

Curriculum and Assessment

The goal

Students in blended learning conditions exceed students in traditional classroom environments,¹ but simply implementing technology does not necessarily equal positive results. Especially in priority areas like STEM, schools must continually ensure their pedagogical beliefs align with their technological efforts. Contemporary Curriculum and Assessment is a key area in which to do this.

We've been ignoring half the power of assessment.

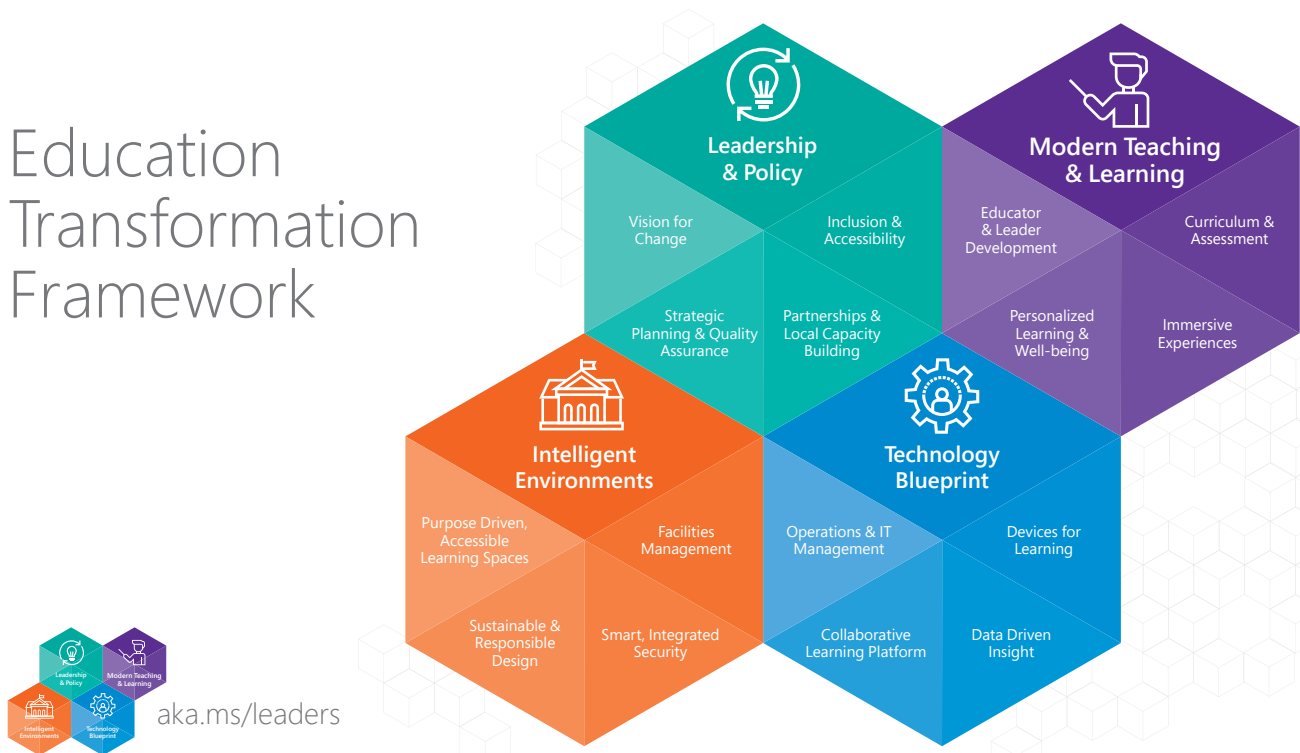
Assessment tools can be used for learning as much as testing. Students often learn by failing. Rather than making the test the final outcome, schools can create an environment where assessment is part of the curriculum.² This helps show where a student is headed, rather than summarize where they have been. This can also apply to professional development. Teachers understand the importance of personalized learning for students, yet many schools still offer one-size-fits-all professional development.

How can technology boost curriculum outcomes?

When correctly implemented and supported by the right strategies and behaviors, technology can improve curriculum and assessment outcomes, especially when:

- Learners are connected. Collaboration tools help improve writing skills and engagement.³ Collaboration boosts interest and critical thinking⁴
- Learning is personalized. This increases academic achievement and social development⁵
- Students and teachers can reflect. Reflection helps consolidate learning.⁶ Online forums are considered the most beneficial reflective practice⁷
- Alternative assessments are available. Student digital portfolios can positively impact engagement levels and self-assessment⁸
- STEM skills, particularly computer science, can be more effectively developed using games, immersive environments and hands-on tools.

Education Transformation Framework



Guiding questions

How will modern skills and STEM be integrated into lessons and curricula?

Is the curriculum balanced with authentic, performance-based formative and summative assessment?

Does the curriculum support collaborative, differentiated and game-based experiences?

How easy is it for the community to search, create, collaborate, store and share curriculum content?

Does the curriculum and assessment enable pedagogy for deep learning?

Do we have systems to allow adaptive teaching and learning (authoring, branching)?

How can technology support Curriculum and Assessment?

When it comes to choosing technology for curriculum, content and assessment, there have never been more choices. Here are some popular technology combinations:

- Student collaboration, personalization and reflection is supported by Windows 10 combined with Office 365 Education, OneNote and Class Notebook
- Schools can build a connected curriculum with collaboration tools using Office 365 Education, Microsoft Teams, SharePoint and Skype for Business
- Students can create e-Portfolios with OneNote, SharePoint and Office 365 Education
- Students and teachers can access innovative STEM and CS curriculum content at the Microsoft Virtual Academy.

Resources

Whitepaper: Curriculum, Content and Assessment for the Real World

Written by Richard E. Ferdig, Summit Professor of Learning Technologies and Professor of Instructional Technology at Kent State University, this paper overviews recent practice in education content, curriculum and assessment. It also defines the clearest, most effective roles for technology in supporting curriculum and assessment.

The complete version is available at aka.ms/leaders

Additional Support Materials

- STEM and CS curriculum resources at <https://education.microsoft.com/stem>

To learn more or request information in your region, visit aka.ms/leaders

References

1. Bernard, R.M., Borokhovski, E., Schmid, R.F., Tamim, R.M., & Abrami, P.C. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education*, 26(1), 87-122.
2. Laurillard, D. (1996). *Rethinking university teaching*. London: Routledge.
3. Drexler, W., Dawson, K., & Ferdig, R. E. (2007). Collaborative blogging as a means to develop elementary expository writing skills. *Electronic Journal for the Integration of Technology in Education*, 6, 140-160.
4. Gokhale, A. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education*, 7(1), 22-30.
5. Yonezawa, S., McClure, L., & Jones, M. (2012). Personalization in schools. Available online: <http://www.studentsatthecenter.org/sites/sci.dl-dev.com/files/Personalization%20in%20Schools.pdf>
6. Dewey, J. (1933). *How we think*. Madison: University of Wisconsin Press.
7. Ferdig, R.E., Roehler, L., Pearson, P.D. (2002). Scaffolding preservice teacher learning through web-based discussion forums: An examination of online conversations in the Reading Classroom Explorer. *Journal of Computing in Teacher Education*, 18(3), 87-94. (PDF)
8. Fielke, J. & Quinn, D. (2011). Improving student engagement with self-assessment through ePortfolios [online]. In: Australasian Association for Engineering Education Conference 2011: Developing engineers for social justice: Community involvement, ethics & sustainability 5-7 December 2011, Fremantle, Western Australia. Barton, A.C.T.: Engineers Australia, 2011: 473-478.