ISSN 2732-3781 DOI: https://doi.org/10.52398/gjsd.2023.v3.i2.pp7-15

GiLE Journal of Skills Development

Virtual Interview Preparation for Generation Z Science, Technology, Engineering, and Math (STEM) Students - A Necessity for the Post-pandemic Era

Ponn P. Mahayosnand
Ronin Institute, USA
ORC ID: https://orcid.org/0000-0001-8979-2806

S M Sabra
Islamic University of Gaza, Palestine
ORC ID: https://orcid.org/0009-0002-8682-4811

Abstract

Social distancing and remote work were mandated worldwide during the COVID-19 lockdown. While virtual interviews were conducted before lockdown due to the growing global workforce, they became normalised during the pandemic for both work and school. Hiring agents may believe that having grown up with technology and the internet, Generation Z (Gen Z) may be well-prepared for virtual interviews. However, the challenge they face is not technology-related. Gen Z individuals, particularly those in STEM fields, often lack well-developed practical and pragmatic life skills, such as effective communication. A remote independent research scholar and her student compiled this field report. First, the general characteristics of Gen Z STEM students are presented, followed by a virtual interview preparation guide with tips, recommendations, and examples. Given the ever-changing global remote workforce, future empirical studies are recommended on the virtual hiring process of Gen Z STEM students, which includes and expands upon virtual interviews.

***Keywords*:** Generation Z, STEM students, virtual interviews, soft skills, skill development

1. Introduction

The growing global workforce and gig economy saw a general increase in remote work in recent years. Due to the global COVID-19 lockdown and social distancing mandates, workers and students were forced to work and study remotely. In addition to applying for jobs, the application timeline for college, graduate school, and post-grad admissions did not cease, making virtual interviews a requirement (Lee et al., 2020).

For nearly 30 years, the primary author (herein known as the "mentor") has consistently emphasised to her students and peers that "People hire people" when applying for a job. The authors searched for the origin of this quote but were unsuccessful. Variations of the concept and idea were located, but not the simple 3-word phrase. When offering job advice, coaching

for an interview, or editing resumes, cover letters and/or personal statements, the mentor incessantly repeats these three words. A biologist by trade, the mentor is primarily surrounded by Science, Technology, Engineering and Math (STEM) peers and students. She has first-hand experience that soft skills are underdeveloped in this population and worsens with each generation.

The mentor and one of her students assist undergraduate and graduate STEM students in completing their work and school applications. They help students revamp resumes, reconstruct personal statements, and prepare for in-person and virtual interviews. They gathered their notes and experiences about virtual interview preparation to create this field report. A field report is a type of social science research article that compiles, analyses, and presents the researchers' observations and experiences in the field (Labaree, n.d.).

Key Takeaways:

- Generation Z (Gen Z) students, aged 11 to 26, are the current and up-and-coming workforce with unique characteristics, unlike previous generations. Gen Z has strong STEM skills but lacks the necessary soft skills to make them employable.
- COVID-lockdown normalized virtual interviews. However, virtual interviews are crucial to the hiring process because of the growing global workforce. This report advises students and educators on better preparing for virtual interviews.
- Educators must understand Gen Z and their needs to offer more poignant career advice beyond mastering technical skills taught in the classroom.
- Readers seeking detailed advice on how to master virtual interviews can gain from reading the tips and recommendations detailed in the guide below, even if they are not Gen Z or STEM students.

2. Generation Z (Gen Z) STEM Students

Generation Z, also called Gen Z, represents the next wave of employees entering the workforce, defined as individuals born between 1997-2012 (11 to 26 years old). This set of individuals possesses the most ingrained and natural digital world understanding. When considering engineering students, they possess remarkable theoretical knowledge, occasionally surpassing those of their senior colleagues (Magano et al., 2021). However, their lack of soft skills could potentially put them at a disadvantage in their employability (Kalra, 2019). Soft skills are personal attributes that enable an individual to interact and work effectively and harmoniously with others.

