GenZ's Perspective: Digital Learning and Skills Development During the Covid-19 Pandemic

Lela Lestari(✉), Annisa Yasmin, Dea Nurita, and Muhammad Zaenal Abidin

Vocational School, Universitas Diponegoro, Semarang, Indonesia
lestarilela@lecturer.undip.ac.id

Abstract. This study aimed to investigate the perspectives of Generation Z students on the use of digital technology to develop skills during the COVID-19 pandemic. This qualitative research used data collection techniques through semi-structured interviews with six Generation Z students who are preparing for their future working life. The results of the study found that Generation Z considered digital technology to have a significant role for them to develop skills during the COVID-19 pandemic. Through independent learning, they try to develop their skills by utilizing smartphones and digital media in the form of Instagram, Youtube, TikTok, online courses, websites, as well as participating in webinars which are often held during the pandemic. They are made easier by the flexibility of place and time during the pandemic. They can easily gain knowledge to develop skills in their respective fields from anywhere and anytime.

Keywords: GenZ · skills · digital technology · individual learning · digital learning · mobile learning · digital media · COVID-19 pandemic

1 Introduction

Generation Z (GenZ) is a generation that grows and develops in the digital era with advances in technology and the internet. According to Beresford Research, Generation Z was born in the range of 1997 – 2012 which means that they are currently between 10–25 years old [1]. The development of technology and the rapid flow of information through the internet play an important role for Generation Z. One of the technologies used by Generation Z is the use of smartphones and the internet in a 'hyperconnected' world, a virtual world that connects people in real time from all over the world through the internet network [2]. With smartphones in their lives, they are used to communicating, viewing various information from the internet, playing games, and even making transactions. This makes Generation Z become dependent on smartphones, so accessing the internet become a major need for them [3, 4].

The high intensity of using smartphones and accessing the internet in Generation Z binds them to social media. Turner [4] mentioned that based on the total of all Generation Z respondents, 60% started their social life online, 50% of respondents stated that they prefer to communicate online rather than talk in real life, and 70% of respondents feel more comfortable communicating with their friends online. This is in line with Berkup

D. T. Kurniawan and I. Zutiasari (Eds.): BISTIC 2022, AEBMR 245, pp. 27–35, 2023.
https://doi.org/10.2991/978-94-6463-178-4_4

[5] which stated that the characteristics of Generation Z related to the use of technology, namely socializing through the internet, consuming the internet very quickly, tending to use technology efficiently and innovatively, and liking games that challenge creativity.

Perez-Escoda et al. [6] argues that Generation Z has a good orientation in terms of education, especially lifelong learning, and has a lot of skills and knowledge related to technology because of their high integration on the internet. Some Generation Z use technology, especially smartphones, to empower themselves other than for entertainment [3]. However, some other also still have very low digital awareness, so they generally use smartphones only for consumptive purposes [7]. It is a cause for great concern. In fact, the ease of internet access and the availability of various digital platforms make self-development easier and more practical. Limited mobility during the COVID-19 pandemic also increasingly supports the learning process and sharpens the skills effectively, which is only with 'a single click' they can take advantage of various media available on the internet [8].

The use of smartphones and technological developments which were later adopted into a learning model is called mobile learning (m-learning) [9]. Mobile learning is carried out individually and is based on the desire to learn independently in order to develop skills. Efforts to acquire the knowledge and skills that are self-initiated, future-oriented, and the change required by individuals to master future job tasks are called proactive skills development [10, 11]. Currently, the concept is getting a lot of attention from researchers in the field of management, most of which focus on predictors at the individual level [11–17].

Proactive skill development will be very easy for Generation Z who are considered to have qualified technological literacy. One of the digital platforms that can be used for independent study is Youtube. Rahmatika et al., [18] found that Youtube can be used as a learning medium that helps students learn independently. Several studies in Indonesia regarding the effectiveness of using Youtube as a medium to improve various competencies and skills showed positive results [19–23]. Apart from Youtube, other social media such as Instagram and TikTok are also media that are able to improve various competencies and skills [24–29]. Skills development through webinars and various training platforms or online courses is also increasingly being offered during the COVID-19 pandemic. Google Trend Indonesia data shows that online courses, training, and workshops have experienced an increase in searches since March 2020 [30].

