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## A Racial Impact Analysis of HB 936: Accessibility of Electronic Textbooks

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# **A Racial Impact Analysis of HB 936: Accessibility of Electronic Textbooks**

*A project of the Minority Political Leadership Institute Class of 2014*

Prepared by: Melanie Avery, Theresa Cry, Linda Haskins and  
Branden Riley

## **Project Description**

The economic and social consequences of the lack of access to technology for students in the Commonwealth of Virginia are real and significant. This report provides a legislative racial impact analysis of House Bill (HB) 936, a proposed bill in the Virginia General Assembly, prohibiting school boards from making electronic textbooks available for students, unless the school board adopts a plan to ensure that e-textbooks are available on or before July 1, 2017. The bill focuses solely on developing a plan for installing prior to implementing electronic textbooks in K-12 classrooms. Electronic textbooks are important as they offer updated content, ease of accessibility, multimedia features to enhance the learning experience, and the ability for educators to customize learning. Delegating this decision to each local school board in Virginia raises important potential racial implications, including the digital divide. Previous research suggests a correlation between the number of students receiving free and reduced lunch and the lack of availability of electronic textbooks. Districts with high rates of students on free and reduced lunch have a high population of minority students. This analysis provides maps that capture the trends on the probability of providing electronic textbooks for high minority areas across the state. The primary recommendation is to advance policy approaches that make electronic textbooks available to all K-12 students in the Commonwealth of Virginia.

## **Legislative Analysis**

### **Background**

In Virginia, state law mandates that all textbooks be approved by the Board of Education for use in grades sixth through twelve (Virginia State Code § 22-1-241). The proposed legislation is intended to be a general outline for regional school districts to implement plans allowing for the purchase and use of electronic textbooks through contracts and purchase orders with textbook publishers. The proposed bill also specifies that if a local school board decides to purchase an electronic textbook, it must be provided to each student free of charge. Finally, the proposed legislation would require local school boards to work with the Center for Innovative Technology annually to report to the General Assembly on the level of broadband connectivity of each local school district, as well as the level of computer ownership and access to broadband services for each student. The Commonwealth may also begin working to develop a broadband connectivity map to aid each local school board in its decision to purchase electronic textbooks.

In 2013, a bill was introduced to prohibit school boards from making electronic textbooks available for use by students in their residence or residences unless the school board implements measures to ensure that every student in the local school district has access to a personal computing device approved by the Board, and access to internet service in their residence or residences. This legislation did not pass and was left in the Virginia House Committee on Science and Technology.

The concept of having electronic textbooks in the classroom stemmed from Delegate Scott Surovell, a resident of Mount Vernon, Virginia and attorney in Fairfax County, dedicated to helping Northern Virginians and small businesses solve their legal problems. In an effort to increase the use of electronic textbooks across the state, Surovell came up with the idea after observing how students in his district were being required to use electronic textbooks but were not receiving free computers provided by the Constitution of Virginia. Outdated textbooks and access to up-to-date information in the schools across Virginia have been an issue that initiates discussions about funding. The state creates and maintains laws that govern the state school board and districts throughout the Commonwealth. Thus, as a locality implements electronic textbooks, costs associated with funding becomes the top issue.

The proposed requirement that localities implement the use of electronic textbooks was a result of the Surovell's HB 936 introduced in the 2014 General Assembly session. The bill would help local school districts plan for implementation of electronic textbooks and roll out connectivity that would be fair and equitable across the state by 2017. Yet, despite overwhelming support by the Virginia legislators in the Northern Virginia region and some school administrators across the Commonwealth, HB 936 was not well-received by the full voting General Assembly and was left in the House Committee on Education. Fortunately, the legislature was open to the idea enough to refer the proposed legislation for study by the Joint Committee on Technology and Science (JCOTS). The JCOTS committee of appointed legislators and subject matter experts will review ways in which the language can be strengthened so that further review will result in passage in the 2015 session of the Virginia General Assembly. Delegate Surovell believes passage of this legislation will take a step to ensure that every child will continue to have the same access to educational materials, regardless of their family's socioeconomic status. If adopted, it will also start the process of assuring that every child in Virginia has a computer and broadband access so they can be fully prepared to compete in the 21st century economy. However, if the legislation passes with its current language, students in poorer school districts will be largely unable to connect to e-textbooks in their homes due to costs.

