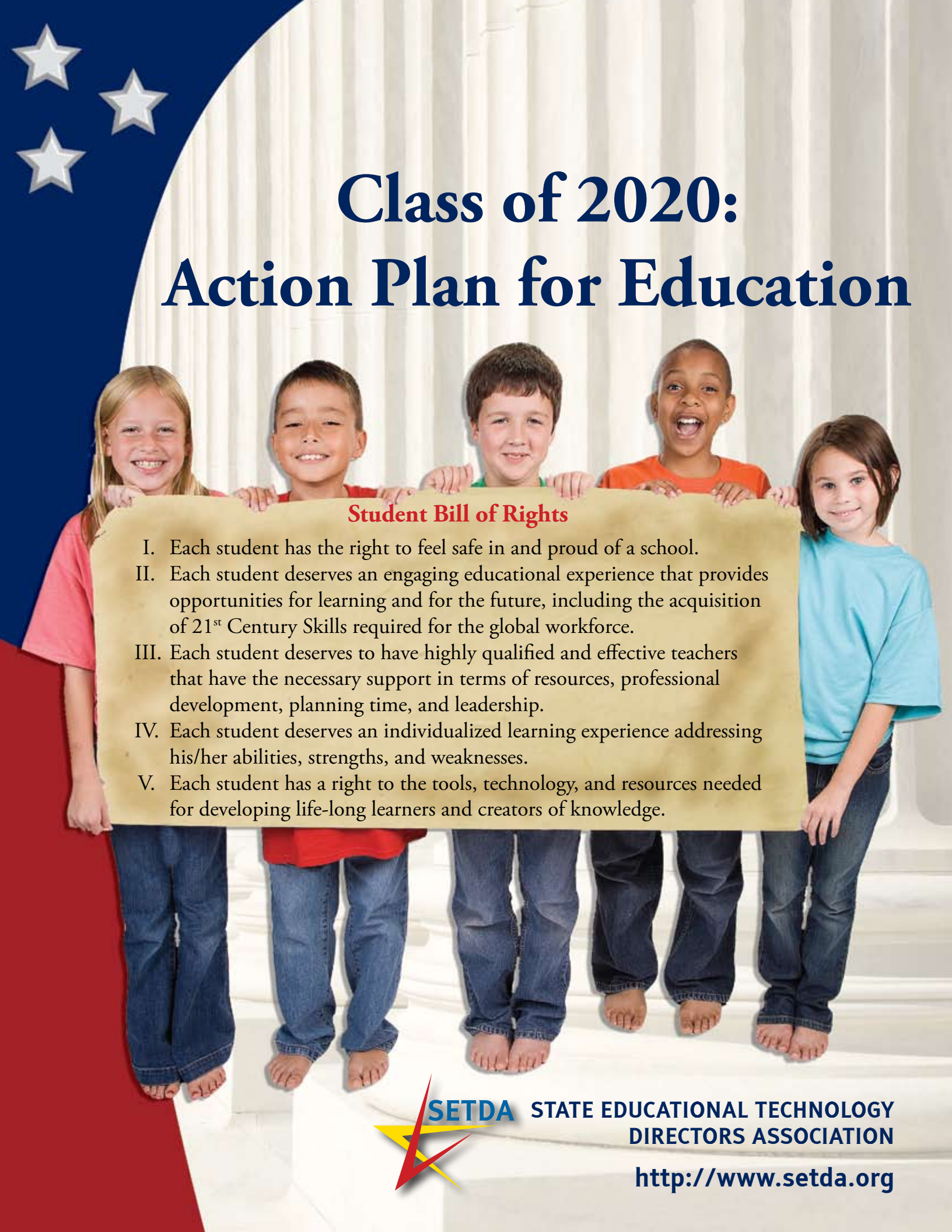
Class of 2020: Action Plan for Education



Student Bill of Rights

I. Each student has the right to feel safe in and proud of a school.

II. Each student deserves an engaging educational experience that provides opportunities for learning and for the future, including the acquisition of 21st Century Skills required for the global workforce.

