

## Exploring the Impact of Digital Divide on Quality of Work Life of Employees: Empirical Evidence from Nepal

Mandip Bhattarai<sup>1\*</sup> and Arjun Rai<sup>2\*</sup>

<sup>1</sup> Lecturer, Kasturi College, Itahari, Nepal

<sup>2</sup> Lecturer, Faculty of Management, Mahendra Multiple Campus, Dharan

<sup>1\*</sup> [bhattarai.mandip@kasturi.edu.np](mailto:bhattarai.mandip@kasturi.edu.np) <sup>2\*</sup> [arjun.rai@mahmc.tu.edu.np](mailto:arjun.rai@mahmc.tu.edu.np)

### Article History:

*Submitted 12 December 2024*

*Reviewed 27 December 2023*

*Revised 19 January 2025*

*Accepted 20 March 2025*

### Principal Author:

Mandip Bhattarai

*Email:*

[bhattarai.mandip@kasturi.edu.np](mailto:bhattarai.mandip@kasturi.edu.np)

### Corresponding Author:

Arjun Rai

*Email:*

[arjun.rai@mahmc.tu.edu.np](mailto:arjun.rai@mahmc.tu.edu.np)

### Copyright Information:

*Copyright 2025© Authors of this journal; with authors' permission, the copyright is transferred to the publisher for the first edition only.*

### Publisher:

Research Management Cell (RMC)

Janta Multiple Campus

Itahari, Sunsari

Tel.: 025-81300

Email: [rmcjantacollege@gmail.com](mailto:rmcjantacollege@gmail.com)

### Abstract

This study examined the effect of access to technology, learning challenges, and age on quality of work life. This study used a survey questionnaire to collect primary data from 111 respondents. In this study, the researchers used a cross-sectional research design. Descriptive and inferential statistical tools were used in this study. The ordinary least squares multiple regression model was used to examine the impact of independent variables on dependent variables. The reliability test revealed a robust internal consistency. The regression analysis revealed a significant positive impact of access to technology and learning challenges on the quality of work-life. However, the variable age had an insignificant negative impact on the quality of work life. The results suggested that access to technology and challenges significantly influence employees' quality of work life. Subsequent studies can be conducted by including additional variables affecting the quality of work life, using longitudinal studies to monitor temporal changes, and analyzing the impact of various demographic variables, including educational background, on job-related outcomes.

**Keywords:** digital divide, quality of work life, access to technology, learning challenges, digital skills

**JEL Classification Code:** M54, O33, J24, C12, J11

## Introduction

Hussain (2024) asserts that digital technologies have reshaped the modern workplace, resulting in unprecedented connectivity, efficiency, and innovation. Because of cloud-based collaboration tools and artificial intelligence-driven analytics, today, digitalization has become a cornerstone of organizational success (Hossain et al., 2025). However, this transformation has not been universally equitable, resulting in a digital divide. The digital divide is a gap between people, societies, and communities with access or reach to digital technologies and those who do not have it (Van Laar et al., 2020). The digital divide manifests not only in access to hardware and internet connectivity but also in the disparity of technological skills, which determines an individual's ability to thrive in a digitalized work environment.

The digital divide significantly impacts the quality of work-life, including job satisfaction, work-life balance, autonomy, and overall well-being (Sirgy et al., 2001). When workplaces become more reliant on technology, employees lacking adequate technological skills face reduced productivity, limited career advancement, and heightened stress, eventually eroding employees' work-life quality (Nikou et al., 2022). Moreover, digital skills can empower workers, enhance their performance, and foster a sense of competence and engagement (Van Laar et al., 2020). At the same time, the global trends amplify the urgency of addressing digital divides.

Li (2024) predicted that by 2025, more than 50 percent of all employees will require significant reskilling, most importantly, digital skills at the forefront. However, disparities persist across socioeconomic groups, geographic regions, and industries. For instance, rural workers from developing economies often lack access to technology and opportunities for acquiring digital skills, which results in inequalities (Haleem et al., 2022). Even in developed countries, older employees may struggle to adapt to the digital environment, resulting in a skills gap (Beaunoyer et al., 2020).