### E-Textbook Awareness

Planners and teachers believe in the ability of technology to enhance learning and believe that technology can enhance learning in the classroom, however the cost is prohibitive across the state. The goal of electronic textbooks in the classroom and in residences is to allow students to take a variety of paths through digital curricula based on their own learning styles. Planners, teachers, and even parents are generally supportive of the concept that "electronic textbooks and connectivity" is important but also believe that specific rules on how plans should be adopted should not be mandated. Different approaches are required to engage their students and maximize their investment in education that includes technology. It is further emphasized that the cost for supplying electronic textbooks and the connectivity for it simply is not feasible for some school districts with lower income students.

Several localities, including Henry County have had success in distributing electronic textbooks to the entire school population, and have also adopted innovative approaches to include those with high rates of poverty. Technology spending in schools varies widely across the country, as some districts reap the benefits of grants and parental donations, while others are limited to local, state, and federal funding.

Located in Southwest Virginia, Henry County Public Schools has the largest digital textbook initiative in the Commonwealth of Virginia. Currently sixth graders have their science books installed as an e-textbook, with plans to add more textbooks as they become available digitally. Melany Stowe, a communications coordinator in Henry County Public Schools, secured over \$1.5 million in competitive grant funds over the past three years to support increased student achievement initiatives using technology in classrooms. Schools and school districts that embrace technology are excited not only to see the innovative ways technology can be implemented, but also how technology can effectively be used to teach and advance education.

### **Racial Impact Analysis**

This racial impact analysis focuses on the impact HB 936 will have on helping Virginia students to better prepare for their academic futures as educational technology continues to evolve. Creating funding is an important part of closing the structural equity gap that exists in educational technology resources. The policy of not funding electronic textbooks for all students in Virginia creates an issue of racial and economic inequity.

The National School Lunch Program is a federally assisted meal program providing nutritionally balanced, low-cost or free lunches to children from low-income families in public and nonprofit private schools and residential childcare institutions (U.S. Department of Agriculture, 2013). On average, 64 percent of students nationwide receive free or reduced price lunches (U.S. Department of Agriculture, 2013). In the state of Virginia, 41.2 percent of students received free or reduced priced lunch. The students on free and reduced lunch programs are from families which are often in poverty. In order to receive free or reduced priced lunches, families must live within the federal poverty level. Table 1 provides federal poverty guidelines. This evidence further suggests that poorer school districts are the most affected by the digital divide.

**Table 1: Federal Poverty Guidelines (CMCS/CAHPG/DEEO, 2014)**

Household Size	Poverty guidelines
1	\$11,670
2	\$15,730
3	\$19,790
4	\$23,850
5	\$27,910
6	\$31,970
7	\$36,030
8	\$40,090
9+	\$44,150*

\*Note: add an additional \$4,060 for each additional person

### Digital Divide

For the context of the racial impact analysis, the “digital divide” is defined as the use of Internet between whites and certain minority groups, the wealthy and the less financially affluent, the formally educated and those less fortunate to receive an education, and those residing in urban and rural areas. Internet usage by minority groups in the United States (US) is critical to determining how the use of e-textbooks may positively impact public schools. The Pew Internet and American Life Project discovered that 36 percent of African American and 44 percent of Hispanics had Internet access in comparison with 50 percent of Whites (Lenhart, 2000). The Department of Commerce had official statistics that show slight differences in the access to the Internet with 23 percent of African American and Hispanic household versus forty-six percent of Whites (NTIA, 2000). The availability of broadband in select communities and neighborhoods may also contribute to the racial digital divide. Prior to the establishment of low-income broadband access packages by Comcast and Cox Communications, AT&T was sued for “electronic redlining,” which is defined as the failure to provide service to minority communities based on negative stereotypes. Additionally, poor quality of telecommunication service within the inner city may contribute to the racial digital divide, in particular for African Americans according to Baynes (2004). Given these gaps and discriminatory practices, the use of e-textbooks in minority communities will be lower due to the lack of Internet access, which requires further examination by the JCOTS committee.

