



## How New Technologies are Reshaping Education and Bringing Big Data to Schools

**Daniela Kruei DiGiacomo**, University of Kentucky

In schools around the world, new digital platforms that link families, children, and teachers have gained widespread use. These platforms allow teachers and families to communicate in real time and across languages. Teachers use these technologies to send pictures of children; to convey comments about student behavior, achievements, or activities; and to share information about upcoming programs. They do all this, and more, via self-contained, online platforms and phone applications. Parents use the platforms to send messages to the teacher (not other parents), usually via smart phone.

Although these platforms seem to build on established forms of communication between teachers and parents, we argue that platforms like ClassDojo may entail undue – and currently under-researched – influences over the behavior of families and teachers. Educators and policymakers concerned about the future of U.S. education should carefully consider how interactions on these platforms reshape families' relationships with schools. In particular, they should think carefully about the ways in which digital communications about students' classroom behavior should influence or inform how parents treat students at home.

### The Case of ClassDojo

We examined research and news about the well-known digital platform, ClassDojo. ClassDojo hosts over 3 million teacher and 35 million student users in over 180 countries. The ubiquitous use of this digital platform in schools is a relatively new phenomenon, one that appears not to be driven by empirical research on learning, but rather a perfect storm of popular psychology and market forces.

Founded in 2011, ClassDojo was created to help teachers manage classroom behavior. Today, **ClassDojo's mission** is to “bring communities together and give them the tools, ideas, and energy to improve education for all kids.” In classrooms across the world, the platform provides a means for home-to-school communication, strategies for improving student behavior, and classroom management tools for diverse users: parents, teachers, and school administrators.

Teachers use it to monitor and manage student behavior and to communicate with parents quickly. On ClassDojo, each student has an avatar and the teacher tracks their behavior by assigning (or subtracting) points based on student performance. Through the app, teachers can decide what counts as good behavior and decide how often to communicate with parents using the platform. For example, if a teacher decides that raising one's hand is good behavior, students' avatars receive points for doing that. By contrast, if going to the bathroom out of turn is deemed bad behavior, then students' avatars lose points for doing so. All these behaviors can be saved, monitored, and shared with parents (that is, for those parents who opt in to platform use).

School administrators, coaches, and counselors might use records from ClassDojo to refine student behavior plans. Parents' may also use platform records to inform their choices about children's non-school hours. For example, parents may reward children for accumulating ClassDojo points at home or coordinate supplemental education by targeting areas the platform suggests their child may be lagging. Other uses of ClassDojo's associated data are still emerging. What seems clear, at present, is that an assumption of ClassDojo is that a student's classroom behavior ought be the responsibility of more than just teachers.

### Open Questions about Bringing Big Data to Schools

Platforms like ClassDojo raise important questions about the quantification and regulation of behavior. How can and should points accumulated on these platforms, or similar systems, come to track and evaluate learning? There is little research about how administrators are coping with data generated by online platforms, and even fewer studies about how best to train teachers to handle data generated through their classrooms.

What is more, the effects on family relationships of the day-to-day use of these platforms have not been studied. How do they influence attitudes towards schooling, attitudes towards teachers, and teacher-parent communication? Perhaps most concerning, potential hazards from third-party data use remain largely unknown.

Scholars have raised questions about the ownership and commodification of student data, control over that data, and related privacy issues – and rightly so. Such platforms may enable forms of compliance, surveillance, and control that go beyond the authority currently delegated to U.S. public schools.

The central premise of ClassDojo's classroom behavior management system is that parents will reinforce teachers' disciplinary control. But how do families actually understand the function of such platforms? Research is needed to understand better influences on norms for parental behavior and the ways these digital tools could unwittingly reshape family life. Schools frequently argue they are in a partnership with families, but such rhetoric may serve to disguise ways these platforms shift responsibility onto families to make schooling work.

If families are not equipped to understand the consequences of digital data collection and the long-term effects of quantified behavioral measures, so-called partnerships between schools and families will remain unequal and symbolic at best. Apps like ClassDojo hold great value for teachers, students, and parents. However, to ensure the costs do not overtake the benefits, these critical questions must be addressed.

Platforms like ClassDojo connect schools with homes, offering new opportunities to explore how learning takes place across digitally connected spaces. These platforms promise connection between education's many stakeholders: parents, teachers, administrators, students, app designers, business entrepreneurs, and others. However, as in other areas of technological progress, unintended consequences always arise. To prepare, policymakers, educators, and parents should advocate for further research on the use and effects of these tools and start conversations about what the digital era can and should mean for the future of education.

**Co-authored with Jessica Zacher Pandya, California State University-Long Beach, and Julian Sefton-Green, Deakin University.**

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