IGF Internet Governance Forum

Dynamic Coalition on Internet & Jobs

Internet & Jobs 2022

A Report by Dynamic Coalition on Internet & Jobs

Covering Six Continents & 75 Countries

IGF Internet Governance Forum
Dynamic Coalition on Internet & Jobs

Table of Contents

About IGF 1

IGF Mandate 1

About the Dynamic Coalition on Internet & Jobs 2

Our goals: 2

Action plan: 3

Mailing list: 3

Foreword 4

Disclaimer 5

Methodology 5

Acknowledgments 5

Background 6

Key findings

Regions Covered 7

Age 7

Respondent's Profile 8

High-Tech Impact 10

From Jobs to Tasks- The Big Shift 12

COVID-19 impact 14

Internet Connectivity Issues 15

Interrupted Internet Connectivity 17

Internet Access 18

Role of Internet 20

Internet & Money making 21

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Automation & Obsoletion of Manual Jobs Skills for Internet 23
Skills for Internet 24
Internet & Automation 26
Leveraging Opportunities via Internet 27
Rise of New Age Entrepreneurs 29
Digital Skills 29
Social Media 31
Use of Internet 32
Real Time in the Virtual World 34
Impact on Health 35
Harmful Effects 37
Internet: Leveraging the potential 39
Big Tech 40
Internet in Daily Routine 42
Internet - Making a difference 44
Internet for Education 45
Metaverse 47
E-commerce 49
Carbon footprint of Digital Footprint Recommendations 51
Recommendations 52
References 54

About IGF

The Internet Governance Forum (IGF) serves to bring people together from various stakeholder groups as equals, in discussions on public policy issues relating to the Internet. While there is no negotiated outcome, the IGF informs and inspires those with policy-making power in both the public and private sectors. At their annual meeting delegates discuss, exchange information and share good practices with each other. The IGF facilitates a common understanding of how to maximize Internet opportunities and address risks and challenges that arise.

In the resolution adopted by the UN General Assembly on 16 December 2015, (70/125) 'Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society', the existing mandate of the IGF as set out in paragraphs 72 to 78 of the Tunis Agenda was extended for another 10 years.

IGF Mandate

Paragraph 72 of the Tunis Agenda:

72. We ask the UN Secretary-General, in an open and inclusive process, to convene, by the second quarter of 2006, a meeting of the new forum for multi-stakeholder policy dialogue—called the Internet Governance Forum (IGF). The mandate of the Forum is to:

- Discuss public policy issues related to key elements of Internet governance in order to foster the sustainability, robustness, security, stability and development of the Internet;
- Facilitate discourse between bodies dealing with different cross-cutting international public policies regarding the Internet and discuss issues that do not fall within the scope of any existing body;
- Interface with appropriate inter-governmental organizations and other institutions on matters under their purview;
- Facilitate the exchange of information and best practices, and in this regard make full use of the expertise of the academic, scientific and technical communities;
- Advise all stakeholders in proposing ways and means to accelerate the availability and affordability of the Internet in the developing world;
- Strengthen and enhance the engagement of stakeholders in existing and/or future Internet governance mechanisms, particularly those from developing countries;

• Identify emerging issues, bring them to the attention of the relevant bodies and the general public, and, where appropriate, make recommendations;

• Contribute to capacity building for Internet governance in developing countries, drawing fully on local sources of knowledge and expertise;

• Promote and assess, on an ongoing basis, the embodiment of WSIS principles in Internet governance processes;

• Discuss, inter alia, issues relating to critical Internet resources;

• Help to find solutions to the issues arising from the use and misuse of the Internet, of particular concern to everyday users;

• Publish its proceedings

About the Dynamic Coalition on Internet & Jobs

The Internet is the fourth most impactful invention in human history after - the fire, the wheel, the electricity; and yet, we have barely scratched the potential of what Internet can deliver. As we move ahead with technologies and tools built to leverage the Internet, scepticism is gaining ground on the potential impact of the Internet on taking away jobs.

The Dynamic Coalition on 'Internet & Jobs' has come from the realization of the need for sustainable and responsible automation, and the potential of the internet to create jobs and boost the local economies. It is the result of the initiatives taken by Dr. Rajendra Pratap Gupta at the IGF, since 2018 when it was held in Paris and then, in 2019, at Berlin.

Our goals:

- To create jobs across sectors and geographies, through a multi-stakeholder, ecosystem approach of: Connect, Coordinate, Activate, Train, and Enable.
- To help people realise the human resource and entrepreneurial potential of the Internet across the globe.

Action plan:

- We will come out with an annual report on 'Internet & Jobs' capturing the opportunities, best practices, and success stories, to inspire people to leverage the Internet to build local economies and connect them to the global opportunities.
- Organize online and offline workshops on how local communities can leverage the Internet for a better life
- Showcase our real-life stories and brain-storm ideas and innovations at the local IGF and annual IGF meetings

On November 30th, 2022, we have announced Project CREATE – Collaborate to Realize Employment & Entrepreneurship For All Through Technology Ecosystem.

For more details, visit: www.projectcreate.tech

Mailing list:

Mailing list address: dc-jobs@intgovforum.org

For more information, please visit: https://www.intgovforum.org/en/content/dynamic-coalition-on-internet-jobs-dc-jobs

Chairman: Dr. Rajendra Pratap Gupta

Email: founder@projectcreate.tech

Coordinator: Ms. Priya Shukla

Foreword

I believe 'we need air to survive and the internet to thrive.' Still, 2.7 billion of the 8 billion are not connected to the internet; it shows that we have failed more than one-third of humanity; where on one side, BigTech corporations have a net worth of more than ten trillion dollars, and on the other hand, 2.7 billion are deprived of one of basic life-tool- 'Access to the internet.' If they have access to the internet, they will find their way to move up the value chain and improve their standard of living by knowing, learning, and finding new opportunities. Internet for all is a precursor to livelihood for all. Also, by not giving everyone access to the internet, we are telling the world, 'Leaving no one behind' is just another slogan like in 1978, 45 years ago, at Alma Ata, we promised Health for All by 2000. In the next five years, we will complete 50 years of Alma Ata, and we are still far away from what we promised, 'Health for All.' We should not let this happen to the internet.