The JCOTS committee, assigned to study the effects of HB 936, is directed to examine and return recommendations to the General Assembly that will create a workable solution by all parties involved. This includes determining if additional legislation is needed to help localities transition to electronic textbooks and connectivity. The result of the Joint Committee’s effort could develop a phased-in approach or tiered approach to implementation. Thus, school districts will be permitted to have some flexibility before a mandatory implementation becomes law. Behind the scenes, work will be needed to get all of the legislators and

stakeholders to compromise on the final language which ultimately will need approval by the full General Assembly.

## **Public Awareness of Legislation**

Many of the school districts in Virginia have individuals, similar to lobbyists, that represent their interests, especially regarding the implementation of district wide electronic textbooks, access to e-textbooks, and the connectivity to the internet in the schools and at home. This is how many districts find out about issues that will directly impact the students and their educational advancement. Many also receive guidance from the Virginia Department of Education (VDOE) or the Virginia Education Association (VEA). The VEA is a statewide community of more than 50,000 teachers and school support professionals working for the betterment of public education in the Commonwealth. A host of consultants and professionals from the VDOE also assist with public outreach by holding public forums in different areas of the state where electronic textbooks could benefit the very wealthy school districts and consider the extraordinary circumstances of poorer school districts.

The state of Virginia recently launched a “Beyond Textbooks” campaign that was deemed successful. Beyond Textbooks is a series of small-scale pilot programs designed to explore the technical, social, and policy implications of textbook alternatives. This project identifies cost-effective models that blend studies, standards-based content, and convenience of traditional textbooks with the engaging, dynamic, and up-to-date content and resources afforded by the Web. The “Phase I” of Beyond Textbooks study clearly demonstrated that multipurpose portable devices can be powerful tools for learning when loaded with engaging high-quality content and applications. In one step further, the “Phase II” of the pilot focuses on the design and development of model e-Learning backpacks that included digital textbooks delivered on wireless, handheld, multipurpose computers with supporting resources, tools, and applications. This phase emphasized STEM areas (mathematics and its real-world applications specifically), also deemed successful. Phase I and Phase II of the Beyond Textbooks campaign were deemed successful by the VDOE and Radford University. The program demonstrated how public and private partnerships can accomplish ground breaking work on the behalf of students. This is important because students are the primary stakeholder.

### Stakeholders/Interest Groups

HB 936 impacts a broad spectrum of Virginians. Some of the key stakeholders are textbook publishers, Virginia Department of Education, teachers, parents, and of course the students. One concern that affects all of the stakeholders is the reoccurring issue of out of date or obsolete textbooks. While the United States spends more than \$7 billion a year on textbooks, too many students are using books that are 7-10 years old with outdated material (FCC & USDOE, 2012). Primarily, those who are using out-of-date textbooks are minorities living in poverty stricken school districts that are unable to afford upgraded textbooks, to upgrade a physical text book, there is a purging process. E-textbooks would essentially be exempt from this process as an update would be performed by downloading a new file or instantaneously if

viewed through a web application. The ability to easily update e-textbooks on electronic devices may be a good reason for implementation of e-textbooks.

Publishers encounter capability problems from varying devices, operating systems, and hardware providers. While digital content eliminates the cost of printing physical books, it does not eliminate development costs such as research, hiring authors, art, photography, illustrations, fact checking, and adherence to curriculum and pedagogical standards. New processes and systems to protect digital rights management are also necessary, as well as tools to manage royalty payments (see Figure 1).

**Figure 1: History of Electronic Textbook Expenditures**

Recent K -12 digital textbook market expenditures
2010 – 1% of the US textbook market (\$80M)
2012 – 5.5% (\$440M)
2013 – about 10.5% (\$840M)
2014 – an estimated 18.8% (\$1.5B)

The Virginia Department of Education (VDOE) has sponsored a series of implementation pilots to help determine the potential of multipurpose portable devices to support teaching and learning in K-12. The initial study garnered excitement and interest in the schools, and the division.

