

Barun ICT Global News

November 2021



- 01** **The Ethical Challenges of the Gig Economy**
by Emily Qiyang WU
- 02** **When Should Kids Start to Learn Coding?**
by Hyun Joo WOO
- 03** **Instagram for Kids: Solution or Mayhem?**
by Jacklin LEE
- 04** **China Proposes Major Regulations to Algorithmic Recommendations**
by Piao WENLING
- 05** **Accessing the World of Media through Over-The-Top (OTT) Platforms**
by Ji Young SONG
- 06** **Malaysia's Millennial and Gen-Z Digital Entrepreneurs**
by Muzaffar Bin MAHUDIN
- 07** **Talking Trash: Pandemic Reduction of E-Waste Signals a Growing Digital Divide**
by Simrill SMITH
- 08** **COVID-19 and the Digital Divide in Nepal**
by Simran KARKI



The Ethical Challenges of the Gig Economy

Emily Qiyan WU

Department of Economics, UIC, Yonsei University

COVID-19 has undoubtedly changed the labor market, and the gig economy is one of the new phenomena it has resulted in, followed by the rapid penetration of technology in our daily lives. The gig economy, according to the UK government, involves the exchange of labor through digital platforms that facilitate matching between customers and providers, usually on a short-term basis [1]. In other words, gig workers are usually independent or temporary contractors who provide services based on short-term demand. Although gig economy jobs are one of the most common types of employment in the platform business, including Uber and delivery drivers, there are ethical concerns and challenges involved.

One of the main ethical concerns is that most of the platforms manage their gigs based on algorithms including rating systems. However, those systems produce unfair outcomes. For example - gig platforms may dismiss temporary workers without any notice, or discriminate against women and ethnic minorities



01. The Ethical Challenges of the Gig Economy

when allocating jobs and ranking applicants [2]. Moreover, emotionally taxing gigs exist; workers in need of income have had to take on jobs such as carrying out content moderation including monitoring and viewing abusive or graphic videos to avoid any possible controversies that may occur on their platform services [2].

Another concern is economic welfare; gig workers are often not fully protected by law and may face issues regarding payment. According to 2018 statistics, more than 700,000 gig workers were not being paid enough, even much lower than the minimum wage [3]. Since the national minimum wage in many countries does not apply to self-employed or temporary workers, it's hard for gig workers to obtain even basic rights.

To resolve such issues and create a better environment, it is perhaps essential to reform laws to protect gig economy workers. Labor and equality laws should specifically include temporary workers, especially those working in the platforming business where the company itself does not “physically” exist. Platforming firms should also embrace the flexibility and encourage more dynamic exchanges of labor, instead of imposing limitations on workers based on their gender or ethnicity. Considering that COVID-19 has hastened the rise of the gig economy by reducing permanent jobs and more temporary contract work, policymakers should impose regulations while implementing more flexible policies. The South Korean government, for example, is currently trying to enact the Platform Laborer Protection Act to protect gig workers' rights [4]. However, the proposed act is said to contain many loopholes. Thus, the government and employers of platforming firms need to collaborate on facilitating the welfare and rights of gig workers.

◆ Sources

[1] Charlton, E. (2021, May 26). What is the gig economy and what's the deal for gig workers? World Economic Forum. <https://www.weforum.org/agenda/2021/05/what-gig-economy-workers/>

[2] Aggarwal, N. (2020, Sep. 10). Tackling the ethical challenges of the gig economy. Oxford Internet Institute. <https://www.oii.ox.ac.uk/blog/tackling-the-ethical-challenges-of-the-gig-economy/>

[3] Booth, R. (2018, Feb. 7). 700,000 gig workers paid below national minimum wage. The Guardian. <https://www.theguardian.com/business/2018/feb/07/death-dpd-courier-don-lane-tragedy-business-secretary>

[4] The Korea Times. (2021, May 18). Protecting Gig workers. https://www.koreatimes.co.kr/www/opinion/2021/07/202_308987.html

When Should Kids Start to Learn Coding?

Hyun Joo WOO

Department of Economics, UIC, Yonsei University



The development of digital technology in recent decades continues to change our lives at an ever accelerating pace. Our phones and laptops keep us connected to the Internet, and we have at our fingertips access to a vast amount of information available at any time and place. Without surprise, all of this is possible due to coding. Code powers our digital world as every smartphone application, computer program, and website relies on it to operate. Consequently in recent years, computer programming and coding have become the most in-demand skill across industries, and for that reason, education for coding has increased more than ever [1].

