

A Computer-Based Experience of Work-From-Home Workers in Quezon City

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Abstract: This research explored the experiences of computer-based work-from-home (WFH) workers in Quezon City, which focused on technological challenges. The study employed a phenomenological research design and purposive sampling, gathering data through interviews with ten participants. Themes included difficulties in internet connection, communication hurdles, computer speed issues, advanced computer knowledge, technological innovations, computer skills development, and technical challenges. The results highlighted the importance of reliable technology for WFH workers. The study concluded that while technology enhanced productivity, challenges persisted. Recommendations included upgrading computer equipment, investing in reliable internet, and promoting computer skills development through seminars for an improved WFH experience.

Keywords—STEM, Work from Home, Computer-based Jobs, Experience, Technology

I. INTRODUCTION

The computer-based remote work can be traced back to the 1970s when the concept of telecommuting emerged. However, it wasn't until the widespread adoption of personal computers and the internet in the 1990s that telework became more feasible and popular. Today, with the COVID-19 pandemic, remote work has become even more prevalent, highlighting the importance of computer-based experiences for WFH (Work From Home) workers. These technological advancements marked a critical turning point. Workers suddenly had the option to connect to their office networks and complete their responsibilities effectively from the convenience of their homes. This shift not only expanded but also presented a profound change in how we view the traditional office setup. As time went on, technological advancements strengthened the benefits of working online. Email, video conferencing platforms, and collaboration software, among other communication tools, opened up new possibilities for productive connection. By bridging the physical distance between co-workers, these gadgets promoted efficient teamwork and gave the impression that they were physically there in the workplace. With the increased adoption of computer works during the pandemic the significance of computer-based experiences for Work From Home workers became widely evident (Reynolds, 2022).

A. Statement of the Problem

The main objective of this study was to understand the experiences of work-from-home workers who relied on computer-based work, specifically focusing on the technological challenges faced by WFH workers in Quezon City. Similarly, this study sought to answer the following questions:

1. What were the experiences of Work From Home workers in terms of difficulties in using computers and navigation?
2. How adept was the Work From Home workers in terms of using computers?
3. To what extent does their use of technology contribute to their Work From Home experience?

B. Scope and Delimitation

The research covered the experiences of computer-based work from Work From Home workers in Quezon City regarding their use of technology. The study consisted of ten (10) participants who were currently residing in Quezon City. The research duration spanned from September to February.

In addition, the study focused on "computer-based work from home workers" for the reason that the researchers intended to concentrate on the field of technology that was connected to the STEM strand. Since home-based employees frequently utilize more technological devices to operate effectively at home, it is relevant to STEM fields, particularly technology. The study specifically concentrated on Quezon City residents who worked from home, limiting the scope to this specific geographic area to examine how technology was utilized by 'computer-based' workers within this city. The research encompassed a diverse range of professions, including but not limited to virtual assistants and freelancers. Furthermore, the study extended its focus to workers like educators, telehealth workers, and allied health workers who transitioned to work from home due to the outbreak of the COVID-19 virus. Ten (10) respondents, serving as a representative sample, provided insights into the experiences of this varied group of work-from-home computer-based workers in Quezon City.

C. *Significance of the Study*

Withal, the researchers aimed to comprehensively explore the experiences of WFH workers in Quezon City. It delved into understanding and describing the multifaceted aspects of WFH, including its challenges, advantages, and dynamic shifts. It served as a valuable resource for a diverse audience, including STEM students, by offering insights into how technology influenced the workplace, fostering a deeper comprehension of the technology used in computer-based professions, and promoting awareness of its applications in professional settings. In addition, it provided students with a window into the evolving landscape of remote work, helping them grasp how technology reshaped work paradigms and equipped them with the knowledge to navigate future job challenges effectively. For WFH workers, the research can guide them in identifying the most effective technology tools to optimize their remote job performance while also imparting practical strategies for managing their roles efficiently. As well as, for professionals in computer-based jobs, the study offered valuable insights into technology tools and platforms that could enhance their work processes and simplify their job tasks. Lastly, it served as a foundational resource for future researchers, facilitating a deeper exploration of technology's impact on computer-based professions and contributing to a more comprehensive understanding of this evolving field.