Specific to Gen Z STEM students, the authors define "employment" to include academic work-study opportunities. For example, most students applying to graduate school are also attempting to secure assistantships. Postdoctoral fellowships or residencies are also included, as these postdoc students are paid full-time while in these positions. Last, Gen Z STEM employment includes engineering or computer programming boot camps, which are highly competitive post-grad training and employment placement programs. Therefore, when Gen Z STEM students secure any work-study positions, they are herein known as "employees" in this report.

Understanding and embracing the new generation of employees is vital to adapting and understanding what they have to offer. While Gen Z are the most diverse and adaptable, they also have some individual characteristics that may be new to the workforce. Gen Z was

identified as having underdeveloped social and relationship skills and a lack of attention span, desiring convenience and immediacy (Chicca & Shellenbarger, 2018; Magano et al., 2021). These traits may limit their access to job opportunities, as these soft skills are just as important as one's theoretical knowledge. These transferable skills are universally significant in both employment and daily life.

Gen Z's lack of soft skills may directly correlate to their predominantly online lifestyle, limited in-person interactions and the shift towards online work and education during the COVID-19 pandemic (Pradhananga et al., 2022). Educators must embrace the employability agenda. Educators can help students cultivate social awareness and civic autonomy by building essential graduate attributes and employability skills. As a result, this bridges the gap between students' skills and what employers require (Fellows, 2023).

Gen Z, particularly Science, Technology, Engineering and Math (STEM) students, may face challenges adapting to virtual interviews due to limited experience and skills (Hall Jr. & Gosha, 2018). Interview anxiety is a real phenomenon, and harms interview performance. Mentoring is a mutual knowledge-building experience for both the mentor and mentee (Mahayosnand & Bermejo, 2022). While there are many different training options for mentoring, the main goal is to support and develop the student or mentee (Mahayosnand & Bermejo, 2022; Papp & Horváth-Csikós, 2021). Mentoring offers three focuses: professional and personal support and professional identity development (Papp & Horváth-Csikós, 2021).

3. Virtual Interview Preparation Guide - Tips, Recommendations, and Examples

It is important to showcase your technical skills and authentic self during interviews. Interviews allow you to demonstrate your individuality. It is an opportunity to show your unique and likeable traits beyond the confines of your curriculum vitae or resume. Maintaining a balance of professionalism while expressing your personality is important during the interview stage– particularly behind a camera. Below are tips and recommendations to aid in preparing for a virtual interview.

3.1. Host the Interviewer in Your Home

Change your mindset. Remember that "People hire people", so remain human. A major advantage of a virtual interview is creating the most comfortable environment for you, which can reduce anxiety and stress (M. G. Y. Lee et al., 2020). Remember that you are literally on your own "home turf". Do not fear the superiority of your interviewer. Take on the role of a host welcoming a guest into your home. Prepare and be ready to share a memorable time. Your goal is to make the interviewers remember your warm hospitality so much that they eagerly request to spend their 40-hour work week with you.

Once you enter the virtual room, greet your interviewer with a smile and look eye-to-eye by looking directly into the camera (Laker et al., 2021). Try to gaze naturally into the camera for the majority of your call. Stay engaged and be engaging. If their eyes drift, their mouth slips into a bored frown, or they start fiddling around, be proactive and regain their interest.

3.2. Set The Stage

Take stock of a 360-degree view, starting with you sitting in front of your laptop or computer screen and camera. Select the most ideal, minimalist professional setting for your house. Turn your camera on and start staging your scene (Jones & Abdelfattah, 2020; McKinley et al., 2021; Seifi et al., 2020).

Mirror - Place a mirror behind your camera to judge every step (T. C. Lee et al., 2021). Use the mirror instead of video mirroring so you are not distracted by looking at yourself.

