	Submit final version of project proposal for the advisor
5	4	Workshop: literature search and theoretical background
5	2	Workshop: Data collection for theoretical papers (literature review)
5	2	Not obligatory: literature search support
5	4	Workshop: Data collection for empirical papers

Deadline	End of week 5	Submit self-chosen peer-reviewed paper for reading group course requirement
6	Start of week	No teaching, time to read the submitted papers from classmates in one's group for the reading group course requirement
6	2 (end of week)	Reading group course requirement (group discussion in class)
6	2	Workshop: research through literary analysis
7		Cross-curricular week on Children, Youth and Health, no teaching in the module
8	4	Workshop: thematic analysis of qualitative data
8	2	Workshop: quantitative data analysis
8	2	Workshop: literature review data analysis
8	4	Workshop: Discussing findings and academic writing
9	4	Not obligatory - Q&A / Shut-up-and-write
10	4	Not obligatory - Q&A / Shut-up-and-write
10	2	Group advising session with advisor
11	2	Not obligatory - Q&A / Shut-up-and-write
Deadline	End of week 11	Submit draft of final paper
12-14		Practice placement, no teaching in the module
15	During the week	Individual meetings with advisors
15	4	Final class: Finalizing the paper, course evaluation, eating cake
16	End of week	Exam hand-in

Case 1: Selected Presentation Slides

Week	Project Proposal writing	
33-34	Reading different research papers and learning about possible topics, research methods etc.	✓
34	Setting up your peer and guidance network : <ul style="list-style-type: none"> • Choice of groups for peer review and reading group course requirement. • Choice of topic and whether you are writing alone or with someone. • Advisors are assigned week 35-36 based on chosen topics and research proposals. 	✓
35	Defining the research question and initial planning of data collection Writing the project proposal draft (2 workshops in class) Project proposal draft for peer review hand-in	✗
36	Peer review in class on Wednesday, discussing and revising the project proposal Project proposal final version hand-in	

Paper outline

- Introduction/Background
- Theory
- Method
- Results
- Discussion
- Conclusion

References

5000/7000/9000 words

PROJECT PROPOSAL:

Background:

Description of the topic, your motivation for choosing it, and justification of its relevance for English teaching

Research question:

Statement of the research question (and any sub-questions)

Theoretical background:

Overview of some relevant literature on the topic (minimum 80 pages of references) and why it is relevant for your paper.

Research design/methodology:

Description of the research design (data collection method, timeline etc.) and justification for the choice of method in relation to the research question.

Reflection on peer review: A 200-word (In addition to the 1400-word proposal) reflection note on how you followed up on and benefited from the peer review of your project. You can also add questions to the advisor about things you want specific feedback on.

1400 +/-10% words

3

Start writing your project proposal!

Create a word document titled:

YourSurname_Project Proposal_290823

At the top of the page, write the title and your name under it:

Project Proposal
Dragana Surkalovic

Create subsections:

- 1.Introduction
- 2.Research question
- 3.Theoretical background
- 4.Research design/methodology
- 5.Reflection on peer review

Paper outline

- Introduction/Background

- Theory
- Method
- Results
- Discussion
- Conclusion

References

5000/7000/9000 words

TODAY

PROJECT PROPOSAL:

Background:

Description of the topic, your motivation for choosing it, and justification of its relevance for English teaching

Research question:

Statement of the research question (and any sub-questions)

Theoretical background:

Overview of some relevant literature on the topic (minimum 80 pages of references) and why it is relevant for your paper.

Research design/methodology:

Description of the research design (data collection method, timeline etc.) and justification for the choice of method in relation to the research question.

Reflection on peer review: A 200-word (In addition to the 1400-word proposal) reflection note on how you followed up on and benefited from the peer review of your project. You can also add questions to the advisor about things you want specific feedback on.

1400 +/-10% words

Paper outline

- Introduction/Background

- Theory

- Method

- Results

(if theoretical paper)

- Discussion

- Conclusion

References

5000/7000/9000 words

**a bit today,
much more
in week 37**

PROJECT PROPOSAL:

Background:

Description of the topic, your motivation for choosing it, and justification of its relevance for English teaching

Research question:

Statement of the research question (and any sub-questions)

Theoretical background:

Overview of some relevant literature on the topic (minimum 80 pages of references) and why it is relevant for your paper.

Research design/methodology:

Description of the research design (data collection method, timeline etc.) and justification for the choice of method in relation to the research question.

Reflection on peer review: A 200-word (In addition to the 1400-word proposal) reflection note on how you followed up on and benefited from the peer review of your project. You can also add questions to the advisor about things you want specific feedback on.

1400 +/-10% words

Paper outline

- Introduction/Background
 - Theory
 - Method
 - Results
 - Discussion
 - Conclusion
- References

Thursday
workshop

5000/7000/9000 words

PROJECT PROPOSAL:

Background:

Description of the topic, your motivation for choosing it, and justification of its relevance for English teaching

Research question:

Statement of the research question (and any sub-questions)

Theoretical background:

Overview of some relevant literature on the topic (minimum 80 pages of references) and why it is relevant for your paper.

Research design/methodology:

Description of the research design (data collection method, timeline etc.) and justification for the choice of method in relation to the research question.

Reflection on peer review: A 200-word (in addition to the 1400-word proposal) reflection note on how you followed up on and benefited from the peer review of your project. You can also add questions to the advisor about things you want specific feedback on.

1400 +/-10% words

9

PROJECT PROPOSAL:

Background:

Description of the topic, your motivation for choosing it, and justification of its relevance for English teaching

Research question:

Statement of the research question (and any sub-questions)

Theoretical background:

Overview of some relevant literature on the topic (minimum 80 pages of references) and why it is relevant for your paper.

Research design/methodology:

Description of the research design (data collection method, timeline etc.) and justification for the choice of method in relation to the research question.

Reflection on peer review: A 200-word (in addition to the 1400-word proposal) reflection note on how you followed up on and benefited from the peer review of your project. You can also add questions to the advisor about things you want specific feedback on.

1400 +/-10% words

10

In the final
version to
advisor,
after you
have done
the peer
review

CHAPTER 2

CULTIVATING RESEARCH LITERACY IN SWEDISH TEACHER EDUCATION: CASE STUDIES FROM MALMÖ AND GOTHENBURG UNIVERSITIES, SWEDEN

**Shaun Nolan, Anna Wärnsby, Irma Brkovic,
and Ali Yildirim**

National Context for Teacher Research Literacy Policy

Sweden faces a well-documented shortage of qualified and experienced teachers throughout the education system (Boström, 2023; Lindqvist, 2022). Therefore, the government has made teacher education a key priority within the national education agenda (Åstrand, 2023). Swedish teacher education offers three main education programmes: primary school (grades K-3, 4-6), secondary school (grades 7-9), and upper-secondary school (grades 10-12). For example, at the time of writing, the upper-secondary subject teacher programme, described in Case 1 below, is structured as a five-year integrated master's programme in the following manner:

- Total number of credits for the teacher education programme – 300 ECTS
- Credits for the first teaching subject – 120 ECTS
- Credits for the second teaching subject – 90 ECTS
- Remaining credits – 90 ECTS

In addition to subject courses, the programme includes 60 ECTS of educational science core courses. These cover, for example, topics such as learning, didactics,

leadership, special education, theory of science, and research methodology. Furthermore, the programme incorporates 30 ECTS of school-based placement practice.

Several universities offer teaching degrees based on similar programmes. Alternative pathways into the teaching profession include bridging teacher education programmes, usually one year in duration, for those who already hold academic degrees in one or more school subjects. Moreover, specific complementary programmes are available to teachers with foreign teaching degrees to familiarise them with the Swedish school system and teaching traditions. Programmes are also available for further education of teachers and preschool teachers who do not hold a formal teaching degree. Early childhood and primary school teacher education programmes are mostly administered by faculties of education, whereas courses in subject-area teacher education programmes can be shared across different university departments.

The current Swedish Education Act stipulates that all education “rests on a scientific ground and proven experience” (Swedish Government, 2010, 5§). This requirement has far-reaching consequences for both in-service and student teachers in teacher education. Teacher education is considered an “academic vocational education” (Swedish Government, 2008) and must, therefore, be research-based. Consequently, pre-service teachers must be given opportunities to learn from the latest research on education, receive education from teachers who are also active researchers, and develop academic and research literacy. This includes consuming original research to understand scientific methods, posing relevant and critical questions, and independently conducting research within the profession. In line with this, the Swedish National Agency for Education’s plan for school professional development (The Swedish National Agency for Education, 2024) underscores the importance of teacher research development. The plan specifies that practice-based research and participation in research and development projects be integral to schoolteachers’ competence development. Additionally, it highlights the crucial role of school leaders in initiating and creating the conditions for teachers and preschool teachers to engage in research projects.

The Swedish Cases

The two local cases stem from classroom observations conducted at Malmö University (MAU) and at the University of Gothenburg (GU).

The Malmö University Case

The workshop observed in the project was part of the course *Sociolinguistics and Intercultural Communication* (hereafter, SLIC) offered at Malmö University (MAU, 2023). SLIC is a 7.5 ECTS course that addresses linguistic variation and linguistic norms. It draws upon sociolinguistics to explore issues related to intercultural communication, language and gender, power, regional variations, English as an international language of communication and lingua franca, and the relationship between identity and language. Various digital tools are used to support the study and teaching of linguistic variation and intercultural communication. Issues related to linguistic variation are tied to language teaching and language teaching materials, especially in the use of digital tools. The learning objectives for this course state that, on completion, the student must be able to:

- 1) present sociolinguistic principles for studying linguistic variation and intercultural communication;
- 2) critically use digital tools for the didactic application of linguistic variation and intercultural communication;
- 3) use international databases in a functional way to support their own studies.

In accordance with the so-called *Malmö model* (MAU, 2024), subject content is steeped in the general educational science core and subject didactics. Therefore, while all learning activities in the course are framed in the content of the course – sociolinguistics and intercultural communication – they are also explicitly connected to the didactic and pedagogical approaches addressed continuously in other subject courses and the general educational science core courses offered to all students enrolled in the various teacher education programmes at MAU. Students' research competence is prompted through specific course requirements: weekly preparation of recommended materials and preparation for two examination tasks, one of which is an individual annotated bibliography (see below). The course incorporates various learning activities such as seminars, lectures, independent study, group work, and workshops.

The course is offered in the fourth year (term 7) of the five-year integrated master's teacher education programme for upper-secondary school teachers of English as a second subject. At this stage, students have completed their BA-level independent projects in their first subjects (typically, social studies, history, physical education, religion, mathematics, or Swedish as a first or second language) and have entered what is internationally comparable to the first year of

a professional master's programme. During the fifth and final year, they complete their master's thesis in their first subjects. Generally, these students were not formally taught to produce annotated bibliographies, and based on our experience, very few – if any – have performed this task before.

The individual written annotated bibliography workshop was the focus of the TREL observation. According to the examination instructions, students must identify a topic of interest concerning the role of sociolinguistics and intercultural communication in language teaching and independently formulate a relevant research question. Subsequently, they must outline a methodological approach to researching the topic and present at least eight relevant annotations of empirical research articles from international databases to explore their research question. All three learning objectives (below) are in focus in this exam task.

The workshop aims to:

- develop their skills in using international databases to support their own studies;
- equip students with research skills directly applicable to their master's thesis work;
- enhance students' skills to identify, evaluate, and analyse credible primary research in education studies relevant to their professional needs and interests.

Feedback received from the observers

The observers provided their feedback both orally, directly after the observation, and in writing, after the project meeting. This feedback is summarised below under four themes: student engagement and interaction patterns, tasks and instructions, content, and supporting students' research literacy.

Students' engagement and interaction patterns

Multiple forms of interaction were observed in the classroom. Discussions contributed to creating a student-friendly atmosphere. The teacher delivered short lectures and posed questions to students, while individual and small-group tasks were used to exemplify and problematise different aspects of research to help students gain an overview of both content and methodology. Students actively participated by both answering and initiating questions and responding to peers' contributions during whole-class and group discussions. However, several observers indicated that more students could be prompted to participate more actively.

Task and instructions

The tasks were clear, practical, logically designed, and interconnected. The time allocated to different activities was generally sufficient. However, one observer noted that the task related to keyword creation was allocated too much time, leading to a loss of students' focus. In contrast, other observers recommended more time for this task and for teamwork.

Content

Several observers commented on the efficiency of the chosen metaphors, particularly the concept of "research as a conversation". They noted how discussions about the practicalities of creating annotated bibliographies were well integrated with broader research considerations, including ethical issues and methodological approaches.

Supporting student research literacy

The table-based tool for drafting annotated bibliographies was generally considered innovative and effective (see Appendix). The tasks and accompanying discussions helped students to adopt "a researcher's gaze". Different aspects of annotated bibliographies, along with broader research-related issues, were addressed through modelling and pertinent discussions.

Critical insights into practice given the received feedback

In their feedback, the observers provided several practical suggestions for improvement. Firstly, they recommended creating a summary document outlining all the steps necessary in producing an annotated bibliography, which students could use as a future reference. Secondly, some suggested adjusting the time allocation for different tasks and prompting even more student participation. These suggestions will be implemented in future iterations of the course.

Some of the suggestions highlighted the importance of visualising research literacy activities as a progressive process for both instructors and students. We were, therefore, reminded that the Malmö model must remain a vital part of our everyday teaching practice and that its underlying rationale must be continuously communicated to students. However, due to the current teacher shortage, most students at MAU are not only completing the school practicum required by their educational programmes but are also employed in schools while studying full-time. This dual engagement enables and motivates students to connect their professional experiences with the academic content and research literacy activities in the courses. That said, it is essential that instructors actively support students in making these connections fully meaningful.

Many observers have also noted that the annotated bibliography task in focus in the workshop should be better connected to the students' future classrooms and the teaching profession (see the national requirements for research-based teaching in schools above). While this is a valid point, establishing such a connection is difficult. In Sweden, access to research databases is restricted to research institutions. Thus, schools depend on sources such as the Ministry for Education, the Swedish National Agency for Education (Skolverket), and private actors such as Skolporten ('School gate', skolporten.se) to select, synthesise, and disseminate research on different educational issues. While we cannot connect the task directly to the teaching profession, we concentrate on developing different relevant skills, such as reading purposefully and using the table-tool, and introduce alternative ways to gather information, for example, through Google Scholar.

The University of Gothenburg Case

The observed workshop was part of the course *Teaching Profession and Scientific Work for Teachers in Secondary School Years 7-9* (hereafter L9K81A) (University of Gothenburg, 2017). The course is given as the penultimate component of the lower-secondary subject teacher education programme (240 ECTS in total), carries 7.5 ECTS, and prepares students for the final thesis course. It is offered in the seventh term of the eight-term programme and is delivered over five consecutive weeks. L9K81A builds on a preceding course that aims to contribute to future subject teachers' development towards reflective and critical practices. Within this progression, students are introduced to adopting a scientific approach to learning, teaching, and development work in the pedagogical profession, thereby strengthening their ability to engage with research-based practice.

L9K81A corresponds to the research method courses given across all teacher education programmes at GU. Both the topics of teaching profession and research methodology are integrated into the so-called core courses, which collectively prepare students for the final thesis required in all teacher education programmes. This final thesis, including that in the lower-secondary subject teacher education programme, must be based on empirical work conducted by the student.

The L9K81A course consists of two parts:

Part 1: "The teaching profession and educational science" (3 ECTS)

The first part of the course critically examines the teaching profession through the lens of educational theory and addresses methodological questions relevant to the profession. This is achieved through discussions on the role of a scientific approach within the profession and through analyses of methodological choices in scientific articles and theses. These activities aim to deepen students' understanding of how research can inform and shape pedagogical work.

Part 2: "Applying educational scientific methods" (4.5 ECTS)

The second part of the course deepens students' knowledge about key research areas within educational science and emphasises the importance of research for teachers' everyday practice. This is achieved through exercises in data collection and analysis methods that are directly related to the implementation of the final thesis within teacher education. These activities aim to strengthen students' methodological competence and their ability to apply research-based approaches in an academic context.

The learning objectives of the course address both the teaching profession and research methodology, and are formulated as follows:

After passing the course, the student must be able to demonstrate:

- Knowledge and understanding
 - Reasoning about scientific approach in the teaching profession based on professional theory starting points.
 - Discuss central educational scientific methods.
- Skills and ability
 - Interpret and use data in educational scientific research, as well as be able to critically reason about the results.
 - Discuss research ethics issues in relation to educational science research and method.
- Evaluation
 - In an independent way, be able to account for and reason about different approaches to a scientific basis for the teaching profession.
 - In an independent way, be able to give an account of certain educational scientific methods' opportunities and limitations

The course consists of six lectures and six workshops. The workshop observed for this study, which is the focus of this chapter, was conducted as the final

activity in the course. Prior to this concluding workshop, the students participated in the following activities:

- Lecture 1: Educational research and the teaching profession
- Lecture 2: Introduction to educational research
- Lecture 3: Ethnographic method - empirical example
- Lecture 4: Policy study - empirical example
- Lecture 5: Quantitative research method - empirical example

During lectures 3, 4, and 5, students met with three researchers, university teachers who have investigated different aspects of recent reforms in the Swedish school system, each applying distinct methodological approaches. Students read the associated research papers, which are part of the examination literature, and discussed the applied methodologies with the authors. The workshops covered two themes: *Interview Method – Qualitative Methodology* and *Survey Method – Quantitative Methodology*. These two themes represent the most common methodological approaches students apply in their thesis work. Each theme consisted of three workshops.

The interview-related workshops address interviews as a qualitative data collection method and involve the following: 1) Designing the Interview Process and Guide: students collaborate with the teacher to define an overall topic and create an interview guide that they will apply; 2) Conducting Interviews: students take turns acting as interviewer and interviewee in simulated interviews that are recorded, and later transcribed as part of students' homework; 3) Analysis of Transcripts: students perform a basic analysis of interview transcripts.

Prior to the quantitative methodology workshop series, students have two preparatory lectures, covering the following topics: the concept of quantitative approach in educational science, methods of educational quantitative research, steps in planning and conducting research, types of questions answerable by quantitative research in educational context, quantitative data, sources of error in quantitative research, the concept of validity and reliability, the role of sampling in educational research, children and teachers as research participants, the teacher as a researcher, reporting quantitative research, and critical analysis of one article addressing issues relevant to teaching profession.

The workshops on quantitative methodology were designed to follow a typical research process. Due to time constraints, students did not collect their own data; instead, the teacher provided the datasets. All workshops were conducted in the computer lab equipped with SPSS software.

Workshop 1 deals with the following:

- defining the research question, concepts, and items; working collaboratively to formulate a research question and identify key concepts and items.
- designing a new questionnaire based on the theoretical background presented by the teacher.
- discussing data collection challenges, common issues, and practical considerations.
- engaging in comparative analysis, in which the questionnaire developed during the workshop is compared with the “real questionnaire” used to collect the dataset, which ideally generates insights into common mistakes when designing questionnaires.

Workshop 2 provides hands-on experience with the real dataset. Students practice data input and data screening, followed by an introduction to descriptive analysis, including techniques for presenting and interpreting quantitative data.

Workshop 3 (observed within the TREL project) is fully committed to working with the dataset. Guided by the exercises prepared by the teacher, students conduct descriptive analysis, present their findings, and perform basic data interpretation.

The course is assessed through three assignments that collectively assess students’ ability to critically evaluate scientific texts and apply methodology in relation to their respective research questions:

- **Oral Individual Presentation:** Students deliver a presentation on a topic related to the teaching profession, grounded in scientific research and supported by documented professional experience
- **Home Written Examination:** Students develop a research plan, design, and address methodological challenges.
- **On-Campus Written Examination:** Guided by specific questions, students analyse three methodological approaches presented in the three studies from the lectures.

Students’ research competencies are developed through lectures that focus on the methodology of empirical research within the context of the teaching profession. Competences related to evidence-grounded teaching are directly discussed and assessed in individual oral presentations. These competencies are further strengthened in hands-on workshops, where students apply interview and survey

methods. The workshops emphasise the practical application of these methods and compare their scope, advantages, and limitations. Students are thus guided through the key steps of the research process and are thus prepared for the individual thesis work that follows in their studies. Assessment tasks include critical methodological reflections on existing research and the development of an original research plan in a chosen field. For most students, this work is directly linked to their future empirical study.

Feedback received from the observers

Observers provided feedback according to the TREL observation protocol both orally, immediately after the teaching session, and in writing. Three observers were physically present in the classroom with the consent of all participating students.

Students' engagement and interaction patterns

The session began with a brief review of the previous class, which covered means and frequency tables. The activities incorporated multiple forms of interaction, including teacher-student, student-teacher, and student-student exchanges. The work was organised as a series of minor tasks. Building on knowledge acquired in the previous workshops, the instructor encouraged students to make informed decisions regarding data presentation, for instance, choosing a bar chart over a pie chart based on the nature of the data and the intended interpretation.

Tasks and instructions

The observers highlighted the effective use and application of concrete examples to support students' understanding of quantitative concepts. They characterised the teacher's instructions as "positively provocative", noting that this approach prompted students to offer creative solutions to the tasks. The instruction approach was described as learning-by-doing and was considered well aligned with students' previous skills and academic needs.

Content

Observers appreciated that the workshop included hands-on activities using the available software. Furthermore, structuring the workshop around a series of minor tasks was considered an appropriate and well-suited approach to addressing the topic.

Supporting student research competencies

One observer noted the convenience of GU students having off-campus access to the software and appreciated that the teacher introduced this opportunity during

the workshop. Additionally, the observers found it empowering that the teacher reassured students they did not need to memorise every procedural step. Instead, students were equipped with online reference materials, which they could also later use in their professional engagement.

Critical insights into practice given the received feedback

The observers recommended that the teacher allow more time for students to formulate their own responses to the tasks. They noted that students needed additional time to systematise their thoughts and respond meaningfully to the prompts. Moreover, one observer suggested that, considering the relatively small class size, the teacher could have provided more individual support at students' computers and more monitoring of their ongoing work. In general, the feedback emphasised the need for greater attention to assessing the extent to which students successfully completed tasks, beyond relying solely on students' self-reporting that they are "done". Greater emphasis was needed on the risk of misinterpreting observed descriptive differences when statistical tests were not applied to support the results. However, addressing this issue within a single course is challenging, as statistical competencies are not included in the course syllabi of Swedish teacher education programmes. A general concern expressed by both observers and the teacher was the very low student attendance at the workshop. This is particularly problematic given the importance of preparation for successfully completing the course and being adequately prepared for thesis development. Attendance at seminars and workshops is generally non-obligatory within the programme, and low attendance remains a persistent challenge for university teachers.

Reflective Comments for Both Cases

Reflecting on both cases, several key insights emerge that can inform and enhance teaching practices aimed at developing research literacy. The importance of fostering student engagement and interaction patterns was highlighted. Overall, the tasks and instructions were well-received, being clear, practical, and interconnected. However, adjustments in the time allocation for certain activities could help maintain focus and enhance productivity. In particular, allocating more time for collaborative work may strengthen teamwork and deepen students' conceptual understanding.

The content in Case 1 was praised for its effective use of metaphors, particularly the concept of research as a conversation. This approach helped integrate discussions on the targeted activity with broader research issues, making the

content more relatable and engaging for students. The use of innovative tools to support student research literacy, such as the table for drafting annotated bibliographies, was also considered effective. This tool, combined with pertinent discussions, helped students adopt a researcher's perspective, which is crucial for their academic development. Additionally, connecting research literacy activities to students' professional experiences was identified as a strategy that can make the learning process more meaningful. Therefore, introducing alternative and more accessible research tools beyond the university setting, such as Google Scholar, can help prepare future teachers to gather information effectively and independently.

In Case 2, the tasks and instructions were well-received, with observers appreciating the effective use of concrete examples to support students' understanding of quantitative concepts. The "positively provocative" instructions encouraged creative problem-solving and were well aligned with students' prior knowledge and academic needs. This learning-by-doing approach was effective; however, allocating more time for students to formulate their responses would further enhance engagement and comprehension. The workshop content, which featured hands-on software work and a series of minor tasks, facilitated practical learning and was well-suited to the topic. Additionally, providing students with online reference materials was considered useful, as it alleviated the need to memorise procedural steps.

Finally, in both cases, when research competence development activities must compete with a myriad of other responsibilities that student teachers face within teacher education, addressing the challenge of potentially low attendance is crucial. It is essential that all stakeholders, especially student teachers, understand the importance of research literacy competencies for course outcomes, the final thesis, and the long-term sustainability and quality of the teaching profession.

References

- Åstrand, B. (2023). The education of teachers in Sweden: An endeavour struggling with academic demands and professional relevance. In: E. Elstad (Ed.), *Teacher education in the Nordic region. Evaluating education: Normative systems and institutional practices* (pp. 75–158). Springer, Cham. doi: 10.1007/978-3-031-26051-3_4
- Boström, L. (2023). What is the problem and how can we solve it? School authorities' perceptions of the shortage of teachers in Sweden. *Educational Research for Policy and Practice*, 22, 479–497. doi: 10.1007/s10671-023-09350-7

- Lindqvist, M. H. (2022). Teacher shortage in Sweden: time to take action? *Education in the North*, 29(2), 48-67. doi: 10.26203/d9gc-4a72
- Magnusson, P., & M. Malmström, (2023). Practice-near school research in Sweden: tendencies and teacher roles. *Education Inquiry*, 14(3), 367-388. doi: 10.1080/20004508.2022.2028440
- Malmö University. (2023). Course plan. *Sociolinguistics and intercultural communication*. Malmö University, Department of Culture, Languages and Media. <https://utbildningsinfo.mau.se/kurs/kursplan/EN425C/20232>
- Malmö University. (2024). *Målbild 2023-2033: Fakulteten för lärande och samhälle* [Strategic objectives 2023-2033: Faculty for Learning and Society]. Malmö University. <https://mau.se/en/about-us/faculties-and-departments/faculty-of-education-and-society/strategic-objectives-2023-2033/#accordion-143877>
- Swedish Ministry of Education. (2008). *En hållbar lärarutbildning* [Sustainable teacher education] (SOU 2008:109). Swedish Government. <https://www.regeringen.se/contentassets/d262d32331a54278b34861c44df8dbad/en-hallbar-lararutbildning-hela-dokumentet-sou-2008109>
- Swedish National Agency for Education. (2024). *Redovisning av uppdrag om ett nationellt professionsprogram* [Commission report on a national professional programme]. The Swedish National Agency for Education. Available at: https://acrobat.adobe.com/id/urn:aaid:sc:EU:3bd9fcad-8704-4e84-8607-3131ca670c95/?viewer!megaVerb=group-discover&x_api_client_id=anonymous_home&x_api_client_location=signin
- The Swedish Education Act* (SFS 2010:800). Swedish Government. https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800/
- University of Gothenburg. (2017). Course plan. *Teaching profession and scientific work for teachers in secondary school year 7-9*. University of Gothenburg, Department of Pedagogical, Curricular and Professional Studies. Available at: <https://kursplaner.gu.se/pdf/kurs/sv/L9K81A.pdf>

Appendix

MAU Annotated Bibliography Table-Tool

	Participants	Method	Claim	Key Reference(s)	Key term(s)	Implication(s)	...
Source 1
Source 2

MAU Presentation Slides Annotated Bibliography

Your assignment instructions

Each source in your annotated bibliography should be accompanied by a concise paragraph (about 150-250 words) that provides key information about the source. The annotation of each source should include the following information (about one sentence for each item below):

- Purpose of the study
- Questions, hypotheses, or issues being studied
- Samples used and/or participating populations and how they were chosen
- Procedures for data collection and analysis
- Major findings/Interpretations/Implications
- Your evaluation of the relevance of the study with respect to your research question.

Drafting an annotated bibliography

	Participants	Method	Claim
Source 1	Upper secondary school pupils, native speakers of Dutch writing in English	Qualitative interviews with a focus group	Affirmative feedback boosts motivation
Source 2	University students, native speakers of Chinese writing in English	Text analysis of student production	Affirmative feedback does not prompt transfer of good habits to other contexts
...

SYNTHESIS: Although younger ESL pupils find affirmative feedback on their writing motivating, there is no evidence that such feedback is beneficial for adult EFL writers' development. Thus, teachers should offer some affirmative feedback to Swedish pupils, but concentrate on the formative, feed-forward feedback on their writing.

CHAPTER 3

TEACHER RESEARCH LITERACY IN LITHUANIA THROUGH NATIONAL FRAMEWORKS AND ACTION RESEARCH CASE STUDIES

**Milda Ratkevičienė, Jolita Horbačasienė,
Berita Simonaitienė and Edita Štuopytė**

National Context for Teacher Research Literacy Policy

Lithuanian higher education institutions train teachers for pre-school, primary, secondary, and non-formal education, as well as vocational teachers, social pedagogues, and special educators for the country's education system. There are four different pathways to becoming a teacher in Lithuania:

- by completing a university or college undergraduate degree programme in pedagogy, leading to a bachelor's or professional bachelor's degree in educational sciences and a formal teacher qualification.
- by completing modules in pedagogy alongside a university or college undergraduate degree programme in a non-pedagogical field, leading to a bachelor's or professional bachelor's degree in the main field of study, plus a teacher qualification.
- by completing a one-year non-degree pedagogical programme, open to individuals who already hold at least an undergraduate qualification degree.
- by having teaching competences acquired through teaching practice and/or non-formal education formally recognised in accordance with procedures established by law (Association of Lithuanian Higher Education Institutions for Centralised Admissions, n.d.; Ministry of Education, Science and Sport, 2010).

Depending on the chosen pathway, the duration of studies ranges from one year (60 ETCS) to four years (240 ETCS). The graduate degree does not lead to a teaching qualification corresponding to the sixth level of the Lithuanian Qualifications Framework and the European Framework for Lifelong Learning. However, it does lead to the development of higher competences in subject didactics, education, and educational activities (Ministry of Education, Science and Sport, 2015).

In Lithuania, research literacy education is integrated into the curriculum of teacher education study programmes. However, because, as noted above, there are several different routes to obtaining a teacher qualification, research literacy education is understood and implemented in different ways. For example, in first-cycle study programmes that also lead to a teaching qualification – in line with the description of the group of education and development fields of study (Ministry of Education, Science and Sport, 2015) – the student will acquire certain skills in conducting research, such as identifying a problem, formulating an objective, conducting a literature analysis, developing a research methodology, collecting and analysing data, and applying research to solve problems. In contrast, non-degree pedagogy programmes, which are designed for practice-oriented teachers, do not formally require the development of research competencies. The development of these competences is usually reflected only in the final project (3 ECTS), which is oriented towards the investigation of practical activities (Ministry of Education, Science and Sport, 2010). However, in terms of the specific competences required for a practitioner-educator and regulated by legislation, research- and data-analysis-oriented cognitive competences – like all other competences included in the teacher qualification – must be continuously developed throughout the entire period of active professional practice (Ministry of Education, Science, and Sport, 2023). The development of teachers' research literacy competences is of great importance in both practical and scientific contexts, and research-based pedagogical activities have been a priority in Lithuanian education policy for several years now (Jakavonytė-Staškuvienė et al., 2023; Rutkienė & Kaminskienė, 2023). Thus, it is natural that the scientific basis is an important element not only of teacher education but also of teachers' professional practice itself.

Jakavonytė-Staškuvienė et al. (2023) emphasise that Lithuania seeks to develop teachers who ground their pedagogical practice in the systematic development of reflection skills. According to Pečiuliauskienė (2011, p. 113), a teacher-researcher is “a practitioner who continuously reflects on his/her own practice, organises

research on pedagogical activities, and applies various research methods” (authors’ translation), with research activities directed towards 1) teachers’ own research activities and 2) the supervision of students’ research activities. However, there is still a lack of research that reveals how to organise these activities in a qualitatively robust way (Jakavonytė-Staškuvienė et al., 2023). Studies show that teachers in Lithuania often lack skills in data analysis and in applying research findings to practice, including setting specific goals, collecting data, and planning interventions to achieve those goals (Melnikova et al., 2023).

As Druskienė (2021) notes, teachers do not associate research activities with their professional (pedagogical) work. At best, they consider them as a complementary task and assume that only scientists, researchers, or experts – not teachers – can conduct research. However, according to Jakavonytė-Staškuvienė et al. (2023), teachers need to be able to investigate students’ performance, select appropriate content, and create a supportive learning environment. Various studies (Batuchina et al., 2022; Sabaliauskas et al., 2018) have shown that a lack of specific knowledge – such as difficulties in correctly interpreting data or planning data-based interventions – prevents teachers from applying innovative, research-oriented tools and methods in their practice. Therefore, teachers need to develop a sufficient level of data literacy that enables them to transform information into practical knowledge and to engage in the collection, analysis, and interpretation of different data types, as well as make pedagogical actions based on these data (Melnikova et al., 2023; Jakavonytė-Staškuvienė et al., 2023).

