The need for school leadership and assessment capability in disruptive times

Experiences from remote teaching in Norway during Covid-19

Lise Vikan Sandvik, Stine Aarønes Angvik, Alex Strømme, Bodil Svendsen, Kari Smith & Oda Aasmundstad Sommervold

Published online: 12 Sep 2023.

Submit your article to this journal ↗

View related articles ↗

View Crossmark data ↗

Routledge
Taylor & Francis Group

The need for school leadership and assessment capability in disruptive timesExperiences from remote teaching in Norway during Covid-19

Lise Vikan Sandvik , Stine Aarønes Angvik, Alex Strømme, Bodil Svendsen, Kari Smith and Oda Aasmundstad Sommervold

Department of Teacher Education, Norwegian University of Science and Technology, Trondheim, Norway

ABSTRACT

This study explores school leaders' and teachers' experiences of leadership in assessment during the Covid-19 lockdowns. A total of 148 school leaders and 582 teachers participated in a survey, and 15 school leaders from four schools also participated in focus group interviews. In Norway, the pandemic led to closed schools for long periods, from spring 2020 to spring 2022. Moreover, all final exams were cancelled, and all final gradings were made by individual teachers. In a disruptive and chaotic situation, it was up to school leaders at each school to ensure that teachers' assessment practices used to decide students' final grades were valid and reliable. The extraordinary circumstances that the pandemic created in schools also created a need for leadership functions beyond the ordinary. It seems that the disruptive situation during the Covid-19 school lockdowns led to a re-distribution of school leadership tasks connected to assessment, which in turn motivated more development and innovation, even stronger collaboration, and a more focused ability to solve problems related to assessment challenges in school. This study also revealed a need for more teacher support and assessment capability within school leadership to ensure fairness, validity and reliability in final assessment.

Introduction

In Norway, the pandemic led to long periods of school closures, with remote teaching organised as online learning, from spring 2020 to spring 2022. In upper secondary schools, this led to cancelled national exams for three years in a row. When this happened, the challenges of different assessment cultures in schools regarding student involvement in assessment and final grading

became apparent. Ordinarily, teacher assessment counts for 80% of the final grades given in upper secondary schools in Norway, and external exams count for 20%. In the Norwegian school system, central authorities are responsible for national written examinations. Responsibility for oral examinations is delegated down to the municipal level and school leaders, while the examination tasks are prepared by the individual teachers. Final grading in subjects is made by the individual teacher alone, and there are no central guidelines for how this should take place. When the external and local exams were cancelled, and all final grading relied exclusively on teacher assessment in each school, there were no systems or regulations on how to ensure validity or reliability in this process.

Key findings from studies that have examined how the Norwegian authorities and Norwegian upper secondary schools met the challenges around assessment due to closed schools and cancelled exams during the pandemic, show that cancelled exams had negative consequences for teachers' professional development in assessment. Teachers lost the opportunity to calibrate grading through their participation as assessors in central exams. This is perceived as a negative side effect of the cancellation of external exams (Gamlem et al. 2023). These findings align with former research, which demonstrated that not only is assessment competence among teachers and schools needed, but likewise more support and guidance in practising assessment and grading (Brookhart et al. 2016; Buckley-Walker and Lipscombe 2022), and especially in contexts without external exams (Sandvik et al. 2022; Tveit and Olsen 2018). Grading external exams is perceived as an opportunity for professional development and collaboration in assessment (Bjørnson and Skar 2021; OECD 2011).

When the exams were cancelled, all final gradings were made by individual teachers. School-based assessment cultures that could foster collaboration between students, teachers and leaders played an even more important role in moderating the assessment practices. Studies from Norway revealed sporadic teacher collaboration on assessment and insecurity on issues such as validity and reliability in assessments (Sandvik et al. 2021). Furthermore, studies report that the teachers thought that they would have performed better if they had received more pedagogical support during the lockdowns (Bubb and Jones 2020; Huber and Helm 2020).

For many years, assessment for learning (AfL) practices have influenced Norwegian schools, and national authorities, school leaders and teachers have been developing assessment practices that support and improve the quality of students' learning (Hopfenbeck, Petour, and Tolo 2015). In the Norwegian context, instructional leadership has been established as a norm, where school leaders are required by law to initiate and support professional learning communities related to AfL practices at the school level (Ministry of Education 2018). A key role for school leaders is to build assessment capability within schools in order to support teachers' knowledge and skills, and to adjust and

develop teaching practices (Charteris and Smardon 2021; Mandinach and Schildkamp 2020; Wyatt-Smith et al. 2017). Also, several studies state that school leaders' competence and capacity related to assessment and development processes in the professional community is of great importance for how well such intentions translate into learning-promoting practices in the classroom (Hopfenbeck, Petour, and Tolo 2015; Hargreaves and O'Connor 2018; Charteris and Smardon 2021). However, studies show that it can be demanding for school leaders to support teachers in this work; they face challenges due to lack of time, competence, and tools to lead the work in appropriate ways (Hill 2016; Laveault 2016).

The COVID-19 pandemic has brought about significant changes in the nature of leadership, placing greater demands on school leaders. Hauseman, Darazsi, and Kent (2020) highlight how school leaders were experiencing intensified work demands as a direct consequence of the pandemic, leading to increased pressure to fulfill their altered leadership roles.

The pandemic has shifted school leaders' work from predictable contexts to uncertain ones (Pollock 2020). Argyropoulou, Syka, and Papaioannou (2021) note that school leaders and education stakeholders were grappling with various managerial and emotional challenges during this period. Overall, the existing evidence emphasises the substantial pressure that the pandemic has placed on school leaders and those they serve (Hylton-Fraser and Hylton 2021; Kafa and Pashiardis 2020).

Other studies have examined how school leaders adapted their leadership practices during the pandemic. Fornaro et al. (2021) proposed that school leaders provided their colleagues with four levels of support: academic support, technological support, operational support, and interpersonal relationship support. Additionally, existing evidence highlighted that school leaders were expected to provide emotional support that extended well beyond the traditional boundaries of their leadership role (e.g. Thornton 2021).

According to Harris (2020), the prevailing approach for school leaders in navigating the diverse demands and unpredictable challenges of the pandemic is distributed leadership. Spillane, Halverson, and Diamond (2004) offer a distributed perspective on school leadership, emphasising its complex, uncertain, and ambiguous nature within contextual situations such as the pandemic. They highlight that leadership practice is always situated, with tasks distributed among various actors, situations, and artifacts. Effective distributed leadership requires an environment of trust, flexibility, and communication. This theoretical understanding of distributed leadership practices can provide insights into how these practices are shaped by the interactions between people and situations in the disruptive context of COVID-19 school lockdowns.

Moreover, leadership in the context of the pandemic necessitates the ability to adapt and modify established routines and practices. The theory of organisational routines (Feldman and Pentland 2003) provides a framework to

comprehend routines as dynamic entities, continuously evolving and central to organisational learning. According to Feldman and Pentland (2003), routines encode organisational capabilities and knowledge, making them a vital component of organisational learning. Their theory emphasises the interplay between stability and change within organisational routines. Additionally, subjectivity, agency, and power are identified as influences on the flexibility and adaptability of routines.

In their research, Spillane et al. (2011) explored the role of organisational routines in schools, particularly during times of significant change such as the pandemic. They found that when routines were meaningful to teachers, they were more likely to integrate them into their practice, leading to positive changes and improvements in teaching and learning. These routines, once institutionalised, served as an organisational memory, providing stability even in the face of personnel changes (Miner et al. 2008). Miner's study further highlighted the importance of both bureaucratic actions and collegial actions in the design and redesign of routines by both school leaders and teachers. These organisational routines acted as a driving force for improvement and change within the school, with school leaders designing routines that had a tangible impact on classroom practices rather than being merely symbolic.