Comfortable chair - Sit in an ergonomic or comfortable chair that positions you upright. Ensure it is not broken, lopsided, too comfortable that you slouch, or twists and turns too much (Chicca & Shellenbarger, 2018; McKinley et al., 2021).

Lighting - Strive for a professional, minimalist, non-distracting, clutter-free, well-lit view. Look and adjust the angles of what is visible around you. Select plain colours and not patterns. Be prepared to explain or share fun stories about everything given the camera, such as a selection of books, stationery, or appropriate decorations (Chicca & Shellenbarger, 2018; Laker et al., 2021; Seifi et al., 2020; Wolff & Burrows, 2021).

Practice live behind the camera - Practice live in a virtual conference room to judge if your stage is appropriate and pleasing.

3.3. Critical Props

Mirror - Explained above.

Cell phone - To serve as a backup method to communicating if you need to call via the phone service or to use your data as a Mobile Hotspot for lost wireless or ethernet internet, poor connection, etc. Do not use the email otherwise (Seifi et al., 2020).

Notebook and writing utensil - Prepare notes and questions (Details will be provided in the sections below).

Clock or Timer - It is better to have a stand-alone clock or timer to pace yourself and your questions and answers. Do not rely on a watch, as that can be distracting, and the interviewer may misunderstand your nerves or lack interest in keeping the conversation fluid. Also, do not rely on your cell phone, which will be used for other purposes (Jones & Abdelfattah, 2020).

A glass of water - Drinking from a glass of water is more pleasant than watching or listening to someone gulp from a water bottle. While staying hydrated is important, a glass of water can be a helpful prop. It serves as an excuse to take a quick sip, giving you a moment to gather and calm your nerves.

3.4. Know Thy Time

Time your answers - It is important to run a mock video interview with a mentor, colleague, classmate or a critical family member or friend. Prepare answers to typical interview questions and test them aloud to your mock interviewer live behind a virtual room camera. Be conscientious of your speed and timing of each answer. Keep each answer to 1-3 minutes long,

and be prepared to answer detailed follow-up questions (Jones & Abdelfattah, 2020; McKinley et al., 2021).

Know your time zone difference - To assist with mishaps, the authors recommend adding all appointments to your digital calendar, such as Google Calendars, based on the interviewer's time zone. The calendar will self-adjust to your time zone.

Plan to arrive 10-15 minutes early - The authors recommend making the interview appointment 15 minutes before its designated time on your digital calendar. Add multiple notifications, such as one day, 1 hour, and 10 minutes before. Share the earlier interview start time (e.g. 9:45 a.m. instead of 10 a.m.) with your family or housemates to allow for some last-minute preparations. Arrive early in the virtual room for the interviewer to let you in, rather than making them wait (McKinley et al., 2021; Wolff & Burrows, 2021).

Schedule with family or housemates - A quiet house to yourself is ideal if possible. Try to arrange for others to wait outside or temporarily leave. Ensure they do not return until you notify them that the interview has concluded, as it may potentially run longer than expected. If some individuals need to stay at home, it is essential to collaborate and agree on quiet activities they can engage in during this period. Make it clear that this is not the time for household chores, cooking, or noisy play.

3.5. Check the Tech

Internet connection - Ideally, a high-speed internet connection is expected in Western countries. However, high-speed internet is a luxury in low- to middle-income countries, especially those in turmoil or war. Be sure to purchase data on your smartphone with the ability to turn on the Mobile Hotspot. If your home is not an option, the next best place is a family or friend's home rather than a loud and public internet cafe. Another option is hourly or a day's rental of co-working office space. You may opt for a cubicle or office with a closed door (Jones & Abdelfattah, 2020; Laker et al., 2021; McKinley et al., 2021; Seifi et al., 2020; Wolff & Burrows, 2021).