Internet was formally launched in January 1983, with the adoption of the TCIP protocol. It is time that we promise quality internet to all by 2032 when we complete 50 years of the founding of the internet. Our report, Internet & Jobs, shares insights we can act upon to define a pathway for 'Internet for All.' Internet & Jobs 2022 is our annual report based on the survey-based study conducted online through the IGF and other social media networks.

Through this report, we aim to highlight key aspects associated with the internet and job creation in the digital age, and we also touch upon the carbon footprint of our digital footprint. This year's Internet & Jobs report highlights some key action points that governments, organizations, and individuals may find helpful in planning their policies and formulating their programs.

I look forward to your feedback on how to make the next survey and its report more valuable to you in your work and for your organization. Also, join Project CREATE and let us work towards the goal of 'Internet for All. Livelihood for All'.

Happy reading.

Dr. Rajendra Pratap Gupta
Chairman
Dynamic Coalition on Internet & Jobs
Internet Governance Forum
E: founder@projectcreate.tech
contact@projectcreate.tech

Disclaimer

- For this report, an online study was conducted and people who have access to internet were reached out. This year's study (2022) will have broadened horizon i.e., people with no internet accessibility.
- Weblinks given are functional at the time of writing.
- In case you find any error or discrepancy, please reach out to the contact in the mailing list.

Methodology

For the report, an online survey was being conducted using a questionnaire on the SurveyMonkey platform, and was being shared on the IGF Facebook and Twitter handles, and other platforms like LinkedIn. The survey was in the public domain from November 2022 till January 2023. Total 6 continents, with 75 countries, in total across the globe responded to the survey. The data, collected from the survey, was then analysed and interpreted into a report.

Acknowledgments

We are thankful to the following for getting the report into your hands:
1. Mr. Chengetai Masango, Head – Internet Governance Forum Secretariat, United Nations
2. Ms. Anja Gengo – IGF Secretariat
3. Ms. Smriti Lohia – Co-ordinator, DC -Internet & Jobs (2022-23)
4. Digital Health Academy, Health Parliament (Digital Health Associates Pvt. Limited) for funding this report, Project CREATE, and other activities we undertake to support the Dynamic Coalition on Internet & Jobs @ UN's Internet Governance Forum

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Background

The internet has a ubiquitous influence globally. The use of the internet is unavoidable and unstoppable. There is no limit to where the internet can be used.

There are still nearly 2.7 billion people who are still not connected to the internet. This impacts the entire world, and it pulls down the global advancement and it reminds us that 'Leaving no one behind' cannot just remain a slogan. Also, the internet not being accessible will cost the people their future. Low digital literacy continues to be a challenge to effective participation in a digital society, and due to enormous wealth disparities, internet access is still unaffordable for many in the world, especially in the developing and underdeveloped world.

We need to have more initiatives like "Generation Connect" by ITU which aims to connect youth globally and encourage them to engage digitally and advance their vision for a more digitally connected world (International Telecommunication Union).

Internet accessibility is essential, it opens doors to a plethora of knowledge, educational resources to many job opportunities. Though, the internet has made a lot of services accessible, affordable, and quality-driven. Furthermore, Digital skills have improved many people's lives. Access to the Internet, with enough bandwidth, is important for the growth of an information society. Countries need to prioritize frameworks and policies that can promote universal access to quality Internet, including urban and rural populations, for promoting social and economic development, and to ensure equal opportunities in the digital age.

Key findings

Regions Covered

Table 1:

Continent	%
Africa	11.2%
Asia	45.0%
Europe	26.9%
North America	6.9%
Oceania	1.9%
South America	8.1%

In this study, we have representation from across the continents: Africa, Asia, Europe, North America, Oceania, and South America. The largest representation is from Asia (45%), which reflects the size of its population, followed by Europe, Africa, South America, North America, and Oceania.

Age

Table 2:

Age Group (Years)	Distribution(%)
Below 18 years	0.8%
18-30	27.7%
31-40	18.5%
41-50	25.8%
51-60	19.6%
61 and older	7.7%

Maximum respondents of the survey are from the age bracket of 18-30 years (27.7% of the respondents), followed by 41-50 years (25.8%), 51-60 years (19.6%), 31-40 years (18.5%), 61+ years (7.7%), and below 18 years (0.8%).

Respondent's Profile

Table 3:

Response	Distribution (%)
I have a full-time employment	53.85%
I am working part-time	1.92%
I am a freelancer	4.62%
I am Self -employed	5.00%
I am a student (unemployed)	20.38%
I am a student (working part-time)	1.54%
I am an Entrepreneur	9.62%
Currently not employed (looking for paid work)	1.54%
Currently not employed (not looking for paid work)	0%
I lost my job during COVID-19	0%
I am retired (not looking for a job)	0.38%
I am retired (looking for a job to meet my expenses)	1.15%

Table 4:

Backgrounds	Distribution(%)
Science and Technology	18.08%
Management	12.31%
Academics	6.15%
Finance	4.62%
Administration	3.46%
Creative Arts and Design	3.85%
Data	1.92%
Manufacturing	1.54%
Services	3.85%
Research	5.77%
Agriculture/ Farmer	0%
Intelligence	1.54%
Manual Jobs- Daily Wage Earner	0.38%
Entrepreneur	4.23%
I am a student	15.00%
Other (please specify)	17.31%

According to the data presented in Table 3, more than half of the respondents (53.85%) have a full employment, followed by students (20.38%), then entrepreneurs (9.62%).