Teaching Class: Action Research Assignment

Introduction to the Case

This case presents a teacher qualification programme designed to highlight the development of teachers’ research competences. The programme targets those who already hold a bachelor’s degree, are working, or intend to work as teachers, but still need a qualification. In the 2023-2024 academic year, 60 students were enrolled. Approximately 20 were preparing to become STEAM subject teachers, around 20 to become teachers of languages, history, and other humanities subjects, and the remainder to become teachers of preschool education, primary education, sports, and other subjects not included in the first two groups. The programme lasts one year (60 ECTS) and culminates in a final project in which students assess changes in six competences related to the teacher profession throughout their studies. The first of these, research competence, is mandatory

for all students. Students can select the remaining five competences from various educator competence frameworks, such as the Digital Competence Framework for Educators (DigCompEdu) or the Competence Inventory for Teachers and Student Support Professionals (in Lithuanian). They analyse the development of their research competence in detail, such as describing specific activities, developing a research design, formulating a research question, collecting and analysing data, and formulating recommendations for improvement.

During their studies, students complete the teaching internship (integrated school-based practice) under the guidance of school-based mentor teachers. The assignments for the Pedagogical Internship module are prepared, supervised, and evaluated by the university lecturers. The module's learning outcomes specify that upon completion, students will be able to plan, conduct, analyse, and evaluate their pedagogical activities, make appropriate choices, and apply action research (AR) methods. One key assignment requires students to plan, conduct, and report on AR. The assignment aims to develop and strengthen researcher attitudes, deepen understanding, and build skills in applying AR methodology to pedagogical practice, while developing core research competencies, such as identifying research needs and problems, collecting and analysing data, and presenting results.

The AR assignment consists of two parts: in the fall semester, students plan the AR through an action research design; in the spring semester, they implement, document, and reflect on the AR by producing a reflective action research report. This assignment requires 65 hours of student workload in the fall semester and 80 hours in the spring semester. Prior to commencing the AR project, a two-hour contact seminar introduces and discusses the methodology, assignment requirements, and the AR process. Detailed instructions for conducting AR, reporting and reflection forms, and descriptions of core principles, methods, and examples of AR are provided via Moodle. Additionally, two one-hour tutorials offer interim feedback on the AR design and report drafts, supplemented by individual question-and-answer sessions.

Feedback from observers

Observers provided feedback across three thematic areas:

Interaction patterns

Observers noted that the lecture was mostly constructed on a lecturer-student interaction framework, with the instructor delivering most of the content and

reserving the remaining time for a question-and-answer session that included some student-student interactions. This format was deliberate, as the lecture introduced students to their teaching internship, during which they must conduct pedagogical AR. The instructor covered key topics – such as AR design, implementation, reporting, and reflection – and outlined the course assignment, which will be assessed as their final project. Consequently, the lecturer-student format best served these objectives. Observers also questioned whether incorporating more interactive learning methods – such as small group discussions where students could share their insights on AR or their experiences – might be appropriate. However, the instructor’s experience shows that, given the limited classroom time in the Pedagogical Internship module, the lecturer-student interaction format during sessions is the most effective. These sessions deliver essential AR guidance, with lectures recorded for absent students due to the mixed-mode delivery. Primary interaction occurs instead during individual supervision tutorials, where students address specific AR-related questions and challenges.

Content

Observers highlighted the importance of AR in initial and in-service teacher education, which one observer described as “potentially powerful professional learning”. They praised the consistency of the information provided, the emphasis on essential elements, and detailed coverage of the assignment: structure, AR process stages, competences to be developed, and time management. This blend of theoretical and practical approaches is crucial for constructing students’ AR knowledge and is necessary for this research context. Observers recommended grounding the AR presentation more firmly in scientific literature – by discussing different approaches to AR and citing more scientific sources – and questioned the absence of references to course readings or other literature in the instructor’s slides. However, the list of required and supplementary readings for AR is provided in the course description on Moodle.

An observer also questioned why a source referenced in the slides was not included in the list of required readings in the course description. However, given that the course description is a rather static document updated only at a certain point in time, the instructor occasionally includes additional sources deemed useful for complementing the listed literature and adding value to the students’ AR work. Another observer noted that the instructor’s views appeared to contradict a specific source they cited. However, as with any scientific discussion, different perspectives on AR are possible; neither position represents the sole correct interpretation, and the instructor’s stance simply represents one of many views on AR.

Scientific grounding of the assignment

In the feedback analysis, observers recommended strengthening the scientific grounding of the assignment. Specifically, they suggested that students be required to justify the relevance of their work beyond only their own needs and to base their search for solutions to the problem in scientific reasoning and research-based insights. However, as noted by the instructor, the research method used was deliberately chosen for its practicalities. This choice was also influenced by the specificity, limited duration, and limited scope of the study itself, as well as by the overarching aim of preparing students for the practical realities of teaching in educational institutions. From this perspective, the assignment was designed to enable students to address authentic problems faced by in-service teachers and to find the most appropriate solutions. Furthermore, the instructor highlighted that AR was chosen because it is widely regarded as a research method that is relatively accessible to practitioners. Unlike more theoretically demanding research approaches, AR is easy to understand and apply within professional practice, making it particularly suitable for teacher education contexts.

However, it is also important to note that one of the observers pointed out that during the discussion of possible topics, it became evident that the students were already aware of ethical issues and personal data protection when research involves children. This finding demonstrates that these students entered the non-degree pedagogical programme with basic research competences acquired during their undergraduate studies. According to the instructor's experience, such prior knowledge and basic research competences enable students to produce high-quality AR projects that are strongly practice-oriented while still adhering to basic research principles.

Critical insights into practice given the received feedback

Observers' feedback and instructor's reflections after the observation and subsequent discussions provide valuable insights into further course development. In particular, the feedback highlights two key areas for improvement: 1) the introduction of more varied forms of interaction during the lecture, and 2) the integration of more activities related to engaging with scientific literature. The following section presents concrete examples of how course practices can be improved through the integration of scientific content and interactive elements in lectures.

Regarding interaction as a possible means for improving the course, changes can be implemented in both teaching formats: lectures and the post-lecture tutorials. In terms of interaction during lectures, one of the observers recommended considering a flipped classroom approach. This suggestion represents a very pertinent and useful insight that could be applied either fully or partially within course design. For example, it may enhance student engagement and promote student-teacher interaction during lectures. With this approach, students would attend the lecture having completed the assigned readings and having prepared relevant questions in advance, thereby allowing in-class time to be used more effectively for discussions, clarification, and deeper engagement with course content. Regarding post-lecture tutorials, combining individual tutorial supervision with group tutorials could be beneficial. Many of the challenges students encounter while conducting AR – especially in the early stages – are common across projects, and a substantial proportion of individual tutorial time is spent on discussing these same issues. Therefore, introducing group tutorials would provide a more efficient use of instructional time by allowing shared concerns to be discussed collectively. At the same time, individual tutorials, which are necessarily time-limited, could focus more on individual issues related to each student’s specific AR topic.

With regard to strengthening the integration of scientific literature into the module, this can be done in two complementary ways: 1) by engaging students to read scientific literature in preparation for lectures, and 2) by encouraging them to ground their AR processes in relevant scientific literature. Regarding preparatory reading, the previously referred to recommendation to adopt elements of a flipped classroom approach is relevant. By engaging students with scientific literature prior to lectures, students would be better prepared to participate actively in class. A flipped classroom format could be used to ascertain students’ existing knowledge of AR and other research concepts, thus making it possible to identify knowledge gaps and variations in preparedness. Such insights would allow the instructor to adapt lecture content accordingly, for example, by adjusting the emphasis placed on specific theoretical concepts, recommending targeted readings during the course, and ensuring that uneven levels of prior knowledge are addressed through systematic engagement with scientific literature.

As one of the observers noted, incorporating selected readings from the theoretical literature on AR would broaden students’ understanding of the methodological foundations of AR. Such engagement would likely enable

students to engage more actively in the lecture, raise relevant questions, contribute to discussions, and produce stronger AR projects. With regard to supporting students in grounding their AR processes in scientific literature, consideration should be given to introducing a requirement that students draw on a limited number of scientific sources. These sources could be integrated throughout the research process, including both the description of the research process itself, the analysis of the data, and the formulation of recommendations.

At the same time, it is important to acknowledge the specific context of the course under analysis. As a Pedagogical Internship module, the course is primarily focused on practical activities within a specific educational institution. The observed lecture, in particular, was narrowly focused on the development of pedagogical competences, pedagogical internship, and teacher qualification. The programme is limited to 60 ECTS, of which 30 ECTS are devoted to modules in pedagogy (including a maximum of 3 ECTS for the final project) and 30 ECTS to the pedagogical internship. When pedagogy is pursued as an integrated part (minor studies) of undergraduate studies, the development of the students' scientific competences follows the disciplinary requirements for that field. However, when pedagogy is undertaken as an additional, non-degree study programme – as in the case of the course under analysis – then students must have completed undergraduate and postgraduate studies. Consequently, students enter the programme with research competences from their previous studies, an insight also highlighted in the observers' feedback. In light of these considerations, the development of scientific competences in pedagogy studies is integrated into the courses aimed at developing pedagogical competences. Programme lecturers thus make every effort to integrate scientific content into the development of practical competences, thus ensuring that professional training is informed by foundational research principles.

Reflective Comments

The analysis of observer feedback collected during the pre-observation, observation, and post-observation phases reveals a recurring concern regarding the limited degree of “scientific grounding” in the course. Observers emphasised the need for a stronger focus on the development of research competences and the transfer of research-related knowledge. This concern was expressed across multiple dimensions of the course, including lecture content, the formulation of assignments, and the monitoring and assessment of students' work. However, it

should be noted that, in some cases, the development of research competences in teacher education depends on specific legal regulations. In the case of pedagogical studies, whether pursued as minor studies or as a non-degree programme, current legislation does not stipulate the development of students' scientific competences. This legislative orientation is also reflected in the formal requirements for the final project, which integrates theory and practice in pedagogical studies, leading to a teaching qualification. Students are required to produce an original, independently prepared non-degree qualification project, the primary purpose of which is to "demonstrate the results of the study achieved by collecting, systematising, reflecting on and critically analysing, integrating and applying theoretical, practical, empirical information on the objects and subjects of pedagogical activity" (Description of the Group of Educational Studies, 2015, point 40.3.2.1., authors' translation).² Moreover, the final project in non-degree pedagogical studies emphasises the application of knowledge in practice rather than the demonstration of explicit scientific competences.

The choice of AR is deliberate. As Elliott (2009) argues, one of the major challenges facing teacher educators is the need to reconcile their dual roles as educational researchers and practitioners. From this perspective, teacher educators are encouraged to understand their pedagogical role as an opportunity to empower pre-service teachers to develop, test, and refine shared understandings to pursue worthwhile educational goals. This entails orienting research activities toward addressing some of the most pressing and contextually grounded problems encountered by teachers in classrooms and schools (Elliott, 2009). In this context, AR – with its strong emphasis on practical applicability and its close alignment with research activities embedded in professional practice – represents a particularly appropriate approach for incorporating a research aspect into programmes primarily focused on the development of practical pedagogical competences.

References

- Batuchina, A., Melnikova, J., Šakytė-Statnickė, G., & Šmitienė, G. (2022). Mokymosi analitikos nauda edukacijai: Lietuvos bendrojo ugdymo mokyklų mokytojų patirčių analizė [The benefits of learning analytics for education: An analysis of the experiences of teachers in Lithuanian general education schools]. *Acta Paedagogica Vilnensia*, 48, 129–142. doi: 10.15388/ActPaed.2022.48.8
- Druskienė, A. (2021). *Bendrojo ugdymo mokytojų tiriamosios veiklos kompetencijos tobulinimas: Metodinis leidinys* [Improving the research competence of general education teachers: Methodological publication]. Nacionalinė švietimo agentūra [National Education Agency].
- Elliott, J. (2009). Building educational theory through action research. In: E. S. Noffke & B. Somekh (Eds.), *The SAGE Handbook of Educational Action Research* (pp. 28–38). SAGE Publications. doi: 10.4135/9780857021021
- Jakavonytė-Staškuvienė, D., Jašinauskas, L., & Kudinoviėnė, J. (2023). An analysis of prospective primary school teachers' action research: the case of Lithuania. *Educational Action Research*, 33(3), 543–558.
- Lietuvos aukštųjų mokyklų asociacija bendrajam priėmimui organizuoti [Association of Lithuanian Higher Education Institutions for Centralised Admissions]. (n.d.). *Teacher training*. <https://lamabpo.lt/en/teacher-training/>
- Lietuvos Respublikos švietimo ir mokslo ministerija [Ministry of Education, Science and Sport]. (2015, December 11). Dėl švietimo ir ugdymo studijų krypčių grupės aprašo patvirtinimo [On the approval of the description of the group of study fields in education and training]. *TAR* Nr. 19677. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/5c4afaf0a04a11e591078486468c1c39?jfwid=j7125jw5g>
- Lietuvos Respublikos švietimo ir mokslo ministerija [Ministry of Education, Science and Sport]. (2023, November 27). Dėl mokytojų ir pagalbos mokiniui specialistų kompetencijų aprašo patvirtinimo [On the approval of the description of competencies for teachers and student support specialists]. *TAR* Nr. 22836. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/e8d855a08d6111eea791d94269904d9b?jfwid=-117zm5mf0>
- Lietuvos Respublikos švietimo ir mokslo ministerija [Ministry of Education, Science and Sport]. (2010, January 23). Pedagogu rengimo reglamentas [Regulation on the training of educators]. *Valstybės žinios* [Official Gazette] Nr. 9-425. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.364217/asr>
- Melnikova, J., Batuchina, A., Ahrens, A., & Zascierinska, J. (2023). Teachers' data literacy skills for pedagogical decision making: Needs analysis in Lithuania and Germany. *ENVIRONMENT. TECHNOLOGY. RESOURCES. Proceedings of the International Scientific and Practical Conference*, 2, 182–188. doi: 10.17770/etr2023vol2.7287

- Pečiuliauskienė, P. (2011). Tiriamosios veiklos mokykloje praktika [Research activity practice at school]. In: P. Pečiuliauskienė & M. Barkauskaitė (Eds.), *Pedagoginės praktikos mokykloje vadovas* [Handbook of pedagogical practice at school] (pp. 113-138). Edukologija [Educology].
- Rutkienė, A., & Kaminskienė, L. (2023). Teacher education in Lithuania: Striving for professionalism. In: M. Kowalczyk-Wałędziak, R. A. Valeeva, M. Sablić & I. Menter (Eds.), *The Palgrave Handbook of Teacher Education in Central and Eastern Europe* (pp. 379–393). Palgrave Macmillan. doi: 10.1007/978-3-031-09515-3_16
- Sabaliauskas, S., Poteliūnienė, S., Česnavičienė, J., & Juškevičienė, A. (2018). *Dalykinių kompetencijų tobulinimo poreikio ir turinio analizė Kokybinio tyrimo ataskaita* [Analysis of the need and content of improving subject-related competencies qualitative research report]. Parlamentarizmo istorijos tyrimų centras [Research Center for the History of Parliamentarism].

CHAPTER 4

THE TALLINN UNIVERSITY CASES, ESTONIA

**Anna-Liisa Jõgi, Merilyn Meristo, Maarja Tinn,
Maile Käsper and Meril Ümarik**

National Context for Teacher Research Literacy Policy

To become a teacher in Estonia, candidates must complete a specific educational and certification process. Teacher education in Estonia is designed to prepare professionals who can meet national educational standards and foster students' academic achievement, social-emotional development, and general competencies (Estonian Ministry of Education and Research, 2023). Teacher education is primarily offered at Tallinn University and the University of Tartu. Both universities offer various teacher education programmes, including those for early childhood educators, primary school teachers, subject teachers for middle and secondary school, vocational teachers, and specialists in special education. Early childhood education and vocational teachers complete a three-year bachelor's degree followed by a two-year master's programme. Primary school teachers undertake a five-year programme combining bachelor's and master's level studies with education as the major field. Middle and secondary school subject teachers complete a three-year bachelor's degree and an additional two- or three-year master's programme. These programmes are designed to provide the pedagogical knowledge and practical skills necessary for professional teaching practice. In addition to meeting the academic requirements, aspiring teachers in Estonia must complete a supervised teaching practice internship in schools or other educational settings. This practical experience enables them to apply their theoretical knowledge in real-world classroom situations under the guidance of experienced educators. The practical component is integral to the teacher education process in

Estonia, ensuring that graduates are well-prepared to engage effectively with students and navigate the complexities of the teaching profession.

The teacher education curriculum typically includes courses in pedagogy, teaching methods, educational psychology, classroom management, and basic research methods at both bachelor's and master's levels. At Tallinn University's School of Educational Sciences, bachelor's students are required to complete courses such as Basic Research Methods (6 ECTS) and Research Seminar (6 ECTS). At master's level, students take courses in Basic Research Methods (6 ECTS), followed by Qualitative and Quantitative Methods (6 ECTS) and a Master's Thesis Seminar (6 ECTS). The programme culminates in the preparation and defence of a master's thesis.

In Estonia, significant emphasis is placed on teachers' in-service training. Several policy documents highlight the importance of continuous professional development to ensure teachers remain updated on current educational practices (for example, Estonian Ministry of Education and Research, 2023). However, teachers have a lot of autonomy in selecting the topics and extent of their in-service training, as there are no compulsory requirements for completing a specific number of in-service training hours. In addition to rich learning experiences, in-service training often fosters collaboration and the exchange of ideas among educators, thereby creating a supportive professional community. For example, several university-led in-service training programmes adopt a whole-school approach or focus on building networks of teachers and school leaders across different institutions.

Many students enrolled in teacher education programmes at Tallinn University are already employed in schools. Balancing coursework with their teaching responsibilities can lead to a significant workload, requiring efficient time management skills and dedication. However, this dual role offers invaluable opportunities to apply newly acquired knowledge directly in the classroom. Moreover, the diversity among students in these programmes significantly enriches the learning environment. Students vary in age, life experience, and professional backgrounds, including a notable number of career changers. This diversity brings a wealth of perspectives to the educational discourse, fostering dynamic discussions and preparing future educators to meet the diverse needs of their students and communities.

After completing a teacher education programme at Tallinn University, graduates must obtain a teaching certificate. This certification requires passing a

professional qualification examination and meeting specific criteria (Estonian Qualifications Authority, 2024). The examination assesses pedagogical competence, subject knowledge, and teaching skills to ensure candidates meet the rigorous standards of the Estonian educational system. Research literacy is understood as a core component of teacher education, encompassing the ability to effectively engage with and utilise educational research in their professional practice. It includes skills for conducting action research to address challenges in one's own teaching, analysing students' learning processes, and planning their learning accordingly (Estonian Qualifications Authority, 2024).

The state uses an evidence-based approach to developing education policy, increasingly involving researchers in strategic decision-making. National policies strategically embed research literacy components within the curricular framework of teacher education programmes (OECD, 2020). This ensures the systematic development of prospective educators' abilities to critically engage with and apply educational research findings. Moreover, all upper-secondary school students must complete a research study or practical work as part of their studies, which often necessitates teachers taking on supervisory roles. This responsibility further challenges and strengthens their research literacy, contributing to a culture of continuous professional development and evidence-based practice within the Estonian education system.

Teaching Class: Quantitative Methods Seminar

Introduction to Case 1

The course *Qualitative and Quantitative Research Methods* (6 ECTS) is integrated into almost all master's programmes at the School of Educational Sciences, Tallinn University. Most MA students are already employed as teachers, youth workers, or school leaders. However, their academic backgrounds and research experience are rather diverse. Many hold a previous MA degree in another field, while others have little or no previous research experience.

The aims of the course are to:

- develop theoretical knowledge and practical skills required for critically understanding research results and for data collection and analysis in educational research.

- prepare students to conduct empirical qualitative and quantitative research in the educational field.
- foster the development of students as independent and ethical researchers.

Essentially, the course is designed to support MA students in their reading of scientific literature and conducting their own research. Its content is embedded into qualitative and quantitative methods, including data gathering and analysis. Initially, the course addresses the research process, its main goals, and the role of the researcher in both qualitative and quantitative paradigms. Next, students are introduced to the most common data collection methods used in educational research, with a focus on their strengths and limitations. Finally, the course covers basic techniques for qualitative and quantitative data analysis, followed by instructions for reporting research results.

The course uses a mixed teaching approach, tailored to the content of each seminar. Sessions typically combine lectures with small-group or whole-class discussions and practical data-related activities. Students create and conduct a practice interview, which is then subject to discussion and reflection during the seminar. They also design a data collection instrument for answering a research question requiring quantitative data. Data analysis instruments are introduced and discussed, and for hands-on practice, students use Jamovi for quantitative data and QCAMap for qualitative data.

Students are required to complete four independent tasks during the course:

- conduct qualitative data collection by carrying out an interview and providing a reflective analysis.
- perform a qualitative mini-research project to demonstrate theoretical knowledge and practical skills in analysing an educational phenomenon, applying a freely chosen qualitative data analysis method.
- design a data collection instrument to address a quantitative research question.
- analyse quantitative data and present the results according to the formatting guidelines for MA theses.

The seminar observed by TREL project colleagues focused on statistical association tests. It followed a seminar on critically reading quantitative data analysis results and preceded a seminar introducing the Jamovi software. Statistical association tests are taught in a step-by-step manner. First, students examine the results presented in a scientific paper and reflect on their

observations. Next, the idea and purpose of the association tests are introduced and discussed. Finally, students interpret the example results from additional research papers. In the following seminar, students are introduced to the Jamovi software and practice using a data file. At this stage, the focus is on exploring the programme's features rather than interpreting the results of the analyses. In the last seminar, these elements were integrated: the conceptual understanding of the association tests, the use of Jamovi as a tool, and the development of interpretation skills.

In the seminar observed by TREL colleagues, the session began with a review of the previous meeting. Students were asked to find and describe the descriptive statistics presented in the example paper. Next, the concept of statistical association tests was introduced. Students then completed the task of formulating independent and dependent variables from a given set and provided theoretical justifications for their choices. This task was designed to illustrate the necessity of theory-based hypotheses in quantitative research. The seminar began with a brief review of the previous session, with particular reference to the data types and the importance of selecting appropriate statistical tests for each analysis. Subsequently, the concepts of independent sample t-tests, analysis of variance, correlation, and regression analyses were introduced. Examples of research questions suitable for each method were discussed to illustrate their practical applications.

Feedback from observers

Students' engagement and interaction patterns

Observers noted that students seemed genuinely interested and actively engaged in the group tasks, with one observer remarking that they were "making meaning" of the concepts studied. However, the observers pointed out that the seminar tended to favour more active students, who asked questions and participated in the group discussions, thus leaving some students less involved. Additionally, observers highlighted the imbalance between student-led knowledge construction and teacher-directed discussion, noting that the seminar leaned more toward the latter.

Tasks and instructions

Observers discussed the level of simplification applied to the research results and the tasks designed to illustrate the research methods presented in the seminar.

Content

Observers emphasised the importance of highlighting a clear theoretical model and well-defined hypotheses before planning any quantitative data analysis. They also recommended integrating discussions of ethical considerations throughout the seminar.

Critical insights into practice based on feedback

Observers highlighted the specific content and depth of quantitative methods covered in the course, noting the challenge of determining the appropriate amount of preparation for students to effectively engage in thesis work and analyse their own data. It is crucial that the material remains accessible and understandable for all students. For example, factor analysis was excluded because it requires a broader understanding of psychological measurement. During the course development, an additional in-class seminar was introduced to familiarise students with the software used for data analysis. Furthermore, non-parametric tests are now only briefly mentioned, as combining parametric and non-parametric tools proved too confusing for most students.

We appreciate the observers' feedback on strengthening the link between the analyses taught in the course and their practical applications in teachers' and school leaders' everyday work. While this is challenging, it represents an important area for improvement in the course. To address this, we plan to add tasks that involve reading and understanding real-world educational data (for example, external school evaluation reports, students' state examination summaries, and students' individual development cards). These tasks will also include planning subsequent interventions, either in school or at student level, based on the insights gained from the data.

Introduction to Case 2

The observed research seminar aimed to provide participants with a comprehensive understanding of quantitative instruments and their application in research. Specifically, the seminar aimed to elucidate the conceptualisation and analysis of quantitative instruments, with a primary focus on planning and constructing questionnaires. The seminar was conducted in a hybrid format, with half of the students attending in person and the other half participating online.

Throughout the seminar, participants delved into key phases involved in questionnaire development, ranging from setting clear objectives to piloting the instrument for refinement. Emphasis was placed on feasibility considerations,

including factors such as time constraints, participant accessibility, and the estimated completion time for respondents. Additionally, discussions addressed the selection of appropriate platforms for administering the questionnaire and determining sample size to ensure statistical validity and representativeness of findings. Furthermore, the seminar explored the practical application of action research methodologies within the context of questionnaire construction and analysis. Participants also examined the constructs to be included in the questionnaire, evaluating the advantages of using ready-made instruments versus their own. They explored available resources such as databases and scholarly literature for questionnaire templates. The seminar underlined validity as a critical aspect in self-made questionnaires, underscoring the need for rigorous validation processes to ensure the reliability and accuracy of research findings. Furthermore, ethical considerations were woven in throughout the seminar discussions. Topics included the potential drawbacks of incorporating too many open-ended questions, the importance of clear writing and unambiguous questions to facilitate understanding, and the optimal sequence of questions to enhance survey coherence and respondent engagement. Additionally, concerns pertaining to participant confidentiality, informed consent, and responsible research conduct were thoroughly examined to uphold ethical standards in research practice.

The seminar participants consisted of seven master's-level students enrolled in a foreign language teacher programme. This cohort represented a spectrum of linguistic specialisations, including one German language teacher, one French language teacher, one Finnish language teacher, and four English language teachers. In addition to being students, all held positions as novice in-service teachers, bringing practical experience in language instruction. While they had encountered research methodologies during their undergraduate studies, this exposure was primarily limited to qualitative approaches. Consequently, statistical methods were relatively unfamiliar terrain for them.

The observed research seminar was closely linked with the preceding seminar on theoretical issues. Feedback was given on the designs students had prepared as homework, offering constructive insights for improvement. Drawing on past experiences, frequent references to previous sessions were made, thus setting the stage for a discussion and providing valuable context for the ongoing exploration of quantitative research methodologies.

Feedback from observers

Students' engagement and interaction patterns

The observers noted that the teacher employed a variety of strategies to engage students and deepen their understanding of the material. Short-response questions were predominantly used to initiate interaction, while follow-up questions encouraged deeper responses and fostered critical thinking skills. Furthermore, the use of controversial questions served to trigger discussions and challenge students' perspectives. As the discussion shifted towards students' work on questionnaires, the session became notably more interactive. Design principles were introduced using students' own examples, a strategy deemed effective in enhancing student responsiveness and attentiveness. Furthermore, reviewing assignments and draft items in relation to potential problems, possibilities, and analysis requirements proved to be an effective method to connect the lecture content to students' own research projects. This approach increased both the relevance and the meaningfulness of the session.

The teacher continuously demonstrated efforts to engage students throughout the class. She maintained direct and continuous eye contact to monitor student engagement. Adopting a Q&A format, the teacher highlighted practical information relevant to questionnaire development, while ensuring clear communication and addressing students' questions. Her approachable demeanour created a safe and supportive environment, encouraging students to inquire about various aspects of questionnaire construction and implementation. In addition to addressing practical questions, the teacher encouraged students to reflect on their own research experiences and used short scenarios to illustrate key concepts. By involving both onsite and online students in the discussion and fostering an argumentative approach, the teacher promoted critical thinking and deeper engagement.

Tasks and instructions

The teacher incorporated connections to previous classwork and utilised students' own work as discussion points, while maintaining realistic expectations for such projects. A notable aspect of the seminar was its emphasis on connecting the material to students' actual theses and their work with supervisors. This approach was commended for contextualising the material within the students' current academic endeavours and enhancing its practical relevance. Additionally, the discussion of students' assignments in relation to their research projects served to bridge theoretical concepts with real-world applications.

Content

The observers noted that the course was very informative, particularly regarding the use of questionnaires as a research tool, with students demonstrating attentiveness in both modalities – online and in the classroom. While only a subset of students actively engaged and participated verbally during the instructional process, it is possible that others were more knowledgeable about the topics or preferred to listen and learn from the teacher and more vocal peers. Additionally, some students may have been less comfortable expressing themselves in English, which could have influenced their level of verbal participation.

Critical insights into practice given the received feedback

The importance of addressing questionnaire design principles was highlighted as essential for enhancing students' comprehension of research literature. However, the complexity of guiding students through the process of designing their own questionnaires was acknowledged, considering the multitude of principles and details requiring careful attention. Despite this, engaging students in designing their own questionnaire was perceived as a beneficial and effective approach to developing questionnaire construction. Concerns were raised regarding the adequacy of time allotted for students to fulfil all requirements related to designing a questionnaire for their research.

While the course was commended for its student-friendly approach, it was noted that the teacher dominated most of the teaching time. The hybrid nature of the class posed challenges, with Zoom participants appearing less involved, which negatively impacted class discussions. Furthermore, only a select group of students actively participated, prompting consideration for strategies to promote richer student-to-student and teacher-student interactions. The teaching methodology predominantly relied on lecturing key issues, supplemented by practical questions, without assigning specific students to provide comments. It is recommended that students be given more time for reflection and peer discussion to process information at a slower pace. Additionally, the rarity of note-taking among students suggests that the course content might not have sufficiently challenged their prior knowledge, warranting adjustments to the instructional approach.

Reflective Comments for Both Cases

Improving students' research literacy remains a considerable challenge for higher education institutions. Achieving this goal requires a careful balance between making the content accessible and ensuring sufficient depth for students to develop a conceptual understanding of key topics. This is particularly crucial in teacher education, where instructional practices are grounded in data-driven decision-making. Teachers are expected to understand, critically reflect, and implement evidence from educational research (Prenger & Schildkamp, 2018). Moreover, teacher education emphasises learner-centred teaching methods: the same approaches we encourage our students to use in their future practice. These include constructing knowledge collaboratively, explaining concepts to peers, and merging these into the existing frameworks. Our course development efforts reflect this commitment. For example, both observed courses have since been redesigned to align with a student-centred approach, thus increasing hands-on activities and meeting the needs of students' individual research projects.

References

- Estonian Qualifications Authority (2024). *Occupational qualification standards: Teacher*. <https://www.kutseregister.ee/ctrl/en/Standardid/vaata/11334391>
- OECD. (2020). *Education policy outlook: Estonia*. OECD. <https://www.oecd.org/education/policy-outlook/country-profile-Estonia-2020.pdf>
- Prenger, R., & Schildkamp, K. (2018). Data-based decision making for teacher and student learning: a psychological perspective on the role of the teacher. *Educational Psychology*, 38, 734–752. doi: 10.1080/01443410.2018.1426834
- Requirements for teacher training*. (2023, October 27). Estonian Ministry of Education and Research. <https://www.riigiteataja.ee/akt/127102023002>

CHAPTER 5

THE UNIVERSITY OF LATVIA CASE

Indra Karapetjana and Gunta Roziņa

National Context for Teacher Research Literacy Policy

Teacher education is a key priority within Latvia's education policy, driven by persistent challenges in recruiting and retaining qualified educators. These difficulties significantly impact the overall quality of education. To address this, the Regulations on the Education and Professional Qualifications of Teachers and the Procedure for Professional Development of Teachers (hereinafter – Regulation No. 569, 2018) established comprehensive requirements for various teacher roles. These include general education teachers, pre-school teachers, vocational education teachers, special educational needs teachers, social teachers, career counsellors, and speech therapists.

In Latvia, teacher education at the tertiary level follows two models: the concurrent model and the consecutive model. The concurrent model is available to students immediately after completing secondary education. This four-year programme integrates studies in the chosen academic subjects, with courses in education, research methods, psychology, information technology, and other related subjects. In addition, students undertake a teaching practice internship in schools. Upon graduation, students in the concurrent model earn qualifications in two teaching subjects. For example, they may qualify as teachers of English and German or as teachers of computer science and English. In the consecutive model, students first obtain a degree in a specific academic discipline before enrolling in a pedagogical training programme. This pathway typically takes five years and results in qualification to teach one core subject. During the final two study years, students engage in practical teaching experience in schools (Margevica-Grinberga & Odiņa, 2021). The concurrent model integrates pedagogy and subject matter within a single programme, while the consecutive

model separates disciplinary studies from pedagogical training. Further, there are fewer direct pathways. For example, students enrolled in disciplinary programmes such as English studies often are simultaneously employed at school or language centres while completing their degree, thereby gaining practical experience alongside their academic studies.

In accordance with Regulation No.569 (2018), individuals are eligible to work as teachers if they have completed higher education in teaching and hold a qualification in the subject they teach. This provision also applies to persons who first obtain a degree in a core subject and then acquire a teaching qualification. Alternatively, a person may teach if they hold higher education in the subject taught and have completed a professional development programme related to pedagogy amounting to 3 ECTS credits (Regulation No. 569, 2018). This approach has long served as one of the solutions to address the persistent shortage of teachers. Another important aspect is that the scientific work completed upon graduation is related to the content and didactics of the respective subject (Regulation No. 569, 2018).

In accordance with the Regulation of the Cabinet of Ministers No. 655 On the Types of State Universities (2021), the University of Latvia has been designated as a university of science. Consequently, research literacy is a core component of the learning outcomes across all study programmes. For future teachers, research literacy is essential not only for successful completion of studies but also for ongoing professional development. Furthermore, it equips them to incorporate research-based approaches into their teaching practice at schools.