There are limited studies conducted to explore the effect of variables used in this study in Nepalese socio-cultural context. Studies like those by Cortellazzo et al. (2019) suggest that digital competence enhances adaptability and job satisfaction. Similarly, Habibi et al. (2021) emphasize the connection between access to technology, digital

skills, and motivation. However, most of the studies often focus on productivity or organizational performance rather than the holistic well-being of employees, i.e. quality of work life. This gap in the literature presents an opportunity to investigate how bridging the digital divide through tech skills development can directly enhance the quality of work-life. The findings of this study have both practical and theoretical contributions to the field of knowledge.

### **Research Objectives**

The research has the following objectives.

- a. To examine the relationship between age, access to technology, learning challenges and employees' quality of work life in the Nepalese organization.
- b. To examine the impact of access to technology on the Quality of Work Life among employees across different sectors.
- c. To determine the effect of learning challenges on the employees' Quality of Work Life.

### **Research Questions**

This study is conducted to answer the following research questions.

1. What is the relationship between age, access to technology, learning challenges and employees' quality of work life in the Nepalese organization?
2. How does access to technology influence the Quality of Work Life among employees across different sectors?
3. How do learning challenges affect employees' Quality of Work Life?

### **Significance of the Study**

This study is important because it helps us understand the role of different environmental variables in the workplace for employees in this rapidly growing digital world. This research examines the connection between learning difficulties and work environments. This research also focused on how solving these issues can improve workforce culture and help people learn new skills. This research finds the relation between the age of employees and technology use at work; this can help organisations to make better strategies for those teams that are made up of different age groups. The study will explore how access to technology, basic digital skills, and motivation impact employee engagement and productivity improvement. The results of this study could be

helpful for policymakers and organizations to make the workplace more creative, inclusive, and effective.

### **Limitations of the Study**

- a. Most of the participants in this study are males (75.7%) and from the private sector (67.6%). This imbalance may not apply to other groups or sectors. A diverse group of respondents may show the effect of the digital divide on employees more significantly.
- b. The study used a cross-sectional design, meaning data was collected at one point. So, it is difficult to understand a cause-and-effect relationship or changes over time. The study conducted over the long term may show how a lack of technology and learning difficulties affect work-life quality as time goes on.
- c. Various factors like education level, job type, or industry are not included in the research, although access to technology, learning challenges, and age are. Future research should consider how these things affect the workplace.
- d. The participants may overrate or underrated their quality of work life, technology access, or digital abilities. More accurate results could be achieved if some objective tools were used to measure digital skills or workplace conditions.
- e. The study discovered that people had their perception of the quality of work life, but the research did not examine the reason behind this. Exploring these reasons could help understand the insights after these perceptions.
- f. Finally, the study's results may not be applicable to all organizations, especially those with different technology setups, resources, or workplace cultures.

### **Literature Review**

The digital divide means the gap or differences between the people with access to information communication technology (like the internet, computers, and smartphones) and those who do not have (Van Dijk, 2017). In Nepal, this gap is mainly caused by the place where they live and their financial and educational level (Wagle, 2010). Those living in rural areas have less access to digital tools and technologies because of poor internet, low literacy rates, and a lack of affordable technology, so developing digital skills is difficult (Salemink et al., 2017).

*Bhattarai, 2025, Exploring the Impact of Digital Divide .....*

Employees' efficient digital skills help them improve their work and home lives (Rodriguez Modrono & Lopez, 2021). People with the proper digital skills can get better jobs, work from home, and do their work more efficiently while still handling personal responsibilities (Konig, Seifert, 2022). In Nepal, many people lack these skills, creating economic and social inequalities (Chand, 2024). People in cities benefit more from digital tools; in rural areas, people often do not. Such discrimination makes the gap even bigger (Hasler et al., 2017). The COVID-19 pandemic showed the importance of technology for balancing work and personal life. Due to the pandemic, working and studying from home became necessary, but people without digital skills or tools struggled (Otamiri & Odu, 2021). Many families in rural Nepal struggled to do their tasks because they lacked digital knowledge (Shrestha et al., 2022). Nepal needs to focus on affordable technology and teaching people to use digital skills to remove such gaps created by digital tools and technologies. Programs offering basic digital education and internet access can help disadvantaged groups (Khanal et al., 2021). Along with digital education, improving digital infrastructure in rural areas is key to helping everyone benefit from technology (Khalid, 2024). Solving the digital divide in Nepal will take a complete plan that includes better infrastructure, cheaper access to technology, and better digital education (Baral, 2022). Nepal can help more citizens get good jobs and enjoy a better quality of life by giving them the digital skills they need (Adhikarihi et al., 2011).