1 out of 10 respondents is an entrepreneur. This shows the potential of the people with access to the internet to create jobs and wealth.

Dr. Rajendra Pratap Gupta
Chairman- Dynamic Coalition on Internet & Jobs

As Dynamic Coalition on Internet & Jobs, we have tried to reach out to people from multiple backgrounds so that we can incorporate views from different fields to give broader perspective on different issues. As depicted in Table 4, maximum respondents i.e., 18.08%, are from Science and Technology background. We also received responses from the people with background of Management (12.31%), Academics (6.15%), Research(5.77%), Finance (4.62%), and among others.

High-Tech Impact

Impact of advancement in High-Tech in your sector

Figure 1:

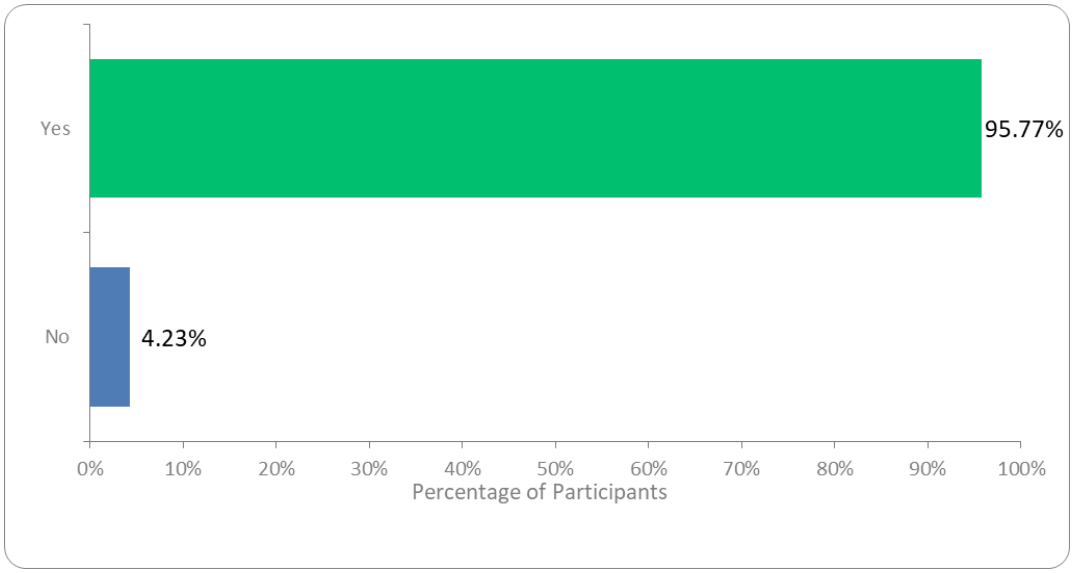
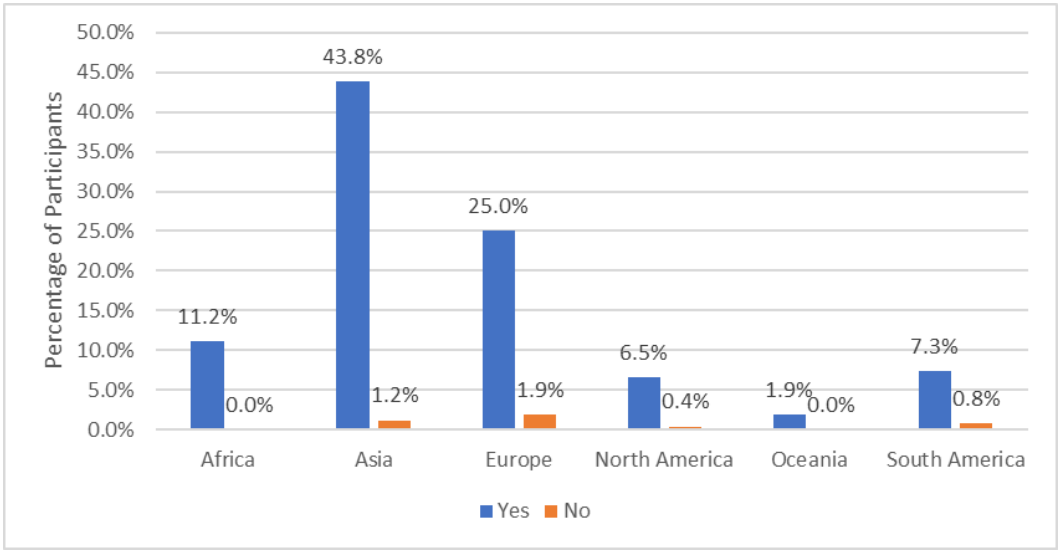


Figure 2:



The impact of High-tech advancements across sectors is likely to be significant and far-reaching, as data claims (Figure 1) 95.77% survey respondents believe the advancements in High-tech will have major impact in their respective sectors. On one side, the advancements will create opportunities for innovation & growth while on the other side, the change may also come with potential risks and challenges.

High-tech advancements are needed across sectors. Efficiency and productivity can be improved, for instance, automation can reduce costs and improve accuracy across industries. Similarly, the advancements can also enhance the quality of life in many ways, and one of them could be digital health. The advancements in High-tech also has the potential to address global issues like climate change and food insecurity. Moreover, high-tech advancements in communication and connectivity can help businesses grow and people connect. With benefits, the high-tech advancements also come with challenges like job displacements/loss, privacy, and security, ethical issues, and environmental impact.