Latvia Case

Introduction

Research literacy is defined as “the ability to judiciously use, apply and develop research as an integral part of one’s teaching” (Evans et al., 2017, p. 404). This means that students should be able to access and utilise information, critically evaluate and integrate different forms of evidence within their own context, and conduct their own research. Tatto and Furlong (2015) identify four ways in which research can benefit teacher education programmes. First, programme content can be informed by research-based knowledge and the scholarship of relevant academic disciplines, such as teaching and learning processes; subject matter research; and content assessment. Second, programme design can draw on research into effective approaches to teacher education. Third, teachers and

teacher educators can develop research competence, enabling them to access, interpret, and adapt evidence-based information into their own specific contexts. Finally, teachers and teacher educators can be prepared to conduct their own research (Tatto & Furlong, 2015).

The programmes at the University of Latvia adhere to the above-mentioned “guidelines”. Both teacher education curricula and research-intensive, subject-specific programmes maintain a robust research focus. Throughout their studies, students are expected to engage with and conduct research within their discipline, not only as part of their graduation thesis but also through various course assignments. The long-term aim of such an approach is to encourage students to apply research-based competences beyond graduation, enabling future teachers to integrate these skills into their teaching practice. The English Studies master’s study programme (MSP) spans two academic years and offers a range of courses in general linguistics, literary studies, and English language acquisition. The programme emphasises the integration of theoretical knowledge with the building of practical skills and the ability to undertake independent research. The final semester is dedicated entirely to the preparation of the master’s thesis (30 ECTS) in the students’ area of interest.

Study Course: Research Methodologies

In this section, we examine how research-based education principles in applied linguistics – particularly in the field of English language teaching and learning – are evident in the implementation of the study course Research Methodologies. This course is part of the mandatory curriculum of the English Studies master’s programme and is taken in the third semester, prior to data collection for the master’s thesis. Students are first introduced to research during their undergraduate studies. In the initial year of their master’s study programme, they attend various courses, such as *Foreign Language Acquisition Theory and Practice*, *Acquisition of English for Specific Purposes*, *Foreign Language Testing Technique*, *Semantics and Pragmatics for English Studies*, *Discourse and Critical Discourse Studies*, and *Corpus Linguistics*. These courses provide a foundation for developing research interests and preparing for advanced research work. Furthermore, they require students to undertake mini-research projects and produce reports that include a brief literature review, a description of research findings, clearly stated aims, research questions, and an outline of the research design. By the end of the first year, students specify their research topic and formulate a tentative title for their master’s thesis in collaboration with their

supervisors. Thus, before commencing the Research Methodology course, students have already formulated their research focus and established preliminary master's thesis topics.

The course Research Methodologies is designed to develop students' research competence, enabling them to apply acquired knowledge to their research projects during teaching internships at schools or universities and in the preparation of their master's theses. The linguistics module aims to equip students with general research methodological principles, such as validity, reliability, and triangulation. Upon successful completion of the course, students are expected to demonstrate a solid understanding of the research methodology used in their field, critically assess the approaches employed in prior scientific papers, and apply an appropriate methodological framework to their own research work.

Within the English Studies master's programme, two main student profiles can be identified. The first consists of practitioners who focus on researching teaching and learning processes within their English language classrooms. The second comprises students whose research interests centre on exploring various cognitive and sociocultural processes inherent in language. Regardless of the student profile, doing research in applied linguistics requires a clear theoretical perspective from which the phenomena under investigation are approached. Therefore, it is important to first draw students' attention to the generic term "research approach", which may be qualitative, quantitative, or mixed method. The term refers to a macro-level perspective of research methodology and incorporates both the overall design of a study, as well as the methods used for data collection and data analysis. The key distinction between quantitative and qualitative approaches lies in the nature of the data collected: qualitative data are described in words and typically obtained through interviews, observations, and texts, while quantitative data are numerical, often derived from test scores or responses to Likert-scale questionnaires. Nowadays, mixed-methods research – combining both quantitative and qualitative approaches within a single study – is often employed to provide a more comprehensive understanding of the research problem.

Students are trained in various research methods, for example, action research, case study, survey, discourse analysis, and data collection techniques such as observation, interviews, audio and video recording, document analysis, and testing. Discourse analysis, which focuses on interpreting intended meaning within context, requires careful reading and interpretation of textual material supported by linguistic evidence. One of the most commonly used methods is the

qualitative case study, defined as an in-depth examination of a specific instance, typically a class or an individual language learner, within real-world contexts. In applied linguistics research, case studies usually document learners' or users' language performance in instructional settings, examining their linguistic development over time, usually across a semester or an academic year.

The prominence of case studies can be attributed to their ability to allow close observation of individual learners or classes and intensive analysis of phenomena, rather than manipulating variables to determine causal significance, which is typical in quantitative research. In addition to interviews and questionnaires, case studies use two main types of observation: participant observation, where researchers actively engage in the activities being studied, and non-participant observation, where researchers remain detached from the group's activities. For instance, the master's thesis *Enhancing the Use of Cohesive Devices in the 10th Grade Students' Essays in English* examined the use of grammatical and lexical cohesive devices in a corpus of argumentative essays written by the 10th-grade English as a foreign language students at a secondary school. The study used a case study design comprising non-probability sampling, participant observation, and both quantitative and qualitative analyses of a questionnaire administered prior to the piloted lessons. It also included qualitative and quantitative discourse analysis of essays written before and after the piloted lessons. Similarly, the master's thesis *Task-based Material Design for the Acquisition of Articles at the B2 Level Through Distance Language Learning* employed a case study approach and utilised pre-tests, post-tests, and questionnaires as data collection tools. Moreover, students learn that the adopted approach within a particular research design plays a significant role in defining what constitutes valid research. To this end, they are introduced to key concepts such as validity or trustworthiness, which relates to the extent to which research findings can be considered credible; reliability or dependability, which concerns consistency in measuring something of interest; and triangulation, the use of multiple data collection methods, which is especially relevant in qualitative studies.

An important component of the course addresses ethical challenges that students might encounter in studies involving human participants. Prior to data collection, participants must be fully informed about the potential risks and benefits of the research before giving their informed consent. Thus, the course ensures that all research complies with widely accepted ethical principles and familiarises students with the procedures required to obtain approval from the university's ethics board.

To enhance students' understanding of underlying research concepts and processes, the course incorporates short "case-based tasks" that require proposing solutions within a given timeframe or designing an action research project. For instance, students may be asked to select a learner in their class who struggles with reading comprehension and implement several reading strategies. To track progress over a certain period of time, they design a reading observation checklist and use it to record the learner's engagement in activities aimed at improving reading comprehension. At the end of the pre-selected period, they conduct an interview with the learner to determine whether any changes have occurred. They are also assigned to select two scientific articles in their field of interest and critically analyse the research design and methods used. This activity not only familiarises students with the latest scientific research in language acquisition but also strengthens their ability to evaluate methodological rigor. Through these tasks, students actively engage in discussions about diverse approaches to solving research problems and consider alternative strategies that could have been applied in similar situations. Scientific knowledge developed by previous research is treated as a valuable resource that supports students in understanding practical teaching situations. This engagement with research encourages students to anticipate potential challenges they may face in their own studies and fosters a deeper awareness of their professional challenges. The course is based on the premise that students should not only be research-informed and capable of critically using research evidence but also be able to do research as an integral part of their everyday teaching practice. To achieve this, students are actively engaged in learning processes that encourage them to construct meaning based on their prior experience.

Students have opportunities to receive feedback on challenges or setbacks encountered during the research process by presenting their problems in class. In these sessions, peers work collaboratively in groups to discuss ways of handling issues within the constraints of the student's data collection context. This approach promotes reflective praxis, as students engage in analysing individual professional issues and co-construct solutions to particular problems. Furthermore, research requires a critical engagement with the work of other scholars, thus ensuring that students situate their inquiry within broader academic discourse. Another important element of the course is the literature review, which forms the theoretical foundation for each individual's master's thesis. This review assesses the value and contribution of theories, various scholarly claims, and research designs relevant to the chosen topic. It demonstrates students'

knowledge of the research area and their ability to identify both strengths and shortcomings in previous studies. Moreover, it reflects their ability to analyse, synthesise, and critically evaluate existing scholarship to establish connections among studies, and to articulate their insights in a coherent, discursive prose.

The course provides opportunities for students to deepen their understanding of applied linguistics and enhance their research literacy, thereby preparing them for the design and execution of small-scale research projects. Towards the end of the course, students must design a master's thesis proposal, outlining its theme, objectives, research methods, and formulating research questions or a hypothesis. Despite prior experience with bachelor's thesis writing, instructors and supervisors observe that students often struggle to articulate research goals and questions or to formulate a hypothesis – skills fundamental to any empirical research project.

To support students in this process, the course provides instruction on different types of research goals – exploratory, descriptive, and explanatory – and research questions, including descriptive, explanatory, evaluative, primary versus secondary, main versus contributory, and overarching versus subordinate (see Sunderland, 2010). Students also examine the implications of different research question types for data collection and analysis before formulating their own goals and research questions (or hypotheses). Further, proposals undergo peer and instructor review based on the devised evaluation criteria. Overall, the course combines knowledge of research methods with opportunities for collaborative learning, thereby enabling students to reflect on and discuss their work with instructors and peers. Furthermore, students are supported by their thesis supervisors, who advise on the most suitable research methods and tools for their research.

Conclusions

This study aims to advance understanding of current practices in teaching research methodology within applied linguistics as part of the “English Studies” master's programme at the University of Latvia. It emphasises the central role of research methodology as a core component of the programme, providing students with solid theoretical foundational knowledge and meaningful opportunities to learn and apply research methods. This preparation equips students not only for the successful completion of their master's theses but also for professional contexts where research competence is essential. The course seeks to strike a

balance between student-centred learning, which adapts to learners' evolving needs, and knowledge-centred learning, which fosters awareness of existing scholarship. This dual approach enables students to identify challenges encountered in their teaching practice, analyse these challenges collaboratively with peers and with the instructor, and contextualise them against the academic knowledge gained through literature review. As a result, the course facilitates students' ability to select their own approach to research and improve their overall performance. In summary, upon successful completion of the course Research Methodologies, students have strengthened their research literacy by applying relevant theoretical frameworks, critically evaluating and interpreting collected evidence within context, and conducting individual research within their chosen discipline.

References

- Evans, C., Waring, M., & Christodoulou, A. (2017). Building teachers' research literacy: integrating practice and research. *Research Papers in Education*, 32(4), 403–423. doi: 10.1080/02671522.2017.1322357
- Margevica-Grinberga, I., & Odiņa, I. (2021). Mentoring for school-based teacher education. *Cypriot Journal of Educational Science*, 16(5), 2389-2401. doi: 10.18844/cjes.v16i5.634
- On the Types of State Universities*. (2021, September 17). Cabinet of Ministers No 655. <https://likumi.lv/ta/id/326218-par-valsts-augstskolu-tipiem>
- Regulations on the education and professional qualifications of teachers and the procedure for professional development of teachers*. (2018, September 11). Cabinet Regulation No. 569. <https://likumi.lv/ta/id/301572-noteikumi-par-pedagogiem-nepiecesamo-izglitibu-un-profesionalo-kvalifikaciju-un-pedagogu-profesionalas-kompetences-pilnveides>
- Sunderland, J. (2010). Research questions in linguistics in research methods in linguistics. In: L. Litosseliti (Ed.), *Research methods in linguistics* (pp. 9-28). Continuum.
- Tatto, M. T., & Furlong, J. (2015). Research and teacher education: Papers from the BERA-RSA Inquiry. *Oxford Review of Education*, 41(2), 145–153. doi: 10.1080/03054985.2015.1017404

PART 2
TEACHERS' VOICES:
TEACHER RESEARCH AND
REFLECTIONS AT SCHOOLS

CHAPTER 6

THE BENEFITS AND THE CHALLENGES OF SELF-ASSESSMENT AS A TOOL THAT PROMOTES LEARNING

Lana Chernik

Context

Drammen Upper-Secondary School places great value on research in the field of education, professional cooperation within departments, and participation in educational programmes such as Erasmus+. These activities help us better understand our roles as educators and develop new skills, methodologies, and pedagogical approaches relevant to the 21st-century school. In light of these objectives, the research I have conducted will hopefully play a role in bridging the gap between pedagogical theory and its application in practice, to enhance student learning outcomes and guide teachers in designing their lessons.

Background

My research was conducted among upper-secondary school students in their 1st year. 28 students were enrolled in a class on a general studies programme, which in the Norwegian context means they will be going on to university, as opposed to students enrolled in vocational studies who will choose a vocation right after upper-secondary school.

As an English teacher, I decided to conduct my research in a class where I teach English to the first-year students (level B1-B2). These students have 5 hours of English each week, and the curriculum encompasses a wide range of competencies aimed at developing proficiency in language learning, communication, and critical thinking within the context of English language and literature. The research design itself was applicable to any group of students.

Combining Teaching and Research: Why self-assessment?

Any activity we try to master, any new skill we want to perfect, needs practice and time. However, without an accurate assessment of current achievement, it may not always be clear how much progress has been made or what still needs improvement. When it comes to learning English at school, it is largely the teacher's task to assess learners' progress, identify their level of achievement, and point out areas for improvement. At the same time, learners are expected to engage in self-assessment as an effective way to gauge their progress and set new goals. This expectation is documented in the Competence aims list for first-year students taking the English course. The two competence aims central to my research state that learners are supposed to "use appropriate strategies for language learning, text creation and communication" and "assess and revise one's own texts based on criteria in the subject and knowledge of language". These competence aims indicate the need for English language learners to be aware of various learning strategies and to critically assess their own work. Additionally, most English course books and course books in other subjects published in Norway contain self-assessment sections with a set of questions or criteria that help students identify which learning goals have been achieved so far and to what extent, or to what degree, a particular skill has been developed. Similarly, most teachers assume self-assessment is a valuable tool that students can use easily in the classroom with some degree of regularity. Although educators generally agree on the practical value of self-assessment for students, is there enough evidence that students find it meaningful, rewarding, and worth the time spent? Does the fact that the curriculum expects students to engage in self-evaluation and that the course book contains a self-assessment section suggest that students assess their progress regularly and with clear benefits? And if they do, what gaps exist in students' ability to assess themselves as novices, compared with teacher assessment? Do they see any benefits, and what are the possible challenges of self-assessment? With these questions in mind, I set out to investigate students' perspective on self-assessment as a tool that can potentially promote their learning. Additionally, my goal was to investigate whether gaps exist in students' self-assessment compared with teacher assessment.

At the start, I reintroduced my students to the concept of self-assessment and made them aware of how learning outcomes can be measured. I conducted a survey with the students in my English class. The survey revealed that students

were generally familiar with self-assessment as a practice: most participants (17 out of 28) reported doing self-assessment from time to time, 8 reported doing it in every lesson, and 3 reported never engaging in self-assessment activities. However, when asked whether they think regular self-assessment could be of benefit to their learning, the majority (15 out of 28) were uncertain, 9 students were positive, while 4 students were sceptical. These findings led me to the following assumption: if students are trained to assess their own work, it may become easier for them to recognise the value of self-assessment and to link regular self-assessment activities with positive learning outcomes.

This project was conducted concurrently with the Literary Project, which involved discussing, analysing, and interpreting several short stories by English-language writers studied in class. For 7 weeks, as students engaged in activities that typically facilitate understanding and interpretation of literary texts, they were consistently encouraged to measure their progress against a predefined set of criteria. Students' work on the Literary Project resulted in so-called Literary Conversations, and at this point, students were expected to assess their final product independently. They were asked to submit a video recording of their conversation, and afterwards to assess their contribution to the talk in terms of content, language, and speaking skills. Additionally, every student was to award themselves a grade.

As a next step, students' self-assessment results were compared with the teacher's assessment to identify similarities and discrepancies that revealed the gap between the two perspectives. In 47% of cases, the grade students had given themselves differed from the one awarded by the teacher. At this point, as a final part of the research, the students were asked to reflect on the advantages of self-assessment they observed during the 7-week period and the challenges they encountered in assessing their final product (i.e. a literary conversation with another student).

Findings and Reflections

According to data collected after the project was completed, more than two-thirds of students reported that regular self-assessment increased their awareness of their strengths, while 85% agreed that it helped them identify areas for improvement. Overall, most students agreed that self-assessment has a positive impact when used regularly. This stood in clear contrast to the initial response

about the practical value of self-assessment, when only 20% of respondents agreed that self-assessment promotes learning.

These findings, together with students' reflections on self-assessment, supported several initial assumptions about the role of self-assessment in promoting learning and presented students' perspectives on the issue. First, the collected data supported the original assumption about the practical value of regular and consistent self-evaluation. As students reported in the survey and later confirmed in the interviews, evaluating one's own work increases awareness of strengths and weaknesses, helping learners identify areas for improvement and set learning goals. The ultimate value of self-evaluation therefore, lies in enabling students to reflect on their learning experiences and possibly modify and adapt their learning methods and strategies. Second, it is vital that students are well trained in assessing their own work. Applying the suggested criteria to gauge one's success and track progress can be challenging if students have not practised distinguishing between levels of proficiency. In our case, when assessing language and communication, students were expected to place themselves in the "Yes", "Partially" or "No" category based on several criteria. If students are to make judgements about whether they "demonstrate dynamic and spontaneous conversational ability", "speak freely and with a high degree of fluency", "employ advanced, varied and nuanced vocabulary", etc., they need to be shown what characterises high, medium and low achievement in each of the above-mentioned categories. My project, therefore, made it clear to me that students can effectively assess their learning achievement only when properly trained to use self-assessment techniques. Finally, I learned that students will only be motivated to engage further in assessing their own work if self-assessment is limited to a small number of categories. Having too many aspects to evaluate at once might leave students confused, overwhelmed and discouraged, which will inevitably result in a loss of motivation and make the whole idea of self-assessment counterproductive.

One important takeaway from my project that made me reconsider my own practice is that, as educators, we cannot be complacent about including a self-assessment section at the end of a course book chapter. We cannot simply send our students to "go and do self-assessment" if we really want this process to be meaningful and motivational for them. Self-assessment techniques should be taught, and it is important that learners are guided through their use, particularly in classes with a high level of language proficiency. There is allegedly a considerable difference between evaluating one's skills and competencies as a

beginner and doing self-assessment as a proficient learner. Assessing one's ability to conjugate verbs in the Present Simple is easy, whereas evaluating how advanced, varied, and nuanced one's vocabulary is in a particular talk or paper demands from a learner a whole set of language skills and competencies.

My initial assumption about the value of self-assessment was also confirmed. The students reported that self-assessment “made them reflect on their strengths and weaknesses”, “made them more aware of the mistakes they make”, “helped them gain insight into HOW they learn”, “enabled them to become more independent learners who do not always have to rely on the teacher's feedback”, and “made them more critical of the learning methods and techniques they use”. Although it is hard to overestimate the overall value of self-assessment, a particular benefit linked to evaluating one's own work stands out. When used regularly and consistently, self-assessment encourages learners to take responsibility for their own learning and, to a lesser extent, to rely less on the teacher's feedback. In this way, learners develop critical thinking, learn to set individual goals, and build self-confidence, all of which are valuable and essential skills across various aspects of life.

As important as it is to recognise the benefits of self-assessment, it is imperative to consider the challenges learners might encounter when evaluating their own work, and the gaps between learners' self-assessment and the teacher's evaluation. One of the most frequent challenges reported by students was a lack of objectivity and anxiety that the teacher's assessment would differ greatly from the learners'. Some students were unsure whether the teacher's idea of a rich and advanced vocabulary, for instance, would coincide with their own view. This brings us back to the complexity of assessment criteria: the higher your level of English, the more complex the criteria you need to apply to measure progress, and, consequently, the more advanced skills and understanding are required to assess your own work effectively. One way to bridge this gap is to create conditions for regular, consistent self-assessment practice, developing the skills necessary to become a confident and objective self-tutor. When learners can define what “advanced vocabulary” is or what it means to “support viewpoints with evidence from the literary text”, their goal in self-assessment becomes clear and attainable. It is therefore the teacher's task to ensure learners fully understand the standards by which their performance is being judged and the expectations the teacher has for a particular assignment.

Another gap between students' self-assessment as novices and the teacher's assessment concerns emotional involvement, such as "being too hard on yourself" and "giving yourself a lower grade than you actually deserve". This challenge might turn self-assessment into a discouraging practice for learners who lack self-esteem and tend to underrate their performance. Once again, the teacher's role is to allow sufficient time to develop the necessary skills and to make self-assessment an indispensable habit. Additionally, self-assessment might be combined with peer assessment, which will provide multiple perspectives and will be particularly beneficial for learners who struggle with self-confidence, and will gradually make independent evaluations a motivating and meaningful activity.

Some students also described self-assessment as time-consuming, particularly when practised frequently ("If we start doing self-assessment in every single lesson, it will be too much and I'll definitely lose motivation."). It is not surprising that students might perceive all the activities related to self-assessment as a burden and an additional workload, since evaluating one's product and assessing one's achievements and shortcomings take time and effort. However, when students realise the practical value of the process and are genuinely interested in self-improvement, the task will not seem so daunting. Furthermore, if the teacher allocates time for thorough reflection and self-evaluation in class and subsequently makes it an integral part of any in-class activity rather than presenting it as an extra task, this challenge will be easily overcome.

All in all, I was able to confirm my assumption that self-assessment is a highly valuable tool that may help learners improve their academic performance and develop skills that facilitate personal development. However, it has also revealed several challenges from the student's perspective, which must be addressed if self-assessment is to become an integral and meaningful part of the learning process. Based on my findings, it is vital that students are taught and trained to engage in self-assessment. Clear guidance and consistent, regular practice can turn self-assessment into a motivating process that positively affects students' engagement in learning. When students are presented with detailed rubrics that clearly outline assessment criteria, they will be more confident in applying them when measuring their own learning outcomes. It is particularly important that students understand the standards and assessment criteria; therefore, discussing what it takes to meet them, as well as providing examples of both high-quality work and work with certain shortcomings, will be helpful if students are to develop the skills to become independent learners. To avoid self-assessment

turning into a time-consuming and off-putting practice, it should be incorporated into regular classroom activities. The importance of training and practice cannot be overstated, and a routine for regular self-assessment should be developed. Finally, training students to objectively assess their work, removing the emotional component, and regarding self-assessment as a learning tool rather than a judgment will positively contribute to its use as a practice that promotes learning.

In this final part of my reflection, I would like to comment on my personal engagement in this project and how it has contributed to my professional development as a teacher. One of my goals was to gather evidence-based data to support my assumption that self-assessment is a valuable tool for my students, helping them become self-regulating, independent learners who rely more on their own evaluation than on the teacher's assessment of their work. There is little doubt that the highest learning outcomes can only be achieved when the learner is genuinely interested in acquiring new knowledge and is motivated by something bigger than a grade on their diploma. Simultaneously, I was eager to remove the uncertainty and frustration that students sometimes feel when receiving a grade on an assignment. When students are given clear assessment criteria and are trained to apply them, they can set individual goals, adjust their learning methods, and ultimately take charge of their own learning. My students were highly cooperative, excited, and eager to make self-assessment a regular part of the educational process, and it was rewarding to receive positive feedback indicating increased engagement and interest.

Overall, these kinds of projects contribute to the teacher's professional development through frequent reflection on one's teaching practices, exploration of alternative and allegedly more effective teaching techniques, and analysis of collected data. My project allowed me to explore various aspects of self-assessment as a tool to enhance the learning process, including the use of self-assessment techniques and teaching practices. Simultaneously, this reflective process helped me develop analytical skills: I had to analyse and interpret data collected through surveys and interviews with my students and draw conclusions and recommendations on how to bridge the gaps between novice student assessment and expert teacher assessment. Based on the insights I gained, it seems necessary to further explore how various tools, including digital tools and platforms, e-portfolios, and interactive self-assessment apps, can facilitate self-assessment and help learners measure their progress and reflect on their learning outcomes.

CHAPTER 7

THE TEACHING OF ACADEMIC ENGLISH TO UPPER-SECONDARY STUDENTS IN NORWAY

May Britt Kleppe Baadstø

Introduction

Drammen Upper-Secondary School is one of Norway's largest academic upper-secondary schools, where students can choose from a wide range of subjects, including combinations of languages, science, social sciences, and economics, as well as specialised areas such as entrepreneurship (Inspiro), a research programme, and Drammen International, a bilingual study programme with an international profile. We also offer educational programmes in art, design, and architecture; elite sports; and a vocational programme in service and transportation. We have an S-class for students with special needs. The school's management team consists of eleven inspectors and department heads, each responsible for their respective subject areas and staff, as well as the principal. Although the school is organised into subject areas, we work closely together and across subjects towards the school's common goals.

As an English teacher, I teach students the differences between formal and informal text. We have not, however, focused so much on academic English in the past, and I feel that students really need to work on this now. They need to learn the differences between the type of English they have had in the past and the type of English they need to learn and master during their three years at upper-secondary school. My motivation is therefore that I need to improve my teaching of academic English in class, so that our students are better prepared for their future university studies.

For this project, I have worked with students in their first year of upper-secondary school. They are students in our bilingual programme, Drammen International,

and the focus of the project is the teaching and learning of academic English. My research question is:

- In what ways can I teach academic writing for VG1 while maintaining an engaging and motivating environment for the learners?

The reason I wanted to focus on this is that I felt my students needed more practical learning and training to improve their academic language. In the competence aims for English in the first year of the upper-secondary school, the pupil is expected to be able to:

- 1) listen to, understand and use academic language in working on one's own oral and written texts
- 2) express himself or herself in a nuanced and precise manner with fluency and coherence, using idiomatic expressions and varied sentence structures adapted to the purpose, receiver and situation
- 3) use knowledge of grammar and text structure in working on one's own oral and written texts (Ministry of Education and Research, 2019)

This shows that the curriculum focuses on academic language, and as a result, it is important for teachers to address this in the classroom. Another reason I chose this topic is that we educate Drammen International students who are being prepared for university and the English-speaking world, and we would like them to be as well prepared as they can possibly be.

Methodology

The method I used was surveys. The students were asked about what academic writing involves before and after a workshop on academic language and writing. In the first survey, they answered the following questions:

- 1) What do you understand by the term academic language?
- 2) What do you think academic writing involves?
- 3) What do you think is the best way to learn how to write academically?

The reason I chose surveys was that they are efficient and manageable in the short time I had available. I also think the three questions helped the students in their learning process, giving them a chance to reflect on the topic before and after the workshop. They answered the questions online in a Forms questionnaire.

Combining Research and Teaching

Before we started, I informed the students that I was taking part in the TREL project and that the aim was to research my teaching and their learning in the classroom. I also said that I would prepare some questions they could answer anonymously before and after a workshop that we would have over two lessons, in weeks 16 and 17 in April.

First, they answered questions about what academic writing involves and what they think is the best way to learn to write academically. This was done on 16 April 2024. Twenty-five students were present and answered the questions. They could take as long as they needed. After that, we continued with a workshop over two lessons, with an introduction to the topic and some exercises. After the workshop, they were asked the same questions again on 22 April, and in addition were asked in what ways the last lesson and today had helped their understanding of academic writing. Finally, they were invited to include suggestions to improve the learning process. Twenty-two students were present for the second questionnaire. Here are the questions they answered:

- 1) What do you understand by the term *academic language*?
- 2) What do you think academic writing involves?
- 3) What do you think is the best way to learn how to write academically?
- 4) In what ways did the last lesson and today help your understanding of academic writing?
- 5) Do you have any suggestions to improve the learning process of academic language?

I think the questionnaires, even though I was going to use the answers in my project, would have been useful for the students regardless. The first questionnaire helped activate their prior knowledge of the topic, and the last questionnaire helped them reflect on what they had learnt. The first survey and workshop were conducted during week 16 on 16 April, and the last workshop and survey the following week. The reasons why there was a short time between the two surveys were twofold: I wanted the students to benefit from this learning before their mock exams in English, and I needed to have the data ready for the meeting with the TREL researchers.

Classroom Activities in Weeks 16 and 17, 2024

I attended a lecture by Hilde Hasselgård in 2023 and used some of her advice when I created the PowerPoint presentation and planned the classroom activities.

Nobody is a native speaker of academic English

Academic English can be acquired.

- Practicing bits of academic grammar (passive, nominalization...)
- Finding precise and nuanced vocabulary, including relevant terminology, to be used for a particular writing task. (synonyms in dictionaries, vocabulary from relevant texts...)
- Reading “model texts” and writing similar ones on a related topic.
- Planning and revising the text. (Not a spontaneous genre for most people...)
- Reflecting on writer/reader involvement in the text.
- Reflecting on writing purpose, target readership in relation to the topic/task.
- Working with difficult English might help us become better language users in general – not just academic English.

UNIVERSITY OF GÖTEBORG Hilde Hasselgård, 2023

Image 1. PowerPoint slide by Hasselgård (2023)

I also included two YouTube films made by different universities to explain more thoroughly to the students how to structure and write academically. The first video I used was *What is Academic Writing? 7 Features of Academic Writing* (EAP Foundation, 2021). The second one I used was *How to Write an Academic Essay in 10 Minutes or Less* (Blackhaze231, 2022).

We talked about the various features of academic writing mentioned in the first video, i.e. that texts need to be evidenced, critical, balanced, precise, objective and formal. We also talked about the formulas presented by David Taylor in the second video. In addition to this, I used some exercises to help the students practise sentence structures and to learn about the differences between simple, compound, complex and compound-complex sentence structures.

I have used both the term academic language and academic writing when talking about this topic. However, most of the questions the students were asked focused on academic writing.

Data Analysis

As I asked the students open-ended questions, I needed to spend some time reading through their responses to find similarities and differences and interpret the answers.

Findings

What Do Students Think Academic Writing Involves?

In the first questionnaire, 25 students responded; in the second, 22 students responded. When asked what they think academic writing involves, 11 students in the first questionnaire mentioned vocabulary and academic vocabulary

. In the second questionnaire, only three students mentioned that. Seven students mentioned the formality of the text in the first questionnaire, whereas twelve mentioned it in the second. Eight students mentioned grammar in the first questionnaire, while only three mentioned it in the second. Four students wrote that avoiding contracted words is important in the first questionnaire, while only two mentioned this in the second. When it comes to organised and clear structure, seven students mentioned it in the first questionnaire, while eleven mentioned it in the last. In terms of factual and source-based information, only one student mentions it in the first questionnaire, while six students mention it in the second. In the first questionnaire, no one focuses on academic writing as objective, unbiased, and balanced; however, in the second questionnaire, seven students mention that. In the first questionnaire, two students focus on academic writing as precise, while seven students focus on this in the second. In the first questionnaire, two students mentioned that academic writing needs to be polite, while the term “polite” is not mentioned in the second questionnaire. Two students in the first questionnaire focus on academic writing as involving the thinking process, while 1 student mentions this in the second questionnaire, commenting that it involves critical thinking.

In the first questionnaire, the data show a sense of academic writing as being “proper”: one student refers to it as having “proper language”, another as “an advanced way of writing”, and one as “a higher form of expression”. One student states that academic writing involves adapting to changes in communication, and interestingly, one student writes that it involves expressing what you think.

In the second questionnaire, the students show that they know more about the topic. More students focus on academic language as being evidenced, balanced, precise, and objective. Some responses are harder to categorise. One student states that academic writing involves writing “perfect” essays that focus on one topic only. Another states that it involves being as “far away from your own text as possible”, and another writes that it is explicit and responsible.

When it comes to academic vocabulary, there is a significant decrease from eleven responses in the first questionnaire to three in the second. There is also a decrease from eight to three students who think correct grammar is important, and a drop from four to two students who mention avoiding contracted words. These results could indicate that students consider academic vocabulary, correct grammar and contracted words as less important after the workshop. However, it may also be that other topics have simply taken priority. I think the latter is probably most correct, because we also see a notable increase from seven to twelve responses when it comes to formal language. In terms of organised and clear structure, there is a significant increase from seven to eleven responses. The findings also show a substantial increase from one to six responses for evidence-based writing, and an increase from none to seven responses for writing as objective, unbiased, and balanced. This does not necessarily mean students were unaware of these things before, but after the workshop they were clearly more aware. The responses about polite language drop from two to none in the second questionnaire. This may indicate that politeness is considered less relevant in academic writing, or it may be that the students regard it as part of the broader category of formal language.

To sum up, there is a decreased emphasis on academic vocabulary, correct grammar, avoiding contractions and polite language, and an increased emphasis on formal language, organised structure, factual evidence, objectivity and precision. These shifts are likely the result of the workshop, and the increased emphasis on structure, evidence and objectivity aligns well with what we were trying to teach.

What Do Students Think Is the Best Way to Learn to Write Academically?

In the second question, students were asked about the best way to learn how to write academically. In the first questionnaire, five students focused on learning vocabulary, whereas this was not mentioned at all in the second. Five students pointed out the importance of studying and learning the rules of academic writing

in the first questionnaire, and six students pointed this out in the second. Ten students focused on the importance of practising writing texts in the first questionnaire, while seventeen pointed this out in the second. Ten students focused on reading texts in the first questionnaire, while only six did in the second. Two students focused on text comparison as a strategy in the first questionnaire and one in the second. In both questionnaires, one student stated that you only need to follow the teacher's instructions. In terms of using videos and online sites, three students pointed this out in the first questionnaire and six in the second. What is perhaps most interesting are the topics that appear in the second questionnaire but not the first: four students in the second questionnaire focus on the importance of feedback, while two point to the usefulness of model texts. One student mentions the importance of repetition, one focuses on using sources, and one focuses on having an open mind.