Digital skills combine the ability to use digital devices, communication applications, and networks to access and manage information effectively. Digital skills denote the basic skills to use digital tools and technologies to get advanced knowledge on these technologies, e.g. operating a smartphone or computer to competencies like programming or cybersecurity management. Basic digital skills are also called as essential digital skills. It means abilities people need at home, school, and work. These skills are the foundation for living and working in today's connected digital world (Van Dijk et al., 2017). EU Digital Skills Framework and the UK Essential Digital Skills Framework (Martin, 2006) discuss basic digital skills. As per these frameworks, digital skills include communicating well using email, chat apps, and social media; finding and using information online, including knowing how to search and pick trustworthy

sources; using devices and simple software; solving fundamental tech problems; staying safe online by spotting scams; and protecting privacy. These basic skills are essential for learning more advanced digital abilities later on.

Digital literacy means having the skills to use information and communication technology (ICT) effectively for communication, finding information, and solving problems (Park et al., 2021). It covers a wide range of abilities, from the essential use of digital devices to more advanced skills in browsing the internet and handling online content (Van Deursen & Van Dijk, 2011). According to Ng (2012), digital literacy has three main parts: technical (using digital tools), cognitive (understanding and applying knowledge), and social-emotional (behaving responsibly online). These skills are essential for both personal and professional development. This knowledge helps people keep up with the fast-changing digital world. Digital literacy plays a significant role in improving the quality of work life by helping people do their jobs better, giving them access to remote work, and supporting a better balance between work and personal life (Santoso et al., 2019). Digitally literate people are more productive at work, confident, and flexible since they are also better at handling technology problems, which are becoming more common in modern workplaces (Mohammadyari & Singh, 2015).

Integrating digital competencies into regular workflows enables employees to execute duties more effectively. It increases stress and allocates additional time for personal obligations (Hashim et al., 2024). Moreover, digital literacy enhances access to continuous learning opportunities and professional progression, ultimately promoting job satisfaction and personal development. (Yasmin, & Tanaka, 2022).

### **Methodology**

This research employed a cross-sectional quantitative research design. The study population comprises all people working in different organizations in Nepal. Non-random sampling technique under which, snowball sampling technique was used to collect primary data. Using a structured, self-administered survey method, 111 responses were collected. For data collection, a structured questionnaire was sent to employees of different organizations in Nepal. The study used SPSS (27) to analyze the collected data. The study used both descriptive and inferential statistical tools for data analysis.

**Result and Discussion****Table 1***Demographic Profile of the Respondents*

Demographic Variables	Groups	Frequency	Percent
Gender	Male	84	75.7
	Female	27	24.3
Sector of Occupation	Private	75	67.6
	Public	34	30.6
	PPP	2	1.8
Total		111	100

*Note:* PPP Public Private Partnership

Table 1 presents the demographic profile of the study's respondents. The study collected responses from 111 respondents. Out of 111 respondents, 75.7 percent were male, and 24.3 percent were female. Employees from different organizational background responded the questionnaire. Out of 111 participants, the majority of them were from private sector i.e 67.6 percent, 30.6 percent from the public sector, and the remaining respondents who were from the public-private partnership sector accounted for 1.8 percent.

**Table 2***Overall Reliability Statistics*

Cronbach's Alpha	N of Items
0.931	22

Table 2 presents reliability statistics. The instrument contained 22 Likert items on a 1 to 5-scale. Its reliability was measured using Cronbach's Alpha value, which is used to assess the internal consistency of the items used in a questionnaire (Taber, 2018). The reliability analysis showed strong reliability because Cronbach's Alpha value is 0.931 (Sabo et al., 2024).