Publishing companies have an interest in whether or not counties will participate in purchasing e-textbooks. The textbook industry consists of three major companies that comprise 85 percent of the market: McGraw-Hill, Pearson, and Houghton Mifflin Harcourt. Publishers will need to provide electronic versions of textbooks that are compatible for a variety of hardware as well as provide the software at a reasonable price that school districts can afford. If an e-textbook plan is adopted, teachers will have to receive training on the hardware used in their particular school districts as well as training the students on the use of the technology to access the software.

Parents may need training on how to use the devices to assist students, as parents may ultimately be responsible for the devices that house the software. The devices may be taken home to read textbooks and complete homework assignments.

If school boards are responsible for allocating funds for the purchase of e-textbooks, they will need to find funding where budgets may already be stretched, such as those in poorer school districts. Additionally, school boards will need to create policies and procedures about the use of e-textbooks and liability.

The students, the ultimate users of e-textbooks, are the primary stakeholders. Table 2 provides an overview of some of the advantages and disadvantages of e-textbooks.



**Table 2: Advantages and Disadvantages of E-Textbooks**

<b>Advantages</b>	<b>Disadvantages</b>
<ul style="list-style-type: none"><li>• Digital content is up-to-date</li><li>• Multimedia features enhance the learning experience</li><li>• Teachers can customize learning</li><li>• Digital content more effectively supports a variety of learning needs</li><li>• E-textbooks better engage tech-savvy students</li><li>• E-textbooks can be accessed anytime, anywhere</li><li>• Students do not need to carry heavy backpacks<sup>6</sup></li></ul>	<ul style="list-style-type: none"><li>• Multimedia features may interfere with students' reading comprehension</li><li>• Belief that the content contained in digital textbooks is inferior to that of print content</li><li>• Content is not easily transferrable among different types of devices</li><li>• E-textbooks break easily and are costly to fix</li><li>• E-textbooks users read 20-30% more slowly than users of print books</li><li>• Standards for the quality and accuracy of digital content have not been established</li></ul>

By obtaining more stakeholder involvement, the likelihood of achieving the goal of ensuring educational equity and protecting disadvantaged students from being left out of the process will be met.

### **Recommendations**

Electronic textbooks are instructional tools that should be seriously considered, thoroughly considered, and implemented in such a manner that it does not create an injustice to Virginians. The following recommendations will strengthen the bill and further propel equity in the Commonwealth:

- ✓ Include a critical funding step in the bill. For example, add the expense projected for the project as a line item for a tax referendum.
- ✓ Include creation of an implementation team to work with each locality, and ultimately propose a feature implementation date; advertise and campaign to raise public awareness of future expectations and desires of the Commonwealth concerning electronic textbooks; gain support for the cause on the local, national, and international level.
- ✓ Include language to recommend the use of Virginia's colleges and universities offering computer science and IT programs to train and provide real-world experience to students interested in support and client services. The majority of routine maintenance and upkeep of computers could be performed during breaks and on weekends. This overcomes the training hurdles while maximizing the use of the resources in which the Commonwealth has invested.

- ✓ Identify and include school districts serving nearly 50 percent of poverty stricken families such that the state can provide specific and equitable support to those localities proportionately.
- ✓ Deny any individual county and/or school district the opportunity to decide how or when to implement the system, without universal guidelines. Establishing guidelines would help maintain equity between low income districts and high income districts. This includes consideration of the explicitly excluded Henry County wherein the current funding for the program expires in 2017.
- ✓ Avoid recommending a program that could have damaging inequitable effects on school districts (i.e. districts with high poverty levels) and not provide funding, or opportunities for state/region wide partnerships. The more expansive the partnerships/bundles of funding would greatly increase the access and equity for all.
- ✓ Establish a list of public private partners and packages upfront to support the bill that provides opportunities for all levels of business to get involved; provide sign-up opportunities for services and offer contracts to help facilitate the costs of implementation, while sustaining the life of the bill.