The best way to learn academic writing, according to the second questionnaire, is to practise writing — this increased from ten to seventeen responses. The second most popular method is using video and online sites, which increased from three to six responses. After the workshops, students also pointed out the importance of feedback, with an increase from none to four responses, and the use of model texts appeared for the first time, with two responses. Academic vocabulary dropped from five to no responses. As mentioned earlier, I think other topics may simply have taken priority, but to be sure, it would be necessary to ask the students again. Reading texts decreased from ten to six responses, which suggests students are more interested in practising writing than in reading about it.

To sum up, after the workshops, the students emphasised the need to practise writing texts, learn the rules, get feedback, and use model texts, videos, and online sites. This points to a hands-on, practical approach to learning academic writing.

In What Ways Did the Lessons Help Students' Understanding?

In the questionnaire, I asked about the learning outcomes of the two workshops on academic language. Eighteen of the 22 students said the lessons had helped them understand what academic writing is and how to write it. Thirteen wrote that it had helped them understand the structure of an academic text. Four students mentioned that it was helpful to learn that they could use videos in the learning process, and two pointed out that using model texts was useful. One student said they had learnt about how to start the introduction, and one had learnt that thesis

statements are essential. Finally, one student mentioned that the workshops had also been helpful in preparing for the mock exam.

With eighteen responses stating that the workshops helped in understanding what academic writing is and involves, this clearly shows that the lesson significantly clarified the topic for many students. The thirteen responses about structure also indicate that many found the lesson helpful in that respect. The fact that four students pointed to videos as a useful resource was encouraging, as this was something I had specifically included. Model texts and specific aspects like introductions and thesis statements were mentioned less frequently, but they were still noticed by some students.

Overall, the findings suggest that the lesson was particularly effective in providing a clearer understanding of what academic writing is and how it is structured, while also showing students that different types of resources can be useful in the learning process.

Do You Have Suggestions to Improve the Learning Process?

When asked for suggestions, nine student responses focused on writing more texts, three on getting feedback, two on learning vocabulary, and one on reading more academic texts. One response said we should start learning academic language earlier, and one response indicated no suggestions were needed.

Limitations

This study was done over a very limited time, and the students had not had much time to reflect on what they had learnt. One could argue that the study is weak because of the short time between the two questionnaires. The students were asked only a few open-ended questions, with no answer alternatives to consider. Had they been given different alternatives, the results might have been quite different. In the first question, the focus was on academic writing, whereas in the last question, I used the term academic language. It is possible that students would have answered differently had I used “academic writing” throughout. Looking at the answers, it seems most students continued to focus on writing in any case, but this inconsistency is worth noting.

Final Reflections

This project is very small, and it was conducted during a limited time frame, so one might argue that the value of the findings is limited. Still, just focusing carefully on this topic has helped both my students and me. It has made us more aware of academic writing, so that next time my students write a text, they will be more conscious of how to approach it, and next time I plan a workshop on this, I will test new methods and try to improve. In that way, this has been worthwhile.

In addition, this project has led to better teaching of academic writing. Although I have taught academic writing before, I have not talked about it so explicitly with my students, and I have not provided such a detailed structural framework as I did this time through the videos and exercises we used. Another important aspect is the knowledge I have gained by actually seeing what my students understand. Evidence-based teaching provides me with insights I would not have had otherwise, and these findings have strengthened my belief in teaching in a way that students can understand, and that gives them many opportunities to practise what they have learnt. Through the presentation, the YouTube videos, and the exercises, they have gained a deeper understanding of what academic writing is. They have learnt that academic writing needs to be evidenced, formal, critical, and balanced, as well as precise and objective. I believe they will recognise academic language more easily now, and they will be more conscious of the features of academic writing when they write for different purposes in the future.

My research question was about how I can teach academic writing for VG1 while maintaining an engaging and motivating environment. As I did not directly ask the students whether they found the workshops engaging and motivating, it is hard to say for sure whether I succeeded in this. However, the fact that many of them say they would like to write more academic texts clearly shows that they are motivated to develop their language. As a teacher, I always try to teach in an engaging and motivating way, and that is something I will continue to focus on.

What I would have liked is to have had the TREL university-based partners even more involved in the project. It would be very helpful to have one TREL researcher working closely with each teacher-researcher through the whole process: from the research question to data collection, data analysis, teaching material, and the writing of the report. The university staff could take more ownership of each part of the process, while the teachers provide the classroom experiences and data. Us teachers do not really have time to research our own practice in depth, because we are too busy planning and delivering learning for

our students every day. And even though our school leaders support our participation in principle, we do not really get time set aside to work on this. If the university staff were more actively involved throughout, the quality of the research would certainly be higher. If the goal of the TREL project is to encourage teachers to research their own practices, it is important to plan in a way that suits the busy schedule of teachers. We greatly appreciate the opportunity to look at our own teaching in a more evidence-based way, and it is truly valuable to learn from university researchers. At the same time, the demanding reality of teaching should not be underestimated. Since participating in projects like this requires additional time, we must always think carefully before committing.

I would like to extend my sincere thanks to all the TREL partners for their collaboration and support in conducting research in my classroom. I am especially grateful to the staff at USN and OsloMet for taking time out of their busy schedules to work with us. Although this project was limited in scope, it has nonetheless brought meaningful changes to my classroom and to my teaching practice, and for that I am grateful.

References

- Blackhaze231. (2022, 4 April). *How to write an academic essay in 10 minutes or less* [Video]. YouTube. <https://www.youtube.com/watch?v=tBAbl0bh3uo>
- EAPFoundation. (2021, 15 February). *What is academic writing? 7 features of academic writing* [Video]. YouTube. <https://www.youtube.com/watch?v=Cq4J8bPBcck>
- Hasselgård, H. (2023, 2 November). *What is academic English?* [PowerPoint]. University of Oslo.
- Ministry of Education and Research. (2019). *Curriculum for English (ENG01-04)*. Ministry of Education and Research.

CHAPTER 8

MOTIVATION AROUND ORAL ASSESSMENTS IN ENGLISH

Nikoline Holmøy Ellefsrød

Introduction to our Classrooms

The research presented here is based on data collected from two classrooms at an upper-secondary school ('videregående skole') in Norway. We are two teachers who have collected data from our own classes to find out how we can make our students more motivated. We see that in English, the students already have a basic grasp on the language, and they use the language outside of school. In English at upper-secondary in Norway, the aims in the curriculum are quite broad; the students should be able to read, write, understand, listen to, and speak English, they should know how to argue and discuss with others, and discuss and reflect on how English is used in the world and how it is used in different media.

The data is sampled from two different groups: one VG1-class (the first year of upper-secondary, obligatory English with a final grade) and one VG2/VG3-class (the second and third year of upper-secondary, those who have chosen to continue with English one more year). Both groups are so-called 5-hour classes, which means that they have 5 sessions over two weeks, 1,5-hour classes each time. All of the students attend specialisation in general studies, which means that they do three years of theoretical studies before they move on to higher education. In the first year, they can choose which level of math and which foreign language they want, and in the second and third year, they can choose to specialise in different subjects. One of the classes (VG1) we have collected data from therefore have their last year of obligatory English in Norwegian school, whereas the other class (VG2/VG3) have chosen to specialise in English for one more year. There are 28 students in the VG1-group, and 29 in the VG2/VG3-group. In both cases, the grades are final after one year of studies, in VG1 they have one grade for both written and oral English

(from 1-6), and in VG2/VG3 they have one grade for written English and another for oral English (both from 1-6). They all have their own computer they can use in the classroom, and the teachers use both Teams, OneNote, textbooks, movies, and all other external sources they want in the education.

Professional Development Activities at our School

The school we work at has several projects where different teachers cooperate with University of Southern Norway (USN), where the teachers choose if they want to participate or not. This includes both writing research papers or articles together with researchers from USN, and that USN comes to the school to collect data from different classes and different subjects. We are an Erasmus+ school and have exchange programmes with both a school in France and Germany. We prioritise sharing interesting teaching practices, lesson plans, and good ideas for assessment in organised meetings with colleagues within the same discipline.

Research

We have seen an increase in our school of students who do not want to talk out loud in class, and who feel uncomfortable talking in English with other students. We wanted to find out if assessments where the student could choose their own theme/subjects to discuss and present would make them more motivated and interested in doing the assessment. Since a big part of the curriculum in English on all levels is to be able to have a conversation, we wanted to see if we could make an oral assessment where this was the focus. To make sure that the topic was relevant for the students, we also wanted them to choose their own themes, in the hope that this would feel relevant for them, and to make them more motivated.

Methodology and Integration in the Classroom

We made an assignment (see Appendix) where the students had to find an article or a book as a basis for a presentation they made, individually. In the presentation, they had to present the article, the theme, and why this was an interesting topic. For the students to feel safe and comfortable with their presentation, they were supposed to record themselves talking about the topic. They could make the recording at home, and they were able to do it as many times as they preferred before they were finished. They could be in focus themselves, or they could use

a presentational tool like PowerPoint. The students were encouraged to watch TED talks as inspiration for how they could present their topics in an interesting way. Students in upper-secondary school in Norway are used to being graded in oral English through varied methods. It is common with both presentations individually and in class, with conversations with the teacher, and with videos/recordings of them talking English. They are also taught how to present different topics in Norwegian, so we did not practice or work much on presentation skills in class before we gave them the assignment.

After they had finished with the individual recordings of their own topic, they shared it with the teacher and another student. They then had to watch and listen to the presentation by the other student and make follow-up or interview questions for the other student. In the last class before they delivered, they interviewed each other, and they were told to specifically focus on trying to keep the conversation natural and follow up on the answers the other student gave. This was also recorded and delivered to the teacher. The assignment we gave the students, therefore, had two levels of assessment: one oral grade based on their own presentation, and one based on their conversation/interview with another student, both of which were recorded.

As teachers, we hoped that this assignment would be beneficial for the students, because they could choose a topic themselves, but also because they could make the recordings at a time and a place which suited them, as well as being able to do multiple takes if they wanted to. As researchers, we wanted to find out whether the students were more motivated by this type of assignment, and whether an assignment where they presented and talked with another student felt more interesting than talking to a teacher. We therefore asked them some questions about their motivation and interest after they had finished delivering the interview and got their feedback on Forms. From the students starting to research their own topic to them delivering the conversation with each other, they had three weeks, so when we asked them questions about this the week after delivery, we felt certain that their experience was still fresh in their minds. They had different delivery dates on the recordings and the choice of themes, so we then made sure they worked throughout the three weeks (see Appendix for detailed timeline).

Data collection

We made questions that were open-ended, because we wanted more detailed feedback on what their experience with this assignment was like. The questions included both how motivated they were, how they found the cooperation with

another student, and their interest in the topic (see Appendix for the interview guide). We then made a qualitative analysis where we decided to group some of the answers. The interview guide is attached in Appendix, and the students answered anonymously in Forms, in Norwegian or in English. We gathered information from 50 students, and after gathering the answers, we grouped them into Yes/More, Maybe/A bit, and No/Not much. The overview of these numbers is in Appendix. In the weeks after gathering the answers, we have grouped the questions into three main themes: Motivation, Knowledge, and Teacher vs. Student. Motivation concerned if they felt it was motivating to choose their own topic, and to discuss with another student, Knowledge concerned what they knew about the topic beforehand and what knowledge they gained, and Teacher vs. Student was questions about how they preferred listening and talking with a teacher compared to another student.

Findings

Motivation

Are the students more motivated to do tasks when they can choose themes themselves and work with another student?

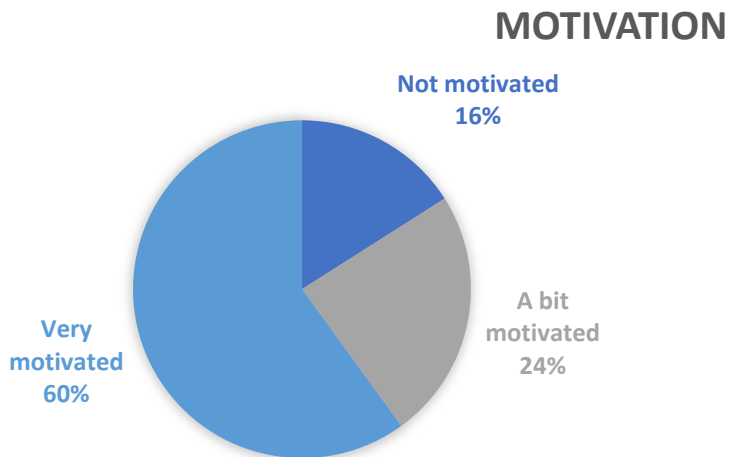


Figure 1 Are the students more motivated to do tasks when they can choose themes themselves, and work with another student?

Figure 1 presents the results of the data analysis of the students' motivation to work with self-chosen topics of interest. Also, two of the questions were related to how the students experienced cooperative work with peers. The students were asked to answer the following questions:

- Question 2: How did you find making your own presentation?
- Question 3: How motivated were you to do the task based on the fact that you could choose something you are interested in?
- Question 4: Did you become more interested in your own topic throughout the project?
- Question 10: Did the presentation and interview increase your interest in the topic the other student chose?

Figure 1 presents the results of the data analysis of the students' motivation. We assumed that students would be more motivated to do the task when they could choose themes themselves, and Figure 1 shows that this is the case. 60% of the students report that they were very motivated to work on tasks with a self-chosen topic, and to work cooperatively with peers, 24% report that they were a bit motivated, whereas 16% report that they were not motivated at all in this setting.

In some cases, the students are not motivated to do schoolwork, no matter the topic, as quoted by a student here: "Even when it was something I was interested in, it didn't motivate me." The fact that 84% of the students were motivated, though, makes it more likely that this is an assignment that the students who usually find school to be a bit tedious now can find more relevant to them, so we are satisfied with the findings here.

An added benefit mentioned by a few students here is the fact that when they are more motivated and can choose a theme themselves, this makes it easier for them to finish the task, or work more on it:

it was ok. little difficult, but it was also nice getting to choose how i phrase everything. the fact that we could choose the theme ourself also made it easier.

i really liked it, and i was more willing to learn in my free time too.

It is more motivating because you're doing something you like and not something you have to do. There is a big difference.

i would say that i was quite motivated, would like tasks like this later on if possible.

I thought it was a good part of the assignment, where we are able to choose

something that we really care about or already have some opinions about a topic. I also like assignments where we are able to choose between some preselect topics.

Some of the students mentioned that they preferred and were more motivated when they could do the task orally rather than in writing. This is a quote from one student concerning this: “When I made my presentation, or TED talk in this sense, I enjoyed it. I find it more motivating to speak about a topic I am interested in, rather than writing about it.”

When we grouped the questions, we had asked the students, we treated the notion of increased interest as the students being more motivated to investigate the different subjects they chose. It is therefore interesting to look at some of the answers for question 4 (about their own topic) and question 10 (about the other students’ topic).

A closer examination of the results here gives this overview:

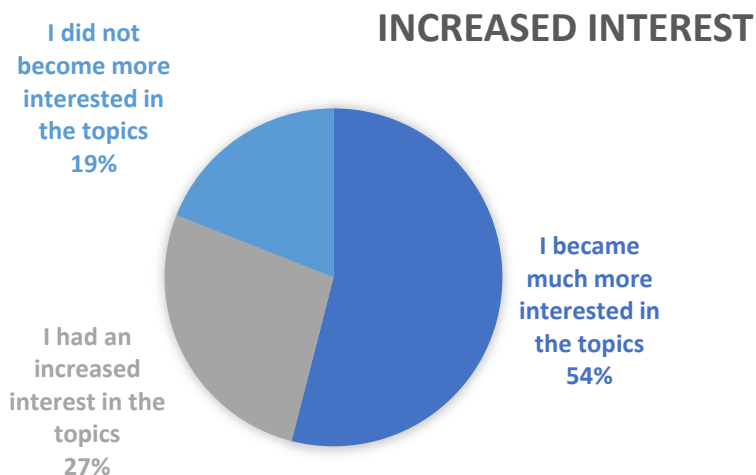


Figure 2 Did the students have an increased interest in the topics which were chosen?

The answers the students gave then reveal that 81% of the students had an increased interest in the topics which were chosen. These are some of the answers they reported:

Question 4: Did you become more interested in your own topic throughout the project?

yes. the more i read about it the more interesting it got.

I did get to know things I didn't know before, which made me a little more interested.

yes, I became more involved in the topic and I thought that it was more interesting than before I started

One possible explanation for why they did not have an increased interest could be as mentioned by a student here: "I was already very interested in my topic, so I can't say that my interest has grown too much." Another student also reported that "No it didn't i think after presentation i heard enough information about the topic". We see this as a good thing since the students made a comprehensive presentation, and they explained their topic well, and therefore the other student did not feel motivated to expand that knowledge, even though they did find it interesting: "I suppose so. I was never particularly interested but they made a good presentation that made the topic a bit interesting".

Knowledge

How much knowledge did the students gain, both from their own presentation and their partners?

Figure 3 presents the results of the data analysis of questions related to how much knowledge the students gained, both from their own presentation and their partners. The students were asked to answer the following questions:

- Question 1: What did you know about the topic you chose beforehand?
- Question 5: What did you know about the topic the other student chose beforehand?
- Question 6: In the other student's presentation, how well did you understand the topic?
- Question 8: Did the interview broaden your understanding of the topic the other student chose?

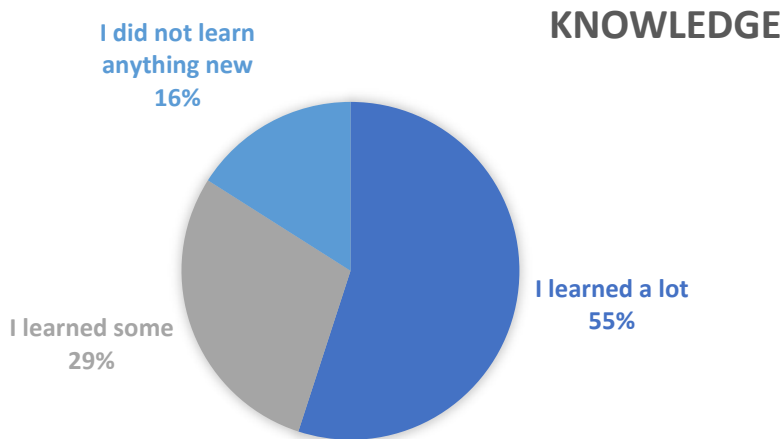


Figure 3 How much knowledge did the students gain, both from their own presentation and their partners?

The answers were first categorised into three sections: 1) I learned a lot, 2) I learned some, 3) I did not learn anything new, which were subsequently analysed qualitatively. As Figure 2 shows, 55% of the students report that they have learned a lot from the project, 29% reports that they have gained some knowledge from the project, whereas 16% reports that they did not learn anything new from this project.

The two following student comments show that the students appreciate choosing topics by interest; “I know a lot about my topic because I chose a theme that I love and have a good knowledge about”. “I knew that my topic was important and that it was something i wanted to talk about.”. Also, the first comment states the fact that they know about the chosen topic, and the other students emphasise the importance of their topic and that they want to talk about it. However, for some students, the topic did not seem to represent an essential part of their learning process. As we can read from this student comment, they only want to get the job done: “I knew that we are going to read not much as I do now something and then have an oral assignment.”

Teacher vs. Student

Do the students find it more interesting and feel more responsible when they work with another student rather than the teacher?

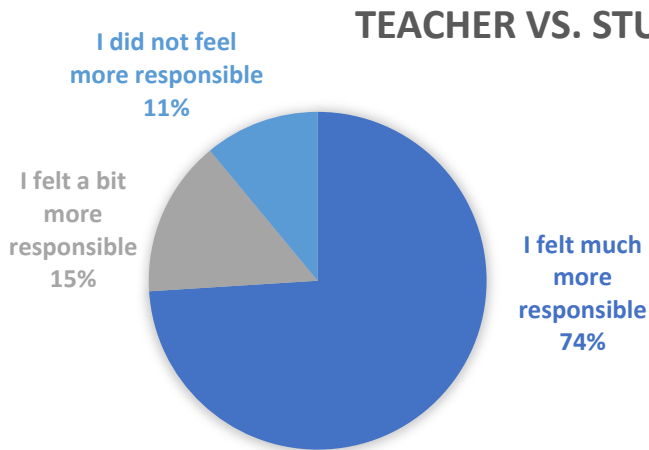


Figure 4 Is it more interesting and do you feel more responsible when you work with another student rather than the teacher?

Figure 4 presents the results of the data analysis of questions related to whether the students feel more responsibility for learning activities when they cooperate with another student rather than when they report their work to a teacher. The students were asked to answer the following questions:

- Question 11: How did you find it listening to another student rather than a teacher?
- Question 12: Is it more interesting to ask questions to other students rather than a teacher?
- Question 13: Do you feel more responsible when you work/ask each other rather than when the teacher monitors the interviews?

All answers were categorised into three sections: 1) I felt much more responsible, 2) I felt a bit more responsible, 3) I did not feel more responsible. As Figure 4 shows, 74% of the students report that they felt a lot of responsibility for the learning activities when they cooperated with another student, 15% report that they felt a bit more responsibility working with a peer, whereas 11% report that they did not feel responsible at all in this setting.

Students stated, “I feel a certain responsibility to not ruin the assignment for another student” and “yes because I don’t want to make the my partner get a bad grade”.

While sometimes group/pair work can lead to some unorganised teaching, the fact that they worked by themselves for the presentation and interview part of this task, also made them able to do things at their own pace. For question 13 (Do you feel more responsible when you work/ask each other rather than when the teacher monitors the interviews?), they responded:

Absolutely, we were also able to do a double take when we struggled focusing on the first one

I do, makes us think more about how we can help each other and how we can bring the best out of ourselves as well. The planning on how we are going to do the interviews are also easier.

i would say because then it doesnt go utover deg men også eleven hvis du ikke er forbredt, it makes some more responsible

yes because we used many tries and it was fun to make a interview with another student than a teacher.

For question 11 (How did you find it listening to another student rather than a teacher?), students appeared generally positive about working with their peers:

more understandable, it's easier sometimes to understand the same age and sometimes teachers, not the English teacher, but teachers in general doesn't often give a understandable feedback, like they don't really help me understand what I am doing wrong

I don't know why you would compare a teacher and a student on this task, even if a teacher showed us her interview it would've not been the same

much better, no offence

When asked about questioning other students rather than the teacher in question 12 (Is it more interesting to ask questions to other students rather than a teacher?), students appeared to have somewhat mixed opinions but were again generally positive in their cooperation with their peers:

Personally yes. Because i can get their pov, but a teacher need to try to remain neutral most times and only give fact based answers

I believe it's beneficial to occasionally shift perspectives and consider the opinions of others rather than solely relying on the teacher's viewpoint.

If I'm interested on a topic and want to get much more information on it, then its better to ask the teacher. If I'm interested in it and i just want to discuss the topic, then i prefer taking to the fellow student.

We have chosen to include three main groupings of answers in this paper, and as seen in the interview guide in the Appendix, that means that we have excluded some questions. We originally included questions 7 and 9 under the theme Task Skills, but we realised that these questions, however useful they were in your teaching with these students, did not increase or add to the research here. They are questions useful for enhancing and improving how we carry out this assignment in the future, but they do not provide understanding of how motivated the students are when they can choose their own topic, nor of how they feel working with another student.

Personal Engagement

Engaging in this project has been interesting for us, as we have not done this so systematically before. We always try to make and create interesting and motivating assignments, and we also reflect on whether the assignments work and what we can change the next time we do the same type of assignment. What we have done here is different because we must be accountable and justify our choices more than when we change our education based on feedback from students. We realised throughout the process that there were some challenges which we might have overlooked if we had not done this research.

One of the challenges was that we were not specific enough in our questions, and we had not grouped them in advance. Usually, when we ask our students to respond to how they feel about our assignments, we only look at the qualitative answers. This time, when we had to analyse the answers, it was not as easy to make the answers quantifiable, and we felt that it was challenging. One of the advantages of being teachers is that we can change what we do in classes throughout the year, and see what fits the different groups. For us, it was therefore a challenge to be held more accountable for presenting this research than just changing questions or assignments from year to year or class to class.

Another challenge is that when students work together, they are not always a good match. In the case of this assignment, where they choose topics important to them, it is maybe more important to take into consideration who they work with, so that they feel comfortable sharing their personal topics. We saw that in the pairings

where the students had prior knowledge of each other, their conversations were more natural than in pairs where they did not know each other. Therefore, this assignment, where students can choose something personal to them, is maybe better to do at the end of the term, rather than in the beginning.

The last challenge we faced in the research was the practicality of recording the presentations and interviews. Firstly, when the students recorded on their phones or computers, the files are sometimes too big to deliver on Teams, which created some issues concerning how to access the presentations and interviews. Secondly, there was not enough room at the school for the students to do their recording, so they had to find alternative places, which some of the students struggled with. This was solved by a colleague who mentioned doing the recording as a meeting on Teams, where the teachers were included, which worked fine. We also saw a difference when it came to what we asked students to use as their starting point. One of the groups was told to find articles to discuss, articles about a topic they could choose themselves. This worked just fine. The other group was told to find non-fiction books in the library, and this created the issue of the library not having enough books, but also that the books were not necessarily about the topics the students preferred.

When it comes to the question of whether our findings will help us develop our teaching, we are a bit uncertain. On the one hand, there is always room for improvement, and small changes could be made to make the assignment easier to comprehend for the students. On the other hand, we are happy with the presentations and interviews the students delivered, and we are happy that they mostly seemed to think this was an interesting, motivating, and achievable task, so we will probably do the same task again with our different groups in English.

Reflecting on one's practice has provided opportunities to gain new perspectives on the students' learning and their role in learning situations. The students were asked to assess their knowledge, motivation, and effort in the learning activity in the project they were working on, and the comments they gave in connection with their self-assessment provided us as teachers with opportunities to observe our teaching practices from the perspective of the students. These observations offer new insights, especially about the mutual roles of the students and the teachers in learning activities and will affect our teaching practice. In this project, the students were asked to present their chosen topic to a fellow student. The fellow student, in turn, should listen and ask elaborate questions about the presented topic, and the goal was to gain expanded knowledge of the presented topic. In addition, we

wanted to see if it gave the students more motivation to work on their assignment and topic when presenting their work to a fellow student instead of the teacher – in other words, we wanted to create a more authentic learning situation between equal partners where the students felt responsible for the learning outcome.

The results of this study show that most students are more motivated when they are given tasks where they have to take responsibility for the learning activities. We could also observe during the project that most of the students were active and showed more commitment than we see in ordinary learning situations where the teacher is responsible and organises the learning activities. When the students themselves manage both the content and implementation of learning activities, the teacher also assumes a different role in the classroom. The teacher does not necessarily have all the knowledge of the topics that the students are working on, which leads to new insight into both the topic and the students' ability to present and reflect on their own and others' project theses. The roles of student and teacher become more equal, and this promotes democratic processes in the classroom, which we see that many of the students appreciated. As one of the students put it on the question of how s/he found it listening to another student rather than a teacher: Much better, no offence.

Appendix

The Assignment Given to the Students

IN-DEPTH STUDY ENGLISH 1 2024

Weeks 4-7 – Deadlines Friday 2nd of February and Monday 12th of February.

Your tasks in this project:

Read an academic article from an area you have an interest, or about a topic you are familiar with.

Then make a claim based on this article/book/topic. It can be an outlandish claim, then it would be more fun to present it and discuss.

Then create a TED talk where you present your claim and try to prove this claim in your presentation. See specific criteria below.

You also have to deliver a document where you add extra information about the sources you have used. See criteria below.

Then watch the video of one of your fellow students and make a video where you interview each other and try to pose critical questions about the claim of your fellow student. Examples of critical questions:

- How can this be true?
- What are your sources for this?
- I have another source that contradicts yours. What are your comments on that?

Your TED talk

Present a topic of your own choice, from Engelsk 1 or one of your other subjects, in a TED talk-style video lasting about 5-10 minutes. You have to use some visual element to support what you say, for example, a couple of slides, writing or drawing on the board, or showing an object related to your topic. Your talk should be a presentation and a line of argument in which you answer a thesis question presented in your introduction. It should have an introduction where you present your claim, a middle part where you present arguments for why your claim is true, and then a final part where you sum up your points and conclude.

You should use arguments and facts from different sources. In addition to the article/book you used when you studied this topic, for example, your textbook and/or material provided by your teacher, you will have to use two other English-language sources.

Your topic, thesis statement, and your two English-language sources will have to be approved by your teacher.

Your TED talk is going to be at least 5 minutes.

Checklist:

Do you have:	Tick off
A topic and a suitably precise approach (a question)?	
Approval of your topic and approach from your teacher?	
Two relevant and reliable sources?	
A manuscript in progress?	
A finished manuscript for a talk of the appropriate length?	
A plan for when and where your video is going to be recorded?	

Critical reading and assessment of sources

Along with a video of your talk, you are expected to submit a document where you assess your choice and use of sources. This part of your assignment will be assessed separately. (Approved with merit/Approved/not approved). In order to get credit for your assignment, this part must be approved.

You should consider the following in your assessment of the sources:

- Is the source relevant?
- Does it meet your information requirements? Is it recently published or updated? Does it contain information that is not too specific or too broad?
- Is the source reliable and objective?
- Is the author an expert in the field? Does the author or media house remain neutral, or is there a hidden or conflicting political, commercial, or personal agenda? Is the source trustworthy? This is particularly relevant if you have chosen a source from a media outlet.
- Does the source distinguish between facts, theories, and opinions?
- When you read the source, is it clear whether the source is presenting facts, theories, or opinions?
- Is the information verifiable and accurate?

Timeline

Lesson	Plan
Week 3: Friday	Presentation of assignment. Start searching for articles or relevant topics. Look at other TED talks, do you understand the assignment and how you can make any topic interesting?
Week 4: Monday	Fill in questionnaire with ideas for topic and approach. In class: Feedback and input from teacher. Read relevant material and take notes. Continue working at home.
Week 4: Thursday	Decide subject, topic and approach. Assess sources. Don't leave this to the very end! Adjust approach, if necessary or desirable. Topic, approach and sources to be approved by teacher in class. Start writing manuscript.
Week 5: Monday	Students work individually with their research questions, and finding other sources. Finish writing manuscript.
Week 5: Thursday	Go through page 330-331, when giving TED-talks. 09.55-10.10. 10.10-10.50: Interview your partner, be ready to explain it in class. 10.50: Back to class, we go through the different topics.
Week 5: Friday	Make your TED talk today. Friday 2nd of February: Deadline video recording.
Week 6: Monday	What is active listening? What is a good interview? See the presentation of a fellow student - prepare questions. All students schedule a meeting and invite the teacher. This makes all their discussions available to the teacher.
Week 6: Thursday	Make a recording where you both interview each other. The interviews should not be based on a script, but should be a sequence of back and forth where the only things you have written down are the questions. Be prepared to also ask questions that arise then and there, based on the answers you are getting. This should feel "live". Feel free to also compare your different subjects. The video with interview should be around 6 minutes.
Week 7: Monday	Monday 12th of February: Deadline interview and assessment of sources. Finish with the assessment of sources, as well as make a reflectionary note (about 200 words) about what you learnt from this project, and how you would have proceeded given what you now know about the project and how well you think you performed.

Note: Week numbers refer to the Scandinavian calendar system, meaning week 3 is week 3 of the year and so forth.

Relevant excerpts from the syllabus for Engelsk 1

The pupil is expected to be able to:

- use suitable reading, listening, speaking and writing strategies adapted to the situation and purpose
- use rich and accurate vocabulary of a general and subject-specific nature in an appropriate and situationally based manner, both orally and in writing
- apply their knowledge of words, sentence structure, linking words and language use to improve their own language and texts
- produce various oral (and written) texts that are adapted to the situation with defined content, and appropriate style and structure
- use appropriate sources in a critical and accountable way
- read and use different types of texts in English as a basis for their own language learning and academic reflection
- explore and present at least one self-chosen topic related to language, culture, society or science with critical use of English language texts and other sources

The pupil is expected to:

- use different subject-specific texts in English with topics from other subjects as a basis for their own language learning and academic reflection
- reflect over language varieties in some English-speaking countries
- reflect over the influence and use of the English language in the exchange of information and opinions globally
- demonstrate comprehension, independent reflection and critical thinking during the analysis of some current social debates in English-speaking countries

Useful resources in *Edge*

- Edge Explains: Sources (pp. 88-89)
- Edge Explains: Critical Reading (pp. 162-163)
- Learning from English Sources (pp. 230-231)
- Course 12: Persuading Your Audience (pp. 330-332)

Assessment criteria

Criteria	Low	Medium	High
Content			
Shows an in-depth understanding of the chosen topic. You answer your research question, and the elements you discuss are all relevant for the question.			
Structure			
Presents the ideas in a highly connected way. Many examples are used consistently to support the points made.			
Communication skills			
The presentation is delivered with great enthusiasm and fluency.			
Sources			
You refer to all your sources, in a relevant way, within your presentation.			
Interviewer			
You have understood and familiarised yourself with your partners presentation and topic. You ask question which makes it possible for your partner to expand on what they have discussed in their presentation, not only repeat what they have already said. You are an active listener, that means that you ask questions to what your partner is saying in the interview, not only focus on the questions you already have.			
Interviewee			
You talk freely, without a script. You show that you know the topic, by discussing freely and answering the questions your partner asks during the interview.			
Spoken English			
Use of subject-specific vocabulary and precise use of language: The consistent use of subject-specific and precise vocabulary enables the student to communicate clearly.			
Style/register: The language is consistently formal and appropriate to the situation.			
Pronunciation: The student's pronunciation is correct.			
Grammar and syntax: The student's grammar and syntax are correct.			