Much to one's surprise, children as young as 5 years old can start coding and learning programming basics. It is undeniable that coding will be in great demand in years to come. Imagine a five-year-old of today growing up to become a doctor after 20 years - the healthcare industry will definitely look different. Artificial

02. When Should Kids Start to Learn Coding?

Intelligence, VR/AR, 3D printing, robotics, and nanotechnology will continue to be implemented, and it will be necessary for doctors to understand AI as much as they understand the human body [2]. Those who have embraced emerging healthcare technologies will be the ones who will find their skills in demand in the coming years, and children who are pushed to keep up with digital trends and coding will be highly sought after employees.

However, there has been a heated debate over the appropriate age for children to start learning coding. Currently, those as young as five years old start, and this seems to concern some people as they believe that teaching coding at such a young age is too much pressure. Typically, during the ages of 4 to 6, children learn to become self-sufficient, developing social skills that allow them to relate to and interact with peers [3]. However, as they are pressured to learn coding, their opportunity for more relaxed engagement with the world will be reduced in favor of time spent indoors in front of a computer screen, exposing them to vision among other problems. They will miss out on a pivotal moment in development where interacting with others is key. Moreover, there is a correct age for everything. Just as a child cannot learn how to ride a bike before learning how to walk, there are steps in taking in new information. With this in mind is it reasonable for children who just learned how to make a sentence to learn how to code applications on their phones? Indeed, we might have been pressuring kids to learn coding too early.

Children at such a young age are just getting to know how the world works. Yet pressuring children into learning coding at such a period is opening them to a more complicated world before their minds are prepared to process it properly. Putting children into coding classes will not only pressure them to excel at a young age but take away their childhood. It is undeniable that coding education is essential for future success in our digital world, yet the right age to begin coding education remains to be a topic of debate.

◆ Sources

[1] Darby, F. (2021, June 16). Why coding is still the most important job skill of the future. Upskilled. <https://www.upskilled.edu.au/skillstalk/coding-most-important-job-skill-of-the-future>

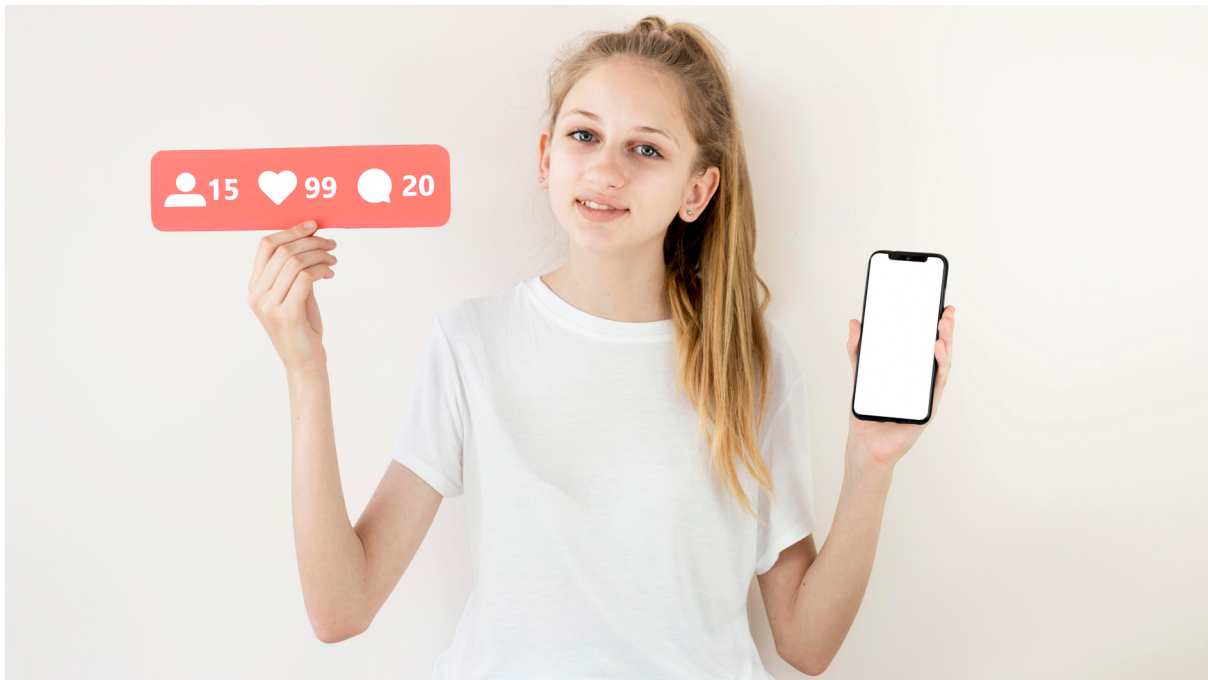
[2] Likens, S. (2020, Dec. 19). Eight emerging technologies and six convergence themes you need to know about. PwC. <https://www.pwc.com/us/en/tech-effect/emerging-tech/essential-eight-technologies.html>