**Table 3***Reliability Statistics for Constructs*

Scales	No of Items	Cronbach's Alpha
Access to technology	5	0.821
Basic Digital Skills	7	0.842
Learning Challenges	4	0.768
Quality of Work Life	6	0.918

Table 3 presents the reliability statistics of the measurement of the constructs of the study. The study measured five constructs: access to technology, basic digital skills, learning challenges, motivation and quality of work life. The construct access to technology was measured using five Likert items. The test revealed a strong internal consistency because the Cronbach's Alpha value was 0.821. Likewise, the construct Basic Digital Skills scale was measured using seven Likert items. The reliability test demonstrated a strong reliability because the value of Cronbach's Alpha is 0.842. Likewise, the Learning Challenges scale comprised 4 Likert items with a Cronbach's Alpha of 0.768, indicating an acceptable reliability. The motivation and quality of work-life were measured using five and six Likert items, respectively. The Cronbach's Alpha values for the constructs were 0.897 and 0.918, respectively, which means there was strong reliability (Sabo et al., 2024).

**Table 4***Descriptive Statistics of the Scales*

Scales	N	Minimum	Maximum	Mean	Std. Deviation
Access to technology	111	5	25	20.81	4.22
Learning Challenges	111	5	20	16.28	3.19
Quality of Work Life	111	8	30	22.75	5.62

Table 4 presents the descriptive statistics for five constructs of the study. The constructs of the study are presented in the first column with the 'scales' title. The actual minimum and maximum scores obtained are presented in the columns with the title



minimum and maximum. Further mean and standard deviation scores are presented in the subsequent columns. All the constructs are measured on a 1 to 5 Likert scale, one indicating strongly disagree, and five indicating strongly agree. The neutral response, i.e. if the respondents are unsure, they would choose 3. Access to technology was measured using 5 Likert items. The minimum possible score for access to technology is 5 (5 x minimum possible score 1=5), and the maximum possible score is 25 (5 x maximum possible score 5 =25). The cut-off value (the value which segregates agree and disagree zone) for interpretation, the study used the cut off value of the construct, which is calculated by (number of Likert items x the neutral response, i.e. 3 of 1-5 Likert scale). Thus, the cut-off value (5 x neutral value 3 = 15) is used to interpret the mean score for the construct access to technology. Therefore, the mean score of access to technology below 15 is considered low access to technology, and above it (15) is considered higher employees' access to technology. From Table 4, the mean score for the construct access to technology is 20.81, which is above the threshold value (cut off value i.e. 15), indicating a higher access of the employees to the technology.

Similarly, the construct essential digital skill is measured using 7 Likert items. The minimum possible score for this construct is 7 (Number of Likert items i.e. 7 x minimum possible score i.e. 1), and the maximum possible score is 35 (7 x 5=35 i.e. Number of Likert items x maximum possible score),

and 3 is the cut-off point; thus, any value below 21 i.e. (7 x 3) is considered as a low essential digital skill and above 21 is understood as higher basic digital skills of the participants. The mean score for the construct essential digital skill is 30.15, which implies that the participants have higher basic digital skills. Further, the learning challenges of the participant were measured using four items on a 1 to 5 Likert scale. The possible minimum score is 4 x 1= 4, and the maximum is 4 x 5 = 20. The cut-off value will be 4 x 3 (i.e. neutral value of 1 to 5 Likert scale) = 12. Thus, a mean score below 12 is considered a low learning challenge and a score above 12 is considered a higher learning challenge. The result indicates higher learning challenges for the respondents since the mean score for the construct is 16.28.

Furthermore, the construct working environment is measured using 6 Likert items. The mean score for the construct is 22.75, which is above the cut-off value of 18

(Number of items -6 x neutral response—3), suggesting a slightly better working environment.

**Table 5**

*Correlations Matrix*

*N=111*

Variables	Age	Access to Technology	Learning Challenges	Quality of work life
Age	1			
Access to Technology	-0.065	1		
Learning Challenges	-0.149	.675**	1	
Quality of work life	-0.164	.538**	.521**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 5 exhibits the correlation matrix of the constructs of the study. The correlation between age and other variables, viz., access to technology, learning challenges, and quality of work life, are insignificantly negative ( $p < .05$ ). However, between other variables, the correlation is significantly positive ( $p < .01$ ).