From Jobs to Tasks- The Big Shift

Do you see the shift from full-time roles to machines/robots or part-time jobs in your field/organization?

Figure 3:

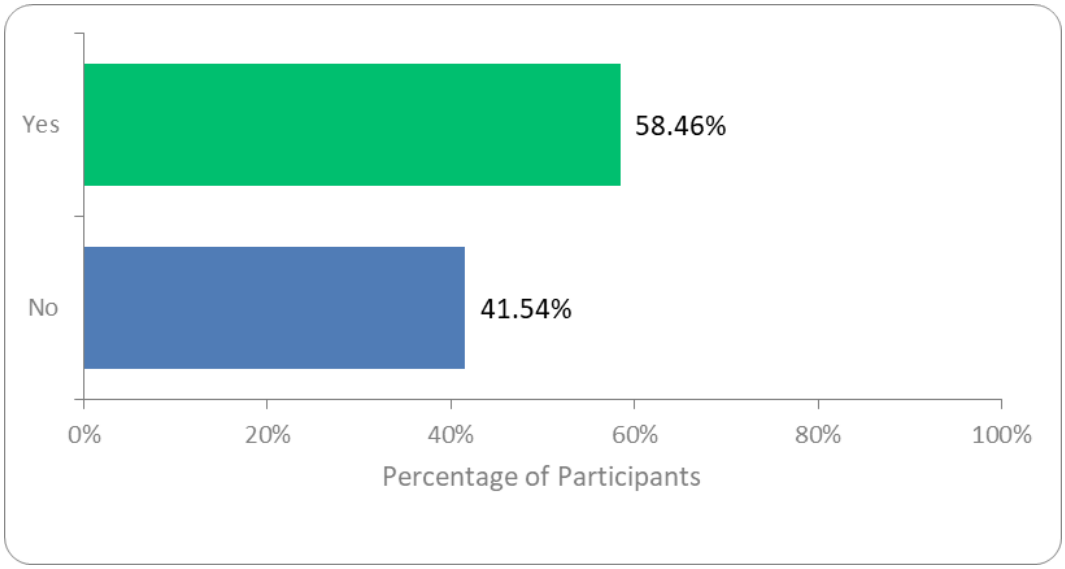
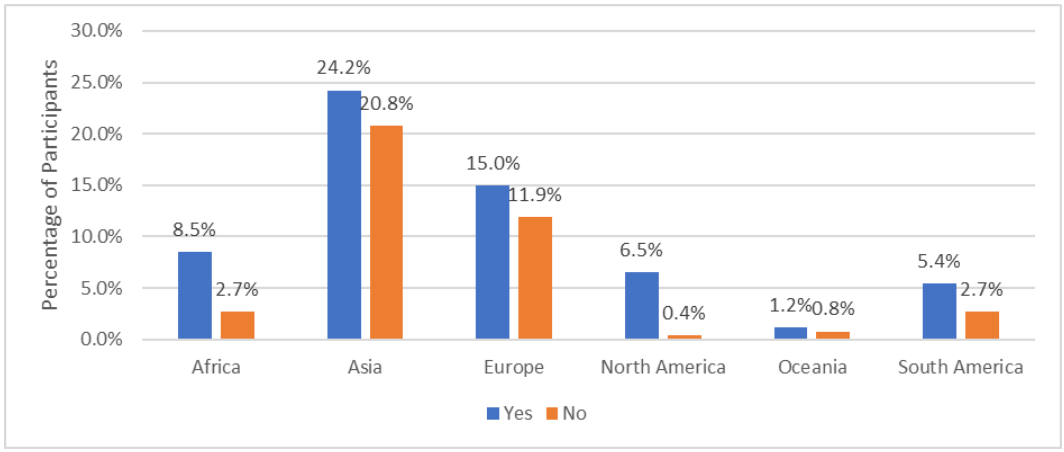


Figure 4:



According to the Figure 3, 58.46% of the respondents see the shift from full-time roles to machines/robots or part-time jobs in their field/organization. This group of the respondents comprises 8.5% from Africa, 24.2% from Asia, 15% from Europe, 6.5% from North America, 1.2% from Oceania, and 5.4% from South America (Figure 4). It is likely that the replacement of humans with machines will accelerate in the future. Machines do not get sick or take time off work, which makes them lucrative for companies looking to maintain productivity.

In the past, technology was introduced gradually, giving workers time to adjust and seek new roles. But, now, the COVID-19 pandemic has provided a strong incentive to automate human work. The rapid pace of automation means that fewer workers are needed for companies to operate. Moreover, advances in AI mean that machines are increasingly capable of performing tasks that were once the exclusive domain of humans, which makes it challenging for humans to keep up with machines. As a result, it is important for individuals to develop new skills and seek opportunities across fields.

Gradually, every job will transition to becoming 'tasks-based' at some level or form, and there is an increasing likelihood of such tasks getting automated, and hence Lifelong upskilling is the key message in this fast-changing technology-driven world.

Dr. Rajendra Pratap Gupta
Chairman- Dynamic Coalition on Internet & Jobs

COVID-19 impact

How did COVID-19 impact you and your family?