## **Conclusion**

Establishing these policies, projects, and practices will allow the Commonwealth to make a clear and direct commitment to easing the digital divide for students currently isolated from broadband and e-textbook access based on race, residential location, or the socioeconomic status of chief primary care givers. Enhancing the language of HB 936 will help to close the gap on the digital divide. Its passage with the recommendations will ensure fair and equitable access of much needed educational materials for all students in the Commonwealth of Virginia. It will position the Commonwealth as a leader in assuring opportunities for educational excellence for all students.

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**House Bill (HB) 936:**  
**Access to electronic textbooks for students at school and in their residences.**

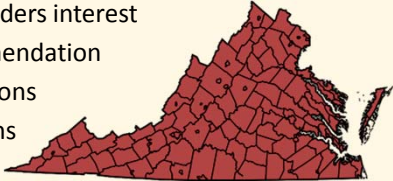
**HB Introduced by:**  
 Delegate Scott A. Surovell








**Racial Impact Analysis presented by:**  
 The firm of Melanie Avery, Theresa Cry, Linda Haskins & Branden Riley

MPLI 2014 Group 1 **PROJECT OVERVIEW** **HB 936**

-  Project description
-  Legislative analysis
-  Racial impact analysis
-  Public awareness
-  Stakeholders interest
-  Recommendation
-  Conclusions
-  Questions



MPLI 2014 Group 1 **PROJECT DESCRIPTION** **HB 936**

-  Electronic textbook plan for school districts
-  Primary education (K-12)
-  Connection to the real world
-  Digital divide
-  District equality among communities

*“Education equality can overcome a lot of racial barriers”*

MPLI 2014 Group 1 **LEGISLATIVE ANALYSIS** **HB 936**

**External Video**

- [News Report Introducing HB 936](#)



MPLI 2014 Group 1 **LEGISLATIVE ANALYSIS** **HB 936**

<p><b>Pros:</b></p> <ul style="list-style-type: none"> <li>• Implementation plan</li> <li>• Mention exemplary districts</li> <li>• Support of VA legislatures</li> <li>• Brings e-book access to some students in the Commonwealth</li> <li>• Encourages an innovative new approach to educating our students</li> </ul>	<p><b>Cons:</b></p> <ul style="list-style-type: none"> <li>• Excludes provisions for funding</li> <li>• Propagates education gap in wealthier district</li> <li>• Not approved</li> <li>• E-books may slows down reading rates in some students</li> </ul>
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MPLI 2014 Group 1 **PUBLIC AWARENESS** **HB 936**

- Virginia Education Association (VEA)
- Virginia Department of Education (VDOE)
- “Beyond Textbooks” campaign
- Henry, Henrico, and Loudon county schools

MPLI 2014 Group 1 **HB 936**

## STAKEHOLDER INTEREST

- Publishers and publishing companies
- Parents and the community
- Information technology firms
- Local county and district school boards
- Students

"I don't use a computer a lot at home, so having to do everything online... I'll get used to it, but it's infuriating."

-- HS senior Katie Ingebretsen, 17 – 2011

MPLI 2014 Group 1 **HB 936**

## STAKEHOLDER INTEREST

### Digital

Advantages of e-textbooks

- Digital content is up-to-date
- Multimedia features enhance the learning experience
- Customizable learning modules
- Tech-savvy student engagement
- Accessed anytime, anywhere
- Students do not need to carry heavy backpacks

### Divide

Disadvantages of e-Textbooks

- Multimedia disrupts reading comprehension
- Digital textbook content is inferior to that of print content
- Transferability & compatibility
- Break and are costly to fix
- Users read 20-30% more slowly
- E-Quality Standards not established

MPLI 2014 Group 1 **HB 936**

## RACIAL IMPACT ANALYSIS

**Top Ranking Districts** ★

- Falls Church: \$119,186
- Loudoun County: \$125,381
- Poquoson: \$82,501

**Bottom Ranking Districts** ★

- Danville: \$35,266
- Hopewell: \$35,926
- Petersburg: \$34,080

Equity MAP of VA

MPLI 2014 Group 1 **HB 936**

## RACIAL IMPACT ANALYSIS

- Minorities affected
- Poverty groups
- Symptoms

**Average Household Income by Race**

Ethnic Group	Average Household Income (Thousands)
Asian	\$86,801.0
Asian Pacific Islander	\$69,869.0
White	\$67,164.0
Avg. of All	\$61,882.0
Latino	\$56,782.0
American Indian	\$47,512.0
Black	\$43,649.0