III. Each student deserves to have highly qualified and effective teachers that have the necessary support in terms of resources, professional development, planning time, and leadership.

IV. Each student deserves an individualized learning experience addressing his/her abilities, strengths, and weaknesses.

V. Each student has a right to the tools, technology, and resources needed for developing life-long learners and creators of knowledge.

SETDA STATE EDUCATIONAL TECHNOLOGY DIRECTORS ASSOCIATION

http://www.setda.org

Students

Powerful Broadband Access for All Kids: Breaking Through the Barriers

All students deserve access to resources and information through a technology infrastructure that provides an opportunity to voice their perspectives as well as collaborate with peers and teachers as they investigate and respond to relevant questions. High-speed broadband allows for efficient and effective feedback to be provided to students for research and collaboration. In addition, this access removes barriers of geography, distance and economic disadvantage.

Science, Technology, Engineering & Math (STEM): Innovative Approaches

It is our responsibility to ensure that our children are prepared to lead our country in the 21st Century and compete in the global marketplace. Further, as a nation, we must ensure that we are able to meet the workforce needs of this 21st Century global economy. In order to do that, we need to provide our children with an education that includes a solid foundation in science, technology, engineering, and mathematics (STEM). Though some specialized STEM magnet schools exist throughout the country, the majority of kids in most school districts in the country do NOT have STEM school options. Instead in most school districts, science, technology, engineering, and mathematics are included as part of the entire curriculum – not as a specific focus. Many of these STEM subject areas are not integrated into the curriculum or taught on an everyday basis. We must provide ALL students with a solid background in STEM. To do this, we must recruit and retain teachers trained in the STEM disciplines, provide on-going teacher training for teachers in these fields, and expose all students to potential STEM careers from an early age.

Class of 2020: Action Plan for Education White Paper Series

For publications on each of these topics, complete with models and research highlighting these approaches, visit SETDA's Class of 2020 Website at http://www.setda.org/2020.

Technology-Based Assessments Improve Teaching and Learning

Within most classrooms in the United States, teachers have students with a wide range of abilities, backgrounds and learning styles. Students deserve and teachers require the resources to allow them to adapt their teaching to these varying needs of their students. Effective instruction—and the teacher training and resources that support it—should allow a teacher to accommodate students with different learning styles, provide both enrichment and remediation, and allow for personalization for each individual student rather than one mode for the whole class or group. A key tool for meeting this end is formative assessment whereby, using technology, classroom teachers can conduct low-stakes innovative micro-assessments of all students for the purpose of improving instruction and helping each student reach his/her highest potential. These less formal assessments may take a variety of forms, including classroom observation, class discussions, quizzes, homework, and tests. These types of innovative tools provide immediate feedback to both teachers and learners and allow for customized support to adjust teaching based on the specific needs of the student long before the student is assessed on high-stakes summative assessments at the end of the year.

Virtual Learning – Expanding Opportunities

All students should be able to have continuous access to a high quality curriculum from the classroom to the family room to the community center—regardless of socioeconomic or geographic barriers. Virtual learning is a tool that can do just this. Virtual learning provides each student the promise of access to age- and ability-appropriate curriculum, rich and extensive resources and accurate and up-to-date assessments regardless of location, economic situation or time. Virtual learning can supplement the traditional bricks and mortar classroom to enhance teaching and learning by creating opportunities for students and teachers to individualize instruction based upon specific learning styles—ultimately giving students resources for "just-what-I need" learning. When effectively used, virtual learning allows for student-centered, self-directed, self-paced learning. Virtual learning also has the potential to engage students in ways that traditional learning does not.