Figure 5:

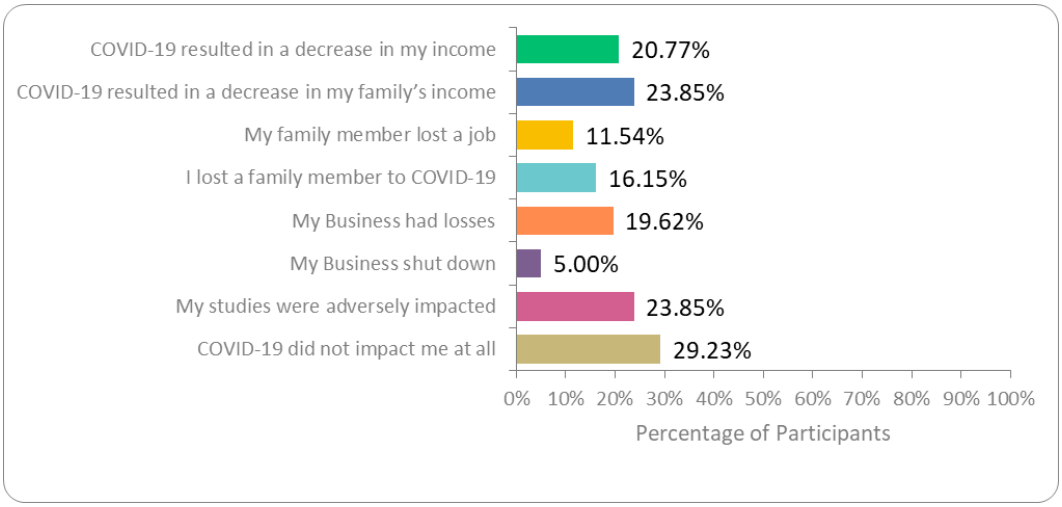
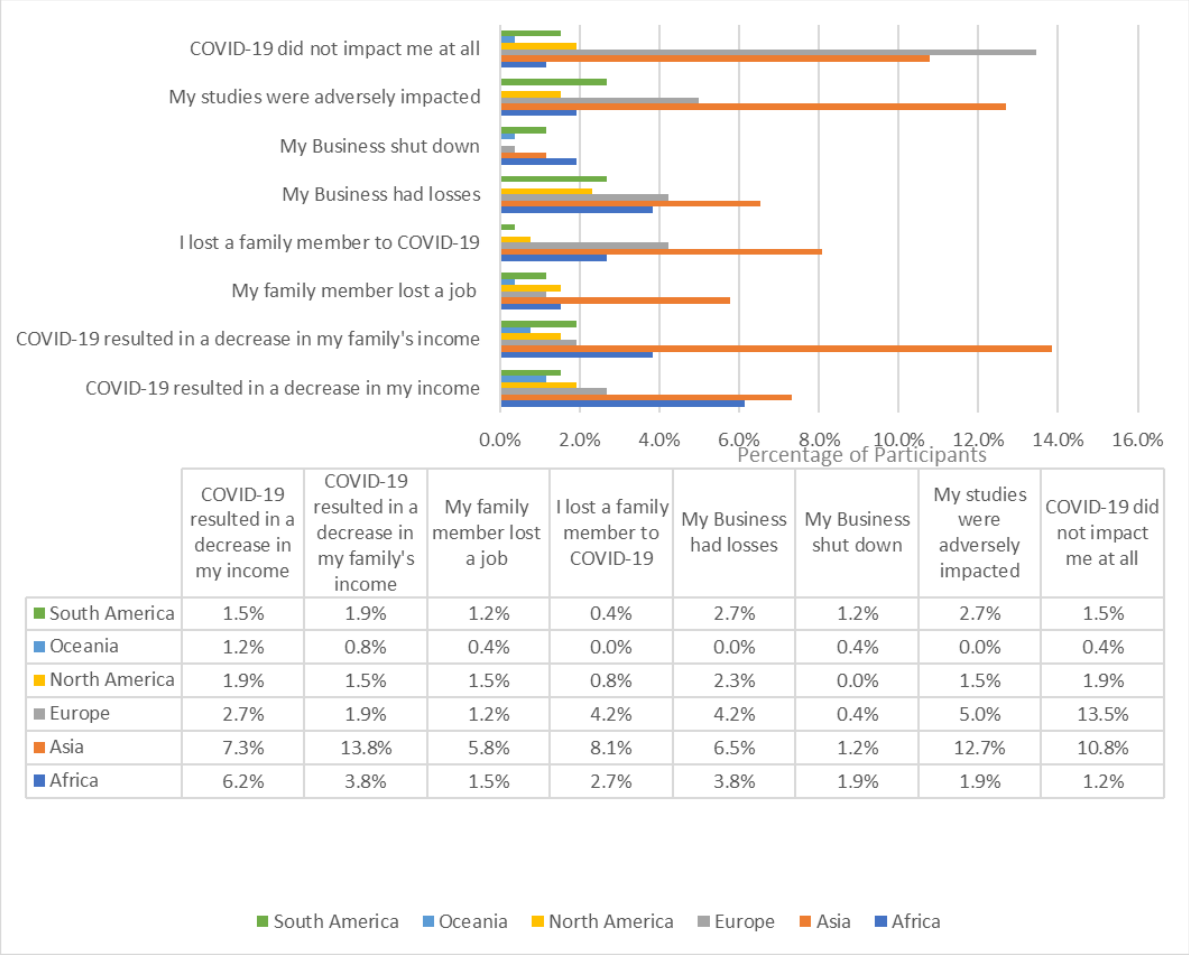


Figure 6:



	COVID-19 resulted in a decrease in my income	COVID-19 resulted in a decrease in my family's income	My family member lost a job	I lost a family member to COVID-19	My Business had losses	My Business shut down	My studies were adversely impacted	COVID-19 did not impact me at all
South America	1.5%	1.9%	1.2%	0.4%	2.7%	1.2%	2.7%	1.5%
Oceania	1.2%	0.8%	0.4%	0.0%	0.0%	0.4%	0.0%	0.4%
North America	1.9%	1.5%	1.5%	0.8%	2.3%	0.0%	1.5%	1.9%
Europe	2.7%	1.9%	1.2%	4.2%	4.2%	0.4%	5.0%	13.5%
Asia	7.3%	13.8%	5.8%	8.1%	6.5%	1.2%	12.7%	10.8%
Africa	6.2%	3.8%	1.5%	2.7%	3.8%	1.9%	1.9%	1.2%

According to the Figure 5, 23.85% of the respondents claimed that their studies were adversely impacted. These respondents are 1.9% from Africa, 12.7% from Asia, 5% from Europe, 1.5% from North America, and 2.7% from South America (Figure 6). The COVID-19 pandemic has had a profound impact on education and schooling around the world. Schools and universities have been forced to close their doors or shift to remote learning, leading to significant disruptions in the education system.