Online courses, training, and workshops are an attractive alternative in the era of the COVID-19 pandemic because of the convenience that they are able to learn and improve skills without having to leave home. Generation Z will also find it easy to participate in this activity since it uses gadgets and internet, especially those who are in the process of preparing themselves to enter the world of work, including students in college or university students. The composition of students in the era of society 5.0 is currently dominated by Generation Z [2, 31]. This indicates that they also need to prepare the skills to enter the world of work during a pandemic or after a pandemic.

The results of a study on the impact of COVID-19 by the Ministry of Manpower (Kemenaker) show that 26.9% of companies are in dire need of skilled technology workers until the pandemic ends [32]. Furthermore, physical skills are 6.2%, emotional and social skills are 4.1%, advanced cognitive skills are 1.9%, and basic cognitive skills

are 0.9%. The Ministry of Manpower also shows the various types of work that are most needed after the pandemic period is over. The highest percentage of 18.7% indicates that the company needs sales, marketing, and public relations professionals after the pandemic [33].

Based on the survey results, students need to prepare themselves with the skills needed to enter the world of work. The convenience during the COVID-19 pandemic in the form of flexibility in time and place is a very good momentum to study independently in order to improve skills by means of mobile learning. Proactive skill development also indicates that a person has an awareness of future job requirements and the confidence to deal with them [11, 17]. This indicates that the awareness to learn independently in an effort to develop skills is needed by students so that they can have the readiness and confidence to face the challenges of skill needs when the COVID-19 pandemic is over.

This study focuses on identifying the perceptions of Generation Z who are students in higher education regarding the use of digital technology. Specifically explore the experience of self-study using digital technology to develop skills. Through an in-depth interview process, this research will attempt to describe the experiences of Generation Z who are currently undergoing activities as students and using digital technology to improve skills during the COVID-19 pandemic.

2 Method

This qualitative study used data collection techniques through semi-structured interviews with six Generation Z students. The selection of informants in this study used a snowball sampling technique. The determination of a small number of informants aims to overcome time constraints and to maintain the effectiveness of in-depth interviews. The purpose of in-depth interviews with a small sample is not to objectively establish facts, but to measure the informants' complex reactions and feelings in their social context [34]. During the interview process, the probing technique is also used which is a process of exploring something that the researcher feels needs to be disclosed in the research [35]. This technique was able to increase the opportunity for informants to tell detailed experiences.

This research did not use the real names of informants to protect their personal data. In this research, informants use the names Z1 to Z6, which means Z1 is informant 1, Z2 is informant 2, and so on. Narrative analysis is used in this study. In the interview process, those who ask about perceptions will tell more about personal experiences or stories during skills development activities by utilizing digital technology during the COVID-10 pandemic. Informants act as social actors who deeply tell themselves and are involved in the process of forming certain meaning [36–38].

3 Result and Discussion

Six informants in this study were Generation Z students who have different gender and the type of skills they were engaged in. Based on the results of interviews, all informants stated that the development of digital technology during the COVID-19 pandemic experienced a rapid development. The informants also said that during the

pandemic period, they learned a lot of new things, one of which was attending free webinars. This is in line with Wicaksono [30] that during the pandemic, the Indonesian trend showed that there has been an increase in the search for courses, training, and workshops on the internet since March 2020.

Their opinion regarding their knowledge about the skills needed after the pandemic or in the future, in general, lead to skills in the field of technology. This is in accordance with the results of a study on the impact of COVID-19 by the Ministry of Manpower (Kemenaker) which shows that 26.9% of companies are in dire need of skilled technology workers until the pandemic ends [32]. Their initial opinion regarding the technological developments during the pandemic activities using digital technology, and knowledge of skills needed in the future is that it become the basis for deepening perspectives on their efforts to develop skills by utilizing digital technology during the COVID-19 pandemic.