D. *Definition of Terms*

The following were the terms defined operationally:

- **Advance Computer Knowledge.** A high level of understanding and proficiency in using complex computer systems, software, and technologies, surpassing basic skills. In this study, it refers to one of the terminologies that was used.
- **Basic Computer Knowledge.** Ability to perform fundamental tasks on a computer. In this study, it refers to the initial journey of the respondents.
- **Computer-based.** Refers to systems, processes, or activities that rely on the use of computers or related technology. In this study, it refers to the focal point.
- **Computer-Based Experience.** It involves interactions facilitated by computer technology, covering activities on digital devices, software, and online platforms. In this study, it refers to the topic that the researchers aim to investigate.
- **Quezon City.** It refers to a city in the Philippines. In this study, it refers to the location where the research was carried out.
- **Technological Innovation.** A new or improved product or process whose technological characteristics are significantly different from before. In this study, it refers to being convenient and organized.
- **Tech Savvy.** Having a good knowledge and understanding of modern technology, especially computers. In this study, it refers to the knowledge of the respondents when it comes to computers.
- **Troubleshooting.** A form of problem solving, often applied to repair failed products or processes on a machine or a system. In this study, it refers to how often they encountered these common problems.
- **Work From Home (WFH).** Completing work tasks without being physically present in a traditional office setting, utilizing digital tools while working from home. In this study, it refers to the measurements of the sampled data.

II. **REVIEW OF RELATED LITERATURE**

Beneteau et al. (2023) states that the workers who regularly use computer-based technologies compared their before and after work performance, and occasionally, despite their employer's support, they quit their jobs because they felt they were not meeting their personal performance standards. The findings aid the researchers in knowing the experiences of the employees who use computer-based technologies in their work, as it talks about their performances and what they encountered in their work.

Computer-based remote employees experience the advantage of using computers as their primary means of work. It is efficient for them to use applications and digital technologies for practical work. According to Bouchrika (2023), having computers at home allows greater flexibility in how professionals operate, interact, and advance their profession (Statista, 2021). This research aligns with our current study by providing literature with a strong relation between computer-based remote work and its positive impact on professional efficiency and flexibility. The advantages outlined in Bouchrika's study (2023) echo the findings of the

current research, emphasizing the practical benefits of using computers as the primary tool for work.

According to Lal et al. (2023), due to the quick changes in work environments, little is known about how people use technology to maintain social engagement with colleagues when working from home. The results highlight the challenges of sustaining social contacts through technology, including the lack of cues and emotional intelligence. They also shed light on a host of other problems that impact their work life, including job insecurity, rising workloads, and extensive technology use. The study also shows that, in spite of the drawbacks of working from home, some participants are afraid of going back to the traditional office setting, where social interactions might be seen as a distraction that will hinder their productivity.

In a recent study by Simplilearn (2023), it was found that proficiency in computer skills has become increasingly essential for success across various aspects of life, such as education, work, and personal pursuits. The influence of computers and digital devices has significantly reshaped our lifestyles, facilitating easier access to information, communication, and task completion. In the contemporary professional landscape, possessing computer skills is often a key factor that enhances one's attractiveness as a candidate for job opportunities. According to the Bureau of Labor Statistics (BLS), there is a projected 21% growth in employment for computer and information technology occupations from 2021 to 2031, a rate substantially higher than the national average. Given the prevalence of computer-related tasks in many professions, proficiency in these skills can greatly contribute to career advancement. This study resonates with the researcher's ongoing investigation, emphasizing the significance of acquiring computer literacy for future careers. The research underscores that gaining hands-on experience in effectively utilizing computers provides a substantial advantage for fostering a successful career in the future.

Another study by Trovela et al. (2023) aims to determine the motivation of WFH office workers in the National Capital Region (NCR). They used a descriptive cross-sectional study design, a survey of WFH office workers around the NCR with a total of 252 respondents. The findings showed that most of the individuals who worked from home (WFH) experienced motivation due to its positive effects; availability, time and cost savings from reduced commuting, and the flexibility it provided to the schedules according to their personal preferences that can be hard to achieve through traditional on site work of computer based.

Abun et al. (2022) found that the computer and internet self-efficacy of employees was high, as was their job satisfaction. Based on the Mult-R regression analysis, it was found that together, computer and internet self-efficacy affects the job satisfaction of employees. Taken alone, it was the only computer that predicted the job satisfaction of employees. The study is related to the present study as it talks about computers' effect on workers capability to perform their work and job satisfaction.

Atske, S. (2022) concluded in their study that 72% of workers say that computers have made their jobs easier, while 20% say that they have made their jobs harder. Also, the study discovered that employees are more likely to claim that computers have made their tasks easier if they use them more regularly. The survey further found that people's attitudes toward computers can vary depending on the kind of work they undertake. Overall, the survey indicates that many workers' job experiences have been positively impacted by computers. This study has relevance to the current study since it gives the researchers a viewpoint about the experiences of workers using computers.