The COVID-19 pandemic has had a significant impact on the global economy and has forced businesses and workers to adapt to a rapidly changing environment. As per the Figure 5, 19.62% of the respondents stated that their business had losses during the pandemic and for 5% of the respondents, their businesses were shut down. Many businesses have been forced to shut down or reduce their operations, leading to widespread layoffs and job losses. It remains to be seen how long the pandemic will last and what the long-term effects will be on jobs, businesses and health of workers.

Furthermore, The COVID-19 pandemic has had a major impact on the global economy, leading to a decrease in income for many people around the world. 20.77% of the respondents claimed that COVID-19 pandemic resulted in a decrease in their income. (Figure 5)

Internet Connectivity Issues

Have you ever faced internet connectivity issues while you were working/studying?

Figure 7:

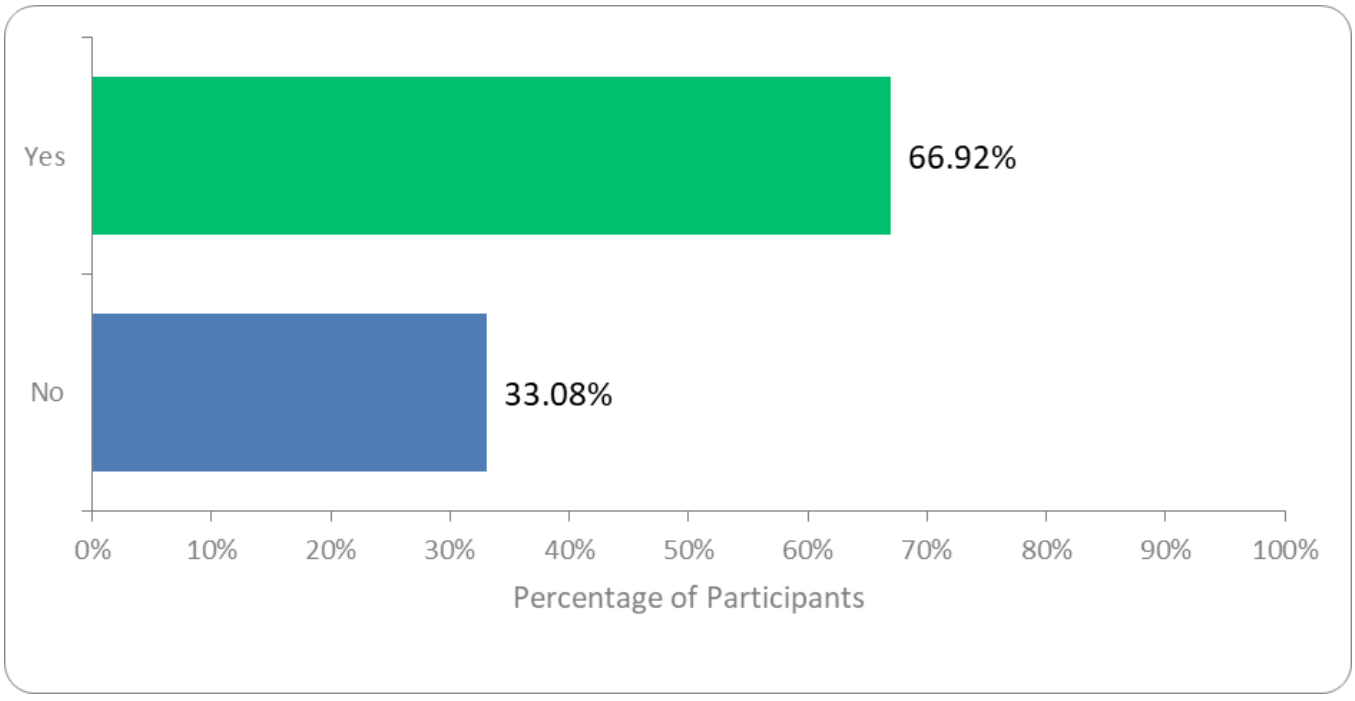
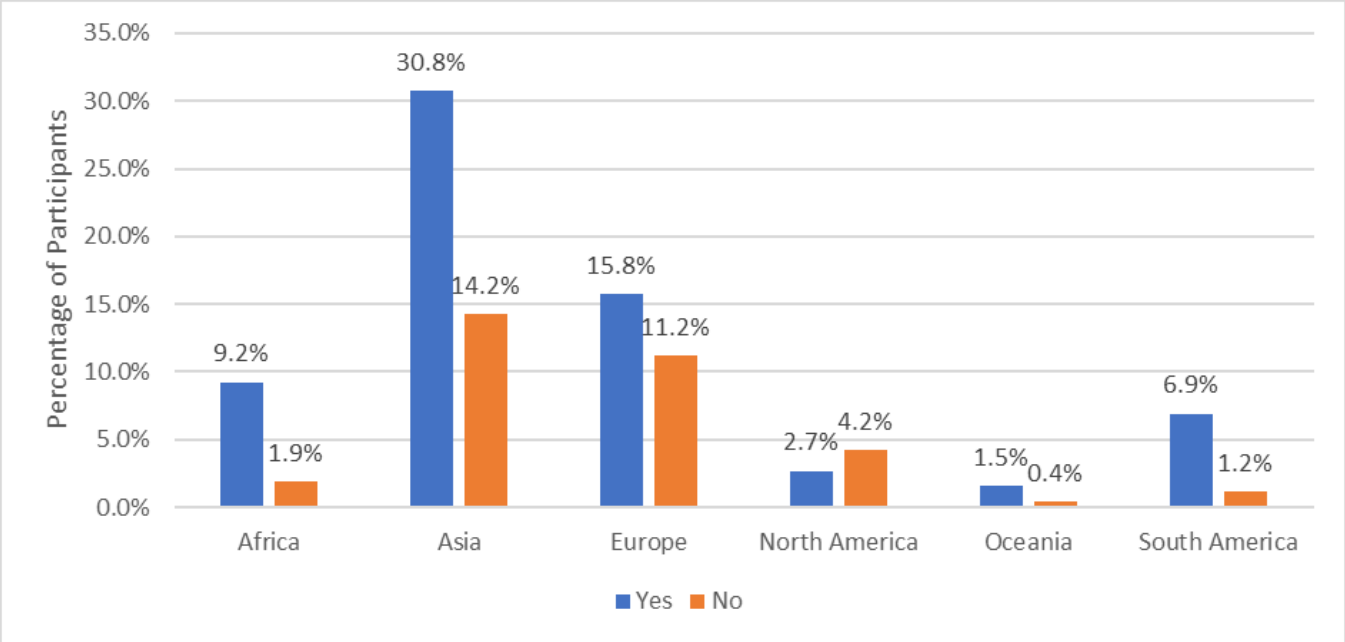