When schools closed during the pandemic, many of the premises for teaching and assessment changed, and the need for assessment capability became even more precarious, both for teachers and school leaders. These premises occurred as tensions and dilemmas connected to more trust, but also more pressure, more flexibility, but also less support and collaboration. At the same time, the conditions for developing and maintaining assessment practices changed dramatically, as there were less obvious opportunities for collective reflection and collaboration.

The present study examines how upper secondary school leaders and teachers experienced both individual and collective assessment practices and leadership during COVID-19 school closures. We seek to answer the following research questions:

1. What do school leaders say about their leadership of assessment practices during the Covid-19 lockdowns?
2. In what ways do the leaders' perceptions of their leadership align with teachers' perceptions of the leadership?

Relevant research

There is a growing body of empirical studies related to educational leadership during the pandemic. Harris and Jones (2020) have reviewed literature on school leadership 'in disruptive times' and found seven factors of particular importance (Harris and Jones 2020, 245). Among the factors are the school leaders' ability to respond and adapt to the contextual conditions connected

to the pandemic. Another aspect is that school leaders should be able to handle crises and unexpected events, which require support and cooperation from all employees. In such a collaboration, trust is crucial for the responsibility to be shared between several people (Harris and Jones 2020, 246).

Beauchamp et al. (2021) conducted a qualitative study wherein 12 British principals were asked how they experienced the changes brought about by closed schools (Beauchamp et al. 2021, 6). The principals' statements dealt with five main themes, all of which are related to challenges in a new situation: external expectations and pressure, power and authority, values and attitudes, communication, and the ability to cope with dilemmas and situations, demonstrating resilience within situational ambiguity (Beauchamp et al. 2021, 8).

Within Swedish education programmes for school leadership, Ahlström et al. (2020, 36) conducted a mixed methods study with principals during spring 2020. Sweden chose a different strategy than most other countries: schools were kept open. The principals highlighted three challenges in particular: the management of fear and anxiety among students, staff and parents, constant insecurity, and concerns about students who fell outside the system. This study can serve as an example of school operations in an unpredictable, chaotic situation, in this case caused by the Covid-19 pandemic (Hargreaves and Fullan 2020, 334).

When it comes to studies related to assessment during the pandemic, findings show different solutions and challenges related to both system issues and to students' and teachers' experiences of assessment practices (Braun and Marion 2022; Cooper et al. 2022; Panadero et al. 2022). Specific issues identified in several of these studies were challenges in student involvement and self-regulation, the use of technology for assessment purposes, and equity in education during home schooling.

A Norwegian study that examined learning and assessment processes in upper secondary school during Covid-19 found that teachers experienced and handled remote teaching and assessment practices in very different ways. Another finding was that many teachers struggled to provide enough support for their students and that they became more uncertain about how to assess the students' work (Sandvik et al. 2021). The teachers also experienced challenges in their effort to involve students in assessment and learning processes. In addition, teachers worked alone on planning teaching and assessment situations in an unfamiliar digital context, and the professional collaboration they were used to became more difficult to implement (Sandvik et al. 2021, 2022).

As contextual factors surrounding assessment activities and assessment results are important for individual student learning outcomes, a key task for school leadership is to facilitate professional collaboration on assessment and teaching (Tolo et al. 2019). Charteris and Smardon (2021) emphasise shared capacity building as important for successful assessment leadership practices. Leaning on the work of Stiggins and Duke (2008), they investigated dimensions

that are crucial for the leadership of assessment cultures. They found that leaders who facilitate professional growth in teachers are important in supporting assessment that improves learning. Furthermore, they highlight the need for school leaders who encourage collaboration on assessment among teachers as another dimension for building shared capacity in assessment cultures, to ensure consistent understandings, sharing of ideas and strategies, and accurate assessments across teachers (Charteris and Smardon 2021, 5). This collaborative approach to assessment capability is also investigated in other studies (i.e. Hubers et al. 2017; Mandinach and Schildkamp 2020; Schildkamp 2019).

Another important dimension is how school leadership fosters teachers' capability to use assessment practices when developing student self-regulation, to manage unforeseen tasks and challenges. School leaders need to support and challenge teacher assessment capability when power shifts from teachers to students (Charteris and Smardon 2021, 8). The premises for teaching and assessment processes changed dramatically when schools went from classroom-based instruction to fully digital practices, and during the periods of school closure, both students and teachers had to take greater responsibility for their own work (Sandvik et al. 2021). The need for self-regulation thus became even greater than in ordinary situations.

In relation to assessment, both individual and collective challenges appeared during the pandemic. The physical context in which leaders, teachers, and students communicate and collaborate, disappeared over night (Sandvik et al. 2022). Informal and formal dialogues as part of ongoing assessment and collaboration practices were suddenly not an option. The important communication between and across students, teachers, and leaders had to rely on digital skills in an unfamiliar context. Gaining more knowledge about how school leaders and teachers were prepared to meet the challenges during the lockdown periods is of great significance. This can help us understand how to build a shared leadership capacity that supports teaching and assessment practices that ensure students' learning in disruptive situations in the future. The rationale and research perspectives presented in this section were used to design the surveys and the focus group interview protocols on the following issues: (1) Assessment practices in remote teaching, (2) Teacher assessment collaboration, and (3) Leadership assessment support and capability. Perspectives from the research were also used to interpret the empirical data from the surveys and focus group interviews.

Method

In this study, we used a mixed-method approach to collect data from school leaders and teachers in two county municipalities in Norway. All upper secondary schools (80 schools) in these two county municipalities were invited to participate. The quantitative data material consists of two surveys administered to a

total of 148 school leaders and 582 teachers. We based the selection of schools on various criteria, such as geographical regions within each county municipality and school size. The principals organised the digital surveys to be answered by school leaders and teachers. Semi-structured focus group interviews with a total of 15 school leaders were then conducted, both digitally and in person. The qualitative data material in this study was generated from these interviews.

The surveys

The two surveys consisted of statements and questions, developed from a theoretical framework leaning on perspectives from assessment practices and distributed leadership (Black and Wiliam 1998; Spillane, Halverson, and Diamond 2004). The surveys included several items related to topics such as assessment practices, teaching and school leadership during remote teaching based on previous national studies on assessment practices and school leadership (Sandvik and Buland 2014). We also developed new statements and questions about assessment and leadership that focus specifically on the situation in schools during the pandemic, i.e. 'The school leadership has been the driving force behind further development of assessment practices in remote teaching'.

The surveys consist of 39 items with a five-point graded Likert scale, from 1; strongly disagree, to 4; strongly disagree, and 5; do not know. In the school leaders' survey, 10 items are regarded to be relevant for the purpose of this study. These items asked for the school leaders' view of teachers' assessment practices during home-schooling, school leadership assessment capability and school leaderships' capacity to lead collective work on assessment, see Table 1 for an overview of the 10 items.

After analysing the school leaders' survey, we identified three items that were especially interesting to compare to the teacher survey using descriptive statistics. The items focus on leaders' and teachers' experiences with assessment capability in home-schooling, teacher collaboration on assessment in professional learning communities and school leadership assessment competence. The exact wording is presented in Table 2.

The chosen items were included in a statistical analysis and compared through factor analysis using SPSS (Creswell 2013). A descriptive analysis provided contextual information on participants and generated overall response trends. Box plot presentations in the results section (Tufte 2001; Tukey 1977) illustrate how the two datasets relate to each other and visualise the degree of spread between the two groups of school leaders and teachers.

Focus group interviews

The focus group interviews were conducted in four different schools and provided qualitative data material for this study, with four interviews and a total

Table 1. Descriptive statistics (item means and standard deviations) and factor analysis for items related to assessment practices.