Interview Guide

- What did you know about the topic you chose beforehand?
- How did you find making your own presentation?
- How motivated were you to do the task based on the fact that you could choose something you are interested in?
- Did you become more interested in your own topic throughout the project?
- What did you know about the topic the other student chose beforehand?
- In the other student's presentation, how well did you understand the topic?
- How did you find making the questions for the interview? Did you want more information how to make questions?
- Did the interview broaden your understanding of the topic the other student chose?
- How did you find communicating in the interview? Were you able to focus on the answers the other students gave, and add follow-up questions, rather than only focusing on your own questions?
- Did the presentation and interview increase your interest in the topic the other student chose?
- How did you find it listening to another student rather than a teacher?
- Is it more interesting to ask questions to other students rather than a teacher?
- Do you feel more responsible when you work/ask each other rather than when the teacher monitor the interviews?
- Is there other feedback you would like to give to the teacher about this assignment?

We grouped the questions 2,3,4 and 10 into Motivation. 1, 5, 6, and 8 were grouped into Knowledge, 7 and 9 into Task Skills, and 11, 12 and 13 were grouped into Teacher vs. Student. Question 14 did not reveal anything related to this research, so we decided to exclude that question when we analysed the data.

CHAPTER 9

THE ROLE OF TEACHER FEEDBACK IN STUDENTS' REVISION OF TEXTS

Siri Hunstadbråten

Introduction to My Classroom

I teach English, French, and social studies at Drammen Upper-Secondary School in Drammen, Norway. The school serves students aged 15-19 and prepares them for university studies. This research project was carried out in my second-year English 1 class during the spring term of 2024. The students were 17-18 years old and all enrolled in the school's bilingual programme, Drammen International. In this course, I taught five 45-minute lessons per week, amounting to 140 lessons of 60 minutes each over the 2023-2024 school year.

The class consisted of 25 students. One student was diagnosed with dyslexia; otherwise, there were no special educational needs. Instruction was based on a textbook designed for English, but supplemented with additional material, such as films, articles, and literary texts. As part of the course requirements, students also read and worked with an English-language novel. Laptops were used as an integrated part of learning, and I employed a task-based approach using several techniques in my teaching.

At the end of the school year, English 1 students receive two grades for their coursework: one for written and one for oral English. They may also be required to take a national written examination or a locally organised oral examination. Because my students had selected the Drammen International programme, they were all motivated to improve their English proficiency. However, as in any class, their level of motivation varied. Although the students were quite proficient in English, they still needed to work systematically to improve their written skills, particularly in developing an academic writing style – an important element of the curriculum and a skill they will need to master at university. Despite having

studied English for more than 10 years by the time they reached English 1, many continued to make relatively basic mistakes in their syntax and grammar. Furthermore, all students needed to develop a greater awareness of the differences between formal written English and the colloquial style they were used to using. There was also room for some improvement in the coherence and fluency of their texts. Moreover, most students needed to work on constructing a persuasive and precise line of argument, including the correct use and citation of sources. Throughout the school year, students submitted written assignments regularly, and I provided feedback on content, structure, and language.

In my teaching practice, I emphasise the importance of students engaging with my feedback by producing revised versions of their texts. I consider it vital to be available throughout this process to provide guidance and clarity. For this reason, I allocate time during lessons for students to work on revisions. While they revise various aspects of their texts, I remain accessible to answer any questions and offer support as needed.

Reflecting on My Overall Research

In preparing for the first workshop of the TREL project, we were asked to propose research topics based on issues in our teaching that were causing concern (that is, what was “bugging us”). For some time, I had been concerned that the feedback I provided on students’ essays might not be as comprehensible or as motivating as I intended. Consequently, I decided to investigate the role my feedback played in students’ learning. This led me to formulate the following research question: How useful and motivating is my feedback for my students when revising their texts?

In my professional opinion, the most effective method to help students address their challenges is by providing tailored feedback on their texts. This process requires a lot of time and effort on my part, and I must carefully balance the depth of my feedback with the time available. Importantly, my focus is not solely on identifying weaknesses or inadequacies in their writing but also on guiding students toward improving their texts and their language. In this sense, my approach covers not only feedback but also feedforward, thereby aiming to support future development and current revision.

Like any other skill, developing one’s writing requires systematic practice and sustained effort. For students to improve their written English, it is important that

they understand why certain aspects of their texts require correction or refinement, and that they are sufficiently motivated to determine how to make these improvements. This is a cognitively challenging and complex process. As I only occasionally provide explicit suggestions for how a text might be revised, students need both motivation and persistence to engage productively with my comments and take responsibility for their part in the feedback process. After all, it takes two to tango! Even though I highlight areas for improvement in my written feedback and provide students with dedicated class time to revise their texts, my method will only succeed if my students are sufficiently motivated to engage in this demanding work.

Another challenge is that my comments are intentionally brief and make use of disciplinary terminology that some students may not fully understand or may struggle to retain from one assignment to the next. While I make myself available and offer support during revision periods, the number of students present means that it is impossible for me to address all students' needs and questions equally well. Consequently, I fear that there is a systematic imbalance between the time and the attention each student requires and what I am realistically able to provide. Some students are a lot more proactive in the revision process than others, asking for help and clearly wanting to improve. Others, however, are more withdrawn. I assume that these students may benefit less from my current approach, which I find concerning; in fact, the main reason why I wished to investigate more closely how my method of supporting students' writing development actually functions in practice.

In my teaching practice, I have often combined quantitative and qualitative methods to gather feedback on both my instruction and my students' learning and motivation. For this project, however, I was inspired by a remark made by one of the lecturers at the first TREL workshop in January 2024, who emphasised the importance of "hearing the students' voices" as an important aspect of teachers doing research on their own practice. Motivated by this, I opted to rely exclusively on open-ended questions. My project started in mid-March, shortly after I had provided feedback on my students' essays. By this point in the semester, my students were already familiar with my feedback practices and with the revision routines I had used in class. After reviewing what they had done well, what required further improvement, and, not least, the grade they had received, students were instructed to produce a revised version of their texts, drawing actively on my feedback and feedforward. What was new this time, however, was that I asked students to reflect on the process itself. I informed them that their

reflections were important for developing my future teaching practices and that their responses would constitute data for the teacher research literacy project in which I was participating. Data collection took place in three stages. First, students responded to a set of questions about the feedback they had received and how they intended to use it before beginning revision. The second stage consisted of the text-revision process itself. In the third and final stage, students answered a second set of questions.

Below are the questions I presented to the students:

Before revising my text

Read the feedback you were given on your text carefully. Then respond to the questions below:

- To what extent was the feedback understandable? Give examples and explain your reasoning.
- To what extent did the feedback motivate you to revise your text? Give reasons for your answer.
- What was the most useful part of the feedback? Provide examples and explain.

After having revised my text

- 1) To what extent did you receive support in understanding the feedback and suggestions for improving your text? Give reasons for your answer.
- 2) How do you feel about having revised your text? Give reasons for your answer.
- 3) Sum up your key takeaways from the overall process of receiving feedback and revising your text.

To obtain an overview of my data, I classified my students' responses into relatively broad thematic categories and summarised the number of responses within each (see Tables 1 and 2). I chose to include many student quotations, as I wanted to listen carefully to how students articulated their experiences and feelings about the ways I support their development as writers of English. Their reflections are not only valuable for my own understanding; I also believe that students themselves benefit from the process of verbalising such reflections. Even if the data were ultimately to prove less insightful than expected, the metacognitive work involved in responding to these questions remains an important and meaningful part of their learning.

Table 1 Coded results from the pre-revision questions (Number of respondents: 21)

Question	Completely understandable		Mostly understandable		Not understandable	
To what extent was the feedback understandable? Give examples and explain.	13		8		0	
To what extent did the feedback make me want to revise my text? Give reasons for your answer.	Highly motivating (wanted to revise text)		Somewhat motivating		Not motivating	
What was the most useful part of the feedback.? Give examples and explain.	12		7		2	
	Content	Color codes	Structure	Rubric	Language or mostly language	Comments in their text
	1	2	0	2	10 + 3 = 13	2

Table 2 Selected student quotes from the pre-revision questions

Question	Selected student quotes
To what extent was the feedback understandable? Give examples and explain.	I did not ask many questions, but when I did, you were very helpful.
To what extent did the feedback make me want to revise my text? Give reasons for your answer	<p>The feedback makes me want to revise my text to some extent. However, it is a bit hard to actually get better at it because I do not really know how.</p> <p>The feedback makes me excited to see what I missed or wrote incorrectly. I strive to make progress in my language, so I am always eager to see what mistakes I have made, so that I can make it right and learn.</p> <p>Often one is 'blind' by the mistakes I make myself and when another person points them out, the mistakes are more visual to me.</p> <p>The feedback makes me want to revise my text to put into effect and fix the aspects of the essay so that I can use them in future endeavours.</p> <p>I want to revise my text because I know there are things I need to improve to get a better mark, and I will know how to write my text better once I have seen it in the text.</p> <p>The feedback is well structured and clear as you use different colour to highlight mistakes, as well as short comments, which makes it easy to identify and alter the mistakes.</p> <p>I guess it makes me want to change at least some parts of my text, on one hand to get it right, but on the other hand also to try to learn what could have been better.</p>

Your feedback, and particularly the comments, makes me wish to revise my text. I find it encouraging that you write what is wrong and what can be done to improve.

For me, it is very motivating and I want to revise the text. I do not like to make mistakes and having mistakes underlined and with an explanation to explain what was wrong makes it easy to change.

The feedback gives me another perspective on my text, and it helped with realizing that I have some things that I can work on in order to improve my texts.

It motivates me to revise and fix my text, especially when I am given precise and direct feedback.

It does not exactly prompt me to revise my text, simply because I believe there was one particular flaw in the text that ended up dragging it down, the flaw being the very relaxed and informal style.

Not that much, since it was written that I write good English and it was well structured, but I wrote too much informal language. However, it does make me wonder why I got the grade I did, if I have good English.

What was the most useful part of the feedback? Give examples and explain.

The most useful part of the feedback was the comment about how I took the reader's knowledge for granted. That is something I usually do and something I need to fix.

Sometimes I find myself inventing new idioms and ways of expressing myself that do not actually exist in English. For this reason, the purple comments, which point out that these should be changed, are most useful.

The most useful part of the feedback might have been the sentences marked in purple, mostly because it is mistakes or things that sound wrong when you say them out loud.

Definitely the most useful part of the feedback are the comments which you write next to the marked sentences or words. These comments help us understand what is wrong and can be improved.

Personally, I find the comments in the margin most useful. The comments help me understand to a greater extent what you mean when you use colour codes.

For me the most useful part was the matrix. I really like to see how my text scored on the criteria because then it is easier to understand why I got that grade.

The most useful part was the part about adverbs.

I think the colour codes are really smart because then I can see exactly what is wrong with the text.

The most useful part is the general feedback where the reoccurring mistakes are highlighted. This makes it easy to remember and make a note of what to not do next time.

I found it useful when you commented on my use of the personal pronoun 'you'. When I write, especially when time is limited, I tend to use the wrong writing style. I also appreciate longer comments.

The feedback highlighted all of my flaws as well as it made me realize what style my future texts should have.

Table 3 Coded results from the post-revision questions (Number of respondents: 11)

Question	Did get necessary help	Did not get necessary help	Did not need any help
To what extent did you get help understanding the feedback and suggestions for improving your text? Give reasons for your answer.	6	1	2
How do you feel about having revised your text? Give reasons for your answer.	Happy or pleased	Indifferent	Looking ahead/what to remember next time
	6	1	4

Table 4: Selected student quotes from the post-revision questions

Question	Selected student quotes
To what extent did you get help understanding the feedback and suggestions for improving your text? Give reasons for your answer.	Based on the different comments and reading the sentences again it was a huge help because in most cases I saw what mistakes I had. I probably should have asked a little more about what I should have done different, but other than that I got quite a lot of help.
How do you feel about having revised your text? Give reasons for your answer.	<p>I feel good after having revised my text. It is always interesting to see what mistakes I made, and to correct them. I feel a bit frustrated that I made so many stupid grammar mistakes and forgot words here and there, but in conclusion, I believe it went well.</p> <p>I see clearly why some of the parts of the text was incorrect, and remember these things the next time I write.</p> <p>I was already satisfied with my original text (except for some genitive and punctuation mistakes that could easily have been avoided), so improving it didn't change much for me personally.</p> <p>I don't think my revised text is that good, but I think it was important for me to see what mistakes I made so that I understand what mistakes I make.</p> <p>It was okay, I did not necessarily learn a lot of new stuff. But I do like doing it because I can look back at my text later and see what I have messed up before and see what I need to practice.</p> <p>I feel that my text looks much better than before because it is more precise.</p> <p>It felt somewhat good, based on seeing my mistakes and correcting them. Of course it is hard seeing the mistakes and not always agreeing with them, but once I understand them, it can be a relief.</p> <p>I am very happy with my text after the revision process. After having revised the text I feel as though I have become a better writer, and that I have a better understanding of my own mistakes.</p>

**Sum up your takeaways
from the process of
feedback and text revision**

I feel like I've improved my text quite a lot, however I feel like I could've written it better when we first wrote the texts.

I am embarrassed to some extent. I usually don't have problems with the style of my text. This is something new to me so I have finally got some real work to do in English.

After this process, I realize that I need to work on syntax, and that I make many mistakes when I am short on time.

Mistakes I will not make again:

Informal language

Incomplete sentences

Be more careful when using "must".

I should pay more attention to syntax and awkward phrasing. I need to learn how to cite my sources in a better way.

My takeaways from this process is a multitude of lessons and though I can learn more from the feedback on my text I have learnt some obvious flaws such Middle Ages and the Bible (capital letters).

My takeaway from this process is that it went how it usually goes. My content is good, but I have some grammatical mistakes here and there that I believe I could have avoided if I had more time. There was a recurring problem with imprecise language, so that is something I have to keep in mind. I also have to remember to be formal and be aware of commas.

The take-away is to use linking words more actively and be wary of influence from Norwegian in my English.

My first set of questions yielded unexpectedly positive responses. I was pleased to learn that my feedback was largely perceived as understandable. The results concerning my ability to motivate students to use the feedback when revising their texts were somewhat less positive, though generally encouraging. One student articulated the challenge of using feedback quite well: "The feedback makes me want to revise my text to some extent. However, it is a bit hard to actually get better at it because I do not really know how." This highlights an important pedagogical challenge for me as a teacher: to provide clearer and more concrete guidance on how students can revise their texts effectively.

Another student described their experience as follows: "Often one is 'blind' by [sic] the mistakes I make myself and when another person points them out, the mistakes are more visual to me." This comment reflects the first step of what I aim to achieve – helping students become aware of how their written English can be improved. The ultimate goal, however, is considerably more ambitious and one that most students are unlikely to achieve during upper-secondary school.

Ideally, I want my students to develop the ability to adopt a critical distance from their own texts and, at least to some extent, revise their texts independently, without relying on teacher input. Two responses in my material are almost too good to be true, as they articulate my pedagogical ambition with remarkable precision:

The feedback makes me excited to see what I missed or wrote incorrectly. I strive to make progress in my language, so I am always eager to see what mistakes I have made, so that I can make it right and learn.

and “Your feedback, and particularly the comments, makes me wish to revise my text. I find it encouraging that you write what is wrong and what can be done to improve.” Comments such as these serve as important incentives for me as they reinforce the value of the time and the care, I put into offering detailed feedback.

The final question was the most demanding for the students, and the most interesting for me. In asking students to pinpoint which part of my feedback they found the most useful and to explain why, I was essentially inviting them to give me feedback on my own practice. The purpose of this question was twofold: to help students improve their revision skills by reflecting on which aspects of my feedback supported their learning, and to help me refine the ways in which I provide feedback. To analyse the responses, I classified them according to the categories I give feedback on – content, structure, and language. It was not surprising that most students highlighted the feedback on language as the most useful. This is, after all, the area where most students need the greatest support, and I estimate that roughly 80 % of my comments concern language-related issues. However, a few responses stood out for different reasons. Two of the responses could almost have been written by me, as they reflect the reasoning behind my approach to teaching writing: “Definitely the most useful part of the feedback are the comments which you write next to the marked sentences or words. These comments help us understand what is wrong and can be improved” and “Personally, I find the comments in the margin most useful. The comments help me understand to a greater extent what you mean when you use colour codes.”

What I was after here, however, was not so much a confirmation of my methods, but rather insights into what students had learnt from my feedback in concrete terms. A couple of responses were quite precise in this respect: “I found it useful when you commented on my use of the personal pronoun ‘you’. When I write,

especially when time is limited, I tend to use the wrong writing style. I also appreciate longer comments.” Another student emphasised the value of pattern-focused feedback: “The most useful part is the general feedback where the reoccurring mistakes are highlighted. This makes it easy to remember and make a note of what to not do next time.”

In class, I repeatedly emphasise that genuine learning requires students to act as agents in their own learning process. Their efforts should not be directed towards pleasing me, but towards supporting their own development. My role is to act as a facilitator. This question also provided insight into my students’ grasp of metalanguage. This was even more evident in the final set of questions, which students completed after revising their texts. I will discuss those results in greater detail below.

The post-revision questions were designed to elicit students’ experiences during the revision process and their feelings about it. Unfortunately, only 11 students responded to this second set of questions, as opposed to 21 who answered the initial set. As a result, the post-revision data are less comprehensive. The most likely reason for the lower response rate is that I failed to allocate sufficient class time for students to complete both the revision of their texts and the accompanying questions. Most students spent the better part of the lesson revising their texts, and those who did finish early may not have understood the importance of responding to the second set of questions or may simply have chosen not to do so.

In retrospect, I realise that I should have ensured that nearly all my students had responded to the full set of questions. The students who did provide answers were largely those who were more independent and mature learners, which means that the results are somewhat biased; specifically, the results are more positive than those the broader student population could have reflected. It is reasonable to assume that, had more students completed the post-revision questions, more of them would have indicated that they did not get the support that they needed during the in-class revision session. As my aim was to determine how many students did not, in fact, benefit adequately from my feedback and the revision process, it is unfortunate that I did not succeed in collecting sufficient data to assess this fully. Nevertheless, I am pleased to see that the students who did respond reported that they, on the whole, received the support they needed from me. As noted earlier, writing is a skill developed through practice and feedback, a process that requires both motivation and perseverance. The benefits of this

effort often become apparent only after the work is completed, and my students' responses reflect this. After producing a revised version of their essays, only one student expressed indifference. The remaining responses reported feeling satisfied and believed that their work would be rewarded when they next produce a text. In the words of one student, "I am very happy with my text after the revision process. After having revised the text, I feel as though I have become a better writer, and that I have a better understanding of my own mistakes."

In the final question, students are asked to adopt a bird's-eye perspective on their efforts to improve their written English. This question allowed me to examine the extent to which they acquired the metalanguage introduced during the course. I was quite pleased with the level of precision and the use of precise terminology in these responses. The takeaways are quite diverse, ranging from issues related to informal style, incorrect syntax, awkward or imprecise language to the increased use of linking words and a heightened awareness of potential Norwegian influence on their English.

I did not investigate the extent to which my students applied what they claimed to have learned from my feedback. To strengthen the completeness of the data, I could have selected a sample of revised texts and analysed them for concrete evidence of revision. There is an important distinction between students reporting they have learned something and demonstrating that learning through observable changes in their writing.

Appendix

Colour Codes for Text Revision

Problem	Typical examples	Solutions/corrections
Yellow – grammar (e.g. concord, verb tenses, it/there, the genitive, pronouns)	Everybody are stupid. It's a lot of people outside the building. The student's computers are on the tables. (Many students)	Everybody is stupid. There are a lot of people outside the building. The students' computers are on the tables.
Blue – vocabulary , informal words and expressions, wrong choice of word or expressions, unidiomatic expressions, influence from native language	You (when referring to people in general) Kid, mum, dad	They Child, mother, father
Green – P punctuation	Use more full stops or commas. Questions should be followed by question marks.	
Purple – sentence or phrase structure : incomplete sentence awkward language unclear phrase or sentence	Every sentence has to contain at least a subject and a finite verb. (They talk.) Please note that infinitives and ing-forms (talk, talking) are not finite verbs.	1) Attach the incomplete sentence to the preceding sentence, using a comma 2) Attach the incomplete sentence to the sentence coming after. 3) Expand the sentence so that it contains the necessary elements to constitute a complete sentence on its own.
Red – spelling	Use the "help" functions in word Look up the word(s) in a dictionary	Titles of books and films in italics. (The Fault in Our Stars). Titles of short stories, poems, songs and articles in inverted commas. "Vossy Bop" Remember to capitalize all the major words in the title.

Assessment Criteria

Criteria	2	3	4	5-6
Structure	<p>The text lacks proper structure.</p> <p>Some parts are not clear or coherent.</p> <p>The paragraph structure is most often not clear.</p> <p>No or hardly any use of linking words.</p>	<p>The overall structure is uneven, and the text is not coherent throughout.</p> <p>Some parts may not be clear or coherent.</p> <p>The paragraph structure is sometimes correct.</p> <p>Linking words are sometimes used.</p>	<p>The overall structure is mostly clear, and the text is quite coherent.</p> <p>The paragraph structure is mostly correct.</p> <p>Linking words are used.</p>	<p>The overall structure is clear, and the text is coherent (introduction, main body, conclusion).</p> <p>The paragraph structure is correct (topic sentence, supporting sentences, concluding sentence).</p> <p>An appropriate use of linking words.</p>
Langue, style and terminology, grammar and syntax	<p>Mostly informal language and very little use of relevant terminology.</p> <p>Many basic mistakes in gramamr and syntax.</p>	<p>Some use of academic language and relevant terminology.</p> <p>Some basic mistakes in grammar and syntax.</p>	<p>Academic language and relevant terminology are used in the greater part of the text.</p> <p>Mostly correct grammar and syntax.</p>	<p>Consistent use of academic language and relevant terminology.</p> <p>Correct and advanced syntax and grammar.</p>
Content	<p>A small part of the essay is on task.</p> <p>Most of the essay content is irrelevant and/or unclear.</p>	<p>The essay is on task.</p> <p>Some of the content is irrelevant and/or unclear.</p>	<p>The essay is on task.</p> <p>It is a complete answer but may be superficial.</p>	<p>The essay is precise and comprehensive.</p> <p>It is a complete answer.</p>
Use of sources and citation	<p>No relevant sources are used, or sources are used incorrectly.</p> <p>There is no in-text citation and/or no list of sources.</p>	<p>Some relevant sources are used.</p> <p>There is some correct in-text citation and list of sources.</p>	<p>A satisfactory number of relevant sources.</p> <p>Mostly correct in-text citation and list of sources.</p>	<p>Many relevant sources.</p> <p>Correct in-text citation and list of sources.</p>

Example Feedback

Is religion a force for good in society?

Religion is an important aspect of many people's lives. It serves as a source of inspiration and an ideal, no matter what people believe in. In many countries it is difficult to distinguish religion, politics and culture. Governments and terrorist groups use religion as a pretext for suspicious deeds such as suppression and acts of violence. In secularized societies, however, religious faith has become a personal choice which may not affect society as a whole that much. The question, however, remains whether religion is a force for good in society.

Many governments and terrorist groups abuse faith to allow acts of violence and suppression. Religious fanatic groups such as ISIS or Al-Qaeda are well known for their Islamic faith and how they misuse the words of the Quran to commit horrendous acts against innocent people. Al-Qaeda claimed themselves responsible for the 9/11 plane attacks on civilians in Manhattan, New York. This goes to show how some religious fanatics believe their horrendous acts are excused simply because of their faith in God. **But in some ways, their religious beliefs are not harmful at all.** These types of fanatic groups are spreading propaganda to the media, they are torturing and killing innocent people simply because of their faith. This is a **perfect example of when religion has gone too far**, and sanctions need to be applied.

Countries like Iran, Palestine, Israel, and Afghanistan are prime examples of states where politics, religion and culture have been mixed in a negative way. The ongoing war between Israel and Palestine is driven by the two countries' sheer inability to cooperate, and the fact that both countries are unwilling to give up territory or **make concessions**. The conflict has been going on for many years and seems to have no end. The political decisions of both the Israelis and the Palestinians are ruled by their religious beliefs, **and the more of the war goes on, the more this is a function of the war.** Many civilians are being killed in daily bombings, mostly by the Israelis. The rage of the Israeli government has clearly impacted their decisions. This shows how in extreme cases, religion may just have negative effects on society. When war-torn countries refuse to cooperate on common land because of religion, there is not much a 3rd party country like the US can do. "Because the parties of God have a veto on it, and everybody knows that this is true" (Edge, p. 197). The quote shows the reasoning behind why Palestine and Israel **can't** cooperate. The American support of the Israeli government has created a dilemma for most western countries: should we support a country committing horrible acts of violence against civilians, simply because of their faith? The European cooperation with the US has created dilemmas inside many European countries and will continue to do so for years to come. **The current international conflict in the Middle East is, facing to western**

countries; to countries supporting Israel in the conflict. Will this have consequences for European countries in the coming years?

There are a lot of horrible acts being committed by religious groups and governments in the word of religious faith, but there are also many **positive** things of religion in society today. In the Middle Ages, religion and state were often one, but in almost all countries of the world today, this is not the case. Countries such as Norway, France, the UK, and Germany have all been able to divide politics and religion. Norway was an official Christian country for a thousand years but have recently separated state and church. This opened for the most religion-diverse country that Norway is today. There are many different religions in today's Europe, and Norway is a **prime example** of this. In this way people are more open to religious cooperation, with many organizations being of Christian, Muslim, and Jewish faith. Many organizations in today's world are faith-based. An example of this is the Red Cross in Norway (Røde Kors). This shows how religion separated from politics can do greater goods for the society. Religion gives people hope and is a common motivation for many people to do good. Religion provides support for civilians in secularized societies and religious societies, cooperation between people, and it creates a common good in all people who have faith in God.

Although religion mixed with politics may destroy societies and create wars, religion in secularized countries normally creates greater goods for society. Religious fanatic groups such as ISIS and Al-Qaeda have misused the word of the Quran and use their faith as an excuse for horrible acts of violence. In my opinion, this is a cowardly attempt to blame issues; acts upon a religion made to bring people together and create peace in the name of God. I am a Christian myself, and I was raised in a secularized country. This helped me accept and understand other viewpoints on the world and has provided me with the correct and moral faith in God. I think religion is **for a reason** (not society) and can only do good once other people's viewpoints are valued and respected. In countries where politics and religion are mixed in a non-secularized society, other viewpoints on religion are discouraged and disrespected. **Because these like ISIS and Al-Qaeda, religion does it for reasons only harmful at all.** In the conflict between Israel and Palestine, religion and state cooperate on a basis which can only be destructive upon people with different beliefs. To conclude, religion is a force for good in society if it is included in a secularized society. As soon as religion becomes a force for politics, it may have destructive consequences on civilians and people with a different faith.

Sources

Hitchens, C. (2010, November 27). Edge *Essays* 1 (p. 197, 2021). |



Siri Hustaadråten ...
Answer, Plz rephrase

Reply

Siri Hustaadråten ...
Incorrect syntax, Plz rephrase

Reply

Siri Hustaadråten ...
Answer, Plz rephrase. Use e.g. the expression "to wage war".

Reply

Siri Hustaadråten ...
Use a more idiomatic expression

Reply

Siri Hustaadråten ...
concord mistake

Reply

Siri Hustaadråten ...
Very poor English. You have used this expression twice.

Reply

Siri Hustaadråten ...
In your conclusion go back to the thesis question: whether religion is a positive force in society. By using the same phrasing, your text becomes better structured and more coherent.

Reply

Siri Hustaadråten ...
Not clear.

Reply

Siri Hustaadråten ...
Your list of sources should be written differently, it's explain.

Reply

CHAPTER 10

DO READING STRATEGIES HELP? UNDERSTANDING WHAT MOTIVATES NORWEGIAN HIGH SCHOOLERS TO READ IN ENGLISH CLASS

Kimberly Wynne

Introduction

Educators across Norway are observing a troubling trend: students' reading stamina and overall reading proficiency appear to be declining. These anecdotal observations lead to lively discussions among colleagues about possible causes of this decline. Are digital technologies, particularly smartphones and the fragmented nature of online information, reshaping students' reading habits? Are the lingering effects of the COVID-19 pandemic disrupting literacy development? Or is it the education system's increasing focus on teaching students to read analytically, unintentionally reducing their opportunities to read books extensively for pleasure? Whatever the underlying reasons, teachers increasingly face the challenge of supporting students whose reading skills no longer align with the expectations embedded within the national curriculum. The Norwegian national curriculum for English in upper-secondary school emphasises students' ability to reflect, interpret, and critically read different text types (Kunnskapsdepartementet, 2019). Strong reading ability is especially crucial for students taking English as an elective in their final years of upper-secondary school, because they do not receive preparatory reading materials prior to the national written exam. This practice will likely become the norm as examination formats are adapted to address challenges posed by the use of artificial intelligence (AI). Consequently, preparing students to become proficient and independent readers is more important than ever. As AI platforms become a primary source of information, often providing content without transparent

information about its origins or underlying assumptions, the need for students to read consciously and critically will become even more important in the coming decades.

The purpose of this study was two-fold: 1) to gain insight into my students' knowledge of reading strategies and how they apply them before, during, and after reading, and 2) to explore what motivates students to read. Accordingly, the study aimed to answer the following questions:

- 1) What reading strategies do my students know, and to what extent do they use them?
- 2) Does the use of reading strategies increase students' motivation to read?

Prior research indicates that adept readers actively use reading strategies more frequently and more efficiently than struggling readers (Bensaad & Ouahmiche, 2020). Based on these findings, this study examined whether students' awareness and effective use of reading strategies influenced their attitudes towards reading.

Method

Participants

The findings from this study were collected from four English classes at a vocational upper-secondary school near Drammen, Norway. Data collection took place during the second semester of the 2023-2024 academic year. Three of the classes were for first-year students, while the fourth was an elective course typically taken during the third year of study. All four classes followed the national requirement of 140 hours of English instruction over the academic year.

The students in the three compulsory first-year English classes were enrolled in one of three different vocational programmes of study: 1) Healthcare, Child and Youth Development, 2) Sales, Service and Tourism, and 3) Hairdressing, Floral, Interior and Retail Design. Each class consisted of 10-16 students, most of whom were between 17 and 19 years old. One of the three classes consisted exclusively of female students, while the other two included both male and female students. The elective English course taken during the third year of study composed 20 students of both genders, ranging in age from 19 to 23. Most students had been learning English for at least ten years, and their proficiency levels generally ranged from intermediate to upper-intermediate. Students in all the classes

described above were eligible to be selected for the national examinations in written and/or oral English at the end of the academic year.

Research Design

This study employed a mixed-methods research design, integrating both quantitative and qualitative data collection and analysis. Quantitative data were collected using the Survey for Reading Strategies to address the first research question regarding students' knowledge of reading strategies and how often they use them (Mokhtarti & Sheorey, 2002). The second research question examined the relationship between reading strategy use and motivation. To explore this relationship in greater depth, qualitative data were gathered through the think-aloud method and semi-structured interviews. The quantitative results from the Survey for Reading Strategies, together with qualitative data from the think-aloud method and observational notes throughout the process, informed the development of the semi-structured interview questions. During the interviews, students were then given the opportunity to further develop their responses and clarify their experiences through probing follow-up questions.

Data Collection Instruments and Research Process

An adapted version of the Survey for Reading Strategies (SORS), modified to suit the Norwegian language context, was used to collect quantitative data in this study (See Appendix). Designed by Mokhtarti and Sheorey (2002), the SORS is based on the Metacognitive Awareness of Reading Strategies Inventory (MARSİ). It has been widely adopted in research examining EFL students' awareness of metacognitive reading strategies when engaging with academic documents in English (Bensaad & Ouahmiche, 2020). Both the SORS and MARSİ aim "to assess students' metacognitive awareness or perceived use of reading strategies when reading texts for academic purposes" (Mokhtari et al., 2018, p. 222). However, the SORS is better suited to the purpose of this study, given that "there is a practical value in using the SORS when assessing students with lower levels of English proficiency" (Mokhtari et al., 2018, p. 239). The SORS is composed of three reading categories: pre-reading, while-reading, and post-reading strategies. The instrument includes a total of 32 items, each using a specified response scale.