Figure 8:



Issues with Internet connectivity can be a major problem, particularly for people who rely on the internet for work, education, or other important activities. 66.92% of the respondents said 'yes' to the question, whether they faced internet connectivity issues while working or during studies (Figure 7). Continent-wise, 14.2% of the respondents were from Asia followed by Europe (11.2%), North America (4.2%), Africa (1.9%), South America (1.2%), and Oceania (0.4%) (Figure 8).

Improving internet connectivity is an important step that countries will have to address to promot economic growth, education, and social development. By investing in digital infrastructure, providing subsidies, promoting digital literacy, and collaborating with private sector, governments can help ensure that everyone has access to quality internet.

Interrupted Internet Connectivity

How often have you experienced interrupted internet connectivity?

Figure 9:

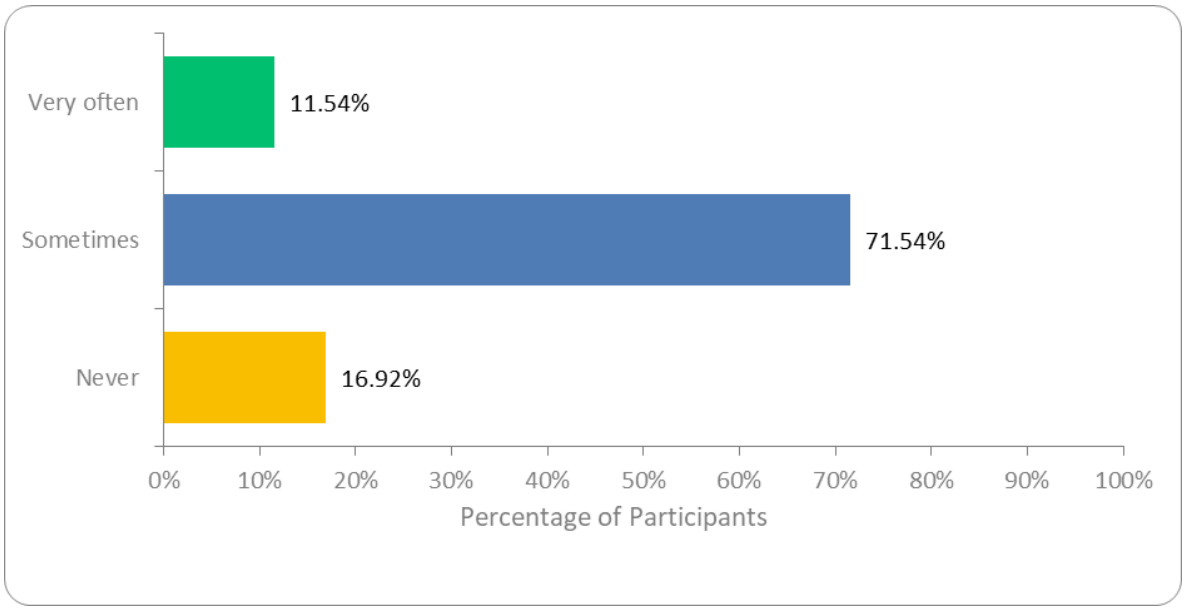
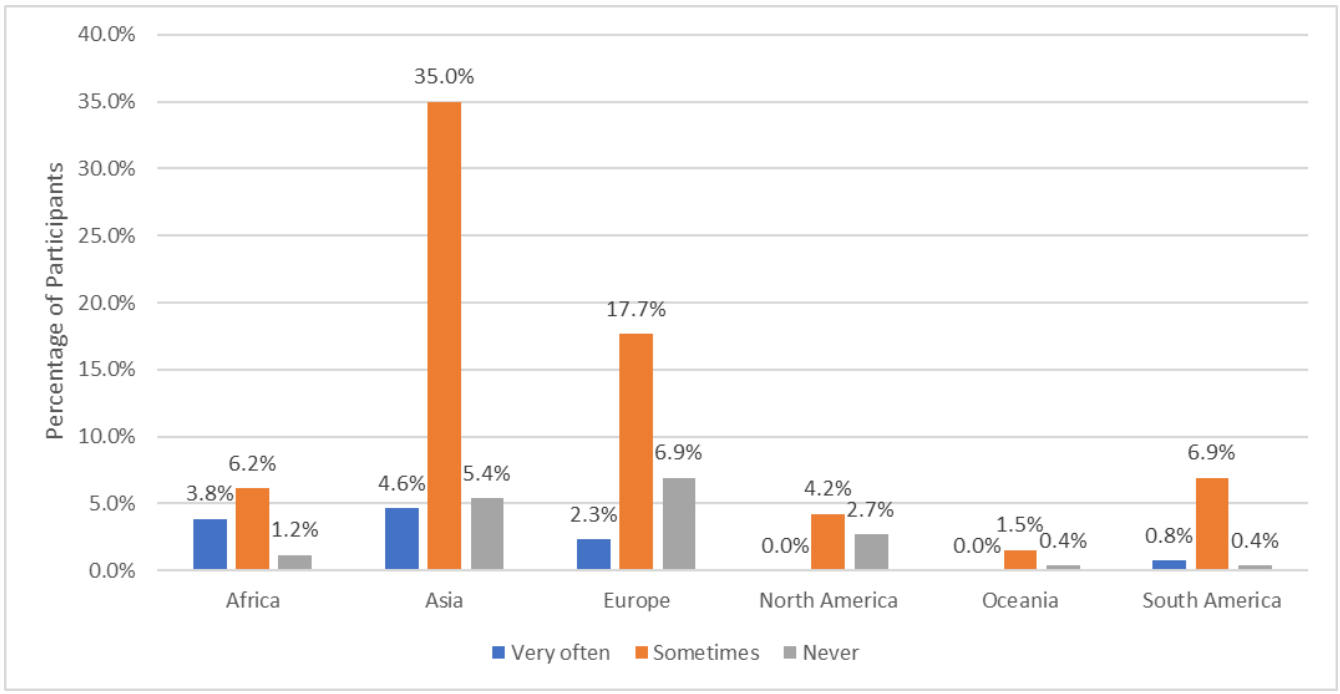