A statistically significant positive relationship between access to technology and learning challenges implies that learners are more likely to encounter complex and challenging learning experiences as they gain more access to digital tools. This may be because the more access the respondents have, the more likely they will be exposed to broader resources, which may make the learning more complex (Innab & Alqahtani, 2023).

Similarly, a significant positive correlation between access to technology and the quality of work life may be attributed to the fact that it helps employees complete assigned tasks more efficiently, enabling better work life. Other studies' findings are also in with the findings of this study. For example, Nam (2014) also found a positive correlation between access to technology and quality of work life. Likewise, the result indicated a statistically positive correlation between the variables: learning challenges and the quality of work life. At first glance, it seems counterintuitive to relate learning challenges to the quality of work life. However, the studies reveal that when challenges

are managed appropriately, they can result in meaningfulness of the job followed by increased job satisfaction, career development and overall well-being of employees.

**Table 6**

*Multiple Regression Equation*

Variables	Unstandardized Beta Coefficients	t- statistics	p-value	VIF
Intercept/Constant	7.611	2.361	0.020	-
Access to technology	0.465	3.284	0.001	1.842
Learning Challenges	0.476	2.521	0.013	1.876
Age	-0.066	-1.269	0.207	1.025
F-Statistics	18.763	R <sup>2</sup>	0.345	-
p-value	0.000	D-Watson	1.796	-

*Note:* Dependent Variable = Quality of Work Life, Independent Variables Access to technology, Learning Challenges, Age

Table 6 presents a multiple regression analysis with the Quality of Work Life as the dependent variable and access to technology, learning challenges, and age as predictor variables. The result indicated that quality of work life is significantly influenced by the predictor variables, since ( $p < .05$ ), except age. Age has an insignificant negative impact on the criterion variable, i.e., quality of work life. The positive impact of access to technology on the quality of work life is in line with the findings of Arbabisarjou et al. (2012) and Alhassan and Adam (2021). Similarly, the significant positive impact of learning challenges on the quality of work life is supported by the findings of other studies conducted by Saraji and Dargahi (2006) and Rai and Tripathi (2015).

The model explains 34.5 percent of the variance in quality of work life ( $R^2 = 0.345$ ). The regression model was found to be significant ( $F = 18.763$ ,  $p = 0.000$ ). The Durbin-Watson test did not reveal major issues of autocorrelations because the Durbin-Watson statistic was =1.796 (Durbin & Watson, 1950). The VIF values of all the variables are less than 5, indicating no multicollinearity issues (Hair et al., 2019; Cheng, 2022).

### **Conclusion**

The study explores the digital divide in Nepal, focusing on how disparities in access to technology and digital literacy impact individuals' quality of work life. The study examines how access to technology, learning challenges, and age impact the employees' quality of work life. By improving employees' digital skills, the gap of the digital divide can be bridged, and at the same time, the quality of work life can be improved. The study's findings suggest that enhancing employees' access to technology and basic digital literacy plays an important role in improving employees' quality of work life. However, the study has some limitations. This study has some demographic biases because most of the respondents were male. Similarly, the study used a cross-sectional design. Thus, further research can be conducted to examine the long-term impact of digital devices on employees' quality of work life.

The digital divide remains a significant barrier to equitable access to technology in Nepal, which affects peoples' employment opportunities, productivity, and overall quality of work life. This study examined the impact of access to technology and learning challenges on the employee's quality of work life in Nepal's context. The findings indicate that by increasing access to technological tools and improving the digital competencies of employees, their quality of work life can be improved. The results show a statistically significant positive relationship between the variables, viz., access to technology, learning challenges, and work-life quality. Employees with better technological access and skills experience enhanced job satisfaction and career growth opportunities. The result suggested an insignificant effect of age on work-life quality. Therefore, organizations should introduce digital literacy programs targeting employees of all age groups. Infrastructure development and digital literacy programs should be used to narrow the gap in the digital divide. Organizations and policymakers can create a more innovative, equitable, and productive workforce by promoting employees' widespread access to technology. At the same time, organizations should try to impart necessary digital skills to their employees.