Prior to administering the SORS, students in each class were informed about the purpose of the study and the procedures for handling the collected data. They were then invited to ask questions about the study to ensure clarity and

understanding to be able to give their informed consent. The contents of the SORS questionnaire were subsequently reviewed together in class, with special attention paid to terms or phrases students found difficult or confusing. Additionally, the response scale used in the questionnaire was carefully clarified and displayed on the classroom whiteboard in Norwegian. Students were encouraged to respond to the questions honestly and reminded that there were no right or wrong answers. Students were also instructed not to write their names on the questionnaires. This was intended to reduce response bias and encourage students to base their answers on their actual use of reading strategies, rather than on perceived expectations of the researcher. Each class took about 30 minutes to complete the questionnaire, which was then collected by the researcher. The SORS was administered to the students a second time, following the same procedure as described above. This was done after the completion of a two-week instructional series of lessons on reading strategies. The resulting data were used to answer the first research question, which examines students' knowledge of reading strategies and how often they employ them.

To evaluate whether students used reading strategies and how these strategies influenced their motivation to read, qualitative data were collected through the think-aloud method. Although the think-aloud method has its origins in the field of psychology, it is currently widely used across many fields, spanning from computer usability to education. The technique asks participants to verbalise their thoughts while carrying out a task or solving a problem, thereby providing insight into underlying cognitive processes (Noushad et al., 2023, p. 892). The reliability of the think-aloud method is grounded in the theory that verbal reports allow researchers to assess higher-level thinking processes, particularly those involving working memory, before ideas are stored in long-term memory, where they become more abstract and non-verbal (Charters, 2003, p. 70). The method has therefore been used to shed light on thought processes involved in reading comprehension and strategy use (Charters, 2003).

Prior to administering the think-aloud task, students in each class were given detailed instructions. Clear and explicit instructions were essential, as none of the students had previously engaged in verbalising their thoughts while reading, and a thorough understanding of the process was necessary to elicit meaningful verbal reports. Students were first instructed to verbalise any thoughts or ideas that occurred to them while reading the text and to read a story without pausing. Students were provided with further instructions recommended by Ericsson and Simon (1993) for think-aloud protocols: a) to speak all thoughts, even if they are

unrelated to the task; b) to refrain from explaining the thoughts; c) to not try to plan out what to say; d) to imagine the participants are alone and speak to themselves; and e) to speak continuously. Across all classes, students raised similar follow-up questions, which we collectively addressed prior to determining how to proceed. The first issue to evaluate was whether students should be permitted to talk-aloud in Norwegian instead of English. The second question related to whether students had to read the story aloud as well as verbalising their thoughts. After some discussion, it was decided that they could choose to conduct the talk-aloud task in Norwegian instead of English, and they were permitted to read the story aloud if doing so facilitated the process. These decisions were intended to reduce the cognitive and procedural load of a task that many students perceived as unfamiliar. To ensure that each student completed the task in a quiet and comfortable environment, free from external interruptions or influences, the think-aloud task was assigned as homework. Students were asked to submit an audio recording of their verbal report. Upon receipt, the recordings were transcribed as closely as possible, including pauses, changes in tone, and reactions. Due to the time-consuming nature of the transcriptions, it was not possible to conduct participant verification of the transcripts by allowing students to review or amend them.

Not all students' verbal reports were thorough or adhered to the think-aloud instructions. In these cases, the recordings were excluded from transcription due to concerns regarding quality. Most students, however, delivered verbal reports that successfully employed the think-aloud technique. These recordings typically ranged between 10 and 20 minutes. With respect to language use, some students conducted the think-aloud entirely in English. However, the most common approach involved switching between English and Norwegian. Interestingly, only a few students verbalised their thoughts exclusively in Norwegian.

The final stage of data collection consisted of semi-structured interviews carried out with each student. These interviews took place outside of the classroom between the student and the researcher. The duration of each interview varied, depending on the extent of students' responses, but most typically lasted between 15-30 minutes. During the interviews, students were invited to reflect on and give feedback on the entire research process, from completing the questionnaire to participating in the think-aloud task. Some of the questions were predetermined, such as: 1) Did you have an aha moment or a key takeaway from this experience? 2) Do you feel differently about reading now than you did before? and 3) What was the think-aloud experience like for you? However, most of the interview

questions were either follow-up inquiries related to students' responses or tailored to individual participants, informed by observations made during teaching reading strategies and analysis of their verbal reports. Notes were taken during the interviews and expanded on to produce more detailed records afterwards.

The qualitative data derived from the interviews were used to gain insight into students' perceptions of their experiences. The interview data were interpreted holistically, bringing together the results from the questionnaire, participants' verbal reports from the think-aloud task, and the information shared during our conversations, as well as my own observations and contextual understanding. During the analytical process, attention was directed to identifying patterns indicative of preferred or effective reading strategies used by the students. Moreover, the analysis explored specific aspects of texts that appeared to hinder students' understanding and examined how students responded when encountering such difficulties. The analysis of the qualitative data was influenced by the researcher's close relationship with the data. Accordingly, it is acknowledged that "qualitative research leads to as many interpretations as there are researchers" (Kvale, 1996, p. 279).

Research Context

During the two weeks following the administration of the SORS, each class received roughly the same series of lessons on reading strategies. The instructional materials were drawn from the coursebook, *Citizens YF* (Andersen et al., 2020), which is assigned to the first-year students. The unit on reading strategies included materials and exercises on skimming, scanning, close reading, and a section on working with literary texts. The purpose of this instructional sequence was to introduce students to reading strategies with which they may not have been previously familiar and to demonstrate how and why these strategies can support reading comprehension.

The short story "Robert and the Dog" by Ken Saro-Wiwa (1986) was selected as the reading task for the think-aloud component of the study. This text was chosen for several reasons. First, it addresses themes with which students were likely familiar, having worked with similar topics in class for nearly a month prior to this study. Secondly, the length and level of difficulty of the story were considered appropriate for the students. Short stories and novel extracts are representative of the texts students typically encounter in their coursebook and are frequently assigned to read. At the same time, short stories are also difficult for students because they often rely on background knowledge or lack explicit

information, requiring readers to infer meaning and read between the lines. Selecting a text that was neither too simple nor too demanding was therefore important for the think-aloud method to be effective.

In summarising existing research on task suitability for think-aloud studies, Charters (2003) explains, "...a language-based activity at an intermediate level of difficulty for the target group is probably an appropriate task for think-aloud research because it requires more than an automatic response but should not be cognitively overwhelming" (p. 72). Taking this into consideration, "Robert and the Dog" was seen as somewhat challenging for students due to its advanced vocabulary, topic, and text type, while not being so overwhelmingly difficult as to impede the production of meaningful verbal reports. Finally, it was ensured that students had not previously read the story, as task novelty is critical to the effectiveness of the think-aloud technique. When participants are familiar with a task, they are more likely to produce automatic responses rather than verbalise their underlying thought processes (Ericsson & Simon, 1980).

Findings and Discussion

Data from the Questionnaires

The questionnaires administered both before and after the two-week teaching period on reading strategies were collected and organised into separate Excel files for each class. For each of the 32 questionnaire items, the mean, average, and standard deviation were calculated. Then, the pre- and post-instruction averages were compared to identify changes in students' responses following the teaching intervention. The calculated means and standard deviations were also used to identify any potential outliers in the data.

The results from the questionnaires showed only a slight difference between first-year and third-year students in their reported use of reading strategies. However, the mean scores for all items across both groups reached a value of 4, corresponding to "I always do this." Overall, responses generally fell between a mean of 2 ("I rarely do this") and 3 ("I frequently do this"), suggesting moderate but not consistent use of reading strategies among students at both levels.

Table 1 Frequently reported strategies

Item #	Average	Mean	Standard Deviation
4: I look at the text surface features and organizational clues (e.g. titles, subtitles, diagrams, etc.)	2.84	3	0.72
6: I read headings and subheadings, etc. to understand the organization of text	2.89	3	0.75
10: I try to guess the meaning of difficult words through contextual clues	2.98	3	0.69
13: I read slowly and carefully when looking for specific information	3.10	3	0.70
14: I connect what I read to what I already know while reading	2.96	3	0.68
24: I re-read text to check my understanding	3.17	3	0.64
29: I re-read to summarize the text	2.85	3	0.91

The items that were reported as least frequently used by all students were the following:

Table 2 Infrequently reported reading strategies

Item #	Average	Mean	Standard Deviation
2: I make a list of all ideas I may have about the topic of the text	1.75	2	0.67
3: I make a list of predictions to anticipate possible content of text	1.81	2	0.65
5: I make some comments on organizational aspects of text (e.g. title, author, source, visual aids, etc.)	2.08	2	0.64
9: I read aloud to concentrate well and understand what I read	2.19	2	0.90
15: I annotate and mark the text while reading	1.94	2	0.80
16: I summarize the general idea of each paragraph in written form	2.08	2	0.75
19: I identify main idea and supporting details of each paragraph	2.27	2	0.78
22: I control my understanding of text by identifying topic sentences of paragraphs or inventing topic sentences if none exist	2.29	2	0.70
23: I take notes while reading to understand what I read	2.10	2	0.88
32: I make a list of new words and terminology to learn and build vocabulary	1.90	2	0.83

The following items were reported by all classes as being used significantly more frequently after the two-week teaching period:

Table 3 Most frequently reported strategies post-intervention

Item #	Average	Mean	Standard Deviation	Improvement
2: I make a list of all ideas I may have about the topic of the text	2.13	2	0.69	0.39
3: I make a list of predictions to anticipate possible content of text	2.16	2	0.57	0.35
5: I make some comments on organizational aspects of text (e.g. title, author, source, visual aids, etc.)	2.48	2	0.71	0.40
9: I read aloud to concentrate well and understand what I read.	2.47	3	0.87	0.28
11: When guessing meaning from context is also difficult, I use translation into Norwegian	2.92	3	0.80	0.36
17: I look for logical relationships between paragraphs.	2.63	3	0.74	0.30
18: I look for logical relationships between paragraphs and visual aids (e.g. diagrams...)	2.73	3	0.72	0.35
19: I identify main idea and supporting details of each paragraph	2.52	2	0.71	0.24
22: I control my understanding of text by identifying topic sentences of paragraphs or inventing topic sentences if none exist	2.69	3	0.70	0.40
26: I check if my predictions about the text are right or wrong	2.88	3	0.80	0.25
28: I make critical comments on text	2.54	2	0.77	0.28
32: I make a list of new words and terminology to learn and build vocabulary	2	2.22	0.76	0.32

Three questionnaire items also showed a slight regression rather than improvement. However, these decreases were not consistent across respondents, as there was little overlap among the specific items reported as being used less frequently. In other words, students had largely different responses regarding which items were used less frequently following the two-week teaching period. Thus, from the data above, it can be deduced that students tend to favour reading strategies that do not involve active engagement with the text through writing. Strategies such as making lists, taking notes, writing comments, marking, and annotating were reported as infrequently used. In contrast, strategies involving visual or surface-level engagement – such as examining headings, pictures, and diagrams – were reported as frequently used. Similarly, students indicated frequent use of rereading texts to check understanding and reading slowly when looking for specific information.

On the one hand, these results are unsurprising, as they align with my own observations of students' reading behaviours. Students, in general, found tasks requiring them to summarise texts particularly challenging. Furthermore, opportunities to observe students taking notes or annotating texts while working with them were rare. When students did take notes, these were often near-verbatim transcriptions of the original text, rather than evidence of more critical engagements, such as posing questions in the margins, highlighting key terms or examples, or taking notes on the gist of each paragraph. Students frequently explained that copying content helps them remember the material, which might be true to some extent. However, this practice suggests limited analytical processing during reading, as notes tend to reproduce content rather than reflect interpretation or critical evaluation. In contrast, students demonstrated an ability to skim through texts to extract information from visual and structural features, such as illustrations and captions, diagrams, titles, and subtitles. Taken together, these results indicate that students are more proficient in surface-level reading strategies than in close reading or engaging in active conversation with the text while reading.

On the other hand, the results were striking because most of the items reported as being used least frequently by students are those featured most prominently in their coursebooks. Exercises related to these strategies appear not only in sections dedicated to reading strategies but are integrated throughout all chapters of the course materials. As previously discussed, critical reading plays a central role in the national English curriculum, and this emphasis is clearly reflected in the coursebooks. It is also possible that the authors of the coursebooks have identified these strategies as areas of difficulty for students and have therefore prioritised them for repeated practice.

The coursebook strongly encourages students to isolate key ideas in texts for use in subsequent discussion and writing assignments. Nevertheless, the apparent lack of familiarity with critical reading strategies among students is striking. This finding is thought-provoking for educators and should be considered when assigning such exercises and when monitoring and supporting student progress. It can be assumed that students need explicit modelling and guidance during these activities, as well as ongoing teacher monitoring to ensure understanding. Most importantly, however, these findings suggest that despite the coursebook's strong emphasis on critical reading strategies, students use these strategies infrequently. This discrepancy raises questions about whether students have developed a sufficient understanding of how to apply the coursebook's guidance on critical reading in practice.

The strategies that showed increased use among students after the two-week teaching period were those reading strategies that had been explicitly taught and practiced during that time. As the instructional materials were drawn from the coursebook, it is unsurprising that students reported more frequent use of these critical reading strategies. In contrast, the reasons why certain strategies were used less frequently after the two-week teaching period are harder to explain. One possible explanation is that, because of the instruction, students became more aware of their reading behaviours. Increased metacognitive awareness may have led students to recognise which strategies, they were, in fact, not using.

Think-Aloud Data

The verbal reports reveal that students found the short story very challenging to read. Most struggled with unfamiliar vocabulary and demonstrated limited ability to infer meaning from context. However, the words that caused the greatest difficulty were those with multiple meanings, such as bachelor. Misinterpretations of such words often led to misunderstandings that snowballed throughout the think-aloud task. For example, students who interpreted bachelor as referring to a person holding an undergraduate academic degree, rather than an unmarried man, used this incorrect assumption as a basis for further inferences. As a result, these initial misunderstandings frequently snowballed into broader misinterpretations of the text as a whole.

Many students experienced considerable difficulty keeping track of the characters and understanding their locations within the story. Analysis of the verbal reports revealed that this confusion stemmed largely from the story's limited use of proper names: only two characters are explicitly named, while others are referred to using descriptive labels such as "the young man" or "the lady." Consequently, students often conflated these character descriptions. In several instances, students interpreted sentences as referring to one character when, in fact, they described another, leading to ongoing misinterpretations throughout the reading process. Many students were unable to clearly distinguish between the characters and thus interpreted the text as if Robert and "the young man" were the same person. This misunderstanding led to considerable confusion and frustration. While some students eventually realised by the end of the story that more characters were present than they had first identified, others completed the reading without reaching this understanding.

The setting was also challenging for students. Although the story explicitly states that the characters are in a house in Africa, the contrasting location was not

sufficiently clear to many students. This secondary setting is described as “a one-bedroom apartment in The Jungle”, and because students interpreted this description literally, they struggled to recognise its symbolic or referential meaning. Many students understood this description as indicating that Robert lived in an overgrown and dense forest rather than recognising it as a colloquial name for an under-resourced neighbourhood. This further complicated students’ already fragile understanding of the characters and their relationships. Thus, several students began to question whether the characters were even human, with several expressing confusion during the think-aloud task (e.g. “But are these characters actually human? They don’t seem human to me, so confusing”).

The characters’ relationship with the dog was also a source of confusion for students. The dog’s presence in the title created strong expectations, and many students expressed disappointment when the dog did not appear immediately in the story. Many asked several times: “When is the dog coming?” When the dog finally appeared, many felt that the story had truly begun at that point. However, this was followed by uncertainty, as Robert’s behaviour toward the dog did not align with students’ expectations (e.g., “I thought that Robert and the dog would become best friends or something. That would be a better ending.”). For many students, understanding Robert’s perspective and treatment of the dog proved extremely challenging. Several expressed strong emotional reactions to his behaviour, questioning how he could treat a dog so poorly. As one student expressed: “Wow, what a story, what an ending. How could you have so much hatred towards a dog? I don’t understand. How could you hate him so much? How could you be so jealous of a dog?”

Some students were able to pick up on contextual clues to infer possible motivations behind Robert’s actions (e.g., “I feel like it is about where he lives, and he is so poor” and “He has a poor lifestyle and he meets the dog and it makes him angry.”). However, many students were unable to make this connection, and as a result, Robert’s behaviour remained illogical to them.

Data from the Semi-Structured Interviews

During the retrospective interviews, students were given the opportunity to elaborate on their experiences with reading strategies throughout the entire process. This included feedback on the questionnaire, lessons on reading strategies, the think-aloud task, and any additional experiences they wanted to share. Although students reported varied experiences, their responses revealed more similarities than differences. These explanations provided valuable

contextual insight and contributed to a more complete understanding of the data collected from the questionnaires and verbal reports.

Students, in general, related that they had learned some reading strategies in Norwegian class since the first grade. However, they did not necessarily apply these strategies actively when reading in English. Strategies common to skimming and scanning were reported as the most frequently used by students. Many students indicated that they commonly relied on visual clues, such as examining pictures and reading headings and subheadings rapidly. Rereading texts to confirm understanding was also frequently mentioned. While some expressed a good understanding of how to skim and scan a text, many reported that they had not received adequate explicit instruction in these strategies before they were addressed in greater detail during classroom instruction. For example, one student explained: “We learned how to skim through a text in elementary school, but they never said it so clearly, like, to look for words from the questions in the book below the text. I never really thought of it.” Many students indicated that they first learned to identify topic sentences during this course, a strategy widely regarded as helpful. Several reported they now apply this strategy not only in English but also across other subject areas. Some students, however, reported that the lessons on reading strategies were not useful, because they believed they already employed strategies that worked well for them. When questioned further, these self-reported strategies typically corresponded to the same skimming and scanning approaches described earlier by other students.

In contrast, close reading was a strategy that most students reported being introduced to for the first time in our lessons together. When reflecting on their experiences with close reading, many students expressed uncertainty about what the strategy entails in practice. For multiple students, close reading was mainly understood as reading slowly or rereading the same paragraph several times. One student, however, was able to explain clearly how he engages in close reading:

I first read multiple times. If writing an exam, I will read once and then look at the task again. Then I will find examples I want to include in the text. If need to analyse, I will read a couple of times. I know what I'm looking for. If something stands out without having to think about it too much, then it might be a literary feature. I also use prior knowledge and make connections while reading, especially in history class.

This student represented an exception in demonstrating a clear awareness of close reading strategies and an understanding of how they can be applied across

different school contexts. In general, however, students tended to associate close reading with reading sentences slowly and trying harder to understand the text, rather than working more actively with it through strategies such as taking notes, asking questions, or identify textual evidence to support main ideas.

The distinction between skimming and scanning strategies and close reading was also apparent in students' responses regarding the motivational impact of reading strategies. Many students reported that the reading strategies focusing on skimming or scanning, which were addressed during lessons, increased their motivation to read. One student explained: "I will remember it and use it in school. I used to hate reading. Now I feel like I know how to read more efficiently and to not use too much energy. This motivates me much more." Similarly, another student related:

It has been helpful because I don't know much about finding the main purpose of the text. Then I feel like, 'am I missing something'? If I start answering the questions beneath the text, I wonder if I am going in the right direction. I feel that maybe I am missing something important. Reading strategies have helped with this. It has helped me understand how to read the most important things to try to find the answers.

One student was very animated when describing her experiences with reading strategies, expressing both surprise and appreciation for having learned them:

Yes, it has been very helpful. When I am reading a text, I am more aware, of like skimming through a text, reading titles, looking for small hints throughout the text. I feel like it has helped me a lot. I found myself using it during the think-aloud task. I was remembering the strategies in my head. Marking words I didn't know, later looking them up. I had not really done that before. Now it's stuck in my head. I have learned reading strategies in middle school and elementary school, but just simple basic things, like, read the title and look at pictures. The teacher just mentioned it and moved on. Here we have worked on each thing thoroughly and we actually did it together.

Although strategies related to skimming and scanning were generally regarded as motivating, students had comparatively little to say about close reading. When asked specifically about how they feel about reading, students typically reported that they did not enjoy reading unless it was done for fun. One student related: "I do not like reading, it is exhausting, just the amount of brain power you use.

Literature or an article that is about something that interests me is what motivates me to read.” Another described a similar perspective, explaining:

I am not the biggest reader. If the first page of a book is fun and not boring, if it starts in the middle of the action, it is more motivating. I don't like poems. We worked on them too much in middle school Norwegian class. I don't always understand what the poem wants until I google it to find the meaning and the actual meaning. I feel like everyone else knows the meaning. But I don't. It can make you feel stupid.

This final quotation is very telling, because a poem is not a text type well suited to skimming or scanning. Rather, it requires close reading to gain a fuller understanding. Overall, the findings suggest that students are not employing close reading strategies when reading for fun, which may be related to their motivation to read. In other words, students appear to derive motivation to read from both external sources – such as completing homework tasks that require answering questions about a text – and internal sources, such as reading for pleasure. However, close reading strategies are largely absent in the contexts in which students report feeling most motivated to read.

Conclusion

The results of this study show a limited level of knowledge and practical engagement among students with respect to close and critical reading. In contrast, reading strategies related to skimming and scanning were widely used and well established among the students. Moreover, students reported that these strategies were both helpful and motivating, particularly in terms of increasing reading efficiency. Despite the strong emphasis on close and critical reading in the national curriculum and the substantial attention dedicated to these strategies in coursebooks, relatively few students reported actively using them. This limited use may also help explain why close reading was not perceived as motivating.

The discrepancy between the expectations articulated in the national curriculum and students' reading skills is disconcerting and should be addressed. Greater emphasis is needed on developing students' awareness of what constitutes close and critical reading, as well as why these skills are important to learn. Educators should provide explicit explanations of close reading processes alongside clear demonstrations of how these strategies can be applied across texts and subject areas.

Educators can play a key role by systematically modelling close and critical reading practices. However, the selection of texts for this instruction should take students' reading abilities and motivational levels into account. In classroom settings, it is not uncommon for only a small number of students to have read a book from cover to cover. There are undoubtedly numerous and interrelated factors contributing to the limited extent to which students read books. However, it is evident that sustained reading occurs infrequently in school contexts. Fewer students are required to read entire books as part of their coursework. Instead, instructional material predominantly offers shorter texts, such as articles, excerpts, and poems, with limited opportunities for extended reading

This raises the question of whether there is a connection between students' generally weak close reading competence and types of texts that are being assigned. It may be argued that learning to read closely and critically is both more accessible and more engaging when students work with an entire book, as extended texts allow for deeper engagement with ideas, themes, and textual structures over time.

This research has provided valuable insight into my students' experiences with reading from multiple perspectives. The results have informed my subsequent instructional practices and highlighted the importance of explicit and sustained work with reading strategies from the beginning of the school year. In particular, using the results of this study to explain the distinction between skimming and close reading has been very effective. Students showed strong engagement when presented with data derived from their peers, and this interest appeared to promote greater motivation to reflect on their own reading practices and explore ways of improving their reading outcomes.

Mastering reading strategies develops through the gradual accumulation of experience, and there are, unfortunately, no simple shortcuts that can substitute for this process. As such, I cannot offer students quick solutions without the foundational knowledge that comes from sustained practice. I can, however, support their development by providing clear and thorough modelling, as well as carefully selected texts that meet their current levels. Although this approach is time-consuming, I have learned to appreciate the importance of explicitly modelling critical reading practices. Reading texts aloud together as a class allows me to ensure that students are actively engaging with the material and developing a meaningful understanding of the texts.

References

- Andersen, V. O., Berger, K., Gloppen, J. K., Holm, T., Stensrud, M. O., & Woodhouse, D. (2020). *Citizens YF: Engelsk for yrkesfaglige utdanningsprogram VGI*. Cappelen Damm.
- Bensaad, S., & Ouahmiche, G. (2020). An examination of reading strategies awareness among Algerian ESP students at the National Higher School for hydraulics. *Journal of Language and Linguistic Studies*, 16(4), 1784-1802.
- Charters, E. (2003). The use of think-aloud methods in qualitative research: An introduction to think-aloud methods. *Brock Education Journal*, 12(2), 68-82.
- Ericsson, K. A., & Simon, H. A. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215-251.
- Ericsson, K. A., & Simon, H. A. (1993). *Protocol analysis: verbal reports as data* (Rev. Ed). MIT Press.
- Kunnskapsdepartementet. (2019). *Læreplan i engelsk* (ENG01-04). Kunnskapsdepartementet. <https://www.udir.no/lk20/eng01-04>
- Kunnskapsdepartementet. (2019). *Læreplan i engelsk programfag* (ENG04-02). Kunnskapsdepartementet. <https://www.udir.no/lk20/eng04-02>
- Kvale, S. (1996). The 1,000 page question. *Qualitative Inquiry*, 2(3), 275-284.
- Mokhtari, K., Dimitrov, D., & Reichard, C. (2018). Revising the “metacognitive awareness of reading strategies inventory” (MARSII) and testing for factorial invariance. *Studies in Second Language Learning and Teaching*, 8, 219-246.
- Mokhtari, K., & Sheorey, R. (2002). Measuring ESL students’ awareness of reading strategies. *Journal of Developmental Education*, 25(3), 2-10.
- Noushad, B., Van Gerven, P. W. M., & de Bruin, A. B. H. (2023). Twelve tips for applying the think-aloud method to capture cognitive processes. *Medical Teacher*, 46(7), 892–897.
- Saro-Wiwa, K. (1986). *Robert and the Dog*. Longman.

Appendix

Reading Strategies Awareness Questionnaire (Adapted from Mokhtari and Shery's SORS, 2022)

The purpose of this questionnaire is to collect information concerning the strategies you use while reading academic materials in English (e.g. reading examination texts). Each item in the questionnaire is followed by 4 numbers 1, 2, 3 and 4, and each number means the following: 1 = 'I never do this'; 2 = 'I rarely do this'; 3 = 'I frequently do this'; 4 = 'I always do this'

After reading each statement, circle the number (1, 2, 3 or 4) which applies to you. You should know that there are no right or wrong responses to any of the items of the questionnaire.

Number	Pre-reading strategies	Scale
1	I establish a purpose for reading through raising some questions I like to have answered in the text	1 2 3 4
2	I make a list of all ideas I may have about the topic of the text	1 2 3 4
3	I make a list of predictions to anticipate possible content of text	1 2 3 4
4	I look at the text surface features and organizational clues (e.g., titles, subtitles, diagrams, etc.)	1 2 3 4
5	I make some comments on organizational aspects of text (e.g., title, author, source, visual aids, etc.)	1 2 3 4
While-reading strategies		
6	I read headings and subheadings, etc. to understand the organization of the text	1 2 3 4
7	I keep raising questions in mind about the text	1 2 3 4
8	I skim the text to get the general idea	1 2 3 4
9	I read aloud to concentrate well and understand what I read	1 2 3 4
10	I try to guess the meaning of difficult words through contextual clues	1 2 3 4
11	When guessing meaning from context is also difficult, I use translation into Arabic or French	1 2 3 4
12	When translation doesn't help, I ask another person (e.g., classmate, English teacher, subject specialist)	1 2 3 4
13	I read slowly and carefully when looking for specific information	1 2 3 4
14	I connect what I read to what I already know while reading	1 2 3 4
15	I annotate and mark the text while reading	1 2 3 4
16	I summarize the general idea of each paragraph in written form	1 2 3 4
17	I look for logical relationships between paragraphs	1 2 3 4
18	I look for logical relationships between paragraphs and visual aids (e.g. diagrams)	1 2 3 4
19	I identify main ideas and supporting details of each paragraph	1 2 3 4

20	I identify the organizational aspects of text in terms of its typical structure (e.g., cause/effect, compare/contrast, etc.)	1	2	3	4
21	I verify my understanding of text with classmates or teacher	1	2	3	4
22	I control my understanding of text by identifying topic sentences of paragraphs or inventing topic sentences if none exist	1	2	3	4
23	I take notes while reading to understand what I read	1	2	3	4
24	I re-read text to check my understanding	1	2	3	4
25	I examine ideas to make difference between fact and opinion	1	2	3	4

Post-reading strategies

26	I check if my predictions about the text are right or wrong	1	2	3	4
27	I examine how well the text is understood through discussion with classmates, English teacher, subject specialist	1	2	3	4
28	I make critical comments on the text	1	2	3	4
29	I re-read to summarise the text	1	2	3	4
30	I check if the questions raised at the beginning are answered in the text	1	2	3	4
31	I check to what extent my purpose of reading is fulfilled	1	2	3	4
32	I make a list of new words and terminology to learn and build vocabulary	1	2	3	4

CHAPTER 11

VOCATIONAL STUDENTS' ORAL PERFORMANCE IN CLASSROOM ACTIVITIES AND EVALUATIVE PROFESSIONAL CONVERSATIONS

Vanja Renee Larsen and Mats Berg-Berthinussen

We work at Lier Upper Secondary School, a vocational school for students aged 16-19. We teach child and youth care classes together and have the luxury of being two teachers sharing a group of 19 students. Our tight-knit collaboration gave rise to an action-research project that aimed at improving our teaching methods and ultimately, our students' learning outcomes.

Our students can work in various aspects of child and youth care when they graduate, or they can continue to college/university to take a bachelor's degree, which will help them qualify for more positions in child and youth care. The child and youth care curriculum aims to educate them to become practical, communicative, and reflective professionals who can work with children and teenagers from the age of one year up until eighteen.

In a vocational school, students should acquire both practical and theoretical knowledge as well as develop the characteristics, attitudes, and skills needed to become skilled workers in the future. Therefore, we see it as useful for the students to work with practical, vocationally oriented subjects and to develop a professional language that they can use in collaboration with colleagues, parents, children, and young people.

For us, it is important that the students' voices are heard in the various parts of the learning process so that we might understand their learning needs. Consequently, we see students' verbal expressions as enlightening us on what they have understood and might be struggling with. Thus, we believe it is essential that the students express themselves verbally in the classroom.

As part of our professional development as teachers, we recognise that being open to students' input means that you are able to change, to think anew. In order for the student's input to be valued, we as teachers must take action and make arrangements for it to play out in the classroom. Having an open mindset means that you dare to accept the input the students bring. By listening to the students' academic and social needs in the classroom, it might also provide both motivation and an opportunity to master skills that will be useful in the future.

During the school year, students are assessed according to the competence targets in the child and youth care programme's curriculum. There is an oral examination at the end of the school year and several formative evaluations during the semester. Formative evaluation takes place in the form of planned professional conversations between a group of students (occasionally, there is only one student) and/or the two of us teachers. The students are told the topic for the conversation and given the evaluation criteria 48 hours in advance, so they should have time to prepare.

However, we have experienced that our students do not fulfil their potential in these evaluative professional conversations, and furthermore, they are anxious both before and during the conversations. We wondered what we could do to improve our students' achievements during evaluative professional conversations. Thus, our investigation asks the following questions:

- What enables our students' verbal activity in class?
- What do our students need to be able to master spoken academic language in evaluative professional conversations?

We carried out our research in a child and youth care class where there were two of us teaching throughout the entire year. Being two teachers had many benefits for our research. For example, we could discuss our research approach, what we wanted to improve, one of us could observe while the other taught the class, and we could write up the results together. This was a major motivational factor for the research project.

The students were aged between 17 and 20 and of mixed genders. We teach this class for four 45-minute sessions per week. There was a maximum of 20 students, and there were no students with special needs. We have digital books, computers, and other creative materials available. This class started as two separate classes, but they were brought together due to a lack of students at the beginning of the study year.

The class was largely quiet — only a few students were verbally active during lessons. We observed this over time. In contrast, we noticed a difference in the students' ease of talking when we visited them in their field practice compared to their silence in the classroom. They seemed less engaged in the classroom teaching environment than in their field placements and even when they were orally active, they seemed to lack verbal skills and the confidence to express their own professional competence in child and youth care. Worryingly, we had heard of incidents of verbal bullying among some of the students during the school year, so we decided to start our investigation by asking the students why they are not orally active in class in an anonymous, online survey (pre-survey).

In the pre-survey, the students expressed that they felt insecure in the class and that they needed security to be able to express themselves academically. Thus, we wondered if planning for social activities in lessons could improve the relationships between the students and create a safer class environment. We decided to try out an intervention where we include non-evaluative social activities into the lessons.

We know that in this action research project, time is an important factor. It takes time to change a classroom environment and improve relationships. We are unsure whether it is possible to implement and bring about changes in such a short period of time. Nevertheless, we are hopeful that some of the students will benefit from our actions and, at the very least, we teachers will benefit from learning more about our students' learning needs.

Methods

We wished to investigate what the students needed to be able to be verbally active and decided to ask them directly. As mentioned previously, we started with a digital pre-survey. The answers from the pre-survey laid the groundwork for two further surveys – one halfway through the research period and one at the end. We asked them five questions in each of the digital surveys. It was important for us that the surveys were anonymous so that the answers were as honest as possible, and the students did not feel judged. We tried not to lead students to answer in a predetermined way but nevertheless helped us to answer our research questions.

We wanted to start from the here and now situation in the class and thus used the original syllabus in the subject. However, we wanted the research to become a natural part of the lesson and include the students' responses in our action

research. Nevertheless, we had to inform the students in the class that the activities and data that we generated from the lessons would be sent to universities and thus, had to ensure their anonymity. The students received information explaining that their contributions would be impossible to trace back to them personally, nor would we be using their contributions to assess their grades.

