Innovations in digital learning and teaching during COVID-19

Summary developed by the IB Research department based on a report prepared by:
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The COVID-19 pandemic forced the global education system to adapt quickly to a new reality, as schools around the world shifted to remote learning. This rapid change proved to be immensely challenging for students, teachers, and parents alike. At the same time, the pandemic provided a unique opportunity for education systems to respond to adversity, inspiring remarkable innovation and adaptation.

This study sheds light on some of the positive innovations and enhanced learning experiences that arose during the COVID-19 pandemic. Specifically, the study investigated International Baccalaureate (IB) teacher and school experiences with digital learning and teaching during the pandemic through virtual school visits, involving individual and group interviews with 103 IB educators, and a school survey with 782 respondents from 223 schools across the world.

Findings

The findings from the study reveal eight areas of innovation: technology, student engagement, learning environment, instructional strategies, assessment practices, teacher collaboration, parent engagement, and student agency. The following figure demonstrates that although these approaches were used during the pandemic, the overall trend indicates that many innovations may not continue post-pandemic. This suggests that schools may be inclined to revert to a 'business as usual' approach.

This summary focuses on three synthesized themes that emerged from the larger study.

IB educators:
1. explored new approaches for learning and teaching with technology;
2. focused on supporting student access, engagement, and well-being; and
3. emphasized collaboration with parents and the school community.

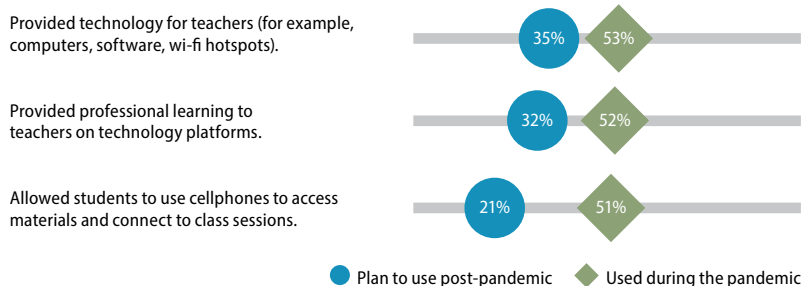*Figure 1.* **Areas of innovation during COVID-19**

Note. This figure shows an average percentage based on the top three survey responses for each category.
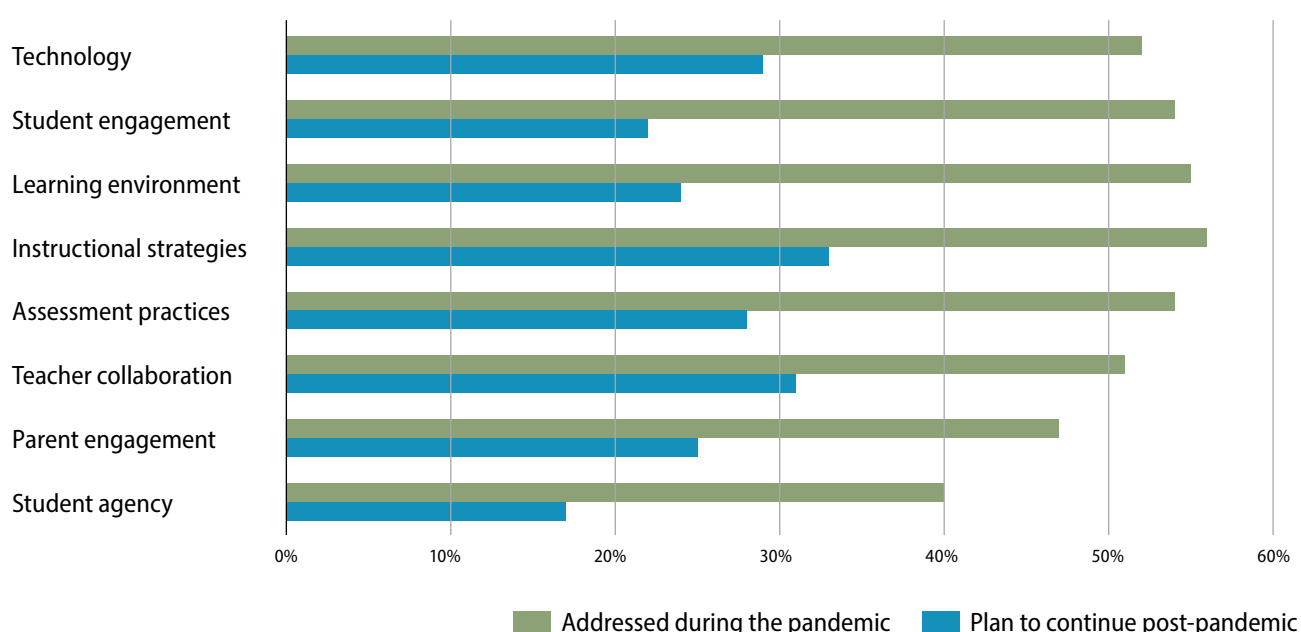
Technology