Item		M (SD) All leaders (*n* = 110)	Leaders' Role	Collaboration	Professional development
1	*Professional development of teachers' learning in the work with home-schooling has been important to me as a leader.*	3.14 (.670)	.603		
2	*I have been a driving force in further developing teachers' assessment practices during home- schooling.*	2.98 (.635)	.591		
3	The school owner has been a professional support to further develop the school's assessment practice.	2.71 (.721)	.742		
4	My leadership team has been an important support for me in the pedagogical development work during home-schooling.	3.40 (.680)	.721		
5	*To what extent have you initiated discussions in the college about what the teachers emphasise in the assessment practices during home-schooling?*	3.14 (.684)		.877	
6	*To what extent have you discussed different assessment practices during home-schooling?*	3.27 (.523)		.730	
7	I feel confident that the work with assessment during home-schooling has been of good quality.	3.11 (.564)			.543
8	The teachers at our school have shown good effort and willingness to learn to develop assessment practices during home-schooling.	3.69 (.464)			.703
9	At our school, we work together to create good assessment practices during home-schooling.	3.19 (.598)			.558
10	I have given support to the teachers in their work with assessment during home-schooling.	3.54 (.519)			.682
% of variance explained			22.5	14.6	9.9
Internal consistency			.730	.637	.628

Table 2. Statements and questions asked to leaders and teachers.

Question	Leaders	Teachers
1	Professional development of teachers' learning in the work with home-schooling has been important to me as a leader	The school leadership works systematically with the development of teachers' learning during home-schooling
2	I have been a driving force in further developing teachers' assessment practices during home-schooling	The school leadership has been the driving force behind further development of assessment practices during home-schooling
3	To what extent have you initiated discussions with colleagues about what teachers emphasise in their assessment practices during home-schooling?	To what extent have colleagues discussed what the teachers emphasise in the assessment practices during home-schooling?

of 15 school leaders. The topic areas in the interview guide were based on the items in the surveys: assessment practices, collaboration, and teaching and school leadership during school closures. These topics served as the starting point for the semi-structured interviews (Bryman 2012). All interviews were recorded, transcribed, and made available for analysis. To ensure reliability, the data material was reviewed and analysed by three researchers, as well as discussed in the research group of six researchers.

The constant comparative method was used to analyse the interview data material (Corbin and Strauss 2008). The initial analysis of data generated an extensive list of codes. Codes that showed a logical association or co-occurring codes (i.e. more than two codes for the same data) were clustered into thematic categories. For example, the code 'too little support from school leadership in relation to assessment' and the code 'too little organized collaboration on assessment' were clustered into the thematic category 'school leadership assessment capability'. From the analysis of the qualitative data, the thematic categories were identified, all in the context of the pandemic: teachers' self-regulation, collaboration and professional development and school leadership assessment capability. Each category was further systematised into sub-categories that corresponded to the survey data, thus providing the opportunity to interpret the data in light of each other (Corbin and Strauss 2008; Creswell 2013).

Results

Results from the teacher and school leader surveys and interviews are presented separately. First, survey results are described for the leader and teacher sample. Then, we present findings from the focus group interviews organised into two tables and three themes. To explain and highlight interesting findings, we use direct quotations from the participants.

Survey results

The school leaders were asked how they experienced their role of leading, facilitating and developing the teachers' instructive and assessment competences

during home- schooling and to what degree they could be confident of their leadership. The 10 items that we chose for this analysis were loaded on three scales, all related to assessment practices: leaders' role, collaboration, and professional development. The scales had acceptable internal consistencies of .73, .64 and .63. 157 leaders participated in the study: however, $n = 110$ due to missing values from various items.

Our findings show that the leaders have an important role in the facilitation of collaboration and professional development towards building teacher assessment capability. Answers from the leaders suggest that they have initiated collaboration and discussions on assessment, as well as provided supportive structures for assessment during remote teaching. The leaders' answers indicate that they have a high level of self-confidence as to their schools' capability to manage remote teaching. They also have high confidence in the teachers' capability to develop both teaching and assessment practices in a digital context.

For a closer look at items especially relevant to our study, box plots are helpful to illustrate how the corresponding answers from leaders and teachers align in relation to the three key questions in Table 2. The box plots indicate what 50% of the informants answered (1: strongly disagree, 2: disagree, 3: agree, 4: strongly agree), and X shows the average (median). The blue boxes represent leader answers, and the orange boxes represent teacher answers. The dots represent outliers due to very few answers. Because the box plots only include discrete answers, the fifth option in the survey, 'do not know', is excluded from the plots in Figure 1.

The answers from the leaders and teachers are quite similar, and the median shows relatively small differences. However, leaders perceive their own leadership practices towards assessment support and facilitation more favourably than do teachers. Furthermore, leaders have a more favourable perception of their efforts related to teachers' professional development than do teachers.

Focus group interview results

To present our findings from the focus group interviews, we summarise what teachers and school leaders highlight as challenges regarding assessment and
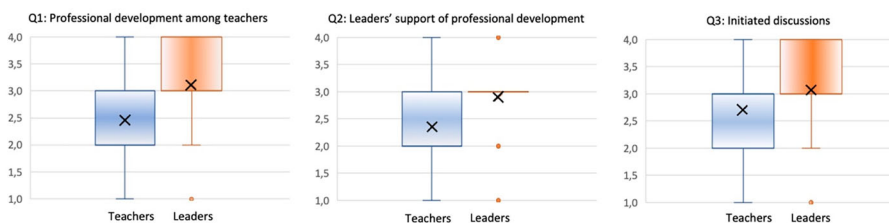

Figure 1. Box plots of leaders' and teachers' perceptions of assessment practices.

Table 3. Summary of key findings: challenges regarding assessment and distributed leadership.

	Teachers	Leaders
Support of students for assessment and learning	Need for support to: • establish routines for students. • establish new teaching and assessment practices	Establish digital platforms for information, learning and assessment. Provide information. Organise school days.
Support of teacher assessment capability	Teachers' assessment and teaching practices varied. New plans, routines and opportunities for assessment. Facilitate student involvement in assessment. Need for possibilities for collaboration	Offer digital courses for more knowledge about assessment and remote teaching. Establish collaboration on digital platforms. Encourage development of new practices. Support the psycho-social work situation.
School leadership assessment capability	Teachers' initiatives for collaboration. Several teachers took a leading role on a private initiative, and it happened independently of the leader.	The need for plan for collaborative work or structured discussions related to assessment. Provide information to students, parents, and teachers. Establish different systems for communication, collaboration, assessment and pedagogical work.

distributed leadership in Table 3. To further present our findings, we focus on three main aspects of school leadership assessment capability in the context of Covid-19 school closures.

Providing student support for assessment and learning was challenging

Several school leaders stated that remote teaching demanded that students would take greater responsibility for their school activities, and in this context, many students developed strategies for self-regulated learning. To support students for self-regulation and learning routines, three of the four school leaderships arranged for the ordinary timetable to be followed when digital classes were held.

The interviews also revealed that the school leaders used their power as leaders to ensure an effective flow of information to the students. Helping them use digital learning platforms were considered important routines, and in this disruptive context, information and digital help had a much greater significance compared to the ordinary school situation. All school leaders experienced that some student groups were not self-regulated and needed closer follow-up routines from their teachers. The leaders tried to be supportive contributors in this task:

> The students who have strategies to hide that they don't get things done, we really struggled with them. Following up on students who don't want to, is very difficult when you don't have them in front of you.

The leaders experienced great variation in how much support the teachers gave the students regarding digital teaching; some teachers gave assignments without any special follow-up, while other teachers gave more support in the

form of collaborative assignments and had closer communication with the students. Although all leaders recognised how these factors influence students' ability to develop self-regulatory strategies, as leaders, they struggled to support and guide teachers who didn't master teaching and assessment practices in a digital context.