Balancing the role of teacher and researcher in the classroom can be problematic. However, as a teacher, you often adjust teaching methods according to your students' learning needs. Often, you discuss methods with colleagues, ask your students for feedback on the lessons, and gather ideas from various sources to help you make your lessons better suited to your students. The main difference for us with having researcher roles was that our lesson adaptations would be based on reflections on the data we gathered systematically, rather than basing adaptations on gut feeling or professional judgement.

We gathered data through three surveys using Mentimeter, an internet-based student response system. There was a pre-survey, an in-progress survey midway through the research period, and a final survey. All surveys were done anonymously online. Some questions had scale-based answer options and others were open-ended questions with the option of using your own words when answering.

Although we had landed on the research questions at the start of the project, we were not sure as to the direction the project would take, as we were doing action research. This type of research means that you have to be open to unexpected course changes and embrace surprises (McNiff, 2013). Thus, when our initial round of questioning indicated a need to implement change in the classroom activities, we decided to explore an intervention where we introduced social activities in the lesson plans. Below are the questions we posed in the three surveys and an explanation of the social activities we organised during the project's intervention:

Questions from Pre-survey 1

- 1) What do you need to be verbally active?
- 2) What kind of instruction do you need to be verbally active in class?
- 3) What do you need to prepare for an evaluative professional conversation?
- 4) Do the teaching methods influence your ability to be verbally active?

The Intervention

We hoped that planning social activities in the lessons would help the students interact and feel more comfortable with each other, to feel more secure with each other, which in turn would make a new and better starting point for developing verbal activity and learning. We chose four different activities:

1. Cultural Cafe

We organised a cultural cafe where we served Turkish tea and biscuits. This social activity encouraged the students to talk to each other. The students mingled and moved around the classroom, and we observed that group boundaries dissolved, with most students engaging in conversations with many others. Sharing food and drinks seemed to foster a sense of pride among those students who had a cultural connection to the dishes being served. This exchange sparked new discussions about culture and food that had not previously taken place. As teachers, we were able to connect these conversations to the subject we were working on at the time. Moreover, the activity allowed us to build stronger relationships with the students by participating in the sharing of personal stories about food traditions.

2. Origami

We had provided paper for the students so they could make paper airplanes. They folded the paper, decorated it with colours, and at the end we had a competition to see whose plane flew furthest. This activity also made students cooperate and be social together. They engaged in conversation, initially speaking cautiously and quietly before becoming more enthusiastic, incorporating subject-related reflections into their discussions. Some students had prior experience with origami, while others had little to no experience. As a result, those unfamiliar with origami sought assistance from those who were more skilled. To learn how to fold the paper correctly, students had to listen carefully to one another and articulate their instructions in different ways. This led to discussions about various types of origami planes and the functions different designs could serve. Students also shared experiences from their internships, describing similar activities they had organised and their observations of children engaging with origami planes. We observed that students felt comfortable asking for help, and that those who typically did not participate verbally became actively engaged in the discussion. Their contributions were valued, as they possessed the necessary expertise for the task at hand.

3. Games

Based on the students' interests, we planned various games for them to play in the classroom. Students training to become child and youth workers need knowledge of different types of play. This is therefore also useful for their practical skills. The students played four different games in the classroom:

- Knutemor (The Human Knot)
- Nøkkelnippe (The Keychain Game)
- Stolleken (Musical Chairs)
- Stafett (Relay Race)

When the students engaged in play in the classroom, we observed that they laughed, talked to each other, and relaxed. They appeared content and secure.

4. Workstations

To encourage conversations among the students, we organised workstations in the classroom. The stations combined academic tasks with engaging, hands-on activities. To complete the tasks, students had to use their speaking skills. The goal was for students to experience a sense of mastery and collaboration with their peers. Some tasks had a humorous undertone, creating space for joy and a positive learning experience.

Survey Design

Questions from In-progress Survey 2:

In the pre-survey, students had expressed feelings of insecurity in the classroom, so we wanted to deepen our knowledge of this topic. Our next Mentimeter survey asked the following questions:

- 1) Feeling secure in the classroom
 - a. What do you find dangerous/threatening for your security in the classroom?
 - b. What does feeling secure in the classroom mean to you?
- 2) Working in groups
 - a. How many people do you think a group should consist of?
 - b. Why?
 - c. Is there anything else about groups that is important to you?

- 3) Teachers want discussions to be orally active in class: How can the teacher support your oral activity?
- 4) What is it about competence targets that makes them incomprehensible?

Questions from Post-survey 3:

In the final survey, we wanted to focus on evaluative professional conversations and how to best support students' preparations for formative and summative assessments:

- 1) Does teaching with oral activity affect your ability to become professionally confident?
- 2) Oral activity in class, does it make you better prepared for an evaluative professional conversation?
- 3) What type of teaching do you need to be prepared for an evaluative professional conversation?
- 4) How do you feel that the oral work in recent weeks has affected your oral activity in the classroom?

Participants

Nineteen students participated in the surveys in total. However, there were some absences during the research period, so we did not get 19 student responses for all three surveys. In addition, a few of the questions were not answered by all the students. Nevertheless, we believe that the qualitative data we gathered from the student responses was sufficient for the next stage of our research, which was to analyse the data.

Data Analysis

The analysis process began with collecting the responses, identifying similarities and differences, and trying to sort out patterns in the data in a thematic analysis approach (Braun and Clarke, 2006). We worked with the responses manually, reading them multiple times to fully grasp their content. Since the students had the opportunity to answer freely, the analysis became both more engaging and more challenging due to the considerable variation in response length and content. We identified key terms that encapsulated the students' answers. These key terms were then quantified and organised into a diagram to visually represent the responses. We now turn to our findings, presented alongside the student response diagrams.

Findings

After several rounds of analysis and much discussion between the two of us, we landed on three main topics, or themes for our findings: Security, Groups, and Competence Targets. We now turn to explain how the data supported our findings.

Security

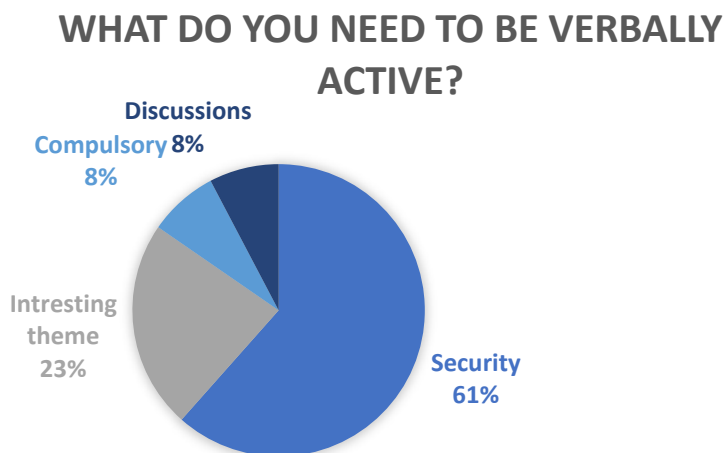


Figure 1. Factors that students consider they need to be verbally active

As Figure 1 illustrates, the majority reported that they needed to feel secure to be verbally active. We were not surprised by this finding, as we had already observed this through our teaching experience. Nevertheless, it did underline the importance of making time for relationship building during the lesson.

After analysing the second survey, we got a wider picture of the meaning behind the word security. By security, the students also meant recognition. Receiving recognition from teachers and peers was important for their feeling of security. They also expressed that having a teacher who provides clear and well-structured instruction helped their sense of security. For the students, clarity was linked to predictability and the perception of being treated fairly. One of the students informed us that to feel safe, they needed “positive relationships in the classroom.” This was a meaningful discovery, and the overall understanding after this finding was that the class needed positive social experiences.

In the next phase of the project, we asked the students to define what could be threatening or challenging to their security and oral activity in the class. We wanted to bring this out as a counterweight to security in the classroom. The students expressed that not being seen and heard by the teacher threatened their security. They wanted recognition for who they are, not only from the teachers, but also from other students in the class. They wrote about a desire to experience support, both academically and socially. We understood this to mean support from the teacher.

The students' responses indicated that the teacher's ability to organise and manage the classroom played a key role in how engaged they were in oral activities. The teacher's role was important for the students' sense of belonging. Students wrote that how the teacher's organisation of seating placements, the predictability of the lesson's structure, and the level of subject difficulty also affect their feeling of security, and consequent engagement in oral activity. They expressed a need for "equality" in class, which we interpreted as being recognised both academically and socially. Finally, the students wrote that open tasks are good for encouraging oral activity as they give opportunities for academic reflection.

Summing up the student responses to the three surveys, we found that to feel secure and engage in oral activity, students needed recognition from a positive social environment (both from peers and teachers), predictability in lessons, and opportunities for reflection. In addition, they expressed that they felt more secure when working in pairs, as it makes it easier for them to use academic language aloud. This brings us to the next finding, which emphasises how working in groups could be beneficial to their feeling of security.

Groups

In the pre-survey, we asked our students what kind of instructions they needed to be verbally active in class. According to the pre-survey answers, "working in groups" was the organisational form that best supported oral activity. Students reported also that discussions stimulated their oral participation. However, presenting something orally was considered least helpful.

In the second survey, we gathered more nuanced information about what "working in groups" meant and in what ways students considered group work to support oral activity. Students expressed satisfaction with being able to do tasks in groups and at making their own tasks in groups. As one student said: "Everyone

has a chance to speak, listen to and feel safe.” They wanted to be safe with a peer, and it was easier to talk safely with one they felt comfortable with.

As teachers, we had previously defined small groups as three or more people. However, the students’ survey responses showed that the students defined groups to be pairs. An interesting finding was that many students mentioned that the group size should be pairs, even though for bigger tasks, they accept being in groups of four.

We found this discovery very interesting because we often talk together about working in groups and think we are talking about the same number of people in groups. Up until now, we had seen groupwork differently from our students. Now, however, we have a common understanding when we discuss possibilities of working in groups and can face the needs of our students in a better way.

The size of the group was not the only factor influencing the students’ oral activity. How the groups are organised was also important. Several students pointed out that they wanted the teacher to put the different pupils into groups, rather than letting the students decide for themselves who they were going to group up with. This provided social security. It was truly clear that it was important that the teacher chose groups for such group activities. At the same time, although the teacher’s role and power resulted in varied compositions of student groups, the students also wanted to be heard. Thus, it became evident to us that the teacher must balance the role as class leader with the role of class listener, responsive to input from the student voice.

Students also expressed that systematic, purposeful oral activities were useful when the students needed to express themselves academically. According to survey 2, the students wanted “open tasks” with a large degree of autonomy so that they had opportunities to solve the task together. This was perceived as motivating. When the students felt engaged, they were more motivated to talk academically.

We noticed that the pupils wanted to be active; they wanted to work in varied ways, and they wanted to be able to express themselves in different ways. Through short sessions of social activities, we experienced that the students began to use their voices. Not in academic English at first, but gradually, the students introduced more and more professional terms from the curriculum, working collaboratively to find solutions to various problems as the activities continued throughout the research period.

In our surveys, we identified several key factors that students consider important when working in groups. The students found that working in groups was very positive for their learning. Students believed that this type of organisation of teaching triggered many varied tasks. Variation in teaching was important for the pupils' focus on learning and on activity in the classroom. A teacher must manage the class clearly, with a well-thought-out structure that allows varied teaching. A teacher must plan activities for groups by discussions, fun and play, meaningful themes, open questions and activate students throughout the lesson in various ways.

Understanding the Competence Targets

Most students reported needing to understand the competence targets. This finding was particularly surprising to us, as students had not previously expressed this need. It served as an eye-opener for us as teachers and highlighted the fundamental importance of ensuring that students understand the meaning of the competence targets, so they can respond effectively and confidently in an academic assessment.

The academic work related to competence targets. These targets are specified in the national curriculum for upper-secondary school education, the child and youth care programme. Many consider these targets broad and general in their formulation. For some, this can create an obstacle to understanding what is to be done, what is relevant, and what learning result is to be achieved, notably in the practical work on the subject. Our surveys showed that understanding the competence targets was essential for the students and that some students struggled to understand them.

This information made it possible for us as teachers to work systematically with competence targets. We changed our methods in the classroom by spending more time when working with competence targets relevant to the topic we were working on. We aimed to explain them clearly using methods that were different and interesting for the students. We learned that students must be given the opportunity to discuss and reflect in small groups what these targets mean in practice. In this way, students can gain a deeper theoretical understanding in their practical work and be better equipped for evaluative professional conversations.

Final Reflections on Our Action Research Project

“What bugs us?” was the beginning of this research making us reflect on some challenges we faced as teachers in vocational subjects. We found ourselves in a situation where we had students who excelled in the field and did a good job in their profession, but in the classroom, they were not able to fulfil their potential and show us what they were capable of. The students’ final exam is both practical and oral. It is important for us to provide the education they need to succeed in the final examination. Evaluative professional conversations (EPCs) are formative assessments that give them the opportunity to train for the exam. We wanted to improve our students’ achievements in these assessments (EPCs) and increase their oral activity in the classroom.

The students were involved in this research from the beginning. They were engaged in their own learning and had to take an active part in developing teaching methods that answered their own needs. Although we do not have data to back up our claim, we believe that involving the students in teaching preparation increased their motivation for learning. Furthermore, we suspect that an indirect consequence of this research project is that the students will feel more self-confident and valued.

One of the challenges in this research was to be able to see ourselves and our teaching with an open mind. The research project on the other hand, gave us the opportunity to investigate the struggles that the students were facing. In our findings the students answered that they needed security, but what is that? We tried, adjusted, and tried again. Were we able to give the students what they needed? We had a very short time doing this research and we realised that making significant changes needs more time. If we had done this over a longer period of time, we think the results would have been more effective.

This project forced us to systematically research our students’ needs and make changes in our teaching methods. We realised that we needed to let the students be more active and participate in their own professional learning. As soon as we started to investigate the needs of our students, we became motivated and engaged on a whole new level than what we had been before. It also made us question the way the school system is built for students who have chosen to study vocational subjects. Our reflections became topics for discussion with colleagues and the school administration.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi: 10.1191/1478088706qp063oa
- McNiff, J. (2013). *Action research: Principles and practice* (3rd ed.). Routledge. doi: 10.4324/9780203112755

Appendix

Written Feedback from the Students on Their Experiences of Working with EPC

Question	Student responses
1a) What is dangerous?	Oral presentations. Less focus on communications To participate in groupwork where I'm not safe. Someone laughs at you. To do and say wrong. Speak your mind is dangerous. Negative body language What others think about you Given looks by others
1b. What feels safe for you?	The feeling of been seen and heard Supported by others Belonging Recognition from students and teachers Good discussions Good reflections Positive class where many students participate. Calm class The class has positive relations. Include each other. Teacher control work groups and where students have their seats. Not being judge by others. Support when needed. Friends Work in groups Information by teacher in time. Predictability.
2a) How many students do you think a group should consist of? Why?	2 maximum. 4 students or less. Everyone has a chance to speak, listen to and feel safe. Easier to share work. Easier to listen to each other. To be safer. Everyone can be more participating.

2b) Is there anything else about groups that is important to you?	<p>That the groups are selected by the teachers.</p> <p>That the groups are diverse.</p> <p>Hearing everyone.</p> <p>Having discussions about subject matter.</p> <p>Building good relationships.</p> <p>Similar skill levels within the group so that I don't have to do everything.</p> <p>Perhaps a sense of community.</p> <p>Everyone gets a chance to speak and be heard.</p> <p>Exploring more and learning from each other.</p> <p>Being able to share thoughts with others.</p> <p>Respect.</p> <p>Being placed with someone I can work with.</p> <p>Having at least one person in the group whom I trust.</p> <p>Being able to express preferences that are considered.</p> <p>Working together.</p>
3. How can teachers plan for more oral activity in the classroom?	<p>Open questions</p> <p>Funny questions.</p> <p>Important themes.</p> <p>Discussions.</p> <p>Smaller Groups.</p> <p>Kahoot.</p> <p>Play and discussion.</p> <p>Group task.</p> <p>Group make their own task.</p> <p>Plan more active lessons with various types of work</p> <p>Rules for talking so students can be heard.</p>
4. How can students find competence target so hard to understand?	<p>Many competence target are so alike.</p> <p>Too many.</p> <p>They are understandable but students doesn't use time to work with it.</p> <p>They are easy to misunderstand.</p> <p>Some of them are hard to understand.</p> <p>Some competence goals are written difficult and have difficult language.</p> <p>Teacher explains competence goals different.</p>

PART 3
SCHOOL LEADERS' PERSPECTIVES
ON TEACHER RESEARCH

CHAPTER 12

DRAMMEN UPPER-SECONDARY SCHOOL CASE, NORWAY

Christine Funtek

Introduction

Drammen Upper-Secondary School is one of Norway's largest upper-secondary schools: it hosts over 1300 students. Most of the students here are enrolled in the general studies and college preparatory programmes. We offer a standard college preparatory curriculum in the natural sciences, technology and social sciences, and have our own specialised lines, so-called niches, with a focus on internationalisation (parts of the subjects are taught in English), entrepreneurship, and research. Furthermore, we have elite sports and Arts, Design, and Architecture as college preparatory offerings. In addition, we offer SESAR, which is a vocational programme in sales, service, and tourism, and a separate class for those with special needs. The S-class is a special education programme for students who, after application and an expert assessment from the PP service, are admitted to upper-secondary education. The instruction provides basic competence without grades and is based on an individual education plan (IEP). These students are divided into smaller groups in various subjects throughout their schooling.

The students at Drammen Upper-Secondary School come from diverse cultural backgrounds. Many of the students come from other countries and cultures, have values that differ from those considered typically Norwegian, and have a mother tongue other than Norwegian. Furthermore, we have a diverse student body in terms of socioeconomic background. All in all, the student population at our school comprises a wide spectrum of conditions and backgrounds. This results in both an exciting diversity and various challenges in everyday school life. Common challenges include, among other things, encouraging the students to

appreciate the differences that exist and understanding that it is completely acceptable to disagree on some matters while simultaneously accepting that we have different values, cultures, and backgrounds. This is something we actively work on here at the school, both during class time and, particularly, during the autumn when we hold a diversity week. During the diversity week, we focus on the positive aspects of the diversity present in the school. Among other initiatives, we work to promote the idea that we are all equally valuable regardless of language, background, or religion, and we invite to both discussions and lectures to involve and engage the students.

Professional Development Activities

At Drammen Upper-Secondary School, we continuously engage in professional development work in accordance with the curriculum framework. The school is a professional community where teachers, leaders, and other staff reflect on common values, assess, and further develop their practice to varying extents and in different ways. We work together in subject groups where the main focus is on the pedagogical work within the subject area, as well as in departmental and line meetings to develop excellent offerings for the students. During subject meetings, teachers share various teaching plans they use, methods and assessments, and reflect on how these work and how they might be improved. Teachers are also given the opportunity to participate in job shadowing and courses through Erasmus+ when the school has the funds for this, an opportunity we consider important for personal development and inspiration. Those who have the chance to participate are expected to share their experiences with their colleagues. We have several cooperation agreements with schools in Europe, including in Belgium, France, Germany, Italy and the Czech Republic, where we travel with students on exchanges and collaborate on various academic projects, both on-site and digitally.

Drammen Upper-Secondary School is a university school for USN. As mentioned earlier, we are primarily a general studies school, and during the past four years, we have been in a process of reorganisation with the goal of aligning more closely with the expectations of the subject renewal reform. In the process of reorganisation, the management team was accompanied by advisors from USN. Guro Hansen Helskog and Rikke Sundberg have followed the process closely throughout the entire period. Philosophical conversations combined with academic theory have inspired us and contributed to the development within the

management team, an experience that we carry forward into our work with both subjects and in our departments and lines.

In addition to the specialised programmes we already offer at the school (Forsker, Drammen International, and Inspiro), we have, through the reorganisation, established new lines such as “Samfunnsforskeren” (the Social Researcher), “Business”, and “Realfagslinja” (the Science Programme). The new organisation has focused on creating theme-based subject packages for students on the various programmes. In the Social Researcher programme, we build on a foundation of research enthusiasm and creativity, aiming to prepare students as thoroughly as possible for further studies through research and academic writing. For example, they have utilised advisors from USN and are in close cooperation with the Holberg Prize in Schools (HiS). We are the first and only school in the country to be designated as a Holberg School.

We are committed to developing ourselves as a school and believe it is important to research and to engage in self-research. In this context, one of our staff members, in close collaboration with USN and the school’s leadership, has applied for and secured public funding for a PhD project that addresses interdisciplinary approaches and student participation.

Overall Observations of Teachers’ Engagement in Research in their Classroom

Research can feel overwhelming — there is so much interesting material to absorb, yet almost none of it tells you exactly how to act on it in your own school. Starting a new project takes longer than expected: not just to get going, but to figure out how to turn theoretical ideas into practical steps. By the time real progress begins, the initial energy has often faded.

Looking back on my own studies, theory was the main focus throughout. Textbooks drew on research, but the research process itself was rarely discussed. What I remember wishing for, and what I still wish for, was something more concrete: “If you use Strategy X, you can expect Outcome Y, and here is why.” The ideas often felt too abstract to translate into classroom action. There was a noticeable gap between the theory and how it might actually be used.

In my conversations with newly trained teachers, I have rarely heard anyone mention doing research in a meaningful way. Their routines seem largely unchanged from day one, and none have told me they plan to take on a research

project as part of their professional practice. Perhaps some assignments during training could qualify as research, but I suspect they experience them simply as practical exercises, not as systematic inquiry. This suggests we need to make the idea of research more explicit and to clarify that it does not have to mean large-scale university-style studies. It can be as simple as comparing results when you try a new assessment method against an older one. Small-scale, built-in projects that fit inside existing responsibilities rather than adding to them are the most likely to survive the first term.

We have not yet established a systematic approach for observing how teachers engage with research in their classrooms. Teachers participating in the TREL project share their experiences within subject groups, but their actual research processes are not formally observed. As a result, we have not identified any standout topics, nor have we been able to draw connections between their findings and the specific needs of our school. We have not yet received teachers' final research results, so it is too early to assess their relevance or impact on professional development. One broader pattern we have noticed is that students tend to struggle with self-assessment and evaluating their own learning. This is an area that intersects with many of the project themes.

I am curious to hear more as the project develops. I want to know whether participants feel they have achieved what they set out to do, and whether the experience has shifted how they think about their own teaching. That kind of honest reflection, not just reporting outcomes, is what I think would be most useful to share across the school.

I am still very curious about how things are going with the project and am eager for more updates. I want to know whether the participants think the initiative has met its goals and if they feel they have achieved what they set out to do. It is also important to highlight that when working on areas like assessment, testing a new strategy against an old one to compare results could be valuable. This approach needs a clear plan, and any new method should fit smoothly into a teacher's regular responsibilities. The goal should be to keep the process from becoming too time-consuming and instead make it a natural part of their professional work.

Recognition and Appreciation

I am genuinely interested in seeing where TREL leads, though my understanding of the full scope of the project is still limited. What I notice most clearly at our school is the gap between sharing experiences that could drive change and actually acting on what we hear. Teachers often find it easier to talk about what they do in the classroom than to reflect critically on whether their methods are working. This is a real area for development, and I think TREL addresses it directly. We have not yet established a systematic way of observing how teachers engage with research in their classrooms, and without that, it is hard to build on what individual teachers are learning.

Small, manageable research projects that are built into what teachers are already doing are the ones most likely to stick. If the task is to “tweak and observe” rather than to “redesign and report,” more teachers will take it up. The challenge, and the opportunity, is to design frameworks that feel like natural extensions of teaching rather than academic exercises. For this to work, information shared through TREL should not only explain theoretical principles but translate them into something a teacher can try on a Tuesday afternoon. I look forward to learning more about the project’s outcomes, and to seeing research become a living part of everyday practice rather than something that stops when the project ends.

To engage with and acknowledge the teachers’ research, we rely on them sharing their experiences with the leadership and the wider faculty. If we find this knowledge valuable, we will be able to implement and integrate it into our ongoing efforts to develop further and improve our professional methods.

CHAPTER 13

LIER UPPER-SECONDARY SCHOOL CASE, NORWAY

Nina Forsberg

Introduction to Lier Upper-Secondary School

Lier Upper-Secondary School (Lier USS) is a vocational school located in Lier, outside Drammen, which is Norway's fifth-largest city. The school has around 630 students and 130 teachers and other staff. It offers a wide range of programmes: Electrician, Healthcare, Childcare, Business and Administration, Design and Handcrafts, and Logistics. The school also serves as a specialist centre for students diagnosed within the autism spectrum. Over the years, this combination of vocational breadth, specialist support, and international engagement has come to define what Lier USS is and what it stands for.

The school has made raising the status of vocational education a deliberate priority. Since 2014, flexible curricula have been central to this effort. The curricula are designed so that students can earn vocational certificates while also accessing pathways to general studies and higher education. The aim is to merge practical skills with academic knowledge in a way that feels relevant rather than imposed. Experience has shown that international projects, particularly those funded by Erasmus+, have helped on multiple fronts: to build reputation, increase recruitment, and improve student motivation.

International collaboration has been a sustained part of the school's development since 2014. Through Erasmus+ projects, students and staff have been able to travel and build partnerships with schools in Ireland, Germany, Spain, Poland, and England. These collaborations have enriched vocational training across fields, from electrical engineering and floristry to specialist programmes for neurodiverse learners. Mobility is now available across all of the school's

programmes, and handling international projects has become a routine part of how the school operates.

Alongside the international work, there has been growing pressure to respond to a revised national curriculum. The updated curriculum places greater emphasis on basic skills and core values that run through all subjects. At Lier USS, this means dedicating real time and resources to making those values visible in everyday teaching.

In the spring of 2019, the school was accredited as a VET Charter school in recognition of the quality of its previous international projects. Since 2020, exchange programmes have been available across all programme areas. International collaboration is now embedded in both the management structure and the day-to-day culture of the school, rather than being treated as an occasional extra.

School development at Lier USS is a collective undertaking. Teachers, school leaders, and employee representatives are involved in ongoing dialogue about priorities and direction. Nearly 80% of staff are members of labour organisations, and union meetings are held during work hours. Thus, the school genuinely tries to move beyond consultation toward co-creation, making space for support staff and classroom teachers alike to shape decisions.

This collaborative approach is also reflected in how the school revises curricula and introduces new teaching methods. Working groups comprising teachers, support staff, and union representatives meet to share practical experiences. A recent example is the redesign of the healthcare programme, where nurses, teachers, and student representatives worked together to integrate simulation-based learning and digital tools. The new programme design strives for balance between the theoretical grounding and hands-on practice.

Teachers at Lier USS are regarded as professionals who lead their students' learning every day. They are not just implementers of policy. This requires a combination of subject expertise, ethical awareness, and the willingness to try new approaches. One teacher in the Childcare programme, for example, redesigned her assessment strategy around student-led portfolios: learners document their development through reflections, photographs, and peer feedback. The school's leadership team supports this kind of experimentation by providing training in formative assessment and protected time for peer collaboration.

In recent years, Lier USS has invested in helping staff develop a deeper understanding of what professional practice means in a vocational context. Goal

3 of the school's operational plan (Strengthening Relationships and Equitable Interaction) has underpinned a series of workshops on ethical decision-making, peer mentoring programmes, and forums for sharing classroom challenges. A key part of this work has been the partnership with Conexus, led by consultant Jarl Inge Wærnes, who has guided staff through reflective processes aimed at clarifying what it means to be a professional practitioner. In one workshop, participants worked through practical dilemmas (for example, how to accommodate a student with autism in a noisy workshop setting) and developed concrete strategies through role-play and group analysis.

External contributors have added to this work. Professor Eirik Irgens from NTNU led seminars on transformative leadership, with a focus on empathy in diverse classroom settings. Tone Skyseth Westvig from Oslo Municipality's Learning Team introduced practical techniques for fostering social belonging, including 'check-in' circles at the start of lessons, where students briefly share their emotional state. Teachers have reported that these external perspectives helped them feel more confident in addressing complex classroom dynamics.

In 2023, the school launched the 'Leadership Together' initiative, aimed at strengthening collaboration between school leaders and employee representatives. This initiative aimed at clarifying roles and expectations, building ethical awareness around issues such as resource allocation and inclusion, and making the most of limited budgets. Central to the initiative is the Co-Creation Lab, which is a monthly forum where leaders and staff work together on pressing challenges. In one session, analysis of student feedback and attendance data led to the development of the 'Career Bridge' programme, in which local businesses host monthly workshops offering hands-on project experience. Early results from this programme indicate a 20% increase in student participation and improved satisfaction among employers.

For 2024–2025, the school has outlined a series of planned activities: ethical and legal workshops covering workplace agreements (e.g., SFS2213) and educator responsibilities; peer-led learning communities where teachers share strategies across disciplines, for example, integrating AI tools into logistics training or using gamification in healthcare simulations; and a Leadership Shadowing programme that pairs junior teachers with senior leaders to observe decision-making in practice.

One practical example of this commitment to reflection is the 'Reflective Friday' initiative, in which staff dedicate the last hour of each week to noting what they

have learned and setting goals for the following week. One teacher described how taking that time has helped her approach Mondays with more clarity. It is a small shift, but it points to a broader effort to make reflection a normal part of the working week rather than an occasional event.

These developments have not come without difficulty. Time is a persistent barrier: teachers are expected to manage classroom duties, administrative work, and continuous professional development simultaneously. A 2023 internal survey revealed that 65% of staff feel overwhelmed by these competing demands. There is also some resistance to change, particularly among teachers who have worked in the same way for many years and remain unconvinced by new approaches. To address this, the school has introduced “Innovation Grants”. These are small funds for teachers who propose experimental projects. One teacher used a grant to develop a virtual reality module for electrical engineering students, allowing them to simulate wiring complex circuits; the project boosted student engagement and inspired colleagues to explore similar tools.

Internationalisation remains central to the school’s development. Annual Erasmus+ funding of approximately €90,000–100,000 supports student and teacher exchanges, particularly in vocational fields. Childcare students have done internships at German kindergartens; teachers have attended workshops in Spain on inclusive education and brought back practical strategies such as visual timetables for autistic learners. The school also hosts international students, including a group from Poland studying sustainable design. One Norwegian student reflected that working alongside peers from different backgrounds had taught him problem-solving approaches he would not have encountered otherwise; he expects to carry these skills into his future career in carpentry.

The school supports staff development through partnerships with universities, enabling some teachers to pursue advanced qualifications such as master’s degrees in educational leadership or vocational pedagogy. Peer observation programmes allow teachers to visit each other’s classrooms and give constructive feedback focused on strengths. An online resource hub that covers topics from classroom management to trauma-informed teaching provides accessible reference material. The ‘Digital Mentor’ programme, in which tech-confident teachers support colleagues in integrating digital tools, has also made a difference: one mentor helped a previously reluctant colleague to adopt interactive quizzes via Kahoot!, which noticeably increased student participation during theory lessons.

As Lier USS approaches its tenth anniversary, the school has set out several priorities for 2025: expanding support for neurodiverse students through sensory-friendly classrooms and specialist staff training; deepening ties with local businesses to co-develop curricula that reflect current workforce needs; and embedding classroom-friendly research approaches into daily practice, so that teachers can systematically evaluate and refine their methods. One teacher put it simply: “We are not just preparing students for jobs, we are nurturing adaptable, curious individuals who can thrive in a rapidly changing world.” That practical, outward-looking spirit that is grounded in what students actually need runs through everything the school does.

From the beginning, Lier USS has worked to improve vocational education through flexible curricula, genuine international collaboration, and a shared sense of responsibility for the school’s direction. The underlying belief is that every student should have the opportunity to develop their judgment and the capacity to work well with others to help them succeed in future working life. The school tries to enact democracy, intercultural understanding, and resilience in practice and not just name them in policy documents.

The pressure to adapt to revised curricular demands has grown in recent years. The updated national curriculum emphasises basic skills and core values across all subjects, and at Lier USS this translates into concrete work: helping students understand their own learning, building a sense of mastery, and developing study habits that support lifelong learning. Implementing these goals takes time and resources, and the school continues to work at aligning its international projects and internal development efforts with this broader direction.

Taken together, these efforts reflect a school that takes seriously its responsibility to prepare students for a world that keeps changing, and to support the staff who do that work every day.

Professional Development

The Framework for Learning and Leadership was introduced through the Viken initiative and has been actively integrated into the school’s development efforts, working in tandem with Chapter 3 of the school’s overarching principles, particularly section 3.5 on professional communities and school development. This framework serves as a professional and pedagogical reference for all staff involved in upper-secondary education within Buskerud and aims to elevate the

quality of teaching across classrooms and workshops. It aligns with the county's vision and values, designed around four interconnected pillars: human perspective (guiding collaborative interactions), shared attitudes (prioritising student learning and development), professional communities (the primary forum for collective development), and practice principles (research-informed strategies to enhance student outcomes). The framework is binding, designed to shape daily professional practices and serves as a compass for interactions among students, teachers, leaders, and the broader school community.

Leadership transitions since May 2021, including a new principal, assistant principal, and five middle managers, have posed challenges in maintaining continuity within professional communities. However, guidance from organisational psychologist Pål Riis, who has advised the leadership team since 2021/22, has provided stability. Collaborative time has largely been dedicated to development groups. In the 2022/23 academic year, teachers proposed 12 themes for in-depth exploration, forming groups based on shared interests. While end-of-term reflections using the “Done – Learned – Insights” model facilitated idea-sharing, it became evident that mere discussion did not translate into classroom changes, as there was limited commitment to experimentation or iterative improvement.