The study reveals critical gaps and opportunities for Nepal's digital transformation. First, the gender imbalance among respondents—predominantly

male—highlights systemic barriers like societal norms, workplace inequities, and insufficient digital literacy programs for women, urging organizations and policymakers to prioritize targeted training, flexible work policies, and awareness campaigns to foster inclusivity. Second, the disparity in digital readiness between private organizations (more equipped) and public institutions (lagging) underscores the need for policymakers to invest in digital infrastructure, training, and transformation initiatives within government and semi-government sectors. Finally, the findings demonstrate that enhanced technology access significantly improves employees' quality of work life, but learning challenges remain a hurdle; organizations must thus integrate user-friendly tools, structured training, and a supportive learning culture to maximize both productivity and job satisfaction. Collectively, these insights call for coordinated efforts to bridge gender and sectoral divides while leveraging technology to create equitable, efficient, and fulfilling work environments.

### Reference

- Adhikari, D. R., Hirasawa, K., Takakubo, Y., & Lal Pandey, D. (2011). Decent work and work life quality in Nepal: an observation. *Employee relations*, 34(1), 61-79.
- Alhassan, M. D., & Adam, I. O. (2021). The effects of digital inclusion and ICT access on the quality of life: A global perspective. *Technology in Society*, 64, 101511. <https://doi.org/10.1016/j.techsoc.2020.101511>
- Arbabisarjou, A., Allameh, S. M., & Farhang, A. (2012). Relationship between information & communication technology and quality of work-life; a study of faculty members of Zahedan University. *Life Science Journal*, 9(4), 3322-3331.
- Baral, R. P. (2022). The digital divide in online learning: A case study of university students in Nepal. *Prithvi Academic Journal*, 88-99.
- Beaunoyer, E., Dupere, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in human behavior*, 111, 106424. <https://doi.org/10.1016/j.chb.2020.106424>
- Chand, M. B., Subin, K. C., & Maharjan, M. (2024). Unveiling Disparities: A Case of Digital Divide in Nepal. *The Journal of Economic Concerns*, 15(1), 130-142.
- Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The role of leadership in a digitalized world: A review. *Frontiers in psychology*, 10, 1938.

- Durbin, J., & Watson, G. S. (1950). Testing for serial correlation in least squares regression: I. *Biometrika*, 37(3/4), 409-428.
- Habibi, A., Yaakob, M. F. M., Mukminin, A., Muhaimin, M., Prasojo, L. D., Yusop, F. D., & Muzakkir, M. (2021). Teachers' digital technology access to motivation, skills and use: a structural equation modeling study. *Aslib Journal of Information Management*, 73(4), 543-559.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24.
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable operations and computers*, 3, 275-285.
- Hashim, M. Z., Razak, R. C., Rusuli, M. S. C., Irawan, N., Muhammad, N., & Mansor, F. A. (2024). A recent systematic review of digital workplace adoption: Digital competencies, impacts and challenges. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 154-175.
- Hasler, S., Chenal, J., & Soutter, M. (2017). Digital tools as a means to foster inclusive, data-informed urban planning. *Civil Engineering and Architecture*, 5(6), 230-239.
- Hossain, S., Fernando, M., & Akter, S. (2025). Digital leadership: Towards a dynamic managerial capability perspective of artificial intelligence-driven leader capabilities. *Journal of Leadership & Organizational Studies*, 15480518251319624. <https://doi.org/10.1177/15480518251319624>
- Hussain, F. (2024). The Impact of Technology on Modern Business Management. *Journal for Business Research Review*, 2(1), 72–84.
- Innab, A., & Alqahtani, N. (2023). The mediating role of E-learning motivation on the relationship between technology access and satisfaction with E-learning. *Nursing Open*, 10(4), 2552-2559.
- Khalid, S. (2024). Women's Empowerment through ICT and Sports: Exploring Narratives of Digital Innovators and Multitasking Brilliance in China and Africa. In *Oriental Conferences* 1(1), 308–329.
- Khanal, S., Bhattarai, S. B. S., Adhikari, U., Sharma, D., & Pandey, M. (2021).

