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# LEARNING

## TO BUILD BACK BETTER FUTURES

### FOR EDUCATION

Lessons from educational innovation  
during the covid-19 pandemic



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## Global Education Innovation Initiative

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Marte Blikstad-Balas

**ABSTRACT**

Providing high-quality, formative feedback is a crucial aspect of teaching. The key idea in this chapter is that digital, real-time collaborative feedback on students' work through platforms such as Teams and Google Classroom is an important educational innovation. The approach can provide teachers with new insight into each student's working process and allow them to give formative feedback while the student is still actively engaged in the task. Drawing on data from Norway, a country with an extensive digital infrastructure, the chapter discusses how teachers and school leaders used the shift to remote and blended learning situation caused by the COVID-19 pandemic to increase and expand the use of digital formative feedback and to find new ways of collaborating between teachers and students. Focusing on the potential of real-time digital feedback, this chapter explores the lessons learned and the possibility of upscaling this particularly promising way of providing feedback.

**KEYWORDS**

Formative assessment, digital learning platforms, teacher professional development, blended learning.

**BIG IDEAS**

**The key idea of this chapter is that digital, real-time collaborative feedback on students' work through platforms such as Teams and Google Classroom can provide teachers with new insight into each student's working process and offer a possibility to provide formative feedback while the student is still actively engaged in the task. Fundamentally, it shows how digital technology can be used as a way to support student learning and promote twenty-first century skills.**

**INTRODUCTION**

The COVID-19 pandemic placed teachers worldwide in challenging situations involving remote and blended learning. Teachers did not have access to students, which we have taken for granted in normal schooling with a shared physical space. Without this shared physical space, teachers struggled to evaluate students' work in class and offer formative feedback.

This chapter will address how this new situation, combined with an extensive technological infrastructure, enabled innovative digital assessment practices through platforms such as Teams and Google Classroom. On these platforms, students demonstrated their competences through digital videos, audio files and other multimodal formats, while teachers followed the students' real-time learning trajectories in collaborative shared documents. While technologies enabling such formative feedback practices have long been available, extended periods of school closures created a need for teachers to expand their feedback practices systematically. Teachers and school leaders across Norway highlighted new and emerging digital assessment practices when challenged to talk about the potential innovations of remote and blended learning. This innovation supports the development of twenty-first century skills, aligns with research on effective formative feedback and can be scaled up.

## THEORY OF ACTION AND DATA PROVIDING EVIDENCE OF THE INNOVATION

The theory of action in this innovation is that real-time collaborative digital feedback from teachers through collaborative platforms can be formative and reach students while they are still engaged in the task. In contrast, previous studies have shown that feedback in ordinary classrooms is often vague and comes too late. The evidence that teacher feedback can impact student learning is significant, especially if the feedback is specific, timely, substantial, and delivered in a meaningful format (e.g. Black & Wiliam, 1998; Brandmo, Panadero & Hopfenbeck, 2020; Hattie & Timperley, 2007; Shute, 2008). Experiencing feedback in real time allows for more communication and shared problem-solving, providing students with new opportunities to communicate and collaborate with their teachers and their peers about their own learning – key aspects of twenty-first century skills. Real-time collaborative feedback through digital platforms will also strengthen students' digital literacy practices for the purpose of increasing and managing their own learning processes while communicating with others. In a recent scoping review on digital assessment practices, Blundell (2021) underscored how gathering and assessing a range of student work digitally (e.g. through digital portfolios) can contribute to assessment as learning and that digital portfolios of student work 'support assessment of a greater diversity of evidence and are reported to provide more overt student authorship' (p. 14).

This chapter discusses how some teachers adjusted the way in which they communicated with their students and supported their work during the pandemic. The case data stem from a targeted focus group conducted with five school leaders from the largest municipalities in Norway (grades 1–13) and a teacher survey with 726 teachers in grades 1–10 from different Norwegian municipalities.

Prior research has found that not all teachers used digital possibilities to innovate their feedback practices, as this case describes. In fact, research on homeschooling in Norway has suggested that many students were left doing individual work *without* good feedback (Blikstad-Balas, Roe, Dalland & Klette, in press; Mælan, Gustavsen, Stranger-Johannessen & Nordahl, 2021). Further, the aforementioned scoping review revealed that digital assessment is not a regular practice internationally (Blundell, 2021). Thus, this chapter focuses on the teachers who innovated their feedback practices during the pandemic, the benefits of that choice and how digital formative feedback practices can be scaled up across schools and countries.

## IMPLEMENTATION AND IMPACT

In theory, all schools with the necessary digital infrastructure have the possibility to implement such innovation. The digital infrastructure in Norwegian schools is good, and 94 per cent of survey respondents reported that the digital equipment of students was satisfactory. The teacher survey also revealed that all schools were using platforms such as Teams, Showbie and Google Classroom. While these platforms have been available for some time, they saw increased and innovative use during the period of remote and blended learning.