Video, sound, and microphone - Test all your electronic equipment at least a day before the interview with your mock interviewer to ensure everything is working smoothly. Try to troubleshoot possible scenarios like static or a shutdown, and try your alternative contact methods. Then, test them again 15 minutes before the interview (Laker et al., 2021; Seifi et al., 2020; Wolff & Burrows, 2021).

3.6. Dress to Impress

Professional attire is still expected, as if you were attending a live in-person interview.

Clothes - A dress shirt and/or jacket are expected. Professional plain colours with no flashy patterns are most appealing as it is the least distracting given the tiny camera view the interviewer will be facing. The authors recommend wearing full professional attire, which includes pants or skirts, socks, and shoes. If an emergency arises and you must hop out of your chair, you do not want your interviewers to see that you are half-dressed, which can be construed as lazy (Jones & Abdelfattah, 2020; McKinley et al., 2021; Wolff & Burrows, 2021).

Body - Groom your hair, nails, and face. Everything visible should be presentable.

Accessories - Keep minimalism in mind. Anything that can make unnecessary noise or distractions to you to your interviewer should be avoided (McKinley et al., 2021).

3.7. Speak with authority and interest

Voice projection - Consider speed and facial expressions. Tone and pacing are important, too. Practice with your mock interviewer that you are not overly expressive in your voice, tone, or speed. Speak clearly. Articulate and enunciate your words. Be conscientious that nerves make people talk faster. Be aware, and note that if your heart begins to race, your body starts to shake, or your voice starts to crack. This would be a time to sip water (Jones & Abdelfattah, 2020; Laker et al., 2021; McKinley et al., 2021; Wolff & Burrows, 2021).

Facial and body language - Be on your best behaviour. Be natural, like a host to your house party. Use natural hand and arm gestures. Do not be excessive or stiff (Laker et al., 2021).

Be confident - Be polite and kind. If you are getting tongue-tied or nervous, pause and politely ask, "May I have a minute?" Confidence can be displayed by allowing moments of silence when appropriate (Wolff & Burrows, 2021). Take another sip of water.

Retain your personality - Plan appropriate anecdotes and relevant jokes to answer commonly asked questions memorably. Make sure you have a story ready for every book, item, piece of clothing, and anything visible that you staged.

Know thyself - Share your strengths while remaining humble and truthful. Be prepared to discuss your flaws and weaknesses (such as lack of experience in a particular program or less work experience than preferred). Be sincere, genuine, and magnetic.

Demonstrate trainability - Emphasise your willingness to learn and adapt.

3.7.1. For your Notebook and writing utensil

The authors recommend having a notebook with two pages opened. The left page will have your prepared notes and the right page will be left empty to take notes during the interview.

The left page:

Guiding notes - Blurbs, bullet points or phrases containing frequently overlooked facts about your skills, resume highlights, or engaging stories to respond to challenging interview questions. A few words in the upper corner of the page are enough. Do not write a script or prose (Laker et al., 2021). Write a few keywords or phrases or draw images to serve as a guide to spark your memory. You should not read full sentences, as you would not do that during a live in-person interview. Looking longingly at your notebook removes your eyes from creating the much-needed connection by looking into the camera.

Questions to ask - Do not ask about salary and start dates, as if you already secured the position. Prepare thoughtful, unique questions demonstrating your genuine interest in the school, program, or company. Do your research. Be sure not to ask questions that could be found on their homepage. STEM is exploratory in nature, so be a scientist and try to discover something new. Try to come up with at least one question to ask. If not already stated in the job posting,

you can ask questions about the timing of the review and how and when you are to expect to hear some kind of decision (McKinley et al., 2021).

The right page:

Be present, attentive, and aware - Interviewers often like to talk or may run off into tangents. Be a detective whose job is to find similarities or strengths you share so that you can keep the conversation going. Even when the interviewer asks questions, they may share relevant company history or program goals not publicised on their website. Jot down these few words and find natural ways to incorporate your anecdotes at the right moments. If the topic never comes up again, circle those notes and draw an arrow toward the left page, singling you to bring that issue up at the end of the interview when they ask if you have any questions or comments before the interview ends (McKinley et al., 2021).

