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Summary of the National Education Technology Plan

Note: All page numbers refer to the National Education Technology Plan (NETP).

What is technology? This is not an easy question to answer, but consider that *books* were once cutting-edge technology. Imagine, if you can, being an educator at the time when books became readily available for classroom use. It would have been a truly revolutionary experience.

We are at a similar crossroads again. At this point, we have used various technologies as powerful teaching tools – tools which allow us to make prettier graphs, or more nicely formatted equations, or do computations faster, or generate more examples. In other words, we primarily use technology to enable us to do routine tasks more effectively and efficiently.

Of course this is beneficial to both students and teachers. But while these tools have enhanced our effectiveness in the classroom, they have not fundamentally altered the way we teach.

The NETP calls for a paradigm shift in education. Recommendation 5.2 suggests that we

> [r]ethink basic assumptions in our education system that inhibit leveraging technology to improve learning, starting with our current practice of organizing student and educator learning around seat time instead of the demonstration of competencies (p. xx, 73).

Why is such a paradigm shift necessary?

> Many students lives today are filled with technology that gives them mobile access to information and resources 24/7, enables them to create multimedia content and share it with the world, and allows them to participate in online social networks where people from all over the world share ideas, collaborate, and learn new things. Outside school, students are free to pursue their passions in their own way and at their own pace. The opportunities are limitless, borderless, and instantaneous.
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> The challenge for our education system is to leverage the learning sciences and modern technology to create engaging, relevant, and personalized learning experiences for all learners that mirror students daily lives and the reality of their futures. In contrast to traditional classroom instruction, this requires that we put students at the center and empower them to take control of their own learning by providing flexibility on several dimensions.

Matsko

> A core set of standards-based concepts and competencies should form the basis of what all students should learn. Beyond that, students and educators should have options for engaging in learning: large groups, small groups, and work tailored to the individual goals, needs, interests, and prior experience of each learner. Technology should be leveraged to provide access to more learning resources than are available in classrooms and connections to a wider set of "educators," including teachers, parents, experts, and mentors outside the classroom. It also should be used to enable 24/7 and lifelong learning (p. x).

One consequence of such a shift is individualized, differentiated, and personalized instruction (pp. 11–12). (In the NETP, "individualization" means students achieve the same learning goals at different rates (and perhaps through different means), while "personalization" means instruction is tailored to the specific interests of students. See p. 12 for more complete definitions.)

A further consequence of this paradigm shift is how we teach. The NETP discusses the practice of *connected teaching,* where

> classroom educators are fully instrumented, with 24/7 access to data about student learning and analytic tools that help them act on the insights the data provide. They are connected to their students and to professional content, resources, and systems that empower them to create, manage, and assess engaging and relevant learning experiences for students both in and out of school. They also are connected to resources and expertise that improve their own instructional practices, continually add to their competencies and expertise, and guide them in becoming facilitators and collaborators in their students increasingly self-directed learning. Like students in the learning model described earlier, teachers engage in personal learning networks that support their own learning and their ability to serve their students well (p. 40).

Given IMSA's mission, it seems important that we take a leading role in using technology to transform education in the United States. We have resources, talent, and – perhaps most importantly – the flexibility to truly *be* a teaching and learning laboratory.

The extent of the transformation depends on the discipline, the faculty in the discipline, and the resources available (both time and money) to make effective changes. What we *cannot* do is simply sit back and watch this transformation occur elsewhere. We are at an exciting time in the history of education, and it is important to play a leadership role in the transformation of education on a global scale.