Communications 160

Position Paper

Claim: Smart devices or laptops should not be provided to K-8 school children because it inhibits physical and mental growth.

Word Count: 918

Reason 1:

In today's technology driven society, we readily have knowledge at our finger tips. However, is all this easy access to knowledge truly making us more intelligent? According to studies conducted at the University of Waterloo by Nathaniel Barr in 2015, using websites such as "Google" is actually creating a mental laziness among our current generation. The study brought out that cognitive skills and intelligence are being affected by the use of technology.

Research by professors at the University of Waterloo indicates a direct correlation between cognitive skills and time spent on smart devices (Barr, 2015). Those who spend more time on their smart devices display less cognitive skills than those who study without. By employing cognitive skills the user relies on actual knowledge learned and retained to solve problems and answer questions. Those with less cognitive skills tend to use the same time to search the internet for the answer despite already having the knowledge. This lack of exercising of the brain can cause a reduction of true knowledge resulting in a loss of certain skills such as knowing how to perform a specific task (Barr, 2015).

Another correlation found within the same study is between heavy smart device usage and lower intelligence. Those who think analytically use their smart device less. Again those that employ analytical skills are relying on stored knowledge and spend less time using the internet to find answers. However, because of the fast paced society with live in, people are eager to avoid expending time or effort that is involved in problem-solving (Barr).

The ease and convenience of technology has created a sense of impatience by offering answers instantly and at our fingertips, without requiring us to use our brains or search within our knowledge to find answers. This is all true of adults. How much more so is it for children who lack a sense of patience?

Reason 2:

Another study conducted at the University of California and at Princeton University discovered that students who took longhand notes retain information better than students who typed notes during lectures. Students who took notes on laptops wrote significantly more words than those that took longhand notes. On average those who typed notes on a laptop wrote around 309 words compared to those who took notes longhand wrote about 173 words. However of the typed notes, students tend to write notes verbatim. By typing notes verbatim, students were not using cognitive skills and not internally processing the information to summarize or paraphrase their notes. By processing the information and encoding the message to the individual students' needs, longhand written notes resulted in students performing better on tests (Mueller).

The external storage hypothesis proposed by Seward in 1910, "suggests that the value of taking notes lies in preserving information for later use, such as reviewing for an exam". The encoding hypothesis "suggests that the actual process of taking notes helps the note-taker learn and remember information" (Seward, p. 4). In taking notes, students have two opportunities to learn from a lecture. Once during the lecture and again when reviewing or studying notes prior to an exam. Those that take notes have a superior external storage and superior encoding functions. Because of enhanced encoding, reviewing notes simply remind participants of lecture information more effectively than laptop notes. When using this enhanced encoding, a student tends to write notes in terms that are easier to understand and remember in accord with the student's individual learning process (Seward).

Reason 3:

Young children are already exposed to smart devices outside of an educational atmosphere. In 2013, about 56 percent of children ages 8-12 have a cellphone and 78 percent of teens ages 12-17 have a cellphone. In recent months, children ages 5-16 spend an average of six and a half hours a day in front of a screen. This time is spent in front of a television, playing video games, or using a smartphone, tablet, or computer (BBC). To add a smart device into everyday school activities would only add to the amount of time spent in front of a screen with can lead to fatigue of the eyes.

"Extensive viewing of the computer screen can lead to eye discomfort, fatigue, blurred vision and headaches" according to the American Optometric Association. Children are not impervious to these same symptoms as adults. However, children have additional factors that could enhance these symptoms further. "Children often have a limited degree of self-awareness". This means that children are often not aware of how long they have been in front of a screen and may continue to perform the task until near exhaustion. If a prolonged activity is engaged without break, eye focusing problem may occur resulting in the "eyes to be unable to smoothly and easily focus on a particular object, even long after the original work is completed". Children are also very adaptive and do not always change screen settings to remove glare or reduce brightness. The strain on the eyes can result in dryness due to infrequent blinking, blurred vision from nearsightedness, farsightedness, or astigmatism due to thinking everyone sees the same way. If not corrected, it can cause further strain despite clear vision being maintained. Also, computers are made for adults. The height of the computer screen is typically set up for the average adult. This causes children to look up at the screen causing additional eye strain and strain on the back or neck due to difficulty reaching the keyboard or unable to place feet on the floor (AOA).

References:

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