With the rapid adoption of new technologies to support remote learning, both teachers and students had to quickly develop the skills necessary to use multiple online platforms and applications. Teachers developed new competencies in delivering online instruction, creating digital content, and using educational technology effectively. Each of these figures show the main innovations that were used during the pandemic by theme and the degree to which educators planned to continue using these approaches going forward.
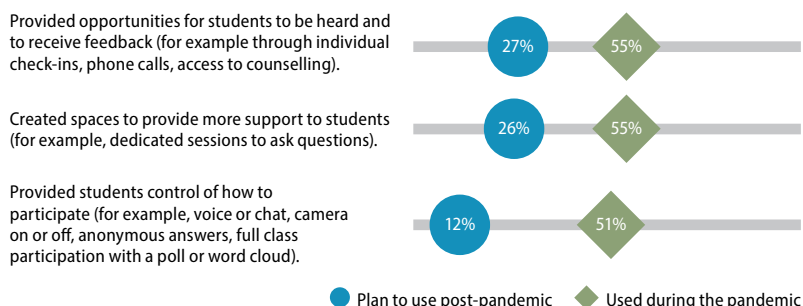
Figure 2. **Most common innovative strategies related to technology**

Provided technology for teachers (for example, computers, software, wi-fi hotspots). — 35% / 53%

Provided professional learning to teachers on technology platforms. — 32% / 52%

Allowed students to use cellphones to access materials and connect to class sessions. — 21% / 51%

● Plan to use post-pandemic　◆ Used during the pandemic

Student access, engagement and well-being

The issue of student access to devices, reliable Internet, and supportive home learning environments emerged as critical, creating an urgent need to ensure all students had equal opportunities for remote learning. Additionally, educators explored new instructional and classroom management strategies and assessment practices, incorporated multimedia resources, and leveraged online platforms to keep students engaged. Lastly, the pandemic highlighted the importance of supporting students' social and emotional well-being and developing resilience-building strategies, both for teachers and their students.
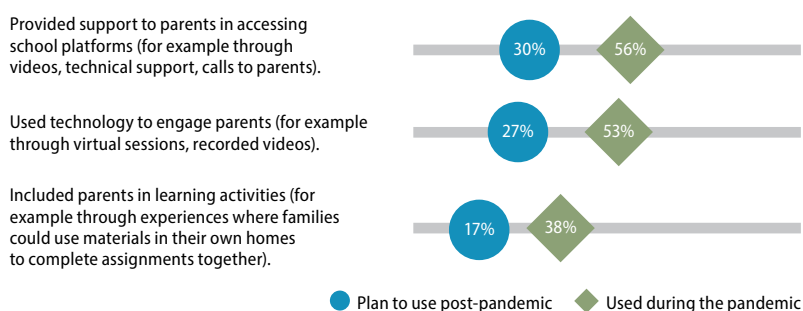
Figure 3. **Most common innovative strategies related to student engagement**

Provided opportunities for students to be heard and to receive feedback (for example through individual check-ins, phone calls, access to counselling). — 27% / 55%

Created spaces to provide more support to students (for example, dedicated sessions to ask questions). — 26% / 55%

Provided students control of how to participate (for example, voice or chat, camera on or off, anonymous answers, full class participation with a poll or word cloud). — 12% / 51%

● Plan to use post-pandemic　◆ Used during the pandemic

Collaboration with parents and the school community

The period of remote learning and teaching during the pandemic prompted educators to prioritize and strengthen parent engagement. Teachers actively sought ways to collaborate with parents, providing regular communication, resources, and guidance to facilitate their involvement. This increased parent engagement proved invaluable in promoting student and teacher success and well-being during this challenging time. For more information about teacher and community collaboration, please refer to the full report.

Figure 4. **Most common innovative strategies related to parent engagement**

Provided support to parents in accessing school platforms (for example through videos, technical support, calls to parents). — 30% / 56%

Used technology to engage parents (for example through virtual sessions, recorded videos). — 27% / 53%

Included parents in learning activities (for example through experiences where families could use materials in their own homes to complete assignments together). — 17% / 38%

● Plan to use post-pandemic　◆ Used during the pandemic

Conclusion

Educators demonstrated remarkable resilience in response to the COVID-19 pandemic, which created opportunities for innovation and adaptation. While this study focused on the significant transformation of schools, it also identified a potential 'boomerang effect' due to a desire to return to normalcy.

By identifying lessons from these innovative practices in learning and teaching, there is also an opportunity to continue to innovate and adapt. In this way, schools will be prepared to face current and future challenges and ensure the best education for all students.

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