Module 2 - Critical Thinking Assignment: The PC A Tools for Social Equity

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The Personal Computer (PC) is one of the most transformative technologies of the end of the 20th and early 21st centuries. It revolutionized how people work and live, today it is almost every household and every place of work. As a print service technician, a university student, and a home for video gaming, I use PCs to troubleshoot equipment, write essays for my classes, research topics, and connect with friends online when gaming. The PC is an indispensable tool in my life. This essay explores the ways PCs can empower individuals to engage in social justice and support contributions to the cause of social justice.

Figure 1

IBM First PC

Note: The figure is an image of IBM's first PC, it was introduced in 1981, nearly 10 years after others were available. Although it was advertised as a PC for the general public, it had the most impact in the corporate world as the organization bought the PC in bulk, revolutionizing how work was done in offices. Image and description from “The IBM PC” by the Computer History Museum (n.d.).

Historical Context

The PC is a multi-purpose computing device that is designed for individual use and capable of performing many tasks such as word processing, internet browsing, gaming, and multimedia (Fiveable, n.d.). PC history started with the microprocessor that was invented, in 197, by Intel's Ted Hoff, Federico Faggin, and Stanley Mazor (Echelon, n.d.). The microprocessor gave birth to the Central Processing Unit (CPU), which due to its small size was easily incorporated into small and more affordable computer systems, allowing PCs to be developed into more compact and user-friendly. IBM developed its first PC in 1980, but it was released in 1981 to the public. The PC used the MS-DOS (Microsoft Disk Operating System) operating system, which was designed by Microsoft for the IBM PC (Advice Scout, 2025). "The PC has evolved, largely following Moore's Law, which says that the processing power of computers roughly doubles every two years" (Ricciardi, 2025, p.7). Today, PCs are in nearly every household and business. They have evolved into mobile devices such as tablets, smartphones, notebooks, and laptops, as well as specialized forms that suit specific uses like gaming PCs and workstations. The PC infiltrated every aspect of our lives, so much so that without it we could not communicate with our friends and family members, do our work, do our school assignments, and manage or maintain our countries' critical infrastructures.

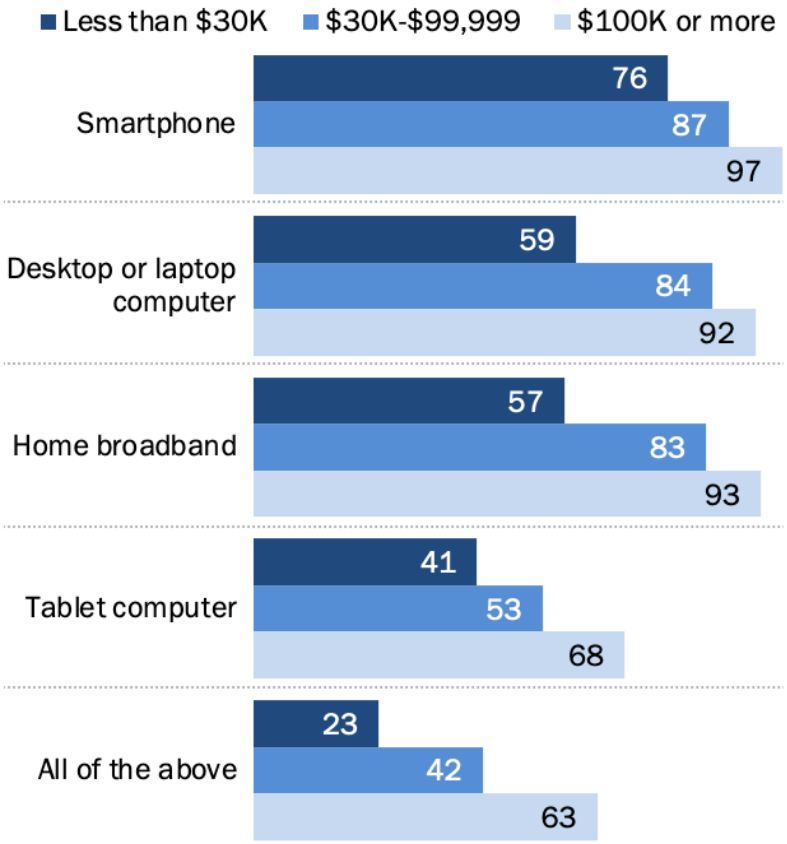
Empowering Marginalized Communities

As described previously, assessing the utility of a PC is essential for doing work, education, and communicating. Because of this, it can be used to empower marginalized communities. PCs through the Internet and other means can provide access to information that otherwise would be difficult to access for marginalized communities. This information includes educational materials, job opportunities, healthcare information, and legal resources.