Several school leaders set up new routines where especially the class teachers were expected to have closer contact with their students than usual. For example, at some schools, the class teachers were expected to have conversations with each student at least once a week, and preferably more often. It was also expected that the subject teachers followed up individual students, especially vulnerable ones. In these conversations, assessment was a core element. One of the school leaders referred to special feedback from:

> … a student who felt that they had several good meetings with their teacher when they had one-on-one conversations. They may have dared to say a little more when they weren't in the classroom and that they received a slightly different follow-up on the digital platform when the teachers met them there.

For these students, remote learning and more frequent communication on digital platforms seemed to involve some positive experiences. However, the school leaders commented that such communication is very time-consuming for teachers, and it was demanding for students and teachers to find a good balance in such matters. In this context, it was challenging for leaders to create strategies and routines for both teachers and students that could give enough support to their students' ability to learn and take part in assessment practices.

Weak support of teacher assessment capability – strong focus on solving practical problems

Teachers' adaptability and positivity during the lockdown periods were highly recognised and appreciated by school leaders at all schools. Teachers had to solve several pedagogical and digital challenges to create opportunities for assessment; among other things, all plans and scheduled assessments had to be changed very quickly from a familiar classroom context to a digital, more individualised context:

> I think it was positive that it turned out that we were so adaptable when we had to. Because we changed from one day to the other, completely new platforms to work from and a completely new way of working.

The teachers had different prerequisites for mastering these challenges, and school leaders tried to facilitate the teachers in bringing about this change through, among other strategies, offering digital courses. Related to assessment, this upheaval also led to more collaboration and a stronger culture of sharing among the teachers:

> The digital tools were used in a better way, and the possibilities were recognized in this setting. When you are facing challenges, you choose to find solutions, and the sharing culture that evolved among the teachers, it worked very well.

Leaders showed their recognition for teachers' considerable effort in an explicit way, both by praising each individual teacher in conversations with them, but also in collective messages on the schools' learning and communication platforms.

Some of the school leaders admired how the digital context led the teachers to use more varied teaching and assessment methods, and how they involved the students in discussions related to different teaching and assessment approaches: 'I admire the teachers for their assessment work, but they also collaborated with the students to find out what worked for them or not'. School leaders encouraged teachers in this development, and they were appreciative of how teachers took much of the responsibility for the leadership towards the students:

> Of course, I can facilitate and support, but it is not me who does the job. And then I understand that the teachers say that they were the ones who were more in the driver's seat for the implementation, because they really were.

At the same time, both school leaders and teachers had to master great challenges, which all arose simultaneously. For example, it was emphasised by the school leaders that teachers should still plan for valid, research-based assessment practices, even in a digital context that gave teachers less control:

> I experienced the teachers as very creative, and they were a little more concerned with the individual students and created new assessment situations for them, so that we could get enough assessment on as many students as possible. Something happened in relation to how they were thinking in terms of assessment practices.

This challenging context, the combination of school closures and high demands and expectations from school leaders, seemed to create possibilities for development and important discussions on assessment. Several school leaders mentioned that the parallel introduction of a new curriculum, LK20 (The Knowledge Promotion), provided a meaningful but demanding framework for such discussions, where the curriculum as a policy document supported principles such as exploration, student involvement and new ways of conducting assessment closely integrated with teaching and learning.

A new and especially challenging task for school leaders was to provide support for teachers' psycho-social work situation:

> We know that there are several teachers who had familiar challenges to deal with, such as small children at home and at the same time be in charge of remote teaching. But the teachers showed an incredible will to get the job done.

In this demanding situation, school leaders tried to find sound solutions and show support and care, for example, by re-locating individual teachers' work

tasks and re-assign assessment tasks to other teachers. At the same time, there was a strong tendency for teachers themselves to take responsibility for leading their own work by learning the appropriate use of digital platforms for teaching and assessments, and by developing their own digital pedagogical practice. The leaders reported that teachers' collaboration in physical meetings in some schools was replaced by participation in educational forums on social media and through collaboration on digital communication platforms, but this collaboration was not initiated by the school leaders. The school leaders worked to resolve practical problems, show a supportive attitude, and facilitate teachers' efforts to develop their teaching and assessment practices in an unfamiliar digital context.

School leadership assessment capability as unused potential

The school leaders who participated in this study demonstrated significant efforts and reflections in addressing the challenges of remote teaching, with a particular focus on building assessment capability within the school as an organisation. Table 4 provides an overview of the main findings related to the efforts and reflections undertaken to address the challenges and enhance assessment capabilities within the school as an organisation.

The school leaders in this study seemed to develop their understanding and exercise of their own role as school leaders seemed to develop during periods of remote teaching, both in general and in relation to assessment. The leaders' work in the beginning of the school closures was mainly to provide information to students, parents, and teachers and to establish different systems for communication, collaboration, assessment, and pedagogical work, because 'we were not pedagogically equipped to solve this new task with home school'. However, the school leaders at three of the four schools did not plan for

Table 4. Summary of key findings: efforts and reflections made to meet the challenges and help build assessment capability in the school as an organisation.

Knowledge of the importance of	Appreciation and emotional support	Skills and practical routines
Maintaining familiar structures	Appreciative and supportive attitude and communication to strengthen distributed leadership, teaching, and assessment	Set crisis staff, establish and distribute responsibilities in staff
Providing information and digital help	General appreciation and recognition of teachers' effort to develop assessment competence in a digital context	Offer alternative teaching and assessment practices
Having clear expectations of frequent conversations about teaching, assessment, and learning	Regular conversations between school leaders and teachers	Engage external expertise to build assessment capability
Using the curriculum as a framework for discussion and reflection		Establish systems for communication and collaboration towards assessment

collaborative work or structured discussions related to assessment during this period, as they 'did not have the capacity to work with such issues'.

One core finding in this study was that the leaders were mostly concerned with the very basic school operations and greatly appreciated that teachers themselves initiated discussions related to assessment. For the leaders, such discussions seemed particularly compelling with the cancellation of the national final exams, as the teachers' work on establishing valid assessments for the final grades were perceived as even more decisive for students' diplomas than in ordinary situations. Only one of the school leaderships decided that they needed to collaborate on assessment with experts from a nearby university. This collaboration facilitated discussions on assessment, organised in subject-specific groups, and the school leaders actively participated in these discussions. In retrospect, this collaboration with external experts was valued as an important and decisive factor for more accurate and valid individual and collective assessment practices. It also contributed to build assessment capability among school leaders at that school.

Much of what school leaders reported had to do with providing support to teachers and students and facilitating effective and sound teaching and assessment work in a new and challenging situation:

During a meeting with my team, we discussed how we, as leaders, could support teachers and students during the school closure. It was encouraging to hear that the teachers had many helpful tips in this regard. As the year progressed, we specifically emphasised the importance of assessment. In addition, the school leaders' role also concerned creating well-functioning systems that teachers and students could work within:

As a leadership team, we recognised the need for an improved assessment system. We have now implemented a mid-term assessment in the fall and another one in the spring. This allows us as leaders to be more involved in the assessment process and potentially enhance its implementation. Another finding emphasises the importance of teachers 'effort to develop their assessment competence'. The school leaders experienced that various resource persons stepped forward and took on responsibility in a new way to lead the remote teaching practices: 'Several teachers took a leading role on a private initiative, and it happened independently of me'. A challenging situation led to innovative solutions, which also contributed to greater efficiency and shared leadership. At the same time, there were many factors to keep track of, and some of the school leaders forgot, for example, that the teachers needed time for collaboration and planning when new plans and routines for teaching instruction and assessment were to be discussed:

> Maybe we should have given the teachers a planning day, because we forgot about that. They went home on Thursday at noon, and school started up at 08.15 the next day. We should have given them some time to plan.