3.1 Utilization of Digital Technology in Skills Development Efforts During the COVID-19 Pandemic

The knowledge of the informants about the skills needed in the future can motivate them to develop their skills according to the needs of the times. The Z1 stated that they are facilitated with technology that helps them to develop skills. Then, Z1 also regularly plans for one year that focuses on developing his skills in the graphic design field. Furthermore, Z2 expressed that this digital era requires them to need to learn potential skills, one of which is in the field of digital marketing.

Then, Z3 argues that all circles are currently required to be able to adapt by understanding technology, so that Z3 is also motivated to continue to explore skills that are much needed today and in the future, which are photo editing and typography. Furthermore, Z4 stated that digital technology which is growing rapidly during the COVID-19 pandemic provided an understanding of the importance of social media, one of which is used for marketing media. During the pandemic, Z4 and Z6 learned photo and video editing skills related to digital marketing through social media. Z5 also said that during the pandemic they are provided a lot of technology to learn skills, especially skills in the field of editing and also studying the field of export.

The efforts made by the informants to develop their skills through independent learning by utilizing digital technology are a form of proactive skills development. In line with Ostmeier & Strobel [11] and Taber & Blankemeyer [17] which stated an effort to develop these skills indicating that a person has an awareness of the needs of future work and confidence to deal with them. This proves that Generation Z realizes that they need to learn independently to develop the skills needed in the future, in order to be able to survive in the competitive labor market.

3.2 Digital Media in the Independent Learning Process in Efforts to Develop Skills During the COVID-19 Pandemic

Based on the results of research conducted by the Research Institute of The Harris Poll in New York involving Generation Z and Generation Y with 2587 representative respondents, generally, they visit websites that share videos, provide online videos, and

play online games [39]. Generation Z tends to prefer Youtube or other applications for learning while Generation Y prefers printed books for learning.

In the learning process, Generation Z prefers to pay attention and practice, not by reading or listening to lectures. Therefore, Generation Z requires a different learning method from previous generations [40]. Generation Z has a short attention span. They are easier to understand visual images. Therefore, Generation Z is suitable for learning using images, animations or videos [41].

All informants said that they used smartphones and laptops in their independent learning process to develop their skills. However, in general, they stated that they use smartphones more often because it is more flexible to carry anywhere, so they can study anywhere and anytime. This shows that the informants carry out this type of learning in the form of mobile learning. This is in line [9] which states that mobile learning is in the form of a learning model that involves mobile devices, so that students can access learning materials, learning instructions, and learning applications without being limited by space and time, wherever and whenever they are.

Then, the types of digital media used by informants for the independent learning process are quite diverse, namely through webinars, Youtube, Instagram, TikTok, Twitter, websites, and online courses. This is in line with the results of a number of published studies in the field of mobile learning [42–44]. In the context of social media in an academic field, there are several commonly used platforms such as Facebook, YouTube, WhatsApp, and others that allow instructors to make important announcements, conduct online discussions, and spread resources [45]. The research conducted in Malaysia examine the intention to use social media for learning in the context of higher education [46]. However, these studies are generally similar to trends that focus on adoption and facilitation factors.

Z1 and Z2 state that the independent learning process is more dominant using smartphones and social media, such as Instagram. Furthermore, Z3 stated that it is more dominant to use smartphones with Tiktok. Then, Z4 and Z6 stated that they are more dominant in learning by using smartphones with Youtube, as well as using laptops when used to access certain applications that are not compatible with smartphones. Meanwhile, Z5 stated that the independent learning process carried out is more dominant using smartphones with learning resources from online courses, websites, and Instagram.

Based on the opinions of all informants regarding the reasons for using gadgets and digital media, they feel it is effective to hone their skills through these media because the information can be accessed easily and relevant content easier to understand. In addition, it can be used as an example to be practiced directly or learning by doing. This is in line with [41] which mentions that Generation Z has a short attention span. They are easier to understand visual images. Therefore, Generation Z is suitable for learning using images, animations or videos.