[3] Scholastic Parents Staff. (2019, July 24). What Your Child Should Know by Age 5. Scholastic. <https://www.scholastic.com/parents/family-life/guides-to-life-learning/what-your-child-should-know-age-5.html>

Instagram for Kids: Solution or Mayhem?

Jacklin LEE

Department of Politics (Ph.D Candidate), Yonsei University



Today more than ever, it's difficult to find friends who are not on Instagram. For university students, it is a way to connect and network. There are pros and cons - but we are adults who can be trusted to be wary of the veracity of online content before believing everything we see. What about children?

In the past, Facebook and Instagram have come under fire for a lack of regulation over material related to suicide and self-harm. Last year, Instagram in the United Kingdom and Europe implemented new technology to identify such content on its platform. The new function enabled the identification of images and rules that breach rules on harmful posts. It can control visibility or remove the content altogether. If a harmful algorithm is detected, it is transferred to human moderators who can provide aid via help organizations and emergency

03. Instagram for Kids: Solution or Mayhem?

services. In terms of practicality, however, this model is still experiencing some hurdles including the GDPR data privacy regulations. Some social media companies including Facebook, Instagram, Google, YouTube, Twitter, and Pinterest have recently attempted to set an example with industry-wide guidelines [1].

This year, Instagram proposed the “Instagram experience” for users under 13 with a new program titled Instagram Kids. Instagram Kids, however, was met with opposition that caused the company to halt the project. There was apprehension that the platform as a whole in any capacity could be toxic, as it has shown to be for teenagers. Many claimed the “image-obsessed” platform was detrimental to children’s health and privacy and pushed for its termination. The company states that it would be a practical solution to the widespread and enduring issue of kids lying about their age to download apps and will instead empower children to bond with their family and friends in an age-appropriate manner.

However, people are concerned that kids will lie anyway, and it will be difficult to rely on its validity. We look at the case of teenage girls, a demographic that has been especially vulnerable to investing themselves in overly sexualized and exceedingly edited content or images of their bodies receiving more attention on the platform. In 2020, when they were asked how Instagram made them feel about their body, 32% answered that it made them feel worse [2]. Some have contended that Instagram is doing it for profit generation to expand their lucrative and highly profitable platform to an even younger demographic. It was alleged this was done through introducing children to a powerfully commercialized social media environment that poses serious threats to their privacy, health, and wellbeing [3].

Are companies such as Facebook and Instagram working to guide children’s use of social media in a better direction, or are they simply trying to exploit them? Whatever their purposes are, some of the duty to protect vulnerable groups also lies with ordinary citizens and university students to be more aware and help combat the epidemic of unhealthy obsession with self-image in social media.

◆ Sources

[1] Instagram: new tools to ban self-harm and suicide posts. (2020, Nov. 11). BBC. <https://www.bbc.com/news/technology-54903428>

[2] Instagram for kids paused after backlash. (2021, Sep. 27). BBC. <https://www.bbc.com/news/technology-58707753>

[3] Wakefield, J. (2021, Apr. 15). Facebook urged to scrap Instagram for children plans. BBC. <https://www.bbc.com/news/technology-56757586>

China Proposes Major Regulations to Algorithmic Recommendations

Piao WENLING

Department of Media Communication (Ph.D Candidate), Yonsei University



Algorithms constantly push content of interest to people based on various criteria such as user profile, purchase history, favorites, and other data. As a result, people are immersed in a constant stream of information. In addition, Internet service providers rely on the algorithm to maintain daily active users and run their business models.