During the reflection on their capacity and preparedness in managing the crisis of school closures, all school leaders expressed a sense of lacking routines and competence. Some leaders found it beneficial to have participated in previous school development projects, as it indirectly contributed to building capacity among both staff and leaders. These projects provided opportunities for teachers to gain experience in leading processes related to school development, and those competencies and skills proved to be valuable in the current challenging situation. All school leaders agreed on the importance of developing improved routines for teaching and assessment to enhance schools' capacity and preparedness in handling future demanding situations.

Discussion

In this study, we have explored what school leaders in upper secondary school say about their experiences in their role of leading teachers' assessment practices during the Covid-19 school lockdowns. We also asked in what ways the leaders' perceptions align with the teachers' perceptions of the leadership in this situation. School leaders' experiences revolved around issues concerning students' learning and wellbeing, teachers' assessment practices and school leaders' self-reflection upon new experiences in their role as leaders of teaching and assessment during a pandemic. The issue of accountability and challenges related to fairness, validity, and reliability when exams were cancelled, and the teacher's final assessment was the only one on the students' transcripts, was not a topic discussed by the leaders.

In this discussion chapter, we focus on the dimensions highlighted by Charteris and Smardon (2021) regarding assessment leadership practices. Their research emphasises the importance of shared capacity building and collaboration among teachers in assessment cultures. They also highlight the role of school leaders in supporting teachers' professional growth and fostering the use of assessment practices for student self-regulation. The shift to digital practices during school closures further emphasises the need for self-regulation among students and teachers. These dimensions will serve as the foundation for our discussion in this chapter.

Additionally, we explore the concept of assessment leadership for system capability, including aspects of capacity, preparedness, and distributed leadership. Understanding how school leaders can effectively build capacity and preparedness for assessment practices within the broader educational system is crucial. We discuss the role of distributed leadership in distributing assessment responsibilities among various stakeholders and fostering a collective approach to assessment. By considering these dimensions, we aim to provide insights and recommendations for enhancing assessment leadership practices that could contribute to the overall capability of the education systems.

Assessment leadership for student capability

The national curriculum underscores the responsibility of school leaders to provide students with equitable and high-quality education, emphasizing the significance of teacher-created routines, structures, and relevant assessment feedback for fostering positive learning experiences (Norwegian Directorate for Education and Training 2019). Studies show that being motivated, effective and able to deal with stress are hallmarks of successful students, and routines, structures and relevant assessment feedback from teachers are elements that support positive learning experiences among students (Davis et al. 2014). When disruptive, unforeseen challenges arise, such as closed schools under Covid-19, students' motivation and mastery largely depends on the teachers' ability to create opportunities for learning during these circumstances, which in turn is related to school leaders' capability to support and facilitate teachers' assessment practices when it comes to student involvement, peer and self-assessment (Bubb and Jones 2020; Sandvik et al. 2021; Spillane, Halverson, and Diamond 2004).

With remote teaching and less social interaction and collaboration among students, studies from the Norwegian context showed that teachers did not have the same opportunity or capability to ensure student collaboration and individual follow-up used as part of classroom assessment. Many teachers spent much time talking to larger groups of students through digital platforms, whereas student involvement in assessment and learning in many cases were given lower priority (Sandvik et al. 2022). Our study indicates that school leaders struggled to provide teachers with the support they needed to facilitate student-centred teaching and assessment practices that could foster motivation, mastery and learning among students. The school leaders reported that their ability to provide support was greatly limited by the digital tools and the lack social framework for communication, teaching, and assessment during this period.

To summarise, the shift to remote teaching and reduced social interaction among students posed challenges for teachers in ensuring student collaboration and individualised support typically inherent in classroom assessment practices. The findings suggest that school leaders faced difficulties in providing the necessary support to enable student-centered teaching and assessment practices, largely due to limitations imposed by digital tools and the absence of a social framework for communication, teaching, and assessment during this period.

Assessment leadership for teacher capability

One of the core findings in this study was that the school leaders' intention to support the students was closely related to facilitating teachers and their opportunity to develop digital teaching and assessment practices to enhance student learning. The lack of common guidelines, in combination with unfamiliar digital

tools, created several technological and pedagogical challenges for the teachers' assessment work, and they were forced to master several new things in a short time (Sandvik et al. 2022).

However, the same applied to the leaders, who needed a solid digital competence to establish routines for effective communication and shared structures, as framework for collaboration on assessment (Feldman and Pentland 2003; Spillane, Halverson, and Diamond 2004). The school leaders in this study reported lack of experience with these digital tools in the initial period of school closures, and this inhibited their work as leaders and sparked a redistribution of leadership. This aligns with other studies that address the need for leadership to foster teacher capability (e.g. Charteris and Smardon 2021; Leithwood, Harris, and Hopkins 2019).

In the same way that students develop self-regulatory strategies in school, several studies underline the importance of teachers having the competence to face unforeseen situations and the ability to develop and adapt their teaching and assessment practices (Hadwin, Järvelä, and Miller 2018; Randi 2004). In our study, the school leaders recognised and appreciated how many of the teachers have taken a lot of responsibility, both to develop their own digital pedagogical competence and to monitor their own teaching, responding to students' needs. This indicates that the teachers' self-regulatory strategies have worked well (Randi 2004), and for school leaders, it is an important leadership task to explicitly appreciate teachers' independent development work on instruction and assessment in the context of closed schools (Leithwood, Harris, and Hopkins 2019; Spillane, Halverson, and Diamond 2004). Teacher agency is crucial when new routines are to be developed to create change (Feldman and Pentland 2003).

However, the teachers in this study reported that they did not receive enough support for professional development during home school. The school leaders were expected to be more involved, to guide and adjust teachers' assessment practices that did not support student learning (i.e. no or low student involvement, no or little peer and self-assessment, extensive use of instrumental assessment tasks to check up on student work). Also, in this situation, most school leaders themselves experienced an insufficient capacity to support teachers in their assessment practices. Only one of the schools turned to external academic competence teams to build a more solid assessment practice and shared capacity during this period. This may be related to the fact that the pressure of daily, practical operations became most important, but it may also be that the school leaders' capability to seek help and support themselves is not sufficiently developed (Leithwood et al. 2019; Kirkerud 2021). Part of the leadership role is to examine, understand and develop the assessment capability within the role itself, and the school leaders in this study recognised, through self-reflection, the need for more knowledge and skills in this area.

In the context of assessment leadership, ensuring the reliability and validity of assessments requires careful consideration of their form and function (Mandinach and Schildkamp 2020). Therefore, assessment leadership involves making informed decisions about the design, implementation, and interpretation of assessments. This decision-making power revolves around determining the appropriate assessment methods, aligning them with instructional goals, and establishing criteria for evaluating student performance. School leaders, with their expertise and understanding of assessment principles, play a crucial role in guiding these decisions.

Assessment leadership for collective capability

This study revealed that the school leaders did not have sufficient capacity to support the teachers' professional learning communities during the school closures, even though they were aware of the value of such communities, and their responsibility to facilitate them. Other studies have shown that the co-creation of knowledge and self-regulatory strategies that are developed and supported by school leaders is crucial to create opportunities for collaboration and reflection related to both teachers' and students' assessment practices (Charteris and Smardon 2021; Spillane, Halverson, and Diamond 2004).

Digital classroom assessment strategies are important elements in traditional classroom assessment, where both peer and self-assessment are expected to be implemented in close integration with teaching and learning, according to the curriculum. The school leaders in this study did not demonstrate the capacity to engage teachers in reflective dialogue, where values and purposes of alternative assessment practices could be debated and examined, to ensure accountability. The school leaders found it challenging to facilitate collaboration on assessment during lockdown periods, and they recognised and appreciated teacher-initiated discussions, which in turn allowed the school leaders to concentrate on practical matters. They also intended to support the teachers in their attempts to facilitate for the individual student and to ensure an adequate assessment practice that led to valid final grades, by making plans for assessment tasks in the different subjects. In a disruptive context, these familiar prerequisites for school leadership, teaching and assessment were experienced as different and demanding, which aligns with Tolo et al.'s work from 2019.