A study by Federico et al. (2022) aims to determine the negative experiences of video conferencing fatigue among computer-based WFH workers. Using the purposive sampling technique, a total of 111 WFH office employees were able to participate in the study and employed a descriptive correlation design. The results showed that people who experienced high levels of negative emotions also tended to report higher levels of weariness and fatigue from video conferences. The cited study helps the current study to determine the difficulties of using computers since the contents of the study provide the experiences of the individuals who engaged in WFH using computers.

Shaw (2022), discusses the advantages of edge computing and how computer-based experiences may be made more reliable and efficient. Additionally, it offers instances of businesses utilizing edge computing to create cutting-edge goods and services. For many of these systems, edge computing hardware and services offer a local source of processing and storage, which aids in issue solving. For example, an edge gateway can process data from an edge device and then send back over the cloud only the necessary information. In the event that a real-time application is required, it can also transmit data back to the edge device. The capacity of edge computing technology to process and store data more quickly is its greatest advantage. This allows for more effective real-time applications, which are essential to companies.

According to Wang et al. (2020) they determined the challenges that remote workers currently encounter, as well as how unique characteristics and components of computer-based virtual work impact these challenges, they conducted a mixed-methods

investigation. They used survey data from 522 employees who worked from home throughout the pandemic to find that characteristics of virtual labor were associated with workers' performance and well-being through the challenges they faced. Several of these correlations were significantly moderated by self-discipline. They discuss the potential implications of their research for the epidemic and other contexts.

The above collection of both foreign and local studies provides information to the multifaceted role of computer based learning in various contexts, unveiling both its benefits and challenges. Additionally, it explores the experiences of work from home workers in computer based jobs. The previous studies will help the researchers to understand more the relationship of work from home and computer based jobs.

III. METHODOLOGY

This section outlined the methodology involved in this study, detailing the approaches and procedures utilized to address the research objectives.

A. Research Design

In order to understand the experiences of computer-based WFH workers in Quezon City, the researchers used phenomenology research design—a qualitative research approach that focuses on exploring the essence of human experiences and understanding the attributes of the people to those experiences. Phenomenology seeks to capture the underlying structures and core aspects of these experiences without imposing preconceived theories or interpretations (Delve. H. & Limpaecher, A., 2022).

The researchers chose phenomenology because it allowed them to thoroughly explore the experiences of computer-based WFH workers and would focus on expanding their findings to a wider population.

B. Sampling

This study used purposive sampling, a method where participants are chosen by researchers based on specific

The age group of the participants that were chosen are divided into two groups: those aged 34 and below and those aged 35 and above. By utilizing purposive sampling, the researchers ensured the reliability and authenticity of the gathered data.

C. Instrument

The researchers used interviews to gather the necessary data. The individuals conducting the research scheduled specific times and locations, posing pre-prepared questions. The interview comprised four (4) questions aimed at understanding the experiences of individuals working remotely in computer-based jobs. The responses sought aligned with the statement of the problem (SOP). This study consisted of ten (10) carefully chosen participants selected based on their qualities and characteristics. These participants were individuals currently working in a computer-based home setup and residing in Quezon City.

D. Ethical Considerations

Following ethical guidelines, it was crucial to prioritize the confidentiality and privacy of the participants. When the interview was conducted, researchers sought consent from the participants, confirming their willingness to be interviewed. Additionally, the researchers inquired if it was acceptable to record the interview. Researchers assured participants that only anonymized information, such as their role as an employee, would be disclosed in any publications.

E. Data Analysis

To analyze data on the computer-based experiences of Work From Home (WFH) workers in Quezon City, the researchers utilized a manual thematic analysis. This method enabled a comprehensive examination of recurrent themes and patterns in the qualitative data without the use of specialized qualitative analysis software. Manual thematic analysis was chosen to systematically identify essential themes, providing insights into the knowledge and viewpoints of respondents on computer-based jobs and remote work experiences. This decision allowed for a thorough analysis of the data, crucial for capturing the wide variety of experiences in the context of work-from-home agreements and computer-based jobs.