Although algorithmic recommendations can provide individualized content according to users' needs, there have been controversies such as abuse of users' privacy and provision of biased information. To address these, on August 27, the Cyberspace Administration of China issued a draft guideline for algorithm recommendations, which is an extension of cyber and data as well as personal information protection laws [1]. The new guidelines are applied to Internet services that use algorithms for personalized push, retrieval filtering, and content selection, which suggest it not only includes platforms that are purely algorithm-driven such as Tik Tok, but also covers platforms like Weibo that rely on user-generated content. Moreover, companies like ride-hailing giant DiDi Global, that use algorithms to manage their platforms, are also subject to regulation [2].

The purpose of the guidelines is to provide users with a fair information environment and protect

04. China Proposes Major Regulations to Algorithmic Recommendations

them from misuse of their personal information. Specifically, the guideline has the following highlights. First, service providers cannot set up algorithmic models, data, mechanisms, or application results that allow users to become addicted or consume large amounts of money. Second, they cannot record illegal or undesirable information as user tags, push information according to the tags, or set discriminatory or biased user tags. Third, service providers cannot set up fake accounts and create fake likes, comments, and retweets. Furthermore, service providers cannot use the algorithm to block information, over-recommend, manipulate the list, search result sorting, or control trending topics. Fourth, algorithmic recommendations should recommend options to users that do not target their personal characteristics or provide easy options to turn off algorithmic services. Fifth, the algorithm should not be used to differentiate the price of a transaction based on consumer preferences, trading habits, and other characteristics. Sixth, when scheduling services through the algorithm, it is necessary to establish a perfect order allocation, compensation composition, as well as working hours, rewards and punishments mechanisms, and other related algorithms [3].

The draft guidelines for algorithmic recommendations are not the first attempt to better protect user privacy and safeguard personal information from becoming a platform tool. On August 20th, the Standing Committee of the National People's Congress passed the Personal Information Protection Law, which clarified that algorithms should handle services related to personal data with care. However, due to the hidden nature of data collection, people have long been aware of the demand for personal information protection but struggle to take adequate measures. Rejecting the control of algorithms requires targeted regulations from relevant departments and Internet service providers to improve their business ethics. In response, last year, Apple announced that it would shut down IDFA for iOS 15, a setting that allows Internet companies and advertisers to track browsing history easily across different platforms and apps [4]. However, neither regulators nor tech giants can reject the algorithm itself, and the only practical solution for users and consumers is to improve their digital literacy.

◆ Sources

[1] Tech China. (2021). Cyberspace Administration of China issued draft guidelines on regulating algorithms recommendation internet service. Sina Finance. <https://finance.sina.com.cn/tech/2021-08-30/doc-iktzscyx1131172.shtml>

[2] 游云庭. (2021). 读《互联网信息服务算法推荐管理规定》征求意见稿的一点个人体会. Sina Finance. <http://finance.sina.com.cn/tech/csj/2021-08-27/doc-ikqcfnc5355946.shtml>

[3] Draft guidelines on regulating the algorithms used by internet service providers to make recommendations to users. (2021). Cyberspace Administration of China. http://www.cac.gov.cn/2021-08/27/c_1631652502874117.htm

[4] O'Flaherty, K. (2021). Apple's Stunning Plan To Strike Facebook With Brilliant New iPhone Features. Forbes. <https://www.forbes.com/sites/kateoflahertyuk/2021/08/07/apples-stunning-plan-to-beat-facebook-with-brilliant-new-iphone-features/>

Accessing the World of Media through Over-The-Top (OTT) Platforms

Ji Young SONG

Department of Psychology (MA Candidate), Yonsei University



Squid game, a South Korean survival thriller streaming on Netflix, is topping charts in different countries around the world including Taiwan, Vietnam, America, and the UK [1] [2]. What made this worldwide popularity possible? Not only the fascinating content itself, but also the unique features of online streaming platforms have contributed to the show's runaway success.

The online streaming service, also referred to as Over-The-Top (OTT) media, is defined as a media platform in which content is delivered directly to consumers through the Internet [3]. These include global distributors like Netflix, Disney+, and Hulu, and local services such as Tving and Wavve, which have been gradually taking over the position of traditional media of television and films.