Additionally, PCs can amplify the voices of marginalized communities by giving them access to social media and online platforms through blogs, vlogs, social media posts, and online forums. PCs can also help build individuals from these communities a sense of belonging and self-respect, as well as provide support by connecting these individuals to each other through websites and communities online space such as Facebook community pages.

Figure 2

Computer & Broadband Access by Income (US)



Note: This chart illustrates the percentage of U.S. adults, by household income, who say they have each of the devices listed in the chart. The survey was conducted between Jan. 25th and Feb. 8th, 2021. From "Digital divide persists even as Americans with lower incomes make gains in tech adoption" by Vogels (2021)

Framing the Issue of Social Justice

PCs have the capacity to empower. However, a digital divide exists between different socioeconomic groups creating a gap that limits marginalized communities' access to affordable PCs. Individuals from marginalized communities often have low incomes, have poor education, are subjected to discrimination based racial or cultural discrimination, or both, and some are geographically isolated. All these factors contribute to reduced opportunities for technological engagement and skill development. For example, a survey performed by the Pew Research Center revealed that Americans with low income have lower levels of technology adoption than others (Vogels, 2021). Only 59% of U.S. low-income households, earning less than $30,000, have a PC at home, compared to 84% of households earning between $30,000 and $99,999, and 92% of households earning $100,000 or more. This disparity in PC accessibility, prevalent in marginalized communities, creates a substantial obstacle to empowerment that are inherent to the use of PCs.

Vulnerability Inherent to PC Usage

While offering numerous benefits to marginalized communities, PC usage also introduces vulnerabilities that are specific to those communities. A research done by the University of Córdoba, “Bullying and Cyberbullying in Minorities: Are They More Vulnerable than the Majority Group?” (Llorent et al. 2016), found that minorities are more prone to be cyberbullied than other demographics, especially sexual minorities. Cyberbullying can be defined as “the use of the Internet (PCs) or the phone system to inflict psychological harm on another person” (uCertify, 2025, 3.9.6 Cyberbullying). Additionally, these communities are the target of misinformation and propaganda, research shows that communities of color, in the U.S., and other historically marginalized groups are exposed to a barrage of misinformation about voting

procedures, social issues, and politics in general, exposing them to digital arm (Woolley, 2022). While empowering marginalized communities, PC usage also introduces vulnerabilities, as described in the two cases above, that can significantly harm individuals from those communities.

Distributive Consequences of PCs

PCs have significantly more benefits than risks for marginalized communities as they empower individuals from these communities with educational resources, job opportunities, and social connections that would otherwise be unavailable. Thus, it is essential to ensure that individuals from these communities have access to PCs through an equitable distribution of technology. This can be done by implementing strategies such as governmental affordable PC access initiatives, as well as training and familiarization programs targeting marginalized communities. For example, the government can subsidize PC purchases and public libraries can implement programs that lend PCs and tables to individuals from marginal communities (Standford CS Students, n.d.). Additionally, educational institutions in marginal communities could integrate PC courses into school curricula at all levels (Petruce, 2024). These measures could allow individuals from marginalized communities to access PCs more easily, resulting in a substantial positive impact on their lives.

Lessons Learned and

Although PCs can empower individuals from marginal communities, a divide remains, often refer as the digital divide. The digital divide is the idea that lower-income citizens, often from marginal communities, suffer in a variety of ways from the lack of PC and internet access (Wihbey, 2013). Additionally, individuals from these communities are more vulnerable to cyberbullied and targeted by social and political misinformation and disinformation.

Furthermore, many of these individuals lack the income to purchase PCs or access appropriate training for developing essential computer skills. These issues are accentuated by barriers to decision-makers learning about them. are obstacles that prevent policymakers and organizational leaders from fully understanding or grasping the technological challenges related to the usage of PCs faced by marginalized communities. Obstacles such as policymakers' lack of awareness of the difficulties in accessing PCs experienced by individuals in marginalized communities, short-term focus on technology needs rather than implementing long-term solutions, and political polarization affecting both PC accessibility and the cyberbullying experienced by some community members.

Conclusion

PCs have become an indispensable tool. We use them to communicate, perform tasks at work, study for school, play video games, and run our countries' essential infrastructures. They can empower marginalized communities through access to educational resources, employment opportunities, and social connections. However, they also introduce vulnerabilities that are specific to those communities such as cyberbullying and political and social misinformation targeting individuals from these communities. Although these issues can be serious is essential for individuals from marginalized communities to have access to PCs, as they empower them and help them by ensuring that the technology is equitably distributed by implementing governmental affordable PC access initiatives and educational programs targeting marginalized communities. Finally, decision-makers need to understand and have a good grasp on the challenges that these communities face in accessing and using PCs by implementing long-term policies and mitigating issues such as cyberbullying and political polarization. PCs empower

individuals from marginalized and they represent one of the most powerful means of addressing social inequities and creating pathways to greater opportunity and inclusion for those individuals.

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