3.3 The Benefits of Independent Learning Through the Use of Digital Technology in Skills Development Efforts

The process of developing skills carried out by the informants includes proactive skill development, which is an effort to acquire knowledge and skills that are self-initiated, future-oriented, and the changes needed by individuals to master future work assignments

[10, 11]. Independent learning that is carried out is considered capable of providing a good understanding of the skills that each informant is currently pursuing.

Z1 stated that the independent learning process provided good benefits, including adding relationships, broaden portfolio, and increased the skills, even being able to win a competition. Z1 also stated that independent learning has the advantage of flexibility in time and place. However, it is the same as experienced by the Z5, which has a shortage in the form of limited questions and answers if there are things that are not understood.

Then, Z2 expressed that through independent learning they are able to add insight and perspectives from many sources. It is very helpful to hone their skills. The advantage of the independent learning process according to Z2 is that it is flexible in terms of time and place. However, as experienced by Z6, it has shortcomings in the form of indiscipline and unstructured implementation.

Z3, Z4, Z5, and Z6 have similar opinion that independent learning has the advantage of flexibility in time and place, so it is easier for them to continue to develop the skills. According to Z3, when learning through TikTok, the drawback is in the form of distraction from other content that irrelevant. Then, Z4 stated that the shortcomings of the self-study process is that there are many accessible tutorial resources that sometimes are biased and confusing because there are too many choices.

4 Conclusion

Generation Z students take advantage of the time during the COVID-19 pandemic by trying to develop skills that will be needed in the future or after the pandemic. The independent learning process by utilizing digital technology has provided good benefits in the process of sharpen the skill. As a result, Generation Z has realized the importance of developing certain skills independently to be able to compete in the labor market in the future.

Independent learning carried out by Generation Z students predominantly uses smartphones and digital media, such as Instagram, Youtube, TikTok, online courses, websites, and participates in webinars which are mostly held during the pandemic. The types of skills that are mostly occupied by Generation Z students are photo and video editing and digital marketing. These skills are very relevant to the current trend which rely on digital technology.

References

1. Beresford Research. Age Range by Generation Beresford Research [Internet]. Beresford Research. 2022. p. 1. Available from: https://www.beresfordresearch.com/age-range-by-generation/
2. Moore K, Jones C, Frazier RS. Engineering Education For Generation Z. American Journal of Engineering Education (AJEE). 2017;8(2):111–26.
3. Hastini LY, Fahmi R, Lukito H. Apakah Pembelajaran Menggunakan Teknologi dapat Meningkatkan Literasi Manusia pada Generasi Z di Indonesia? Jurnal Manajemen Informatika (JAMIKA). 2020;10(1):12–28.
4. Turner A. Generation Z : Technology and Social Interest. The Journal of Individual Psychology. 2018;71(2):103–13.