One important characteristic of the OTT platform is that the content is available on-demand. In the past, the delivery of content through traditional media platforms was restricted to a certain broadcast time. People had to check the channel or movie schedule and wait to watch. When they missed the opportunity, they had to wait for reruns or pay to download the episode. Moreover, traditional platforms were limited by physical boundaries since they required cable networks to have a connection or a visit to the theatre in person. Content on the OTT platform, on the other hand, is accessible as long as an Internet connection is available [4]. With the development of smart devices and wireless technologies, people can easily access media content from all around the world, freely watching movies and dramas whenever and wherever they want. Therefore, OTT service guarantees freedom of both time and location, breaking down the physical and geographical barriers and enhancing accessibility of diverse content.

Furthermore, OTT platforms also filter out unnecessary choices and offer personalized content for a targeted audience. This is made possible through information technology such as big data, which enables

05. Accessing the World of Media through Over-The-Top (OTT) Platforms

the collection and analysis of consumer data on a granular level. For instance, Disney+ presents consumers with a personalized list of recommendations based on their individual preferences and consumption patterns by analyzing what viewers have clicked, watched, and preferred in the past [5]. Also, OTT platforms utilize consumer information and empirical data to make business-related decisions such as choices for investment and what original series to produce. House of Cards, an American remake of a British TV series, is a successful example of how Netflix applied big data analysis in its production process from casting through to generating the plot [6]. Via big data analytics, Netflix identified that subscribers who enjoyed British House of Cards favored work produced by David Fincher or starring Kevin Spacey, and thus employed them for the new original series [7]. The success of the series reflects how ICT allowed the OTT platform to provide the best selection for their viewers and produce high-quality content of different genres.

The paradigm shift in the provision of media content has not only changed trends in media, but also greatly impacted people's overall lifestyle. With the pandemic still ongoing, watching dramas through mobile tablets has become one of people's most accessible forms of entertainment. In this sense, the influence of OTT media platforms has been emphasized more than ever, widening the opportunities for audiences, and enriching their experience.

◆ Sources

- [1] Wong, H. (2021, Sep. 28). Squid Game: the hellish horrorshow taking the whole world by storm, The Guardian. <https://www.theguardian.com/tv-and-radio/2021/sep/28/squid-game-the-hellish-horrorshow-taking-the-whole-world-by-storm>
- [2] Lee, J. (2021, Sep. 23). 'Squid Game' is No. 1 among U.S. Netflix viewers. Korea JoongAng Daily. <https://koreajoongangdaily.joins.com/2021/09/23/entertainment/television/Squid-Game-Netflix-Korean-original/20210923103132414.html>
- [3] Kim, J., Kim, S., & Nam, C. (2016). Competitive dynamics in the Korean video platform market: Traditional pay TV platforms vs. OTT platforms. *Telematics and Informatics*, 33(2), 711-721. <https://doi.org/10.1016/j.tele.2015.06.014>
- [4] Datsika, E., Antonopoulos, A., Zorba, N., & Verikoukis, C. (2017). Software defined network service chaining for OTT service providers in 5G networks. *IEEE Communications Magazine*, 55(11), 124-131. <https://doi.org/10.1109/MCOM.2017.1700108>
- [5] Insights Team, (2020, Apr. 21). How Disney Plus personalizes your viewing experience. Forbes. <https://www.forbes.com/sites/insights-teradata/2020/04/21/how-disney-plus-personalizes-your-viewing-experience/?sh=874ec503b6ee>
<https://doi.org/10.1109/MCOM.2017.1700108>
- [6] Carr, D. (2013, Feb. 24). Giving viewers what they want. The New York Times, <https://www.nytimes.com/2013/02/25/business/media/for-house-of-cards-using-big-data-to-guarantee-its-popularity.html>
- [7] Petraetis, G. (2017, July 13). How Netflix built a House of Cards with big data. Insider Pro. <https://www.idginsiderpro.com/article/3207670/how-netflix-built-a-house-of-cards-with-big-data.html>

Malaysia's Millennial and Gen-Z Digital Entrepreneurs

Muzaffar Bin MAHUDIN

Department of Psychology (MA Candidate), Yonsei University



The World Bank has highlighted Malaysia's goal to become the e-commerce hub of the region in digital entrepreneurship, considering it noteworthy and significant to ensure a sustainable, stronger economy for the country [1]. With a thriving effort for digital economy policy reforms made by the government via providing better quality Internet and providential tax reform to ease the burden on digital entrepreneurs, Malaysia promises to support businesses so they can continue to flourish. The current COVID-19 pandemic accelerated the growing number of young entrepreneurs venturing into business to survive the unprecedented unemployment crisis [2].

