Critical Questions about Technology

Humans tend to be optimistic about technologies because immediate benefits are more obvious than collateral, unintended, and disproportionate effects. Educators can encourage students to critically inquire into technologies by asking the these five technoskeptical questions that were adapted by Dan Krutka and Scott Metzger from a talk referenced below by Neil Postman.

#	Explanation and Question
1	*All technological change is a trade-off*: While it may seem obvious that there are advantages and disadvantages to any technology, Postman contended that there are technologies which people view as "unmixed blessings" and this creates a "dangerous imbalance." He argued that "we always pay a price for technology." Moreover, a new technology can displace older technologies and their benefits, even though some people still prefer the older ones. Educators can ask: **What does society give up for the benefits of the technology?**
2	*Every new technology benefits some and harms others*: Put another way, Postman said "there are always winners and losers in technological change." We detail Postman's insight by pointing out how differential outcomes can target group identity (e.g., race, religion), organizational type (e.g., small- vs. large-scale business interests), or ideology (e.g., democracy, authoritarianism). Educators can ask: **Who is harmed and who benefits from the technology?**
3	*In every technology there is a powerful idea*: All technologies carry a bias or belief about the world that impacts people and their lives. Technologies can convey intellectual, emotional, political, sensory, social, or content biases. Postman represented these ideas by quoting the old saying "to a person with a hammer, everything looks like a nail" and referencing Marshall McLuhan's famous phrase "the medium is the message." Postman explained that the "telegraphic person values speed, not introspection"; the "television person values immediacy, not history"; and the "computer person values information, not knowledge, certainly not wisdom." In other words, technologies need humans to think or behave in certain ways to fulfill their function and spread. Educators can invite students to imagine technology as a living organism and ask: **What does the technology need?**
4	*Technological change is not additive; it is ecological*: Like a drop of dye in water, new technologies are not just additions to the world, they change many other things too. The changes can be hard to predict and impossible to take back. For example, the invention of standardized tests "redefined what we mean by learning, and have resulted in our reorganizing the curriculum to accommodate the tests." Standardized tests were not simply added to schools; they made schools different. Educators can ask: **What are the unintended or unexpected changes caused by the technology?**
5	*Technology tends to become mythic*: We get so used to older technologies that we start to see them as part of the natural world. Postman argued we should view technologies we are used to, such as the alphabet (writing) or airplanes, as "a strange intruder." This means becoming more aware of what technology does to us and for us. Educators can ask: **Why is it difficult to imagine our world without the technology?**

Questions Adapted from:
Postman, N. (1998, March 28). Five things we need to know about technological change [Address]. Denver, Colorado.

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