School leaders described a steep learning curve for many of the teachers. At the same time, they acknowledged that the shift to online teaching and assessment led to both digital and pedagogical development among the teachers. There seemed to be several positive ripple effects of this challenging work, such as a stronger needs-based sharing culture mostly initiated by the teachers themselves. More effective collaboration with the incorporation of new routines and tools for teaching and assessment were also developed, yet not necessarily

because of initiatives made by the school leaders (Papanthymou and Darra 2019).

Assessment leadership for system capability: capacity, preparedness, and distributed leadership

Findings from our study indicate that the transition to closed schools and digital teaching and assessment methods during the pandemic was characterised by improvised crisis management and ground-breaking work. No one had foreseen or prepared for such a chaotic situation, and there was little established knowledge or previous experience to rely on (Hargreaves and Fullan 2020). The lack of various kinds of capacity, organisational routines, and preparedness in this context is something that school leaders themselves admitted as a clear weakness in their leadership competence and something they wanted to address and develop in the future. As leadership's assessment capability is a crucial part of this competence on a system level, it should be strengthened further to support both organisational learning, and teacher and student learning (Charteris and Smardon 2021). This weakness can also compromise the quality of the assessment, and the trust in the assessments' validity and reliability may be at stake (Sandvik et al. 2021).

Many school leaders are teachers themselves, and they typically alternate between the teacher perspective and the leader perspective (Thorpe and Garside 2017). Our study finds that tackling unforeseen issues and weighing various dilemmas against each other made the school leaders' more aware of their own role. In the context of the challenges during the pandemic, the general leadership perspective was strengthened and led to a greater awareness of the functions of the leader.

Shortcomings in assessment leadership revealed the need for a more resilient assessment capability within the school organisation. Well-established organisational routines for collaboration and development of assessment practices that could support change were in many ways lacking. Most of the leaders seemed to have become more conscious of their own role as leaders and what competences that is expected in this role. They were also explicit and vocal about the significance school leadership has for students´ learning conditions, where assessment is regarded a key factor (Harris and Jones 2020).

The leaders' understanding of their expanded role included, for example, considerate dialogue and communication to encourage the development of digital assessment practices as part of teaching and learning in an unfamiliar context. At the same time, school leaders were completely dependent on teachers taking a lot of responsibility for expanding and exploring unknown tools and practices, and school closures during this period seemed to foster a stronger degree of distributed leadership, even when it comes to teachers' learning (Harris 2020; Harris and Jones 2020; Spillane, Halverson, and

Diamond 2004). All in all, crisis management in practice, such as school closures during the pandemic, seems to have a great potential for facilitating growth and development, not only among the formal leaders in schools, but also for the emergence of more informal leaders (Leithwood, Harris, and Hopkins 2019).

Conclusion

In conclusion, this study aimed to explore the experiences of school leaders and teachers in leading and navigating the challenges of teaching and assessment during the Covid-19 lockdown periods. The findings revealed that school leaders primarily focused on practical issues faced by students and teachers, rather than engaging in discussions and reflections to adapt assessment practices to the digital learning context. Nevertheless, the exceptional circumstances brought about a deeper understanding of the significant role and capacity of school leaders in teaching and assessment, as perceived by both teachers and leaders.

The study highlighted the difficulties school leaders faced in supporting student learning and fostering teacher collaboration in the remote learning environment. The crisis prompted independent development, collaboration, and innovation in teachers' assessment practices, while also necessitating a greater capacity for problem-solving in digital teaching and assessment. However, school leaders expressed concerns about their own readiness and preparedness for the transition to remote teaching and assessment, acknowledging the redistribution of leadership tasks and management functions to teachers.

In circumstances where the teacher-administered final assessments constitute the sole means of evaluating students, the preservation of fairness, validity, and reliability in the assessment process assumes paramount significance. Given the power dynamic inherent in the teacher-student relationship, educators and school administrators are tasked with vigilantly addressing these dimensions within the realm of assessment, irrespective of the presence or absence of crisis situations. Assessment leadership also involves recognising the influence of power dynamics and contextual factors on assessment practices.

Therefore, a comprehensive approach to assessment leadership should consider not only the technical aspects of reliability and validity but also the broader context in which assessment is employed. It requires engaging in critical discussions, addressing biases, ensuring fairness, and promoting equity in assessment practices. By embracing a nuanced perspective on accurate and valid assessments, school leaders can contribute to fostering a culture of effective and meaningful assessment within their educational communities.

Based on these insights, we contend that the role of school leadership in assessment has become increasingly vital. It is crucial to address school leaders' assessment competence and capacity within the school's professional

learning community to build assessment capability. Leadership education programmes should address these issues to support leaders in developing the necessary competence. Additionally, ongoing professional development should consider the significance of assessment competence for school leaders, in addition to student and teacher perspectives.

Collaboration with external experts can facilitate the integration of new developments in assessment research and practice, fostering discussions on how school leaders can better support and challenge teachers and students. The study also highlights the need for systematic teacher collaboration, flexible assessment practices tailored to the context, and updated discussions on the purpose and format of final exams at the system level, supported and challenged by school leaders equipped with resilient assessment competence.

To conclude, it is essential to consider the multifaceted nature of teacher assessment capability, which extends beyond individual competence and encompasses factors such as student agency and self-regulation, as well as the broader organisational culture and systemic pressures. The effectiveness of teacher assessment practices is influenced by the norms and expectations within the educational system, the level of preparedness for assessment challenges, and the availability of ongoing professional learning opportunities. An organisational culture that promotes collaboration, shared understanding, and a growth mindset towards assessment fosters the development of teacher assessment capability. Moreover, systemic pressures, such as high-stakes assessments and accountability measures, can impact the extent to which teachers are able to prioritise student agency and self-regulation in their assessment practices. Therefore, efforts to enhance teacher assessment capability should not only focus on individual teacher skills but also address the systemic factors and promote a supportive environment that values student agency, self-regulation, and continuous professional learning.

While this study provides valuable insights based on a limited sample, further research can explore the extent to which students', teachers', and school leaders' experiences with assessment during periods of school closures and remote learning inform and influence school leadership practices, ultimately enhancing assessment capacity within school organisations.

Disclosure statement

Notes on contributors

Lise Vikan Sandvik is Professor in education at the Department of Teacher Education, Norwegian University of Science and Technology. She has experience as school teacher in primary and secondary schools, holds a Ph.D in foreign language didactics, and has served as deputy head of Department of Teacher Education. Her professional field of interest is mainly revolved

around issues of educational assessment, professional development, foreign language didactics, teacher education and partnerships in education.

Stine Aarønes Angvik is a teacher in upper secondary school and assistant professor at The Norwegian Centre for Writing Education and Research (The Writing Centre) at the Department of Teacher Education, NTNU. She is engaged in several continuing education courses in writing instruction for teachers. She also has a supporting role in teachers' and leaders' professional development in school networks.

Alex Strømme is Professor of science didactics at the Department of Teacher Education, NTNU, and has been involved in teacher education at NTNU for a number of years. He is specialised in the use of digital tools and media in teaching science and biology. He has played an important role in the development of online teaching programmes in science in Norway.

Bodil Svendsen is Associate Professor of science didactics at the Department of Teacher Education, NTNU. In addition to her work at NTNU, she also works as a schoolteacher in upper secondary school. Her doctoral thesis was about teachers' professional development in science. Her main research interests are teacher professional development, school leadership development, adapted learning and assessment for and of learning.