Driven by the 17 United Nations Sustainable Development Goals (SDGs), many organizations locally and abroad initiated various workshops, programs, and activities to encourage young people to contribute to improving the world's economic problems. Youth Co: Lab, one of the largest organizations youth entrepreneurship in the Asia-Pacific region, assisted more than 1,000 youth-led startups across 28 countries including Malaysia [3]. Many of the startups are based on digital business, and cover diverse

06. Malaysia's Millennial and Gen-Z Digital Entrepreneurs

industries including gaming, mental health, beauty, food, technology products and services, and e-commerce. The continuation of successful projects will be beneficial for the near- and long-term future of the country.

However, despite the massive influence of successful programs, many digital entrepreneurs were also born from social media platforms without any help from any organizations. The help of AI, advanced algorithms, hash-tagging (through the # symbol), paid advertisements, reviews by influencers and live video engagements have gained the interest of many to start their own business. As the nature of start-ups does not require them to have a large amount of seed capital, they face a reduced risk of profit or investment loss. From this standpoint, with plenty of free online business courses available on the Internet, every young person has the opportunity to experience entrepreneurial skills and subsequently earn an income.

Nonetheless, questions that require critical investigation include: how can these digital entrepreneurs sustain their business? Does becoming a digital entrepreneur lower the risk of unemployment in the long term? And can digital entrepreneurs thrive in a super competitive environment? Malaysia has reported a 90% failure rate among small and medium enterprises (SMEs) due to the lack of proper management and in-depth business understanding [4]. Unemployment as of June 2021 was at 4.8% [5], the highest ever recorded. This has led to fears that entrepreneurs are simply trying to get lucky with one successful company, without completing proper planning before launching.

The government plans to champion e-business in the Southeast Asian region despite the difficult economic situation. No man is an island; it is essential for the government as well as entrepreneur organizations to continue to provide unwavering support via education and funding to help more digital entrepreneurs grow and sustain themselves in the long term. The opportunities for digital business financial and mentoring support should be equally accessible to all youth regardless of their background [2]. It is then we can measure the impact of young entrepreneurs and how they affect the economic growth of the country.

◆ Sources

[1] World Bank. (2019). Digital Business Indicators—Malaysia. <https://www.worldbank.org/en/research/brief/digital-business-indicators-Malaysia#2>

[2] Alisjahbana, A. S. (2020). Engaging youth to accelerate SDGs. NST Online. <https://www.nst.com.my/opinion/columnists/2020/10/634786/engaging-youth-accelerate-sdgs>

[3] Youth Co:Lab. (2021). Youth skills. <https://www.youthcolab.org/youth-skills>

[4] Business Today Malaysia. (2020). Why Business Fail? Magzter. <https://www.magzter.com/stories/Business/Business-Today-Malaysia/Why-Businesses-Fail>

[5] Department of Statistics Malaysia. (2020). Key Statistics of Labour Force in Malaysia, June 2021. https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=124&bul_id=SkFRMTJ0d1RIR-3BrdG1aUTBsUmw2Zz09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09

Talking Trash: Pandemic Reduction of E-Waste Signals a Growing Digital Divide

Simrill SMITH

Department of Civil and Environmental Engineering, Georgia Institute of Technology



Since the start of the pandemic, ICT including computers, mobile phones, and gaming consoles, have been essential to bridging the gaps created by global lockdowns. Despite this increased need for ICT, the consumption of electronic and electrical equipment (EEE) drastically decreased by 30 percent in low- and middle-income countries at the start of COVID-19, according to a recent UN report. The report discussed how this drop comes with the reduction of millions of tons of potential e-waste in a “business as usual” situation, but also highlights the increasing North-South digital divide [1].

The decrease in ICT consumption is an environmental reprieve, as the UN report projected that lower sales of EEE in the first three quarters of 2020 will lead to the reduction of 4.9 million metric tons of e-waste in the next 5 to 15 years [2]. E-waste is the world’s fastest-growing waste stream, increasing globally by 21 percent since 2014. It includes all electronics that have been discarded, from large equipment like refrigerators to cell phones and wires [3]. Increasing e-waste comes as a result of technological innovation

07. Talking Trash: Pandemic Reduction of E-Waste Signals a Growing Digital Divide

and consumer habits which have led to both shorter life cycles of products and an increase in electrical and electronic waste (WEEE) disposal [4].