Teachers

Empowering Teachers: A Professional and Collaborative Approach

In every profession, employees depend on the support of their peers and administrators to learn and grow throughout their careers. Novice and experienced teachers alike need the support of one another and their administrations to achieve and maintain quality instruction. On-going support has proven to retain teachers and minimize transfers because of job dissatisfaction. Effective staff development that improves the learning of all students takes place over time, is job-embedded, organizes adults into learning communities aligned with school and district goals, is led by skillful school and district leaders who guide continuous instructional improvement, and allows for adult learning and peer collaboration. Effective professional development is the lynchpin for ensuring that school districts attract and retain a highly qualified teacher for every classroom.

Access to Training, Resources & Mentors

School systems must provide teachers with on-going support to help maximize the potential of each teacher and ultimately every student. Training is critical in helping teachers utilize the resources and applications necessary to provide quality instruction and increase engagement to improve student learning. Technology can help teachers engage in on-going and job-embedded professional development through access to professional learning communities, online courseware, and education portals with resources, best practices and lesson plans. In addition, master teachers or coaches can be an essential tool for supporting teachers by providing feedback and allowing for the sharing of best practices. Finally, teachers need access to relevant, engaging and up-to-date digital resources to complement their instruction and individualize their teaching based on student need.

Teacher Training to Integrate Technology

Technology integration is critical to our nation's educational success and preparing students for the global economy. Teachers must be able to monitor achievement at the individual student level, generate timely feedback to students, address gaps in student understanding, and provide enrichment and acceleration where students have demonstrated success. Further, teachers must be able to embed technology within the curriculum in order to develop student mastery of technology and 21st Century skills. This systemic technology integration requires effective professional learning that includes on-going training and resources that are available anywhere at anytime. This integration of technology into the curriculum is vital in engaging today's students who have grown up in a technology-rich environment. These digital-age learners deserve a school curriculum rich in technology that supports student created content and fosters the development of life-long learners.

Class of 2020 Action Plan

The Crisis

THE HIGH SCHOOL GRADUATION RATE IS JUST BARELY OVER 70%.

LESS THAN 50% OF GRADUATES ARE PREPARED FOR THE WORKFORCE OR COLLEGE.

BY 2010, MORE THAN 90% OF ALL SCIENTISTS WILL BE LIVING IN ASIA.

11% OF LOWER INCOME HOMES SUBSCRIBE TO BROADBAND AS OPPOSED TO 62% OF MORE AFFLUENT HOMES.

US RANKS 20TH FOR GRADUATE DEGREES IN ENGINEERING, SCIENCE, TECHNOLOGY & MATH.

8 MILLION STUDENTS IN GRADES 4-12 STRUGGLE TO READ ON GRADE LEVEL.

TEACHER TURNOVER COSTS THE US $7.3 BILLION ANNUALLY.

AMONG INDUSTRIES, EDUCATION RANKS DEAD LAST IN THE USE OF TECHNOLOGY.

40-50% OF TEACHERS LEAVE THE PROFESSION WITHIN THE FIRST FIVE YEARS.

Citation references found at http://www.setda.org/2020/citations

Action Steps to Support Our Students

1. Ensure that technology tools and resources are used continuously and seamlessly for instruction, collaboration and assessment.
2. Expose ALL students (Pre-K through 12) to STEM fields and careers.
3. Make ongoing, sustainable professional development available to all teachers.
4. Utilize virtual learning opportunities for teachers to further their professional development, such as online communities and education portals.
5. Incorporate innovative, consistent and timely assessments into daily instruction.
6. Strengthen the home and school connection by using technology to communicate with parents on student progress.
7. Provide the necessary resources so that every community has the infrastructure to support learning with technology, including assessments and virtual learning.
8. Obtain societal support for education that utilizes technology from all stakeholders – students, parents, teachers, state and district administrators, business leaders, legislators, and local communities.
9. Provide federal leadership to support states and districts regarding technology's role in school reform by passing the ATTAIN Act.
10. Increase available funding for E-rate so that school districts and schools can acquire telecommunication services, Internet access, internal connections, and maintenance of those connections.

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