Professor Emerita Kari Smith, Department of Teacher Education, Norwegian University of Science and Technology, has worked as a schoolteacher for 18 years, before she became a teacher educator. She has acted as the Head of Teacher Education programmss abroad as well as at the University of Bergen in Norway. She was the Head of the Norwegian National Research School in Teacher Education (NAFOL) at NTNU. Kari Smith is one of the founders of the International Forum for Teacher Educator Professional Development (InFo-TED). Her main research interests are teacher education, professional development, mentoring and doctoral supervision, and assessment for and of learning.

Oda Aasmundstad Sommervold is a teacher of English in upper secondary school. Her master's thesis from 2019 was about student involvement in oral assessment. She is a research assistant for the research team in this study.

ORCID

Lise Vikan Sandvik http://orcid.org/0000-0001-6797-6196

References

Ahlström, B., U. Leo, L. Norqvist, and P. Isling. 2020. "School Leadership as (Un)Usual. Insights from Principals in Sweden During a Pandemic." *International Studies in Educational Administration (ISEA)* 48 (2): 35–41. https://www.thecommonwealth-educationhub.net/wp-content/uploads/2020/09/ISEA-2020-482.pdf.

Argyropoulou, E., C. Syka, and M. Papaioannou. 2021. "School Leadership in Dire Straits: Fighting the Virus or Challenging the Consequences?" *International Studies in Educational Administration (ISEA) (Commonwealth Council for Educational Administration & Management (CCEAM))* 49 (1): 18–27.

Beauchamp, G., M. Hulme, L. Clarke, L. Hamilton, and J. A. Harvey. 2021. "People miss people": A study of school leadership and management in the four nations of the United Kingdom in the early stage of the COVID-19 pandemic." *Educational Management Administration & Leadership*, 1–18. https://doi.org/10.1177/1741143220987841.

Bjørnson, J. K., and G. B. Skar. 2021. *Sensorreliabilitet på Skriftlig Eksamen i Videregående Opplæring* [Examiner Reliability on Written Exams in Upper Secondary Education]. University of Oslo. http://urn.nb.no/URN:NBN:no-88263.

Black, P., and D. Wiliam. 1998. "Assessment and Classroom Learning." *Assessment in Education: Principles, Policy & Practice* 5 (1): 7–74.

Braun, H. I., and S. F. Marion. 2022. "Accountability and Assessment in U.S. Education: Let's Not Allow Another Crisis Go to Waste!." *Assessment in Education: Principles, Policy & Practice* 0 (0): 1–20. https://doi.org/10.1080/0969594X.2022.2068503.

Brookhart, S. M., T. R. Guskey, A. J. Bowers, J. H. McMillan, J. K. Smith, L. F. Smith, M. T. Stevens, and M. E. Welsh. 2016. "A Century of Grading Research: Meaning and Value in the Most Common Educational Measure." *Review of Educational Research* 86 (4): 803–848. https://doi.org/10.3102/0034654316672069.

Bryman, A. 2012. *Social Research Methods*. 4th ed. Oxford: Oxford University Press.

Bubb, S., and M. A. Jones. 2020. "Learning from the COVID-19 Home-Schooling Experience: Listening to Pupils, Parents/Carers and Teachers." *Improving Schools* 23 (3): 209–222. https://doi.org/10.1177/1365480220958797.

Buckley-Walker, K., and K. Lipscombe. 2022. "Validity and the Design of Classroom Assessment in Teacher Teams." *The Australian Educational Researcher* 49 (2): 425–444. https://doi.org/10.1007/s13384-021-00437-9.

Charteris, J., and D. Smardon. 2021. "Leadership for Assessment Capability: Dimensions of Situated Leadership Practice for Enhanced Sociocultural Assessment in Schools." *Leadership and Policy in Schools* 0 (0): 1–13. https://doi.org/10.1080/15700763.2021.1910715.

Cooper, A., C. DeLuca, M. Holden, and S. MacGregor. 2022. "Emergency Assessment: Rethinking Classroom Practices and Priorities Amid Remote Teaching." *Assessment in Education: Principles, Policy & Practice* 0 (0): 1–21. https://doi.org/10.1080/0969594X.2022.2069084.

Corbin, J. M., and A. L. Strauss. 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 3rd ed. Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J. W. 2013. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 3rd ed. Thousand Oaks, CA: SAGE Publications.

Davis, A., S. V. Solberg, C. de Baca, and T. H. Gore. 2014. "Use of Social Emotional Learning Skills to Predict Future Academic Success and Progress Toward Graduation." *Journal of Education for Students Placed at Risk (JESPAR)* 19 (3-4): 169–182. https://doi.org/10.1080/10824669.2014.972506.

Feldman, M. S., and B. T. Pentland. 2003. "Reconceptualizing Organizational Routines as a Source of Flexibility and Change." *Administrative Science Quarterly* 48 (1): 94–118. https://doi.org/10.2307/3556620.

Fornaro, C. J., K. Struloeff, K. Sterin, I. I. I. Flowers, and A. M. 2021. "Uncharted Territory: Educational Leaders Managing Out-of-School Programs During a Global Pandemic." *International Studies in Educational Administration (ISEA) (Commonwealth Council for Educational Administration & Management (CCEAM))* 49 (1): 101–108.

Gamlem, S. M., K. Smith, and L. V. Sandvik. 2023. "Stakeholder Opinions About Cancelling Exams in Norwegian Upper Secondary School During the Pandemic, and its Consequences – An Illuminative Study." *Assessment Matters*.

Hadwin, A., S. Järvelä, and M. Miller. 2018. "Self-Regulation, Co-Regulation and Shared Regulation in Collaborative Learning Environments." In *Handbook of Self-Regulation of Learning and Performance*, edited by H. Schunk and J. A. Greene, 83–106. Routledge/Taylor & Francis Group. https://www.researchgate.net/publication/313369294_Self-

regulation_co-regulation_and_shared_regulation_in_collaborative_learning_environments

Hargreaves, A., and M. Fullan. 2020. "Professional Capital After the Pandemic: Revisiting and Revising Classic Understandings of Teachers' Work." *Journal of Professional Capital and Community* 5 (3/4): 327–336. https://doi.org/10.1108/JPCC-06-2020-0039.

Hargreaves, A., and M. T. O'Connor. 2018. "Solidarity with Solidity: The Case for Collaborative Professionalism." *Phi Delta Kappan* 100 (1): 20–24. https://doi.org/10.1177/0031721718797116

Harris, A. 2020. "COVID-19 – School Leadership in Crisis?" *Journal of Professional Capital and Community* 5 (3/4): 321–326. https://doi.org/10.1108/JPCC-06-2020-0045.

Harris, A., and M. Jones. 2020. "COVID 19 – School Leadership in Disruptive Times." *School Leadership & Management* 40 (4): 243–247. https://doi.org/10.1080/13632434.2020.1811479.

Hauseman, C., S. Darazsi, and S. Kent. 2020. "Collaboration, Communication and Wellness: Response to the COVID-19 Pandemic in Manitoba Schools." *International Studies in Educational Administration (ISEA) (Commonwealth Council for Educational Administration & Management (CCEAM))* 48 (2): 70–77.

Hill, M. F. 2016. "Assessment for Learning Community: Learners, Teachers and Policymakers." In *The SAGE Handbook of Curriculum, Pedagogy and Assessment*, edited by D. Wyse, L. Hayward, and J. Pandya, 772–789. London: SAGE.

Hopfenbeck, T. N., M. T. F. Petour, and A. Tolo. 2015. "Balancing Tensions in Educational Policy Reforms: Large-Scale Implementation of Assessment for Learning in Norway." *Assessment in Education: Principles, Policy & Practice* 22 (1): 44–60. https://doi.org/10.1080/0969594X.2014.996524.

