Department of Legislative Services
Maryland General Assembly
2016 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 1041	(Senator Rosapepe, *et al.*)
Education, Health, and Environmental Affairs	Ways and Means

Education - Physical and Digital Infrastructure in the Public Schools - Assessment

This bill requires the Maryland State Department of Education (MSDE), in cooperation and coordination with the local school systems, to conduct an assessment of the physical and digital infrastructure needed to support the integration of digital devices into the State's education program for all public school students by December 1, 2016. The assessment must be submitted to the Senate Education, Health, and Environmental Affairs Committee and the House Committee on Ways and Means by December 15, 2016.

The bill takes effect July 1, 2016.

Fiscal Summary

State Effect: None. Assuming that local school systems self-report the required information, MSDE can complete the required assessment using existing resources.

Local Effect: Given related surveys that have been done by local school systems recently, it is assumed that local school systems can provide the information required for MSDE to produce the required assessment using existing resources.

Small Business Effect: None.

Analysis

Bill Summary: The assessment must include:

- a survey of current Internet infrastructure and digital device availability in Maryland's public schools;
- a cost-estimate of bringing all Maryland public schools up to the level of being able to support one device per student;
- any procurement avenues that may prove useful in providing digital devices and related equipment to students across multiple local school systems; and
- a cost-estimate of options for providing one device per student, including bring-your-own-device programs.

Current Law/Background:

One-to-one Computing Initiatives

The meaning of one-to-one computing varies, with some programs specifying that each student must be given a device to take home every night by the school, while other programs defining it as every student having access to a digital device either brought from home or provided by the school during the school day. Programs also differ in what they consider a digital device for purposes of the program. Some one-to-one programs count only laptops, while other programs may also count desktop computers, tablet devices, and smart phones.

One-to-one computing initiatives have been implemented across the nation as a strategy to improve academic achievement, increase equity of access to digital content and skills, increase economic competiveness of a region, and transform the quality of instruction. In addition, one-to-one initiatives and increasing the technology infrastructure in schools have been connected to standardized assessments migrating to a primarily online format.

Bring your own device programs (known as "BYOD" programs) have been supported by some as a method to reach one-to-one computing goals. However, BYOD programs have not been able to be implemented in some jurisdictions across the country due to prohibitions against students bringing their cell phones or other digital devices into the classroom.

According to the Center for the Advanced Study of Technology Leadership in Education at the University of Kentucky, research shows that the effectiveness of one-to-one programs depends on the program goals and the implementation of the programs.

In particular, professional development for teachers in how to integrate the digital devices into the classroom has been shown to be beneficial to the impact of a one-to-one program.

One-to-one Programs and Progress in Maryland

In fiscal 2014 and 2015, MSDE received an appropriation of $3.5 million each year for the Digital Learning Innovation Fund to be distributed to local school systems in need of funds to accelerate their transition to digital learning and upgrade their information technology infrastructure to be compatible with and to implement the Partnership for Assessment of Readiness for College and Careers (PARCC) assessments online.

Pursuant to the Joint Chairmen's Report (JCR)- Operating Budget, April 2015 (R00A01, p. 98), MSDE was required to submit a draft State Education Technology Plan as a preliminary report to identify the technology needs to support online assessment administration and digital learning in an environment conducive to one-to-one access of digital resources, including "bring your own device" options. The draft State Education Technology Plan can be found on the Department of Legislative Services' library website.

Since the Maryland State Technology Plan is currently being developed by the Maryland Instructional Technology Advisory Council, the JCR serves to outline the current state of educational technology in Maryland and details the recent work done around the updated plan. The final report, due June 1, 2016, should identify gaps in technology readiness and access and identify the cost of implementing a Statewide Education Technology Plan. The budget language also stated that, "MSDE should request funds in the fiscal 2017 budget to conduct the statewide analysis."

The JCR language was in response to reports submitted by MSDE and local school systems in 2014 on the readiness and needs of local school systems to implement the PARCC assessments fully online by the 2017-2018 school year and ultimately achieve one-to-one access to digital resources. The reports from the time were inconsistent and had incomplete information on the current state of technology across the State's public schools. Furthermore, according to the JCR, the committees were concerned that the State did not have a statewide strategic plan for education technology that will provide a school environment that will prepare students for the twenty-first century digital environment, help attract and retain high-quality teachers, and enable a better use of school time.

Additional Information

Prior Introductions: None.

Cross File: None.

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