The 2023/24 partnership with Høgskolen i Innlandet (HINN) focused on inclusive practices and instructional quality, informed by Professor Kirsti Klette's research on effective teaching. Her framework emphasises four pillars: clarity in goals and support structures, well-managed classrooms, intellectually stimulating tasks, and meaningful classroom dialogue. Teachers selected focus areas, while leaders planned meetings with clear agendas, assigned roles (e.g., chairperson, note-taker), and action-learning tools such as the “development wheel” or “process arrow.” Term-end sharing occurred in smaller clusters rather than plenary sessions. Success factors included leadership mentorship, pre-planned agendas, and documentation requirements. Feedback highlighted a preference for collaborating with colleagues teaching the same student groups, a structure implemented in the current academic year.

For 2024/25, professional communities now operate under “Teams Around the Subject,” though cross-disciplinary projects have diverted focus from inclusion and teaching quality, a priority the school aims to recentre by spring 2025.

Internationalisation remains a cornerstone of professional development, supported by annual Erasmus+ funding (€90,000–100,000). Partnerships with

schools in Ireland, Germany, Spain, Poland, and England enable student and teacher mobility, particularly in vocational fields such as electrical engineering, sales, floristry, and tailored programmes for students with autism. Teachers are encouraged to engage in international projects, fostering global perspectives and innovative practices.

Professional development is further supported through workshops, seminars, peer-led communities, online resources, and opportunities for advanced qualifications via the national “Kompetanse for kvalitet” [Competence and quality] initiative. County-wide networks and meetings for new staff promote cross-school collaboration. These efforts underscore the school’s commitment to blending theoretical insights with practical application, ensuring teachers remain dynamic, reflective practitioners aligned with both local and global educational advancements.

Teachers’ Engagement in Research in their Classrooms

Let me start by saying this: research literacy is not just about reading studies or attending workshops. It is about being data-informed and theory-informed at the same time, knowing what works in the classroom and why. But here is the catch: even when we hear great ideas, turning them into action is where most of us stumble. I have seen it again and again, teachers nod along in meetings, but back in their classrooms, nothing changes.

As a leader, my job is to nudge, support, and sometimes push. We track grades, analyse surveys, and observe classes, not to micromanage, but to see where we are headed. Take my master’s project, for example. We built a vocational programme from scratch with local businesses, using action research. Every few months, we would sit down with industry folks and teachers, asking, “What is working and what is not?” It was not perfect, but that back-and-forth between theory and practice, that is where real learning happens. Still, I will admit that keeping that momentum alive is tough. Without buy-in, even the best ideas gather dust.

We have tried everything to make research stick. Every Thursday afternoon, teachers get four hours for development, half in cross-subject groups, half in subject teams. Some groups thrive; others don’t engage to the same degree. A few years back, we let teachers pick topics they cared about, AI in math,

gamification in language classes. A few dove in, but too many just went through the motions. One teacher told me, “It feels like another meeting where we talk, but nothing happens.” That hit hard.

Universities could be partners here, but let us be real, money is tight. We did team up with Høgskolen i Innlandet on inclusive teaching; great workshops, but once they left, we were back to square one. What we need is co-creation. Not “here’s a theory, now apply it,” but “let’s figure this out together.” Teachers and academics should ideally work side by side, designing studies that actually fit our classrooms.

Tools help, but they are not magic. We use process maps and development wheels, visual stuff to show where we are and where we want to go. Imagine a wheel divided into slices: “student engagement,” “feedback,” “differentiation.” Teachers mark their current spot and set goals. Some teachers find this helpful. When a young teacher told me, “This finally made me see why my kids zone out,” I knew we were onto something. But time is always the enemy. Even with those four hours a week, teachers are swamped. Some teachers are also more inclined to rely on their proven experience rather than on recent research findings.

It is important to lead by example. If I ask teachers to try inclusive methods, I should use those methods in staff meetings. We brought in an organisational psychologist to coach us on this. We practiced “action research on ourselves,” reflecting on how we lead, not just how we teach. It is messy, but when leaders model curiosity, it may trickle down.

Here is my dream: universities and schools working as true partners. Not “research projects” that end up in journals nobody reads, but simple, classroom-focused studies. Like, “Does this new feedback tool boost motivation?” Collect data together, tweak it, try again. No jargon, no 50-page reports, just practical steps. Teachers need frameworks that do not feel like homework. It could be a good idea to start small: one question, one class, one term. But none of this works without trust. Teachers need to feel safe to experiment, fail, and try again. Academics need to become more aware and sensitive to the schools’ everyday life. I have sat through too many lectures where theorists talk at us, not with us. But then there are moments, like when a veteran teacher shares a tiny tweak that transformed her grading, that remind me why we should bother. Research literacy is not a checkbox. It is a mindset. And mindsets take time.

Recognition and Appreciation

Changing classroom practices is a significant challenge. There is a gap between sharing experiences that could lead to change and actually acting on what we hear. Teachers often find it easier to talk about what they do in the classroom than to critically reflect on how their practice works or does not. This is a key area for development. Over recent years, we have aimed to define a “Good Lier Practice” framework, but leadership recognises the need to set clearer expectations. This will be the next step for our professional development groups.

TREL’s goal, to create simple, manageable models for teachers to research their own practice aligns perfectly with this need. Teachers require tools that integrate seamlessly into their daily routines. Step-by-step guides or adaptable frameworks could bridge the gap between theory and action. For instance, something as straightforward as a reflective checklist or a collaborative peer-observation protocol might help teachers systematically evaluate their methods.

I see this as critical because one of the weaknesses in Norwegian classrooms, in our view, is the lack of classroom-friendly research approaches. Teachers often lack the time or tools to turn insights into tangible changes. By spreading the expertise of TREL teachers (those participating in research-driven professional development), we hope to build capacity within our teams. These teachers gain skills through projects like yours, and we want to channel that knowledge back into our schools.

In short, practicality is key. If teachers can “tweak” and see immediate relevance to their daily work, these models have a real chance of sticking. The challenge and opportunity lie in designing frameworks that feel less like academic exercises and more like natural extensions of teaching.

REFLECTIONS AND OUTLOOK: STRATEGIES AND FUTURE DIRECTIONS FOR RESEARCH LITERACY IN TEACHING AND IN TEACHER EDUCATION

**Shaun Nolan, Aslı Lidice Göktürk Sağlam,
Raees Calafato, Anna Wärnsby, and Kenan Dikilitaş**

Enhancing teachers' research literacy is a core requirement of formal contemporary teacher education in the TREL Nordic-Baltic consortium's programmes. The TREL project's collaborative framework provided a unique opportunity to observe and examine how research literacy is taught in pre-service teacher education. To further this goal, we have identified key strategies across three critical areas: 1) teaching research methods to pre-service teachers, 2) supporting in-service teachers conducting research in the classroom, and 3) sustaining TREL's momentum. By implementing these strategies, we aim to provide teacher educators, schools, pre- and in-service schoolteachers with guidance and support to explore their practice as a means for sustainable professional development. Additionally, providing pre-service teachers with insights into research methods ensures they are well-prepared to critically contribute to educational advancements. Finally, we hope that sustaining the momentum of the TREL project through ongoing partnerships and institutional support will further embed research literacy into the core of our educational systems.

1) Teaching Research Methods to Pre-Service Teachers

The programmes featured in this volume demonstrate diverse approaches to teaching research skills among pre-service teachers, each shaped by its own narrative. For instance, at Malmö and Gothenburg universities, the teaching

profession and research methodology are integrated into core courses that culminate in a final thesis. In contrast, Tallinn University adopts a model of stand-alone courses dedicated to research skills, covering both qualitative and quantitative methods. Other programmes offer separate research-focused courses with explicit instruction in these methods, supplemented by data collection and analysis workshops. Although the expected competencies vary – from conducting action research to mastering advanced statistical procedures – all programmes share a common conviction: engaging pre-service teachers in learning to do research is essential for cultivating reflective, research-engaged teachers. Such engagement may empower future teachers to critically examine and problematise the challenges they will face in their classrooms.

It is also important to acknowledge that teacher educators in every teacher education programme recognise the challenges pre-service teachers face in translating their theoretical research knowledge into practical teaching contexts. To illustrate, in Chapter 5's Latvia case, Karapetjana and Roziņa highlight the following: “Despite prior experience with bachelor's thesis writing, instructors and supervisors observe that students often struggle to articulate research goals and questions or to formulate a hypothesis – skills fundamental to any empirical research project.” (p. 102)

To overcome these challenges and motivate the application of research literacy in real-world settings, teacher educators emphasised the importance of making explicit connections between research activities and everyday classroom practice. This approach not only supports the development of a reflective practitioner identity but also fulfils the mandates of teacher education programmes. For example, Surkalovic et al.'s Chapter 1 highlights insights from OsloMet, where teachers pointed out the disconnect between research literacy and professional practice. They argued for greater emphasis on the developmental aspect of Research and Development, focusing on how research skills can meaningfully contribute to teachers' continuous professional development.

In Chapter 2, Nolan et al. observed that Malmö and Gothenburg student teachers are generally capable of linking their professional experiences with the academic and research components of their course work. However, they stressed that these connections do not occur automatically and require active facilitation by teacher educators to ensure these relationships are truly meaningful. As noted, “it is essential that instructors actively support students in making these connections

fully meaningful” (p. 64). They further argued that such integration has the potential to enrich the learning process.

Similarly, Ratkevičienė et al.’s Chapter 3, which presented insights from teacher educators at Kaunas Technical University, highlighted that many teachers perceive research as a task for specialists rather than an integral part of their pedagogical role: “Teachers do not associate research activities with their professional (pedagogical) work. At best, they consider them as a complementary task and assume that only scientists, researchers, or experts – not teachers – can conduct research” (p. 77).

This view positions research as an add-on rather than a core professional activity. In response, these educators emphasised the need to reframe their pedagogical role, seeing research as a collaborative and empowering process. Such reframing encourages pre-service teachers to collaboratively develop and test ideas, thereby addressing some of the most difficult challenges encountered in classrooms and schools, as demonstrated in the following quotation:

teacher educators are encouraged to understand their pedagogical role as an opportunity to empower pre-service teachers to develop, test, and refine shared understandings to pursue worthwhile educational goals. This entails orienting research activities toward addressing some of the most pressing and contextually grounded problems encountered by teachers in classrooms and schools. (p. 83)

Finally, in Jõgi et al.’s Chapter 4, the significance of integrating research with teaching practice in Tallinn University is underscored in their reaction to TREL partner observers’ feedback:

We appreciate the observers’ feedback on strengthening the link between the analyses taught in the course and their practical applications in teachers’ and school leaders’ everyday work. While this is challenging, it represents an important area for improvement in the course. (p. 91)

While observers acknowledged efforts to connect course-based statistical and analytical instruction with practical applications in schools, these connections remain underdeveloped. The partners concluded that, despite current challenges, enhancing this integration is essential for the course’s future impact.

In sum, teacher educators from these Nordic-Baltic contexts stressed the importance of bridging the gap between theory and practice while fostering a

dynamic environment that supports ongoing teacher development. We hope that the locally outlined best practices in this handbook offer valuable insights into the contextual practices through which pre-service teachers learn to do research within faculties. Furthermore, these practices aim to guide teacher educators in preparing future teachers to become research literate – equipped not only to understand research but also to conduct classroom-based research and improve their teaching.

Drawing on the chapters presented in this book, we propose the following implications:

Integrate research with professional practice

In all cases, teacher educators highlighted the importance of creating explicit links between academic research activities and everyday teaching challenges. These efforts underscore how research skills may contribute to professional development by enabling pre-service teachers to select research topics that resonate with their interests and classroom experiences, thereby enhancing a sense of ownership. At Malmö University, this approach resonated through the metaphor of adopting a “researcher’s gaze”, while at Tallinn University, it was reflected through the explicit alignment of research tasks with activities in stand-alone courses and workshops, ultimately supporting students’ thesis work. Teacher educators at both Malmö and Tallinn universities highlighted the importance of providing ongoing support within formal teacher-training programmes and classroom settings, such as guidance on preparing annotated bibliographies and designing data-collection instruments, including questionnaires and interview questions.

Similarly, in all cases, research was framed as a personal endeavour that requires deliberate methodological and textual decisions while promoting critical reflection on both process and outcomes. For example, in the OsloMet case, revising research questions based on emerging data was identified as a crucial part of an authentic learning experience. This flexibility may accommodate the trial-and-error nature of early-stage research among novice researchers, allowing them to adjust their research questions in response to emerging data.

Early introduction and scaffolded research literacy

Teacher education programmes examined in the TREL project employ a scaffolded course design that systematically guides pre-service teachers from narrowing a research topic into focused research question(s) through hands-on

data collection and analysis. These programmes capitalised on breaking the research process into clear, manageable steps and allocating sufficient time to each stage to promote student independence. In the OsloMet case, for example, teacher educators showcased implementing low-stakes assignments, such as reflective journals or mini-inquiries, to introduce research literacy gradually and build confidence before engaging in more complex tasks.

Leveraging educational technology

Classroom observations at Malmö and Tallinn Universities highlighted the use of international databases and search engines (such as Google) to support literature searches and raise awareness about locating reliable studies online. At OsloMet, online tutorials and step-by-step guides were offered through the university's website to support pre-service teachers throughout the research process. In addition, collaborative web tools such as Padlet were used to stimulate ideas and refine research topics into focused questions (see Chapter 1). In the OsloMet case, web tools were also seen as a way of building a safe space where students could freely explore and test different research topics and questions, both digitally and in smaller groups. Furthermore, educational technology can extend learning beyond the borders of the classroom when teaching research skills. To illustrate, ideally, adopting flipped classroom approaches allows pre-service teachers to engage with core content, such as readings or recorded lectures, prior to class, thereby freeing in-class time for interactive discussions, group work, and collaborative projects (see Kaunas Technical University case in Chapter 3). This structure aims at pre-service teachers focusing on more communicative and productive tasks in the classroom.

Fostering collaborative and reflective research communities for novice researchers

At Gothenburg University, students were given the opportunity to meet and work with experienced researchers during the observed research workshops. These interactions modelled diverse methodological approaches to research and encouraged professional socialisation between novice and experienced researchers, thus fostering reflective learning. Similarly, at OsloMet, peer reviews, collaborative workshops, and group projects were implemented as best practices to build a vibrant research community. Additionally, reflective practices, such as utilising visual representations of research phases to help students track progress and plan future steps at Malmö University, helped pre-service teachers to organise and construct their learning.

In sum, the best practices in teaching research showcased during classroom observations in the TREL network imply that pre-service teachers need to be introduced early to both learning about and learning to do research as part of developing research literacy. Teacher educators can scaffold this process in various ways such as:

- implementing low-stakes research assignments, such as reflective journals or mini-inquiries.
- planning regular peer reviews, collaborative workshops, and group projects to learn from one another.
- guiding students through the research process, from engaging with literature to hands-on data collection and analysis.
- building a safe and supportive environment where students can freely explore and test different research topics and questions, both digitally and in small groups.

Additionally, the best practices we observed in classrooms and discussed within our network stressed the importance of linking research to professional practice, establishing research communities for novice researchers, and harnessing the power of educational technology to enhance the research literacy of pre-service teachers.

2) Supporting In-service Teachers Conducting Research in the Classroom

Parts 2 and Part 3 of this volume, focusing on in-service teacher and school leader cases, demonstrate that, in the ever-evolving world of education, empowering in-service teachers to engage in classroom-based research is crucial for fostering continuous improvement and innovation at both individual teacher and systemic levels. The following recommendations outline essential strategies and support that enable in-service teachers to conduct meaningful research in their classrooms, enhance their teaching practice, and contribute to the broader educational community. This approach transforms schoolteachers into active researchers committed to sustainable and evidence-informed research practices.

Create time allowances for research within teachers' schedules

One of the greatest hurdles teachers face when conducting research is the lack of time. This concern is highlighted in Chapters 6, 7, and 11, where teachers emphasise the need for sufficient time to carry out research. As Kleppe Baadstø states in Chapter 7 (p. 122), “the demanding reality of teaching should not be

underestimated. Since participating in projects requires additional time, we must always consider this before committing.” To tackle this issue, schools must recognise the value of teacher-led research for professional development, the development of the educational community, and the welfare of their students. School management must allot dedicated, protected time within teachers’ schedules for planning, conducting, and reflecting on research activities. Regular, protected time slots for research reduce competing pressures and allow teachers to focus on their inquiries. This approach may integrate reflective practice and research seamlessly into the daily rhythm of teaching.

Offer school-based mentoring by university researchers

As highlighted by Christine Funtek in Chapter 12, mentorship is crucial for supporting teachers’ research endeavours. Pairing schoolteachers with experienced university research partners, who are also teacher educators, provides invaluable guidance and expertise in research design, data collection, and analysis. School-based mentoring fosters a collaborative environment, enabling teachers to experience collegial equality with university researchers, feel supported, develop confidence in their research pursuits, and develop collaborative research networks with their university partners on an equal footing through university-school partnerships.

Establish teacher-researcher communities of practice

Over time, experienced teacher-researchers should be able to independently create and sustain communities of practice that support novice colleagues. These communities will provide platforms for sharing insights, offering feedback, collaborating on research projects, and guiding less-experienced colleagues. Regular meetings and discussions within these communities will foster a culture of continuous learning and mutual support, as demonstrated by Lier Upper-Secondary School in Norway (see Chapter 13). By drawing on collective wisdom and diverse perspectives, such communities will enhance the quality and impact of classroom-based research and promote sustainable development in teacher research.

Recognise and reward research efforts

Teacher-researchers in both Lier and Drammen upper-secondary schools noted that positive student feedback and improved performance are rewarding outcomes of their research. However, recognition and rewards from school management are also powerful motivators for teachers to engage in research.

Schools should acknowledge teachers' research efforts through professional development credits, promotion pathways, and salary incentives based on measurable practice development. Such recognition validates teachers' commitment and incentivises ongoing research activities. By celebrating research achievements, school management can cultivate a culture that values evidence-informed practice and continuous improvement.

Provide easy-to-use research toolkits

To simplify the process of conducting classroom-based research, university researchers should develop, or ideally even co-develop, practical, easy-to-use research toolkits tailored to teachers' needs. As Lier school leader Nina Forsberg (Chapter 13, p. 206) explains, “[t]eachers require tools that integrate seamlessly into their daily routines. Step-by-step guides or adaptable frameworks could bridge the gap between theory and action.” These toolkits should include clear guidance on methodology, data collection instruments, and analysis techniques, regularly reviewed and updated for relevance. By demystifying the research process and offering user-friendly tools, schoolteachers will be empowered to undertake research with confidence and competence.

Encourage small-scale, practice-focused inquiries

Small-scale, manageable and practice-focused inquiries are particularly beneficial for teachers as they directly address day-to-day teaching challenges. Encouraging teachers to engage in these manageable research projects allows them to explore specific aspects of their practice and implement immediate improvements. As Drammen school leader Christine Funtek notes in Chapter 12:

Small, manageable research projects that are built into what teachers are already doing are the ones most likely to stick. [...] The challenge, and the opportunity, is to design frameworks that feel like natural extensions of teaching rather than academic exercises. For this to work, information shared [...] should not only explain theoretical principles but translate them into something a teacher can try on a Tuesday afternoon. (p. 196).

Small-scale inquiries are often familiar to practising teachers, as their teacher education often involves similar projects. These inquiries can lead to more immediately actionable insights that enhance teaching practice, improve student outcomes, and provide evidence of value for school management.

To successfully implement in-service teacher research literacy, it is essential to focus on its practical application in everyday teaching scenarios: “In short, practicality is key. If teachers can “tweak” and see immediate relevance to their daily work, these models have a real chance of sticking” (Lier school leader Nina Forsberg, chapter 13, p. 205). By focusing on practical, contextually relevant questions, teachers can make meaningful contributions to their classrooms and the broader educational community.

Supporting in-service teachers in conducting classroom research is a multifaceted endeavour that requires thoughtful strategies and robust support systems. By implementing the above-mentioned recommendations, schools can empower teachers to become active researchers. This empowerment may not only enrich teachers’ professional development but also drive innovation and improvement in education. As Vanja Renee Larsen and Mats Berg-Berthinussen (Chapter 11, p. 188) note, “As soon as we started to investigate the needs of our students, we became motivated and engaged on a whole new level than what we had been before.” When teachers engage in research and reflective practice, they contribute valuable knowledge and insights that can transform teaching and learning, ultimately benefiting students and the educational community at large. Through sustained support and recognition, we can cultivate classroom-based research that is an integral and celebrated aspect of the teaching profession.

3) Sustaining TREL’s Momentum

Ultimately, TREL illustrates the transformative potential of integrating research into the professional fabric of teaching across the Nordic-Baltic region. The project highlights several cases when research became an integral part of teacher practice, and where classrooms evolved into dynamic spaces of inquiry and innovation. This handbook demonstrates how collaboration among educators, institutional commitment, and innovative dissemination may collectively strengthen research literacy and professional development.

However, sustaining this momentum requires more than isolated initiatives; it demands systemic and cultural shifts that embed research as a valued and supported dimension of teaching. To achieve this, we argue that three strategies, described below, are essential. They focus on institutionalising teacher research literacy within teacher education and professional development through fostering collaborative networks and communities of practice, and innovating dissemination and recognition mechanisms to reinforce the value of teacher-led inquiry.

1. Strengthening university-school partnerships through collaborative research frameworks

The mentorship-driven collaborations, as those showcased in Part 2 of this handbook, highlight the mutual benefits of university-school partnerships. Such alliances may empower teachers to conduct classroom-based research with methodological guidance from academics, as exemplified by Lana Chernik’s self-assessment study (Chapter 6) and May Britt Kleppe Baadstø’s academic writing interventions (Chapter 7). Conversely, teacher educators gain critical insights into real-world pedagogical challenges and may subsequently refine their curricula and teacher education practices. Kaunas University of Technology (Chapter 3) has institutionalised this synergy by embedding school-based action research into its programmes, thus ensuring strong theory-practice alignment. To sustain partnerships, however, formal structures (for example, shared funding models, co-supervised projects, and cross-institutional training) are essential, as demonstrated by the TREL project. These frameworks democratise knowledge creation, foster a culture of reciprocity, and transform research from a perceived barrier into a bridge between academia and schools.

2. Institutionalising research literacy through strategic leadership and policy alignment

Embedding research into institutional culture requires systemic integration. National mandates, such as those outlined in Surkalovic et al.’s Chapter 1, and the emphasis on “scientific grounding” in Nolan et al.’s Chapter 2, exemplify how policy alignment and institutional stakeholders can normalise research as a core teacher competency. Here, strategic leadership must play a pivotal role. School leader Christine Funtek at Drammen Upper-Secondary School (Chapter 12) aligned teacher research with institutional goals, for instance, linking classroom inquiries to school-wide professional development plans.

Based on insights gleaned from TREL, to ensure the sustainable development of teacher research literacy, leadership should prioritise embedding research into school improvement agendas and support this shift with structural incentives, such as research sabbaticals, administrator training, and dedicated funding for teacher-led projects. Such measures help transform research literacy from an individual pursuit into a collective responsibility. Teacher research gains visibility and legitimacy when showcased in professional forums. Through TREL’s cross-border workshops, teacher-partner Nikoline Holmøy Ellefsrød (Chapter 8), for example, presented her findings on student motivation, fostering

peer learning, and interdisciplinary dialogue. Scaling such opportunities would benefit from the creation of dedicated regional networks capable of establishing annual symposia, whether virtual or in-person, where teachers can share findings, critique methodologies, and collaborate on transnational studies. Ministries of education could further amplify participation by integrating workshop and conference presentations into professional certification systems or by offering grants to support collaborative research. Such initiatives would not only recognise and validate teachers' expertise but also cultivate a shared professional identity among educators as active knowledge creators.

3. Building a digital ecosystem for resource sharing and collaboration

While digital tools remain underutilised in several contexts explored in this handbook, their potential to democratise research is significant. For instance, the use of QCAMap and Jamovi (Jögi et al., Chapter 4) demonstrates how technology can simplify complex data analysis, while the annotated bibliography table tool described by Nolan et al. in Chapter 2 provides a simple model for structuring research inquiries. Building on TREL's collaborative ethos, a future initiative could involve establishing a regional online platform for teacher research literacy that is co-designed with input from universities and schools. This platform should centralise resources such as research templates, case studies, and peer-reviewed assessment tools. To maximise accessibility, it should prioritise multilingual interfaces, tutorials, and moderated forums for iterative feedback. This dedicated specific platform may help advance teacher research literacy by bridging theory and practice with a set of simple, reusable and scalable research and reflection tools. It could enable real-time collaboration akin to TREL's cross-border mentoring while maintaining academic rigor through transparent peer-review mechanisms.

Toward a Research-Infused Educational Landscape

TREL shows that teacher research literacy is not a fixed endpoint, but a continuous journey shaped by collaboration, infrastructure, and change. By nurturing university-school partnerships, institutionalising research through leadership, amplifying teacher voices in professional communities, and utilising digital innovation, we can support teachers' reflective practice development. As illustrated by the handbook's cases and the TREL project experiences, this

transformation requires patience: novice researchers may need scaffolding, policies must evolve over time, and trust between all parties involved takes time to build. However, the rewards can be transformative: classrooms can become laboratories of innovation, teachers may emerge as agents of systemic change, and education systems may become better equipped to meet the complexities of the 21st century. Moving forward, research literacy project-based initiatives should become a defining feature of educational excellence.

INDEX

- academic English, 34, 117, 118, 126, 190
- academic language, 34, 36, 118, 119, 120, 122, 123, 124, 125, 159, 182, 189
- academic writing, 30, 31, 34, 35, 46, 50, 58, 118, 119, 120, 121, 122, 123, 124, 125, 126, 147, 199, 222
- action research, 13, 32, 33, 36, 37, 80, 86, 91, 95, 102, 104, 183, 184, 209, 210, 214, 222
- agency, 35
- annotated bibliography, 31, 65, 66, 67, 68, 223
- applied linguistics, 33, 101, 102, 103, 105
- assessment, 33, 47, 49, 50, 84, 100, 110, 111, 112, 113, 114, 115, 128, 129, 138, 141, 142, 191, 197, 200, 204, 222, 223
- Baltic states, 28
- bilingual programme, 117, 147
- case study, 32, 33, 102, 103
- classroom-based research, 23, 24, 27, 29, 40, 216, 218, 219, 220, 221, 222
- critical thinking, 25, 34, 96, 109, 113, 121, 143
- curriculum, 28, 30, 33, 35, 37, 51, 56, 78, 90, 101, 109, 110, 118, 127, 128, 147, 161, 170, 175, 181, 182, 190, 191, 197, 198, 204, 207
- data analysis, 25, 30, 31, 32, 50, 52, 53, 58, 79, 92, 94, 102, 125, 131, 133, 135, 223
- data collection, 24, 47, 49, 50, 69, 70, 71, 91, 92, 101, 102, 103, 104, 105, 125, 163, 165, 214, 217, 218, 219, 220
- digital tools, 35, 65, 115, 204, 206, 223
- discourse analysis, 102, 103
- Drammen International Programme, 34
- Drammen Upper-Secondary School, 23, 33, 37, 109, 117, 147, 197, 198, 222
- educational technology, 217, 218
- English language teaching, 39, 48, 101
- Estonia, 27, 28, 32, 40, 89, 90, 98
- feedback, 23, 25, 33, 35, 48, 49, 52, 53, 66, 67, 72, 73, 80, 82, 84, 94, 97, 104, 113, 115, 123, 124, 129, 136, 137, 145, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 165, 172, 184, 204, 205, 206, 210, 215, 219, 223
- feedforward, 148, 149
- Finland, 27
- flipped classroom, 83, 217
- grade, 103, 111, 114, 115, 127, 129, 135, 149, 152, 173
- grading, 210

grammar, 35, 118, 121, 122, 144, 148, 153, 158, 159
 higher education, 23, 24, 27, 33, 34, 46, 77, 98, 100, 127, 203
 hypothesis formulation, 33
 identity, 24, 26, 38, 40, 65, 214, 223
 informed consent, 95, 103, 164
 in-service teacher education, 27, 81
 institutional culture, 222
 interview, 31, 70, 71, 92, 104, 129, 130, 131, 133, 136, 137, 140, 142, 144, 145, 163, 165, 166, 216
 Kaunas University of Technology, 16, 222
 knowledge creation, 222
 Latvia, 27, 33, 99, 100, 101, 105, 214
 leadership, 64, 199, 201, 204, 205, 206, 208, 211, 222, 223
 Lier Upper-Secondary School, 23, 35, 37, 203, 219
 literature review, 47, 49, 51, 57, 58, 101, 104, 106
 Lithuania, 27, 28, 31, 77, 78, 86, 87
 Master's thesis, MA thesis, 30, 31, 46, 49, 50, 51, 52, 55, 66, 90, 101, 102, 103, 104, 105
 Malmö University, 31, 64, 65, 75, 216, 217
 mentoring, 24, 26, 27, 38, 39, 205, 219, 223
 metacognition, 35
 model text, 48, 123, 124
 motivation, 29, 34, 35, 40, 41, 49, 52, 112, 114, 117, 129, 131, 138, 147, 149, 156, 162, 163, 164, 174, 175, 176, 182, 192, 203, 210, 222
 national curriculum, 36, 161
 Nordic-Baltic region, 27, 29, 221
 Nordplus, 26
 Norway, 23, 27, 28, 30, 33, 37, 45, 46, 48, 55, 56, 57, 110, 117, 127, 128, 129, 147, 161, 162, 197, 203, 219
 novice researchers, 30, 49, 50, 54, 216, 217, 218, 224
 observation, 23, 24, 30, 46, 55, 66, 72, 82, 84, 102, 103, 104, 206, 211
 oral English, 127, 129, 147, 163
 Oslo Metropolitan University (OsloMet), 23, 30, 45, 46, 47, 52, 56, 126, 214, 216, 217
 pedagogical internship, 84
 peer review, 33, 47, 57, 218
 policy, 27, 30, 31, 32, 46, 78, 90, 91, 98, 99, 204, 207, 222
 pre-service teacher education, 213
 professional development, 24, 27, 28, 29, 30, 32, 33, 34, 37, 38, 40, 45, 46, 55, 64, 90, 91, 100, 106, 115, 182, 198, 200, 206, 208, 211, 213, 214, 216, 219, 220, 221, 222
 professional learning network, 27
 QCAMap, 32, 92, 223
 qualitative research, 87, 166, 177
 quantitative research, 51, 70, 92, 93, 95, 103
 questionnaire, 32, 71, 94, 96, 97, 103, 118, 119, 121, 122, 123, 142, 164, 165, 166, 167, 169, 172, 178
 reading comprehension, 33, 104, 164, 166
 reading strategies, 35, 104, 161, 162, 163, 164, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179
 reflective practice, 32, 38, 219, 221, 223
 reflective practitioner, 214
 reliability, 70, 95, 102, 103, 164

research competence, 65, 74, 79, 86, 101, 102, 105
 research design, 32, 80, 101, 103, 104, 109, 163, 219
 research literacy, 24, 25, 27, 28, 29, 30, 31, 32, 33, 37, 45, 46, 47, 49, 53, 54, 55, 64, 66, 67, 73, 74, 78, 91, 98, 100, 105, 106, 150, 209, 213, 214, 216, 217, 218, 221, 222, 223
 research methodology, 48, 51, 57, 64, 68, 69, 78, 102, 105, 214
 research question formulation, 48
 research-based teacher education, 25, 26, 27, 56, 57
 scaffolding, 55, 224
 school development, 37, 46, 207
 self-assessment, 33, 110, 111, 112, 113, 114, 115
 small-scale research, 30, 47, 49, 105
 student voice, 190
 survey, 31, 34, 57, 71, 95, 102, 110, 112, 118, 119, 183, 184, 186, 187, 188, 189, 190, 206
 Sweden, 27, 28, 31, 63, 68, 74, 75
 Swedish teacher education, 63, 73
 Tallinn University, 32, 89, 90, 91, 214, 215, 216
 teacher educators, 24, 27, 29, 38, 85, 101, 213, 214, 215, 216, 217, 218, 219, 222
 teacher research, TR, 25, 26, 27, 29, 30, 37, 38, 40, 64, 150, 195, 219, 221, 222, 223
 teacher research literacy, 29, 37, 223
 teacher-researcher communities, 219
 TED-style presentations, 34
 toolkits, 220
 TREL project, 27, 29, 36, 38, 71, 92, 119, 126, 148, 200, 213, 216, 222, 223
 triangulation, 102, 103
 University of Gothenburg, 31, 64, 68, 75
 upper-secondary school, 29, 63, 65, 91, 109, 117, 118, 127, 129, 154, 161, 162, 191
 validity, 33, 70, 95, 102, 103
 vocabulary, 35, 112, 113, 121, 122, 123, 124, 143, 144, 158, 167, 168, 169, 171, 179
 vocational education, 28, 64, 99, 203, 207
 workshop, 23, 31, 34, 48, 51, 65, 66, 68, 69, 70, 71, 72, 73, 74, 118, 119, 122, 125, 148, 149, 205, 223
 writing development, 149