Huber, S. G., and C. Helm. 2020. "COVID-19 and Schooling: Evaluation, Assessment and Accountability in Times of Crises—Reacting Quickly to Explore Key Issues for Policy, Practice and Research with the School Barometer." *Educational Assessment, Evaluation and Accountability* 32 (2): 237–270. https://doi.org/10.1007/s11092-020-09322-y.

Hubers, M. D., K. Schildkamp, C. L. Poortman, and J. M. Pieters. 2017. "The Quest for Sustained Data use: Developing Organizational Routines." *Teaching and Teacher Education* 67: 509–521. https://doi.org/10.1016/j.tate.2017.07.007.

Hylton-Fraser, K., and K. Hylton. 2021. "Building Educational Resistance – A COVID-19 Jamaican Perspective." *International Studies in Educational Administration (ISEA) (Commonwealth Council for Educational Administration & Management (CCEAM))* 49 (1): 59–65.

Kafa, A., and P. Pashiardis. 2020. "Coping with the Global Pandemic COVID-19 Through the Lenses of the Cyprus Education System." *International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM))* 48 (2): 42–48.

Kirkerud, G. 2021. "Kompetanseutvikling som rekontekstualisering: Skoleledelse i spennet mellom horisontale og vertikale kunnskapsdiskurser." *Nordisk tidsskrift for utdanning og praksis* 15 (2): 1–18. https://doi.org/10.23865/up.v15.2750.

Laveault, D. 2016. "Building Capacity: Professional Development and Collaborative Learning About Assessment." In *Assessment for Learning: Meeting the Challenge of Implementation*, edited by D. Laveault and L. Allal, 131–143. Cham, Heidelberg, New York, Dordrecht, London: Springer.

Leithwood, K., A. Harris, and D. Hopkins. 2019. "Seven Strong Claims About Successful School Leadership Revisited." *School Leadership & Management* 40 (1): 5–22. https://doi.org/10.1080/13632434.2019.1596077.

Mandinach, E. B., and K. Schildkamp. 2020. "Misconceptions About Data-Based Decision Making in Education: An Exploration of the Literature." *Studies in Educational Evaluation* 100842. https://doi.org/10.1016/j.stueduc.2020.100842.

Miner, A. S., M. P. Ciuchta, and Y. Gong. 2008. "Organizational Routines and Organizational Learning." In *Handbook of Organizational Routines*, edited by C. Markus and M. C. Becker, 152–186. Cheltenham, Northampton, MA: Edward Elgar.

Ministry of Education. 2018. "Overordnet del av Læreplanverket – Core Curriculum – Values and Principles for Primary and Secondary Education." Norwegian Directorate for Education and Training. https://www.udir.no/lk20/overordnet-del/?lang=eng [Google Scholar].

Norwegian Directorate for Education and Training. 2019. *The National Curriculum*. Norwegian Directorate for Education and Training. https://sokeresultat.udir.no/finn-lareplan.html?fltypefiltermulti=Kunnskapsl%C3%B8ftet%202020&spraakmaalform=Engelsk.

OECD. 2011. *OECD Reviews of Evaluation and Assessment in Education*. Norway: OECD Publishing.

Panadero, E., J. Fraile, L. Pinedo, C. Rodríguez-Hernández, and F. Díez. 2022. "Changes in Classroom Assessment Practices During Emergency Remote Teaching due to COVID-19." *Assessment in Education: Principles, Policy & Practice* 0 (0): 1–22. https://doi.org/10.1080/0969594X.2022.2067123.

Papanthymou, A., and M. Darra. 2019. "Defining Learner Self-Assessment." *Journal of Education and Human Development* 8 (2): 213–222. https://doi.org/10.15640/jehd.v8n2a22.

Pollock, K. 2020. "School Leaders' Work During the COVID-19 Pandemic: A Two-Pronged Approach." *International Studies in Education* 48 (3): 38–44.

Randi, J. 2004. "Teachers as Self-Regulated Learners." *Teachers College Record: The Voice of Scholarship in Education* 106 (9): 1825–1853. https://doi.org/10.1111/j.1467-9620.2004.00407.x.

Sandvik, L. V., and T. Buland. 2014. *Vurdering i skolen. Utvikling av kompetanse og fellesskap. Sluttrapport fra prosjektet Forskning på individuell vurdering i skolen (FIVIS)* [Assessment in schools. Developing professional learning communities]. NTNU and SINTEF. https://www.udir.no/globalassets/upload/forskning/2015/fivis-sluttrapport-desember-2014.pdf.

Sandvik, L. V., K. Smith, A. Strømme, B. Svendsen, O. A. Sommervold, and S. A. Angvik. 2021. "Students' Perceptions of Assessment Practices in Upper Secondary School During COVID-19." *Teachers and Teaching* 1–14. https://doi.org/10.1080/13540602.2021.1982692.

Sandvik, L. V., B. Svendsen, J. A. Strømme, K. Smith, O. Sommervold, S. Angvik. 2022. "Assessment During COVID-19: Students and Teachers in Limbo When the Classroom Disappeared." *Educational Assessment* 28 (1): 11–26. https://doi.org/10.1080/10627197.2022.2122953.

Schildkamp, K. 2019. "Data-Based Decision-Making for School Improvement: Research Insights and Gaps." *Educational Research* 61 (3): 257–273. https://doi.org/10.1080/00131881.2019.1625716.

Spillane, J. P., R. Halverson, and J. B. Diamond. 2004. "Towards a Theory of Leadership Practice: A Distributed Perspective." *Journal of Curriculum Studies* 36 (1): 3–34. https://doi.org/10.1080/0022027032000106726.

Spillane, J. P., L. M. Parise, and J. Z. Sherer. 2011. "Organizational Routines as Coupling Mechanisms: Policy, School Administration, and the Technical Core." *American Educational Research Journal* 48 (3): 586–619. https://doi.org/10.3102/0002831210385102.

Stiggins, R., and D. Duke. 2008. "Effective Instructional Leadership Requires Assessment Leadership." *Phi Delta Kappan* 90 (4): 285–291. https://doi.org/10.1177/003172170809000410.

Thornton, K. 2021. "Learning Through COVID-19: New Zealand Secondary Principals Describe their Reality." *Educational Management Administration & Leadership* 1. https://doi.org/10.1177/1741143220985110.

Thorpe, A., and D. Garside. 2017. "(Co)Meta-Reflection as a Method for the Professional Development of Academic Middle Leaders in Higher Education." *Management in Education* 3 (3): 111–117. https://doi.org/10.1177/0892020617711195.

Tolo, A., S. Lillejord, M. T. F. Petour, and T. Hopenbeck. 2019. "Intelligent Accountability in Schools: A Study of how School Leaders Work with the Implementation of Assessment for Learning." *Journal of Educational Change* 21: 59–82. https://doi.org/10.1007/s10833-019-09359-x.

Tufte, E. R. 2001. *The Visual Display of Quantitative Information*. Cheshire: Graphic Press.

Tukey, J. W. 1977. *Exploratory Data Analysis*. Reading: Addison-Wesley Publishing.

Tveit, S., and R. V. Olsen. 2018. "Eksamens mange roller i sertifisering, styring og støtte av læring og undervisning i norsk grunnopplæring." *Acta Didactica Norge* 12 (4): 18–27. https://doi.org/10.5617/adno.6381.

Wyatt-Smith, C., C. Alexander, D. Fishburn, and P. McMahon. 2017. "Standards of Practice to Standards of Evidence: Developing Assessment Capable Teachers." *Assessment in Education: Principles, Policy & Practice* 24 (2): 250–270. https://doi.org/10.1080/0969594X.2016.1228603.