

**Critical Thinking in the Information Age:  
How the Internet Is Shaping the Way Students Think**

By

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A Project Submitted to the Graduate  
Faculty of Rensselaer Polytechnic Institute

in Partial Fulfillment of the

Requirements for the Degree of

MASTER OF SCIENCE

Major Subject: TECHNICAL COMMUNICATION

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December 2011  
(For Graduation December 2011)

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## Abstract

In the last 15 years, the Internet has revolutionized our traditional modes for information access. This recent period of evolution in information accessibility has been dubbed the “Information Age”. The transition from the library, a physical center to store and locate information, to the Internet, a virtual space for information storage, has given us instantaneous access to more information than a network of every library in the world could amass. So what does this new access to information mean for Internet users of the Information Age? Peter Norvig, Director of Research at Google Inc., would have you believe that it makes us better thinkers. In a *New York Times Upfront* article presenting a debate between Norvig and Nicholas Carr, author of *The Shallows: What the Internet is Doing to Our Brains*, Norvig states, “Just as a car allows us to move faster and a telescope allows us to see farther, access to the Internet’s information lets us think better and faster” (“Google” 1). In truth, access to the Internet’s information does not necessarily let us *think* better and faster; instead it allows us to retrieve information better and faster. As Albert Einstein famously quoted, “Information is not knowledge.”

It is fairly safe to state that as academics we have an inherent desire to be informed. In our quest to become informed, we are exposed to different perspectives that help us gain knowledge. However, *access* to information, no matter how quick or expansive, does not induce knowledge: It is in understanding, interpreting, and evaluating the information we access that allows us to become better and faster thinkers. Thinking critically stretches far beyond brainless fact checking. In this respect, information and knowledge are correlative, not causal. For example, contemplate the different results for the following two separate search engine queries: (1) How many legal executions

occurred by death penalty in Texas in 2008, and (2) Is the death penalty effective? While the first answer is static and factual, the answer is simply 18 executions by death penalty, the second answer is entirely subjective and requires substantial critical thinking. We certainly require accurate information to make informed decisions, but if we cannot harness effective critical thinking skills, information itself is useless.

In order to further develop our skills in critical thinking, we must understand the different ways in which we think. The human thought process is often broken down into two modes of thought: (1) creative thinking, and (2) critical thinking. Creative thinking is the generation of novel and abstract ideas. In his article *Gifted Education: Thinking (With Help From Aristotle) About Critical Thinking*, David A. White, Ph.D., describes critical thinking as a process that “aims at understanding, interpreting and evaluating information that already exists” (14). In the evolution of humankind, both modes of thought have transformed and progressed with the development of new technologies. While innovations in technology have been credited with sparking the production of creative thought, there has been much criticism regarding the affects of technology on critical thinking abilities. Although scientists often dismiss these criticisms as overly cynical misapprehensions, it is important for the scientific community to explore the Internet’s effects on our critical thinking abilities.

In his aforementioned article, White attempts to determine whether critical thinking varies depending on the medium to which it applies. As the analysis is a heavy rhetorical undertaking, he breaks down the process of critical thinking into four scientifically constructed phases: (1) the recognition of information, (2) the analysis of information, (3) the evaluation of information, and (4) and the consideration of

alternative information (White 15). If we apply White's model for critical thinking, we can offer a deeper analysis of how the Internet has affected our ability to think critically. Specifically, we can attempt to understand how the Internet has changed the ways we recognize, analyze, evaluate and consider alternative information. In this paper, I analyze the Internet's effects on our thought processes through White's critical thinking paradigm.