Waste is inevitable, so why should we pay attention to e-waste in particular? E-waste contains substances hazardous to both human and environmental health, such as mercury, cadmium, and lead. This can cause a wide range of effects such as brain, heart, liver, kidney, and skeletal system damage. For the environment, informal disposal of WEEE by burning can lead to the release of these toxins into the air, soil or water when disposed into landfills [5].

While the reduction of WEEE is promising, the drop in consumption of ICT in the Global South alongside a rise in the United States and Europe indicates that the digital divide has deepened over the course of the pandemic. The digital divide—or the gap in access to technology between the rich and poor—is socially important in that wealthy communities have greater access to the resources needed to work and learn remotely during the pandemic, including hardware and high-speed Internet. This increasing divide can be explained in part by the fact that low-income countries have been affected the most by pandemic unemployment, with workers losing 23 percent of their working hours [2].

More attention to recent ICT trends can help improve e-waste regulation and the digital divide. In terms of reduction, this recent decline offers a breathing space for developing countries to have time to develop a system to manage it better. Increased regulation of e-waste disposal will help protect future human and environmental health while also helping to reclaim the valuable materials present in ICT that make the opportunities of a circular economy possible. For the digital divide, greater awareness and data on ICT usage will help target areas to develop programs for communities to become connected and benefit from the use of electric and electronic equipment [1].

◆ Sources

[1] SciDev.Net. (2021, June 16). COVID widens digital divide, but cuts e-waste. Science X Network. <https://phys.org/news/2021-06-covid-widens-digital-e-waste.html>

[2] Baldé, C. P., & Kuehr, R. (2021). The Impact of the COVID-19 Pandemic on E-waste in the First Three Quarters of 2020. UNU/UNITAR.

[3] Creating a Circular Economy for ICT Equipment. (2020, June). ITU. <https://www.itu.int/en/mediacentre/backgrounders/Pages/e-waste.aspx>

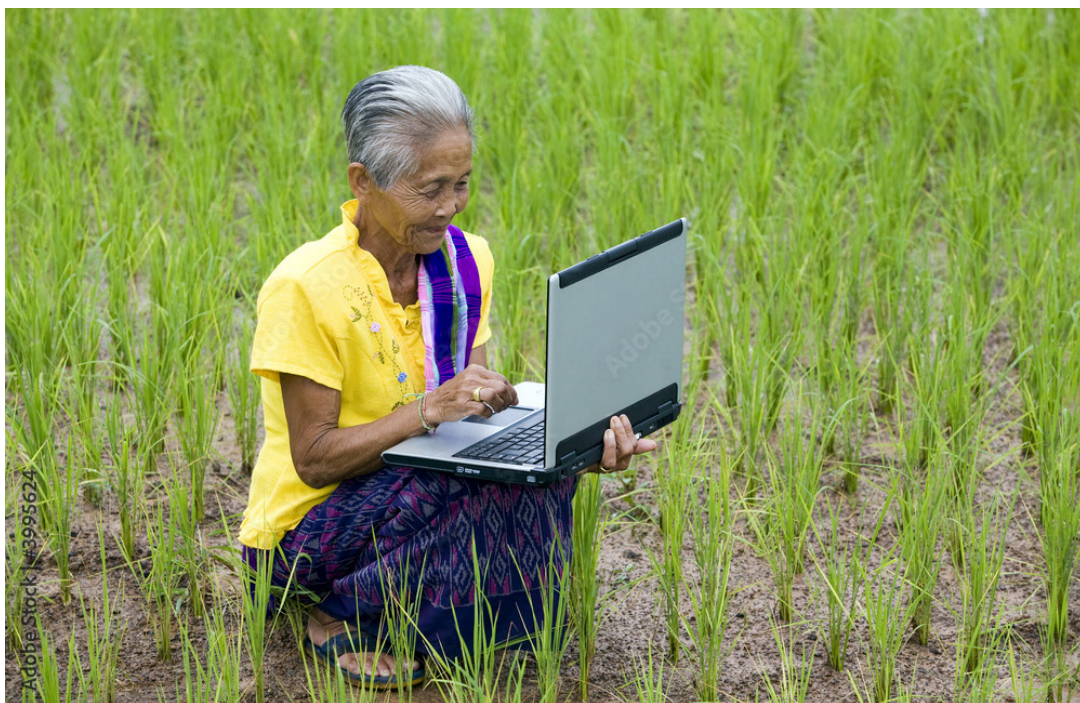
[4] Emmanouil, M. C., Stiakakis, E., Vlachopoulou, M., & Manthou, V. (2013). An Analysis of Waste and Information Flows in an ICT Waste Management System. *Procedia Technology*, 8, 157-164.