5. Berkup SB. Working with generations X and Y In generation Z period: Management of different generations in business life. Mediterranean Journal of Social Sciences. 2014;5(19):218–29.
6. Pérez-Escoda A, Castro-Zubizarreta A, Fandos-Igado M. Digital skills in the Z generation: Key questions for a curricular introduction in primary school. Comunicar. 2016;24(49):71–9.
7. Kennedy DM, Fox B. 'Digital natives': An Asian perspective for using learning technologies. International Journal of Education and Development using Information and Communication Technology. 2013;9(1):64–79.
8. cnnindonesia.com. Tiga Kiat Kembangkan Diri dengan Teknologi Agar Karier Naik [Internet]. 2022. Available from: https://www.cnnindonesia.com/teknologi/20220129105448-190-752777/tiga-kiat-kembangkan-diri-dengan-teknologi-agar-karier-naik
9. Warsita B. Mobile Learning Sebagai Model Pembelajaran Yang Efektif Dan Inovatif. Jurnal Teknodik. 2018; XIV (1):062–73.
10. Claes R, Ruiz-Quintanilla SA. Influences of Early Career Experiences, Occupational Group, and National Culture on Proactive Career Behavior. Journal of Vocational Behavior. 1998;52(3):357–78.
11. Ostmeier E, Strobel M. Building skills in the context of digital transformation: How industry digital maturity drives proactive skill development. Journal of Business Research [Internet]. 2022;139(January 2020):718–30. Available from: https://doi.org/10.1016/j.jbusres.2021.09.020
12. Clements AJ, Kamau C. Understanding students' motivation towards proactive career behaviours through goal-setting theory and the job demands–resources model. Studies in Higher Education [Internet]. 2018;43(12):2279–93. Available from: https://doi.org/10.1080/03075079.2017.1326022
13. Pajic S, Keszler Á, Kismihók G, Mol ST, den Hartog DN. Antecedents and outcomes of Hungarian nurses' career adaptability. International Journal of Manpower. 2018;39(8):1096–114.
14. Ren S, Chadee D. Influence of work pressure on proactive skill development in China: The role of career networking behavior and Guanxi HRM. Journal of Vocational Behavior [Internet]. 2017;98:152–62. Available from: https://doi.org/10.1016/j.jvb.2016.11.004
15. Strauss K, Griffin MA, Parker SK. Future work selves: How salient hoped-for identities motivate proactive career behaviors. Journal of Applied Psychology. 2012;97(3):580–98.
16. Strauss K, Parker SK. Intervening to Enhance Proactivity in Organizations: Improving the Present or Changing the Future. Journal of Management. 2018;44(3):1250–78.
17. Taber BJ, Blankemeyer M. Future work self and career adaptability in the prediction of proactive career behaviors. Journal of Vocational Behavior [Internet]. 2015;86:20–7. Available from:https://doi.org/10.1016/j.jvb.2014.10.005
18. Rahmatika R, Yusuf M, Agung L. The Effectiveness of Youtube as an Online Learning Media. Journal of Education Technology. 2021;3(1):152–8.
19. Kristiani PE, Pradnyadewi DAM. Effectiveness of YouTube as Learning Media in Improving Learners' Speaking Skills. The Art of Teaching English as a Foreign Language. 2021;2(1):7–11.
20. Lestari RD, Untari E. Penerapan Model Pembelajaran Multiliterasi Interpersonal Pada Mata Kuliah Menulis. Wahana Sekolah Dasar. 2021;25(1):55–64.
21. Rahmayani A, Iswari M. Meningkatkan Keterampilan Membuat Dompet dari Bungkus Kopi Melalui Video Tutorial bagi Peserta Didik Tunagrahita Ringan. Jurnal Penelitian Pendidikan Kebutuhan Khusus. 2021;9:86–93.
22. Syafiq AN, Rahmawati A, Anwari A, Oktaviana T. Increasing Speaking Skill through YouTube Video as English Learning Material during Online Learning in Pandemic Covid-19. Elsya : Journal of English Language Studies. 2021;3(1):50–5.