**Poverty guidelines**

Number Per Household	Income Per Household (Thousands)
1	\$10,000
2	\$15,000
3	\$20,000
4	\$25,000
5	\$30,000
6	\$35,000
7	\$40,000
8	\$45,000
9+	\$50,000

MPLI 2014 Group 1 **HB 936**

## RECOMMENDATIONS

**Legislation Revisions**

- Critical funding step
- Designate an implementation team
- Use college students to perform operation and maintenance
- State provides 50% funding assistance

**Additional Actions**

- Equitable universal guidelines
- Pursue opportunities for funding
- Bundling and negotiating packages for partnerships
- Incentive to jurisdictions funding e-textbooks equitably

MPLI 2014 Group 1 **HB 936**

## CONCLUSION

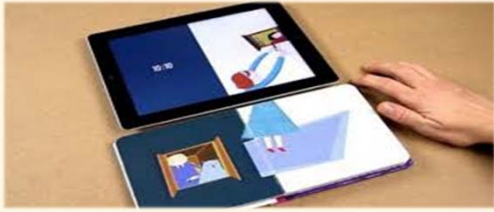
Establishing these policies, projects, and practices will allow the Commonwealth to make a clear and direct commitment to easing the digital divide for students currently isolated from broadband and e-textbook access based on race, residential location, or the socioeconomic status of chief primary care givers.

*"In a country where we expect free wifi with our coffee, shouldn't we have it in our schools?"*

-- President Barack Obama - 2013

MPLI 2014 Group 1 **HB 936**

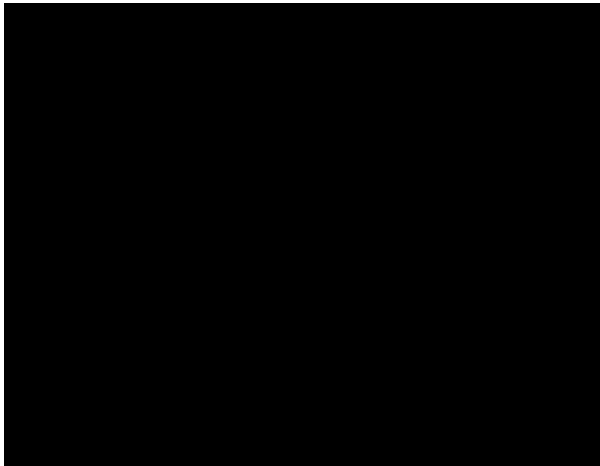
## QUESTIONS



*"In a country where we expect free wifi with our coffee, shouldn't we have it in our schools?"*

-- President Barack Obama - 2013

# END OF PRESENTATION



MPLI 2014 Group 1 **HB 936**

## CONCLUSION

### Conclusion Map

State Recommends	Federal Assistance	District Tax Dollars	State Assistance	Need Funding
E-Textbooks 2017	Poverty Stricken Reduced Lunch	None or Low	None Proposed	Critical Step

MPLI 2014 Group 1 **HB 936**

## QUOTE REFERENCES

in 2011

"I don't use a computer a lot at home," said senior Katie Ingebretsen, 17. "So having to do everything online. . . I'll get used to it, but it's infuriating."

By Holly Hobbs September 21, 2011 <http://www.washingtonpost.com/local/fairfax-county-schools-switch-to-online-textbooks/2011/09/21/>

<http://booksforpoverty.org/2011/09/21/fairfax-county-was-using-a-hybrid-model-at-the-time-of-the-quote/>

The FDES library collection includes almost 800 electronic books that our students can access from any computer. Also, the Loudoun County Public Schools online database are available to students with a username and password. This is a great way for children to find books and information without ever leaving the house! To access links to the ebooks and databases, go to the FDES website. Under "Departments" select "Library". On the left you will see a list of options, including "Online Resources/Databases" and "Ebooks". If you need the usernames and passwords to log in to our database or ebooks, email Mrs. Brandy and she will send you this information.

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