IV. RESULTS AND DISCUSSIONS

In this section, the researchers delved into the outcomes of the study by examining the data collected through transcribed interviews with the respondents

TABLE I. CHALLENGES OF WORK FROM HOME WORKERS WITH COMPUTER USAGE

Area to Focus	Themes/Categories
1. What are the experiences of Work From Home workers in terms of difficulties in using computers and navigation?	<ul style="list-style-type: none"> ● Theme 1: Internet Connection Loss ● Theme 2: Communication Hurdles ● Theme 3: Computer is Old/Slow ● Theme 4: Technical Issues

TABLE I. CHALLENGES OF WORK FROM HOME WORKERS WITH COMPUTER

USAGE

Theme 1: Internet Connection Loss

One of the common difficulties that computer based workers faced was connection loss that makes their job difficult and challenging. This could significantly impede their ability to perform tasks and create a tough work environment.

Quote: "When the internet acts up, it disrupts meetings with clients, making communication difficult. It becomes challenging to schedule appointments if the internet is consistently unreliable."

Theme 2: Communication Hurdles

application software, our computers and other devices aged and became slow over time. Even with the updates available for the gadget's parts, there are situations when the updates are insufficient to support the tasks we needed to complete, necessitating worker upgrades to the computer itself. In order for the workers to accomplish their work with great value they needed to have the right equipment for it.

Quote: "There are also times where I have more tasks and deadlines, my computer becomes slow."

Theme 4: Technical Issues

Working remotely had advantages and disadvantages; numerous individuals did it in the past. To operate in a computer-based environment, you have to possess the necessary abilities for both the work you were applying for and the troubleshooting of any problems that might have arisen. One major advantage when entering the tech business was having a good understanding of technology. A person might manage simple troubleshooting on their own, but even with rudimentary understanding, certain issues could not be resolved quickly, which slowed the workers' ability to finish the work on schedule.

Quote: "The computer itself is having technical issues which I tried to fix with basic troubleshooting and if that does not work I need to reach out to our IT department to get it checked."

TABLE II. COMPUTER PROFICIENCY OF WORK FROM HOME WORKERS

In the rising development of technologies, few problems arose, one of which was communication hurdles that unveiled a multifaceted challenge faced by individuals engaged in remote work. In the realm of virtual collaboration, obstacles often arose in the form of miscommunication, delays, and difficulties in conveying nuanced information. The absence of face-to-face interactions could lead to misunderstandings or misinterpretations, impeding the fluid exchange of ideas. Additionally, reliance on digital communication tools may introduce technical glitches, further exacerbating Workers

Area to Focus	Themes/Categories
2. How adept are the Work From Home workers in terms of using computers?	<ul style="list-style-type: none"> ● Theme 1: Basic Computer Proficiency ● Theme 2: Advance Computer Knowledge

TABLE II. Computer Proficiency of Work From Home communication breakdowns.

Quote: "Challenges in a work-from-home setup may include technical issues, communication hurdles, and potential distractions."

Theme 3: Computer is Old/Slow

Even with the current technological advancements that could support the demanding needs of consumers and

Theme 1: Basic Computer Proficiency

In the progression of computer technology, individuals embarked on their computer journey starting with initial encounters, acquiring basic knowledge. One focal point in the researcher's interview questions explores the foundational proficiency in computer use. Several participants shared their journey in developing their computer skills, starting over from the basics. This foundational expertise encompassed their early exposure to computer usage, where they gained proficiency in navigating basic applications and software functions.

Quote: "I learned the basics of computers in elementary school. The concept of computers wasn't new to me; I covered word processing, Excel, simple programming, encoding – all of that was covered before."

Theme 2: Advanced Computer Knowledge

Advanced computer skills involved specialized knowledge for specific tasks or professions, encompassing advanced programming, web development, data analysis, graphic design, and network administration. Possessing advanced knowledge of computers granted a unique advantage when navigating the digital landscape. Understanding complex systems allows efficient problem-solving, and staying abreast of emerging technologies ensures adaptability. It unfolded with empowerment that came from mastering the language of machines, offering a unique perspective and the ability to influence the evolving world of technology.

Quote: "If you rate 1-10, I already have a perfect score in terms of computer knowledge. I also know a lot of people who have difficulties in their transition from working from home to office-based before, it's from the experiences of my friends. It's difficult for them 'cause not everyone is tech savvy, but for me it's not an issue because I'm already tech savvy."

