

Cognition Across Lifespan and Technology: A Personal Reflection

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With technology all around us and continuing to be integrated within our lives, it is easy to take them for granted and to assume their effects are entirely positive or benign. Without much regard, technology is given to all, from the young to the elderly. Learning about the effects of technology and through the lens of cognition and age is extremely beneficial as a parent, educator, technologist, and developer. With this knowledge, it is possible to mitigate some of the negative effects of technology.

Technology Is Well Integrated Within Our Society

Digital technology, the internet, and information, especially in combination with computers, mobile devices, and smart devices, have significantly changed the process of cognition, emotions, interactions, and learning (Harley et al., 2018). These technologies afford us access to learning for education, productivity for work, and entertainment for personal use. Information provides access, and it can provide great power. Initially, computers were developed to accelerate academic and scientific knowledge, but now it has applications in every sector of our economy, from health to finance. As a result, technology is influencing our cognition, emotions, motivations, and behaviors in measurable ways throughout our lives, from our earliest moments. Until recently, there has been little focus on the effects of technology on physical and emotional health and from the lens of maturational development (Chan, 2015; Harley et al., 2018). Understanding the broader impact technology has on our lives can help establish a path towards ensuring that technology design and use have a genuinely positive impact.

Technology Impacts Us In Many Ways

The impact of technology on individuals, groups, and societies, is now the focus of a developing field called cyberpsychology (Harley et al., 2018). This field looks at both the

positive and negative impacts of technology. Some key milestones include the understanding that digital technologies, in some situations, often correlated to frequency and duration of use, have addictive qualities. Excessive use can also affect emotions, attitudes, behaviors, and sleep. These effects have been attributed to the internet, gaming, and smartphones. Excessive use of internet-based technologies can lead to issues of loneliness and negative emotions, including depression (Harley et al., 2018). Anonymity on the internet can further perpetuate and catalyze negative emotions and behaviors. Negative emotions can lead to cyberbullying, ghosting, and the fear of missing out (Riordan et al., 2018). There has also been a strong correlation between the amount of violent video game use real-world empathy, creating levels of desensitization to violence. However, engagement of positive prosocial digital activities can increase empathy. Additionally, cyberpsychologists have discovered that while social media networks bring global access to others within seconds, they can also create self and social anxieties when individuals seek to compare themselves to others (Harley et al., 2018). As technologies afford access, information, convenience, entertainment, and power, it is imperative that both the positive and negative influences and effects are clearly understood and disclosed. It is necessary to further enhance the positive effects while mitigating the negative effects of technology on our lives.

Technology Use and It's Effects Span a Lifetime

How technology influences an individual has many variables, such as age (Harley et al., 2018). Other factors may include education, social-economic status, and culture also are significant. For early childhood, technology may be used to inspire cognitive stimulation, early means of communication, or entertainment. On the other hand, it can also be used in a negative manner, such as a surrogate childcare provider for busy guardians. Applications could increase cognitive development, overstimulate cognition, or start to reduce social and emotional

development and even start the path to addiction. For elementary school ages, technologies can provide access to learning, communication, and collaboration, but also for entertainment (Riordan et al., 2018). It is at this age, where negative emotions can lead to cyberbullying. Self and social awareness and related anxiety and pressures start to accelerate during middle and high school years. Prosocial related activities can strengthen an individual's social-emotional competencies (SEC) (Durlak et al., 2011). Unfortunately, there are few technologies focusing on the development of SECs (World Economic Forum, 2016). While adults have had greater time and experience with SEC, their use of technology can be broader and greater than children since they may use technology for both personal and professional reasons. As technologies develop greater assistive purposes, they are starting to gain popularity with senior citizens. It is possible that with greater use, they may also experience some of the negative effects of technology other age groups face. Technology use and its effects must be better understood, and the negative effects mitigated. While technology use will only increase, some recommendations for the future may include to better educate the community about the positive and negative effects of technology, to create better-designed technologies that support and develop SECs, and to be more intentional about developing interactive, social-based project-based learning activities within learning environments.

Conclusion

During this course, a great amount of learning around technology, its impact, and its impact across a lifespan was shared. With the study of social-emotional learning and technology, a good percentage of this course's knowledge was already understood. This includes looking at the cognitive theory from a wider and deeper perspective that incorporates cognition, motivation, and emotions, and their effects on behaviors. However, looking at this subject through the lens of

different ages was fascinating. Further looking at the effects of technology from a cognitive, emotional, motivational, and behavioral level added greater dimensionality. Additionally, looking at technology from an elderly population was also novel. However, this course strengthened my understanding and focused on SEC and technology within elementary school-aged learners. It is important to ensure technology builds foundational SEC through the design of the technology, the function of the technology, and how educators leverage technology.

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