Find a reason to follow up. Pay particular attention to every interviewer in the virtual room. Seek to find similarities or common topics to follow up on after the interview. For example, "I actually have a sample of XYZ. I would love to email it to you after the interview", or "My favourite website/journal on ABC topic is XYZ; I will send you the link after our call". Remain interested and interesting (Seifi et al., 2020).

Use it to organise your thoughts - The authors have mentored several international students for whom English is a second language. Leave this blank page to help organise your thoughts. STEM students often stumble on their words because they think they must be quick in their thinking and answer immediately after an interviewer asks a question. Nerves can snowball into your tongue being tied. The authors recommend saying something like, "That is a great question! Can I please have a minute to gather/organise my thoughts?" Our students/peers have never been denied a minute to think.

Utilising silence wisely is a powerful leadership skill. Exert this power and use your notebook and writing utensil to help take note of an impactful answer. Put your timer on for one minute, and do not exceed this time. You may only need 5-10 seconds to doodle a mind map or outline.

Ask for each interviewer's contact information - You cannot ask for everyone's business cards like you would during a live in-person interview. Many times, interviewees do not even know the name(s) of those who attended their virtual interview, let alone have their email address. Show all your interviewers you care about their time and expertise. I politely ask, "May I please have the correct spelling of your full name, title, and email address?" If they question your motives, kindly share that you would like to personally thank them via email and share what you plan to send them. Beware that some interviewers may not want to share their email and tell you you can contact them via the lead interviewer's email. Request everyone's privacy and comfort (McKinley et al., 2021).

3.8. Post-Interview Follow-up

Send a personalised "thank you" email to every interviewer. Share the requested links or samples you promised to send. If someone requested that you contact them via the lead

interviewer, write a separate email "to Interviewer #2 via Interviewer #1". Make sure you email Interviewer #1 their personalised thank you email first. Then, send the second email separately.

4. Conclusion

Interviews are mandatory for the hiring process, and virtual interviews have their nuances, unlike live in-person interviews. While this report was written specifically for Gen Z STEM students, anyone seeking employment during this post-pandemic era may find value from the tips and recommendations shared. Given the ever-changing global remote workforce, the authors find it critical that further empirical studies be conducted on the virtual hiring process of Gen Z STEM students, which includes and expands upon virtual interviews. Further studies that address the unique needs of Gen Z STEM students and Gen Z in general are also highly recommended.

References

Chicca, J., & Shellenbarger, T. (2018). Connecting with Generation Z: Approaches in Nursing Education. *Teaching and Learning in Nursing*, *13*(3), 180–184. https://doi.org/10.1016/j.teln.2018.03.008

Fellows, I. (2023). Critical educators should embrace the employability agenda. *GiLE Journal of Skills Development*, *3*(1), 10–14. https://doi.org/10.52398/gjsd.2023.v3.i1.pp10-14

Hall Jr., P., & Gosha, K. (2018). The Effects of Anxiety and Preparation on Performance in Technical Interviews for HBCU Computer Science Majors. *Proceedings of the 2018 ACM SIGMIS Conference on Computers and People Research*, 64–69. https://doi.org/10.1145/3209626.3209707

Jones, R. E., & Abdelfattah, K. R. (2020). Virtual Interviews in the Era of COVID-19: A Primer for Applicants. *Journal of Surgical Education*, *77*(4), 733–734. https://doi.org/10.1016/j.jsurg.2020.03.020

Kalra, S. (2019). *Perceived Employability of Computer Science Graduates: An Academic Predicament*. 4503–4509. https://doi.org/10.21125/edulearn.2019.1128

Labaree, R. V. (n.d.). *Research Guides: Organising Your Social Sciences Research Assignments: Writing a Field Report*. Retrieved September 16, 2023, from https://libguides.usc.edu/writingguide/assignments/fieldreport

