## TOPIC #7: Should tablets replace textbooks in K – 12 schools?

Proponents of the use of iPads and other tablets believe that electronic textbooks (E-textbooks) should replace print textbooks, but opponents argue that there are a lot of technology and health issues associated with E-textbooks.

In your response, analyze the two articles taken from www.procon.org to determine which position is best supported. Use relevant and specific evidence from both articles to support your response.

## Article 1

(1) Tablets help students learn more material faster. Technology-based instruction can reduce the time students take to reach a learning objective by 30 – 80%, according to the US Department of Education and studies by the National Training and Simulation Association.

(2) Eighty-one percent (81%) of K – 12 teachers believe that "tablets enrich classroom education." The survey of technology in the classroom by the Public Broadcasting Service (PBS) also concluded that 77% of teachers found technology to "increase student motivation to learn."

(3) Tablets can hold hundreds of textbooks on one device, plus homework, quizzes, and other files, eliminating the need for physical storage of books and classroom materials. The average tablet contains anywhere from 8 to 64 gigabytes (GB) of storage space. On the Amazon Kindle Fire, for instance, 1,000 books take up one GB of space.

(4) E-textbooks on tablets cost on average 50 – 60% less than print textbooks. According to a 2012 report from the Federal Communications Commission (FCC), K – 12 school districts spend more than $8 billion per year on textbooks. E-textbooks can save schools between $250 and $1000 per student per year. Tablet prices also continue to drop, making them increasingly affordable. Tablets cost on average $489 in 2011, $386 in 2012, and are projected to cost $263 in 2015.

(5) Print textbooks are heavy and cause injuries, while a tablet only weighs 1 to 2 pounds. Pediatricians and chiropractors recommend that students carry less than 15% of their body weight in their backpacks, but the combined average weight of textbooks in History, Mathematics, Science, and Reading/Language Arts exceeds this percentage at nearly all grade levels from 1 – 12. According to the US Consumer Product Safety Commission, during the 2011 – 2012 school year more than 13,700 kids, aged 5 to 8, were treated for backpack-related injuries.

# Article 2

(1) People who read print text comprehend more, remember more, and learn more than those who read digital text. The brain interprets printed and digital text in different ways, and people generally read digital text 20 – 30% slower than print. According to Pulitzer Prize winning technology writer Nicholas Carr, peer-reviewed studies show that reading hyperlinked text may increase the brain's "cognitive load," lowering the ability to process, store, and retain information, or "translate the new material into conceptual knowledge."

(2) Tablets have too many distractions for classroom use. Students may pay attention to apps, email, games, and websites instead of their teachers. Eighty-seven percent (87%) of K – 12 teachers believe that "today's digital technologies are creating an easily distracted generation with short attention spans." Four-fifths of students aged 8 – 18 multitask while using digital media.

(3) Many students do not have sufficient home Internet bandwidth to use tablets. Students "need home broadband to access digital content and to complete Internet-based homework," according to FCC Chairman Julius Genachowski and US Secretary of Education Arne Duncan, but about a third of all Americans – 100 million people – do not have broadband Internet at home. A 2010 FCC survey found that nearly 80% of K – 12 schools reported broadband connections that were "inadequate to meet their current needs."

(4) Using tablets is more expensive than using print textbooks. Implementing tablets in K – 12 schools requires purchasing hardware (the tablet) and software (the textbooks), building new Wi-Fi infrastructure, and training teachers and administrators how to use the technology. Implementation costs for E-textbooks on iPad tablets are 552% higher than new print textbooks in an average high school. Lee Wilson, a prominent education marketing expert, estimated the annual cost per student per class with tablets to be $71.55 vs. $14.26 for print textbooks.

(5) Handheld technological devices, including tablets, are associated with a range of health problems. Handhelds contribute to Computer Vision Syndrome, which causes eyestrain, headaches, blurred vision, and dry eyes, according to the American Optometric Association. People who use mobile devices more often have a higher incidence of musculoskeletal disorders associated with repetitive strain on muscles, including carpal tunnel syndrome, neck pain ("text neck"), shoulder pain, and fibromyalgia.