[5] E-Waste & its Negative Effects on the Environment. (2019). Elytus. <https://elytus.com/blog/e-waste-and-its-negative-effects-on-the-environment.html>

COVID-19 and the Digital Divide in Nepal

Simran KARKI

Department of Business Administration, Yonsei University



If there is one lesson we have learned from the COVID-19 pandemic, it is that technology is critical to our daily lives. Countries such as Singapore, China, and South Korea have utilized their advanced digital networks to help overcome some of the challenges of the pandemic. The use of QR codes, contact tracing apps, contactless deliveries, and other technology have saved many industries. Even though work-from-home and Zoom classes have become the norm for many of us, transitioning into such lifestyles has been a major challenge for many developing countries. Nepal is one such example.

With a GDP per capital of 1155USD, Nepal is categorized as a developing nation by the World Bank. The digital divide, or the gap between those who have access to the Internet and computers as well as the skills and capacity to utilize them and those who don't, is one of the many problems the country faces. According to the International Union, only 20% of the population in Nepal is online while over 80% is the standard in most developed countries. Likewise, the inconsistent spread of infrastructure has forced the country to encounter an internal divide. Although smartphones and computers are gaining popularity in

bigger cities including the capital, Kathmandu, Nepal has many rural areas that only recently gained access to electricity. In addition, the lack of awareness regarding the use of technology has also aggravated the situation.

The outcome of the digital divide has been prominent in the education sector - even more so with the escalation of COVID-19. After the closure of schools for many months, the government decided on finally adopting remote learning. While students attending the more expensive private schools were able to adapt to the changes somewhat easily, public school students are still struggling to get access to facilities such as personal computers and Wi-Fi, which can be considered luxury items. Taking this into consideration, the government offered alternative learning through televisions. However, this is still an issue since there remain families who do not own them. Moreover, teachers are also facing difficulties adapting to remote teaching methods due to inadequate pre-pandemic training. As such, many parents have raised concerns regarding the quality of education through distance learning.

Nevertheless, as a direct impact, people are more intrigued about technology. The majority want to carry on with their lives while the pandemic continues. For this reason, individuals of all ages and backgrounds have taken personal initiatives to learn more about the online world. Many parents have made themselves familiar with computers and laptops for the sake of their children. Likewise, many small businesses have attempted to move their platforms online. As a positive, digital payment methods are now very popular in Nepal.

In conclusion, the digital divide is a serious problem in developing countries like Nepal due to the lack of proper facilities, digital awareness, and economic issues. With the ongoing pandemic, the impact of the divide has been prominent in sectors like education. While it is true that these sectors are struggling, the pandemic has unveiled an otherwise ignored issue of the digital divide. With the issue coming to the fore, it is hoped the government will help Nepal address its challenges.

◆ Sources

[1] Digital divide. (1994). Merriam-Webster. <https://www.merriam-webster.com/dictionary/digital%20divide>

[2] Gautam, A. (2020, June 26). Closing the digital divide in Nepal. Internet Society. <https://www.internetsociety.org/blog/2020/06/closing-the-digital-divide-in-nepal/#:~:text=COVID%2D19%20has%20pushed%20the,to%2087%25%20in%20developed%20countries>

[3] Rai, N. (2020, July 17). Digital Divide exposes class divide in Nepal schools. Nepali Times. <https://www.nepalitimes.com/here-now/digital-divide-exposes-class-divide-in-nepal-schools/>

Barun ICT Global News

Publisher Beomsoo Kim

Editor-in-Chief Miyea Kim

Editor Seungyeon Won, Alexandra Stephenson

Translator Sumin Lee, Kyong Ju Yu, Jeongeun Park

Designer Subin Lee

November 2021

** Please note that any external contributions to the Global News do not represent Barun ICT's official views.*



Barun ICT Research Center

Barun ICT Research Center, Yonsei University
50 Yonsei-ro, Seodaemun-gu, Seoul 03722, Korea
+82-2-2123-6694 | www.barunict.org

<https://www.instagram.com/barunict/>
<https://www.facebook.com/barunict/>