TABLE III. IMPACT OF TECHNOLOGY ON WORK FROM HOME EXPERIENCE

Area to Focus	Themes/Categories
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<p>3. To what extent does their use of technology contribute to their Work From Home experience?</p>	<ul style="list-style-type: none"> ● Theme 1: Improved Software ● Theme 2: Data Entry ● Theme 3: Fast Tech Inquiry ● Theme 4: Accessible Communication
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TABLE III. IMPACT OF TECHNOLOGY ON WORK FROM HOME EXPERIENCE

Theme 1: Improved Software

Nowadays, technology makes it easier to get things done fast and without too much hassle. It helps finish tasks faster, more efficiently, and without errors with the help of

softwares that has been upgraded to perform better and give more features to help with efficiency. In addition, technology has room to store more files and data that is needed for work without worrying about running out of space. It keeps files organized and easier to access when needed.

Quote: "Technology improvements have significantly enhanced the efficiency of my computer-based tasks by providing faster processing speeds, increased storage capacities, and improved software capabilities."

Theme 2: Data Entry

Various software tools, such as Microsoft Office, Google Workspace, Zoom, and more, were designed for inputting data and collecting results effortlessly, simplifying the process and making it quicker to accomplish tasks without any issues, unlike before, when workers had to manually input data to collect results. With technological advancements, workers no longer have to go through this problem.

Quote: "Before it's manually but because of this softwares excel and google sheets it is easier to enter data and to get the extracted result that you would like to have at the same time it not only gets the job or the task easily done."

Theme 3: Fast Tech Inquiry

Improvements in technology made tasks more efficient in several ways. There's faster processing, tasks were completed more quickly. Additionally, improved connectivity ensures much smoother communication and access to resources. The availability of advanced tools enhances the overall capability to accomplish tasks more effectively.

Quote: "Recent advancements contribute to task efficiency through faster processing, improved connectivity, and the availability of advanced tools."

Theme 4: Accessible communication

Technology improvements contribute a lot in terms of communication especially work from home jobs. Quick feedback and improve collaboration through simultaneous video calls for meetings, chats, or even emails to get information needed for their job. Even without being on site, they could reach their colleagues and supervisors for support regarding their client.

Quote: "Technology advancement or improvements made it a lot easier, made it accessible or made communication accessible for those living in different areas or basically in different countries on the globe

TABLE IV. IMPACT OF TECHNOLOGY ON WORK FROM HOME EXPERIENCE

making it challenging for the participant to navigate initially. Working from home also comes with cons. If they don't know

Theme 4: Overall WFH Experience

Technology could be both pleasant and challenging. Pleasant since it fostered flexibility that could cope with circumstances in the workplace. Connectivity, which offered convenience in connecting to systems and programs without requiring many changes, eased their work. Respondents still encountered difficulties in technology, such as technical issues. Adapting to technology's advantages provides wide knowledge and understanding that gives insight into how to improve our learning in terms of technology.

Quote: "Using technology for remote work can be both pleasant and challenging. It offers flexibility and connectivity but may pose difficulties such as technical issues and isolation. The experience depends on adapting to technology's advantages and addressing its limitations."

V. CONCLUSION AND RECOMMENDATION

The following were the conclusions of the study.

A. Conclusion

1. In the dynamic landscape of a work-from-home environment, challenges such as technical issues, communication hurdles, and potential distractions have been vividly described by respondents. The disruption caused by unreliable internet during client meetings and the complexity of navigating foreign programs for international collaborations emerged as significant obstacles. While technology improvements were lauded for enhancing productivity, the persistent dependence on stable internet connections remained a concern. Power interruptions, internet connection loss, and occasional technical issues were acknowledged, necessitating troubleshooting and IT support that cause our respondents to have difficulties in their jobs.
2. All of the workers have basic knowledge when it comes to technical and navigation on computers, but the respondents who have majored in computers have advanced computer knowledge, which is in-depth knowledge when it comes to using computers and troubleshooting.
3. Technological improvements have significant contributions to the experience and work efficiency of many individuals who work in a remote setting with the help of various software. They are able to do their task quicker. Moreover various applications and functions of technology enable seamless communication, collaboration, and task management. Workers engaged in remote setups had shared their experiences, highlighting both the convenience and challenges of using technology. Overall, the experience was described as generally pleasant, offering benefits like organized workflows and the ability to connect with colleagues through virtual means.

B. Recommendation

The following were the recommendation of the study:

1. Anyone who had experienced challenges while working from home, such as technical issues, power interruptions, and potential distractions that were caused by unreliable internet, should upgrade to a more powerful computer and invest in reliable internet connections for advanced software usage to avoid not being able to work during work hours because of technical issues and to avoid the potential loss of income if not considered by their company.
2. WFH workers should attend seminars and deliberations about computer functions in terms of application and software. Thus, they could gain further knowledge and have an in-depth exploration of technology. It would give them a convenient and pleasant experience working with computers.

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