23. Wijayanti L, Firmansyah B, Sugianti S. Peluang dan Tantangan Pembelajaran Digital di Era Industri 4.0 Menuju Era 5.0. Prosiding Transformasi Pembelajaran Nasional [Internet]. 2021;1:406–17. Available from: https://books.google.co.id/books?id=m7hHEAAAQBAJ
24. Franesti D. Membangun Budaya Literasi Dengan Memanfaatkan Media Digital Instagram. Seminar Nasional SAGA #3. 2021;3(1):111–8.
25. Gustia AG, Iktiarti E, Rini S. Media Sosial Instagram dalam Pembelajaran Keterampilan Menulis Bahasa Prancis Siswa Kelas XI SMAN 9 Bandarlampung. Jurnal Pendidikan Bahasa Prancis. 2021;4(1):77–86.
26. Husin, Dhia HZ, Khoiriyatunnisa L. Pemanfataan Platfrom Instagram Sebagai Media Pembelajaran Bahasa Arab Untuk Pemula. Prosiding Konferensi Nasional Bahasa Arab VII. 2021;543–54.
27. Liany G, Tulung GJ, Lasut TMC. Persepsi Mahasiswa Terhadap Pengaruh Penggunaan Instagram Dalam Pembelajaran Bahasa Inggris. 2021;
28. Rosida S. Pelatihan keterampilan public speaking dalam konten edukatif melalui aplikasi tiktok pada remaja fam (forum anak Medan). BIP: Jurnal Bahasa Indonesia Prima [Internet]. 2021;3(2):234–44. Available from: http://jurnal.unprimdn.ac.id/index.php/BIP/article/view/2017
29. Santoso S, Utami LT, Sukartiningsih W. Pengaruh Pemanfaatan Media Sosial Tik Tok Terhadap Keterampilan Berbicara Siswa Kelas IV SDN Trosobo II. JPGSD. 2021;9(9):3188–97.
30. Wicaksono P. Pelatihan dan Kursus Online Meningkatkan Kompetensi Diri [Internet]. qubisa.com; 2021. Available from: https://www.qubisa.com/article/kursus-online-meningkatkan-kompetensi-diri
31. Samala AD, Fajri BR, Ranuharja F, Darni R. Pembelajaran Blended Learing Bagi Generasi Z di Era 4.0. Jurnal Teknologi Informasi dan Pendidikan. 2020;13(1):45–53.
32. databoks.katadata.co.id. Apa Keterampilan Pekerja yang Paling Dibutuhkan Usai Pandemi [Internet]. 2020. Available from: https://databoks.katadata.co.id/datapublish/2020/11/26/apa-keterampilan-pekerja-yang-paling-dibutuhkan-usai-pandemi
33. databoks.katadata.co.id. Ragam Jenis Pekerjaan yang Paling Banyak Dibutuhkan Setelah Pandemi [Internet]. 2020. Available from: https://databoks.katadata.co.id/datapublish/2020/11/25/ragam-jenis-pekerjaan-yang-paling-banyak-dibutuhkan-setelah-pandemi
34. Crouch M, McKenzie H. The logic of small samples in interview-based qualitative research. Social Science Information. 2006;45(4):483–99.
35. Creswell JW. Research Design, Qualitative, Quantitative, and Mixed Methods Approaches. 4th ed. SAGE Publication; 2014.
36. Maynes MJ, Pierce JL, Laslett B. Telling Stories. Cornell University Press; 2011.
37. Roy R. Working from Home: Women in the Indian Tech-industry through the Pandemic. Journal of Comparative Literature and Aesthetics. 2021;2021(January):56–67.
38. Gubrium JF, Holstein JA. Narrative practice and the coherence of personal stories. Sociological Quarterly. 1998;39(1):163–87.
39. The Harris Poll. Beyond Millennials: The Next Generation of Learners: https://www.pearsonlearned.com/beyondmillennials- the-next-generation-of-learners/. 2018.
40. Shatto B, Erwin K. Moving on From Millennials: Preparing for Generation Z. J Contin Educ Nurs. 2016;47(6):253–4.
41. Mosca JB, Curtis KP, Savoth PG. New Approaches to Learning for Generation Z. Journal of Business Diversity. 2019;19(3):66–74.
42. Al-azawei A, Alowayr A. Predicting the Intention to Use and Hedonic Motivation for Mobile Learning: A Comparative Study in Two Middle Eastern Countries Second Author: Ali Alowayr. Technology in Society [Internet]. 2020;101325. Available from: https://doi.org/10.1016/j.techsoc.2020.101325

43. Thongsri N, Shen L, Bao Y, Alharbi IM. Integrating UTAUT and UGT to explain behavioural intention to use M-learning A developing country ' s perspective. Journal of Systems and Information Technology. 2018;20(3):278–97.
44. Almaiah MA, Alamri MM, Al-Rahmi WM. Analysis the Effect of Different Factors on the Development of Mobile Learning Applications at Different Stages of Usage. IEEE Access. 2020;8:16139–54.
45. Wang Q, Woo HL, Quek CL, Yang Y, Liu M. Using the Facebook group as a learning management system: An exploratory study _1195 1..11. 2011;
46. Moorthy K, T LC, Wei KM, Tan P, Mei Z, Yee CY, et al. Is facebook useful for learning? A study in private universities in Malaysia. Computers & Education [Internet]. 2019; Available from: https://doi.org/10.1016/j.compedu.2018.12.002