Literacy Mediation Remediation

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ETEC 540

Assignment #4

Copyright

Remediation

1

Key Point

Bolton explains that "Remediation is a process of cultural competition between or among technologies" (Bolter, 2001, p.23). He goes on to say that "Remediation can be, perhaps always is, mutual: older technologies remediate newer ones out of both enthusiasm and apprehension." (Bolter, 2001, p.48).

The Free Dictionary helps us to deepen our understanding of remediation, stating that it is: "The act or process of remedying something that is undesirable or deficient" (The Free Dictionary). We end up having a never-ending process whereby old shapes new, new shapes old and we continue to adjust, always looking to address the deficiencies… remediating, re-remediating and re-re-remediating (and so on.)

AUDIO 1.1
Remediation

Key Point: Remediation is not a one-time, unidirectional change that sees the new overwhelm and replace the old.

REVIEW 1.1 Remediation Lifecycle?

There are clear, distinct start and end points for remediation for all technologies.

○ **A.** True

✓ **B.** False

Check Answer

Mediation, Abstraction, Interfaces and Interpretation

2

Neal Stephenson, in discussing the Command Line, offers: "When we use most modern operating systems, though, our interaction with the machine is heavily mediated. Everything we do is interpreted and translated time and again as it works its way down through all of the metaphors and abstractions." (Stephenson, 2003, p.9). This mediation happens via the interface between technology and people or even between technologies themselves. This concept of mediation exists in many (all?) forms of technology including operating systems, GUIs, software development tools, videos, cartoons, music, tweets, books and even amusement parks. As Stephenson elaborates: "Disney and Apple/Microsoft are in the same business: short-circuiting laborious, explicit verbal communication with expensively designed interfaces" (Stephenson, 2003, p.20).

REVIEW 2.1 Interfaces: Good or Bad?

Interfaces have a negative impact on how we perceive and interact with the world.

○ **A.** True

✅ **B.** False

Check Answer

Many software-based technologies explicitly call out the interfaces that they use to mediate, including: graphical user interfaces (GUIs), command line interfaces (CLIs), and application programming interfaces (APIs). The abstractions, metaphors, and interfaces make space between the reader and writer – a space that Qian and Woodbury explain has "interpretation as a working name for all acts between reading and writing" (Qian & Woodbury, 2004, p.1).

A literate individual understands their role and technologies role in the interpretation that occurs. There is danger in mediation, abstractions and metaphors, Emerson offers: "Unless we pause from time to time to consider how these metaphors work to create boundaries . . . they will control us without our knowledge" (Emerson, 2014, p.2).

Key Point: Mediation, abstractions, interfaces and interpretations can simplify learning and communication by hiding unnecessary details. But simplicity has a cost – we can be led astray, we can lack true literacy, or we can lose efficiencies.

The King is Dead! Long Live the King!

3

Key Point

The world of information technology and software development provides concrete examples of the challenges of remediation and mediation. For example, the case for user-friendliness and simplicity has been used to make the case

for deficiencies and drive remediations. However, Emerson raises the alarm: "…what concerns me is that the user-friendly now takes the shape of keeping users steadfastly unaware and uninformed about how their computers, their reading/writing interfaces, work, let alone how they shape and determine their access to knowledge and their ability to produce knowledge" (Emerson, 2014, p.49).

Computing pioneers such as Alan Kay, Douglas Englebart, Seymour Papert and many others wrote and campaigned to include capabilities in our computers and operating systems to allow users to create, annotate, consume and manipulate – to allow us to be literate (Emerson, 2014). Of course, these capabilities would need to be user friendly, but society needs to determine what is sufficiently user friendly and what is unnecessarily abstracted away.

As an example, we can look at the development and use of programming languages. There was a time when Visual Basic was one of the most popular programming languages. The language was simple to use and was primarily driven via a GUI and it was anticipated that it could overcome a deficiency related to who could program and how

productive they could be. Toady shares that "VB eliminated the need to write lengthy code for the user interface,

allowing developers to focus on business logic and produce usable Windows applications relatively quickly" (Toady, 2007). So here we see a case of mediation and also remediation as Visual Basic abstracted details and then also competed with older, text-based languages.

In a recent report from GitHub, however, Visual Basic doesn't even rank in the top 15 languages – the list is dominated by old-fashioned, text-dominated languages such as C, C++ and other languages inspired by them (Weinberger, 2017). A new deficiency had emerged, developers needed to work at a lower level of abstraction.

Similar scenarios have played out in other areas of software development related to team collaboration, deployment and operations. In a blog post called "Chatbots Revenge of the Command-line" we hear:

"But as it seems, revenge is a dish served cold. Chatbots, which are the latest trend are backed up by artificial intelligence and provide automation through a chat interface, like slack. But the chat interface is like command-line right. So you have to memorize commands in order to receive specific functionality or information. So, all these people that hated the command-line, now through chat, they love it. And they will be very happy to use it! Cool huh" (Karakoidas, 2016).

Similarly, in the "Revenge of the CLI" we hear that:

"GUIs are great at providing a discoverable interface, or to easily perform simple tasks, but in the infrastructure world and the development world – when you need to get something done, you most often use the CLI. If you want to get something done quickly, repeatably, and efficiently – the CLI is almost always your better choice" (Erailine, 2014).

Key Point: The degree of abstraction and mediation can vary. We need to understand the needs of the audience to pick the correct level of mediation. Remediation continues as we learn more about our needs and deficiencies.

Technology and Literacy

4

Grady Booch tells us that: "A fool with a tool is still a fool." Technology alone will not make us literate. Boyd offers an example from social media: "A

copy/paste culture emerged, as teens began trafficking in knowledge of how to pimp out their profiles. Although most teens' profiles are altered, it is important to not assume technological literacy - few teens hand-code their pages; most use a helper site or beg friends to do it for them" (Boyd, 2007, p.10). So, while many appear to be literate, few actually have the knowledge and skills to use HTML, CSS or JavaScript. These copy/paste efforts, much like those that used Visual Basic, raise the question "what does it mean to be literate?"

Postman started Technopoly with a warning as he shared the story of Thamus and the impact of technology: "And as for wisdom, your pupils will have the reputation for it without the reality: they will receive a quantity of information without proper instruction, and in consequence be thought very knowledgeable when they are for the most part quite ignorant" (Postman, 1993, p.4).

Key Point: Mediation not only abstracts and hides details between us and reality, it also hides and makes it difficult to understand whether the user is truly literate. Christian Lange warns us that: "Technology is a useful servant but a dangerous master" (Lange, 1921). And, if we fail to become literate, our technology will be our master.

REVIEW 4.1 Coding is the Answer?

The only way to teach literacy is through including coding in the curriculum?

○ **A.** True

✅ **B.** False

Check Answer

Next Steps & Additional Resources

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Join the conversation!

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Hypothes.is

Here are some additional materials that are worth checking out:

1. [The Essential Elements of Digital Literacies](): Doug Belshaw at TEDxWarwick

2. [Raising a Digitally Literate Generation](): Lis Zacho TEDxCopenhagen

3. [Why Digital Skills Matter](): David Timis: TEDxTârguMureś

4. [Let's Teach Kids to Code](): Mitch Resnick: TEDxBeacon Street

5. [Linus Torvalds](): The Mind Behind Linux: TED2016

6. [Intro to Hubot](): Major League Hacking

7. [Intro to the Command Line]() - BASH Basics: Nixie Pixel

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