In the focus group, school leaders considered innovative communication and feedback practices to be a silver lining of remote and blended learning. The need for remote teaching sparked a discussion across schools about how existing tools could be used to support learning and what kinds of tasks students should be working on to support what kinds of competence development.

The question of what to measure in terms of student competences is relevant to twenty-first century skills, and the school leaders observed that homeschool gave teachers more opportunities to give feedback on both what the students had done and how they were working. One school leader described a shift from students as consumers to students as producers of knowledge, and another explained how recordings of students' conversations were used as a new way to assess what competences students were really showing through their work. The school leaders offered several concrete examples of changes:

*We were constantly communicating with students through the chat function. It was very low-stakes for them to get in touch, and all of them could participate. We could also go into their documents while they were writing, and we did this particularly for those who needed extra support and gave feedback during the process. (School leader 1)*



*We used a joint classroom notebook (OneNote) to continuously monitor the students' learning, and we could respond quickly. In mathematics, the students made videos where they explained their mathematical reasoning and sent them back to the teacher. In that way, the teacher got insight into their learning processes, not just their answers. (School leader 4)*

The teacher survey responses supported the notion that teachers were communicating actively through digital channels with their students: 76.7 per cent of teachers across grades reported that students could chat with them (and with other students) daily or several times a day, while 82 per cent reported that they communicated with students every day or several times a day. In an open-ended question, we asked teachers to identify possible benefits of homeschooling. Among the teachers who chose to answer this question, 30.4 per cent highlighted continuous and improved contact with students and/or the possibility of getting real-time insight into students' work. Such responses included the following:

*The students have been much more active in their own learning process – less teacher talk! (Teacher, Grade 3)*

*As a teacher, I am up to speed with all feedback on work that [students] are doing every single day. I experience that I have better one-to-one contact with the students than before. I also note that I have a better overview of all the students' capacity for schoolwork, because I see every day what they are doing. (Teacher, Grade 8)*

*I have had more time and more opportunity to really see the students that struggle and see those who do well. It is easier than usual to focus on the work that is being done while still in progress. (Teacher, Grade 10)*

While it is difficult to assess the impact of digital real-time collaboration with formative feedback on each student's work, teachers across grades explained how they had seen different sides of the students. Many students were able to 'show more of their competences', and teachers felt they had closer contact with students, who invited teachers into their ongoing work and asked for help. For example, several teachers noted how 'quiet students' who did not usually speak up became more visible participants in the digital format and showed more of their knowledge and reflection than they normally would. The digital platforms may have benefited these students. School leaders also explained that students and teachers began using the platforms actively as a joint working tool rather than a passive information source:

*Before, the teachers were on the platform, but the students were somewhere else. But now ... if an important message has been forgotten, I just post the message, tag the group of students, perhaps at 11 pm and then 'heart,' 'heart,' 'heart' – they respond, at 11 pm, on the platform to their teacher! I mean, it is incredible, and it shows that we are in dialogue. We are in a faster dialogue than we have ever been. (School leader 1)*

## EDUCATIONAL IMPACT: LOOKING FORWARD

We know that remote learning has affected students in different ways. For some, it has been better than normal schooling, but it has been challenging for most. While this chapter does not contend that this innovation has occurred uniformly across schools, digital communication with students about their work has shown teachers the potential of real-time digital assessment. The school leaders and some of the teachers in the survey explicitly stated they would continue to use this positive development and even scale it up.

In terms of developing twenty-first century skills, the potential of providing digital feedback is evident: When students communicate with others to improve their work, they emphasize process over product, experience the value of collaboration, and learn ways to use digital tools that will also be relevant to their future education and work life. The potential of digital, real-time feedback is high, both in regular school and in blended learning. Previous research has demonstrated that access to technology is not enough to change teachers' practice (Blikstad-Balas & Klette, 2020; Gil-Flores, Rodríguez-Santero & Torres-Gordillo, 2017), raising the question of what can be done to promote more use of formative digital assessment in appropriate situations.

Given that schools have the necessary digital infrastructure, a starting point in increasing digital formative feedback could be encouraging teachers – and systematically allowing teachers the time – to learn the functions of software with shared real-time comments and to access tutorials (e.g. on YouTube). Teachers should also be encouraged to share their experiences with formative digital feedback within their local context, as we know a focus on content, , and the opportunity for collaborative learning and reflection over time between teachers encourage teachers' professional development (Darling-Hammond, Hyler & Gardner, 2017). As this chapter suggests, teachers will adapt to new scenarios when they must. The pandemic situation revealed that some teachers tried new ways of providing feedback and experienced associated benefits, such as insight into students' work processes, the potential for real collaboration, and the opportunity for some students to show sides of themselves hidden in a more traditional setting.

High-quality feedback is a crucial aspect of effective teaching, and the pandemic has highlighted how digital tools can be used in innovative ways to reach students in the timeframe within which feedback is known to be most effective: when they are still actively engaged in the task.

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