Laker, B., Godley, W., Kudret, S., & Trehan, R. (2021, March 9). 4 Tips to Nail a Virtual Job Interview. *Harvard Business Review*. Retrieved September 30, 2023, from https://hbr.org/2021/03/4-tips-to-nail-a-virtual-job-interview

Lee, M. G. Y., Hu, W. C. Y., & Bilszta, J. L. C. (2020). Determining Expected Research Skills of Medical Students on Graduation: A Systematic Review. *Medical Science Educator*, *30*(4), 1465–1479. https://doi.org/10.1007/s40670-020-01059-z

Lee, T. C., McKinley, S. K., Dream, S. Y., Grubbs, E. G., Dissanaike, S., & Fong, Z. V. (2021). Pearls and Pitfalls of the Virtual Interview: Perspectives From Both Sides of the Camera. *Journal of Surgical Research*, *262*, 240–243. https://doi.org/10.1016/j.jss.2020.12.052

Magano, J., Silva, C. S., Figueiredo, C., Vitória, A., & Nogueira, T. (2021). Project Management in Engineering Education: Providing Generation Z With Transferable Skills. *IEEE Revista Iberoamericana de Tecnologias Del Aprendizaje*, *16*(1), 45–57. https://doi.org/10.1109/RITA.2021.3052496

Mahayosnand, P. P., & Bermejo, D. M. (2022). E-Mentoring Student Researchers through an Undergraduate Field Experience Course—Lessons Learned. *Journal of the British Association for the Study of Religion (JBASR)*, *23*, 60–69. https://doi.org/10.18792/jbasr.v23i0.58

McKinley, S. K., Fong, Z. V., Udelsman, B., & Rickert, C. G. (2021). Successful Virtual Interviews: Perspectives From Recent Surgical Fellowship Applicants and Advice for Both Applicants and Programs. *Annals of Surgery*, *273*(2), e55. https://doi.org/10.1097/SLA.0000000000004172

Papp, I. C., & Horváth-Csikós, G. (2021). Educational and Economic Aspects of Mentoring: How Mentoring Can Contribute to the Development of Soft Skills. *GiLE Journal of Skills Development*, *1*(1), 3–11. https://doi.org/10.52398/gjsd.2021.v1.i1.pp3-11

Pradhananga, P., ElZomor, M., & Santi Kasabdji, G. (2022). Advancing Minority STEM Students' Communication and Presentation Skills through Cocurricular Training Activities. *Journal of Civil Engineering Education*, *148*(2), 04022001. https://doi.org/10.1061/(ASCE)EI.2643-9115.0000060

Seifi, A., Mirahmadizadeh, A., & Eslami, V. (2020). *Perception of medical students and residents about virtual interviews for residency applications in the United States | PLoS ONE*. *15*(8). https://doi.org/10.1371/journal.pone.0238239

Wolff, M., & Burrows, H. (2021). Planning for Virtual Interviews: Residency Recruitment During a Pandemic. *Academic Pediatrics*, *21*(1), 24–31. https://doi.org/10.1016/j.acap.2020.10.006

Declaration Statements

Conflict of Interest
The author reports no conflict of interest.

Funding
The author received no financial support for the research, authorship, and/or publication of this article.

Ethics Statement
No dataset is associated with this article.

Authors Contributions
Both authors contributed equally to the concept, design, literature review, and write-up of this article.

Acknowledgements
The authors would like to thank Hafsa Shah and Z M Sabra for their editing assistance.

Open Access Agreement

This article is published under a CC BY 4.0 license. This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use. For more information, please visit https://creativecommons.org/licenses/by/4.0/.

Corresponding Author

The corresponding author for this manuscript is Ponn P. Mahayosnand, MPH, who can be contacted by email at ponn.mahayosnand@ronininstitute.org