- Disparities between developed and emerging economies in digital divide and ICT gap to bring agricultural sustainability. *Fundamental and Applied Agriculture*, 6(3), 309-322.
- Konig, R., & Seifert, A. (2022). Digitally savvy at the home office: computer skills of older workers during the COVID-19 pandemic across Europe. *Frontiers in sociology*, 7, 858052.  
<https://www.frontiersin.org/journals/sociology/articles/10.3389/fsoc.2022.858052/full>
- Li, L. (2024). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. *Information Systems Frontiers*, 26(5), 1697-1712.
- Martin, A. (2006). A European framework for digital literacy. *Nordic Journal of Digital Literacy*, 1(2), 151–161.
- Mohammadyari, S., & Singh, H. (2015). Understanding the effect of e-learning on individual performance: The role of digital literacy. *Computers & Education*, 82, 11-25.
- Nam, T. (2014). Technology use and work-life balance. *Applied Research in Quality of Life*, 9, 1017–1040.
- Ng, W. (2012). Can we teach digital natives digital literacy?. *Computers & education*, 59(3), 1065–1078.
- Nikou, S., De Reuver, M., & Mahboob Kanafi, M. (2022). Workplace literacy skills—how information and digital literacy affect adoption of digital technology. *Journal of Documentation*, 78(7), 371-391.
- Otamiri, S., & Odu, S. (2021). Education, sustainable development and Covid-19 pandemic: The digital revolution option. Ignatius Ajuru University Press and Book Shop.
- Park, H., Kim, H. S., & Park, H. W. (2021). A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. *Journal of Data and Information Science*, 6(2), 116-138.
- Rai, R., & Tripathi, S. (2015). A Study on QWL and its effects on Job Performance. *Journal of management Sciences and Technology*, 2(2), 33-42.
- Rodriguez-Modrono, P., & López-Igual, P. (2021). Job quality and work—life balance



- of teleworkers. *International journal of environmental research and public health*, 18(6), 3239. <https://www.mdpi.com/1660-4601/18/6/3239>
- Sabo, A., Kuan, G., Sarimah, A., Kuay, H. S., & Kueh, Y. C. (2024). Psychometric properties of the newly developed self-report environmental determinants of health questionnaire (EDH-Q): development and validation. *BMC psychology*, 12(1), 438. <https://link.springer.com/article/10.1186/s40359-024-01782-x>
- Salemink, K., Strijker, D., & Bosworth, G. (2017). Rural development in the digital age: A systematic literature review on unequal ICT availability, adoption, and use in rural areas. *Journal of Rural Studies*, 54, 360-371.
- Santoso, H., Abdinagoro, S. B., & Arief, M. (2019). The role of digital literacy in supporting performance through innovative work behavior: The case of indonesia's telecommunications industry. *International Journal of Technology*, 10(8), 1558-1566.
- Cheng, J., Sun, J., Yao, K., Xu, M., & Cao, Y. (2022). A variable selection method based on mutual information and variance inflation factor. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 268, 120652.
- Saraji, G. N., & Dargahi, H. (2006). Study of quality of work life (QWL). *Iranian journal of public health*, 35(4), 8-14.
- Shrestha, S., Haque, S., Dawadi, S., & Giri, R. A. (2022). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and information technologies*, 27(1), 243-265.
- Sirgy, M. J., Efraty, D., Siegel, P., & Lee, D. J. (2001). A new measure of quality of work life (QWL) based on need satisfaction and spillover theories. *Social indicators research*, 55, 241-302.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48, 1273–1296.
- Van Deursen, A. J., & Van Dijk, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New media & society*, 21(2), 354-375.
- Van Dijk, J. A. G. M. (2017). Digital divide: Impact of access. *The International Bhattarai, 2025, Exploring the Impact of Digital Divide ... ..*

*Encyclopedia of media effects*, 1, 1-11.

Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2020). Determinants of 21st-century skills and 21st-century digital skills for workers: A systematic literature review. *Sage Open*, 10(1), 2158244019900176.

<https://doi.org/10.1177/2158244019900176>

Wagle, U. R. (2010). Income and wealth inequality in Nepal, 1996 and 2004: Changes and socio-demographic, spatial and economic determinants. *Journal of Contemporary Asia*, 40(1), 82–104.

Yasmin, L., & Tanaka, H. (2022). The future of work: Remote collaboration and digital transformation. *Journal of Emerging Technology and Digital Transformation*, 1(2), 136-145.

