

Engaging students through small data and playful learning

EXECUTIVE SUMMARY

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Problem and context

The context is the digitalisation of Danish primary schools, particularly following the 2013 school reform. This reform brought an increased focus on measuring students' learning and wellbeing through digital learning analytics. These analytics often concentrate on the individual student's academic progress, which can lead to a performance-oriented goal structure. The problem is that studies indicate this focus on individualised digital analytics negatively affects students' wellbeing. When presented from a deficit perspective, these analytics can cause students to lose self-esteem and motivation. This learning story explores one example to address this issue by shifting the focus to common learning and wellbeing, and evaluation is based more on the classroom culture as a whole.

How the learning story addressed the problem (the experiment)

The learning story addressed the problem by shifting the focus from individual student learning progression or wellbeing to the collective learning environment and common wellbeing. The core approach involved engaging 11-year-old students in playful teaching experiments during dedicated 'supportive teaching' (UU) lessons aimed at promoting wellbeing.

The 'story' of the implementation is that students were involved in developing and testing their own digital tools for analysing the quality of their collective teaching and breaks. This started with the teacher introducing a prototype data-collecting robot. Students used this device and then, through a Use-Modify-Create process, were encouraged to design and build their own robots or machines to measure aspects of their shared environment (like break quality or opinion on meals) using 'small digital data'. The purpose was to make the analytics less individualised and focus on the classroom as a whole. The experiment aimed to involve students in analysing the collected data qualitatively through class discussions. The overall goal was for these investigations to lead to discussions about meaningful actions to improve the learning environment for everyone, fostering a common, classroom-oriented goal structure based on playful qualities and contributing to the collective wellbeing and empowerment of the students

Lessons learned

The learning story synthesised two similar experiments that aimed to test alternative ways of evaluating teaching to support a good childhood and foster engagement and motivation for both students and teachers. The intention was for students and adults to actively participate in developing the school's evaluation culture.

A key lesson learned is the importance of shifting the focus from individual learning analytics to community-based analytics, focusing on playful experiences and identifying resources and successes rather than deficits.

However, a significant challenge was that it proved difficult for teachers to carry out the full project sequence of digital investigations on class wellbeing using playful approaches. The experiments were often side projects and not fully completed. Teachers were successful at initiating the process but rarely completed the entire sequence, meaning students did not fully experience conducting a complete investigation (collecting, analysing and drawing conclusions).

This highlights the need for teachers to consider specific phases and questions when designing didactic approaches to fully realise the potential of working with small data and playful learning for wellbeing.



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