Figure 10:



As per the global response, 11.54% of survey respondents face interrupted internet connectivity issues very often (Figure 9). 11.54% of the respondents were from Africa (3.8%), Asia (4.6%), Europe (2.3%), and South America (0.8%) (Figure 10). According to the data, the developed regions like North America and Oceania (Survey filled by New Zealand and Australia) do not face the issue of interrupted internet connectivity often. Whereas 16.92% of the respondents never face the issue; 6.9% out of which are from Europe; 6.2% from Africa; 5.4% from Asia; 2.7% from North America; and 0.4% from Oceania and South America (Figure 10).

Internet Access

When it comes to accessing internet:

Figure 11:

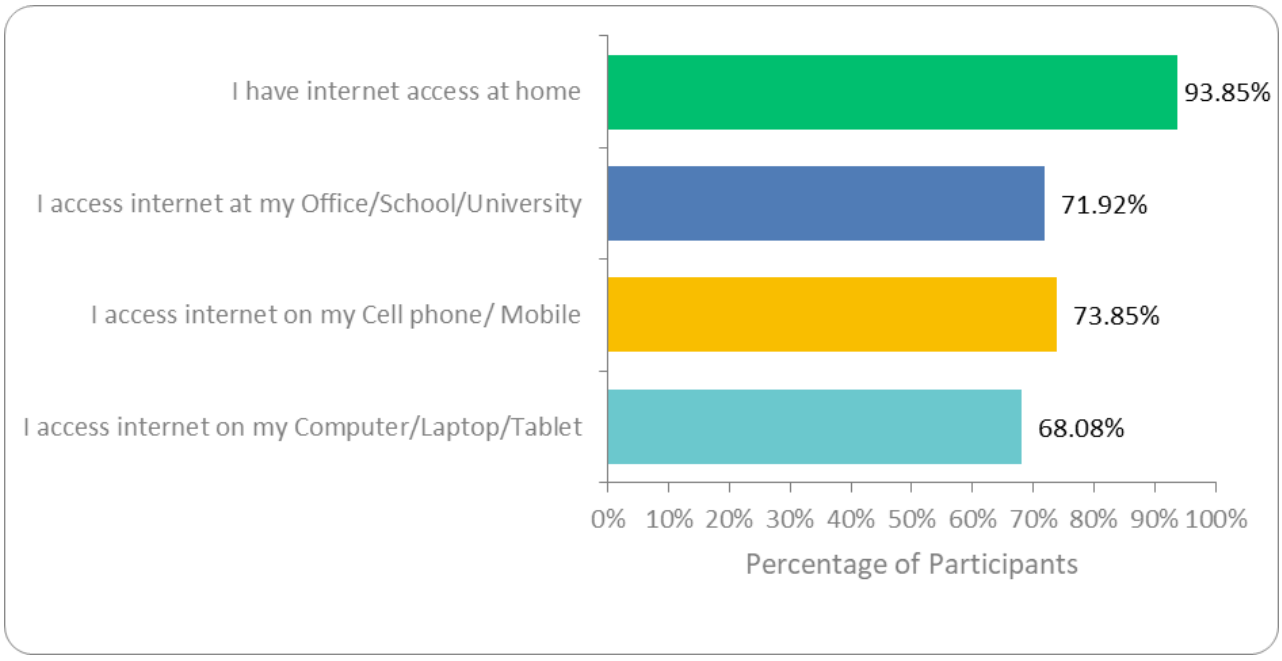
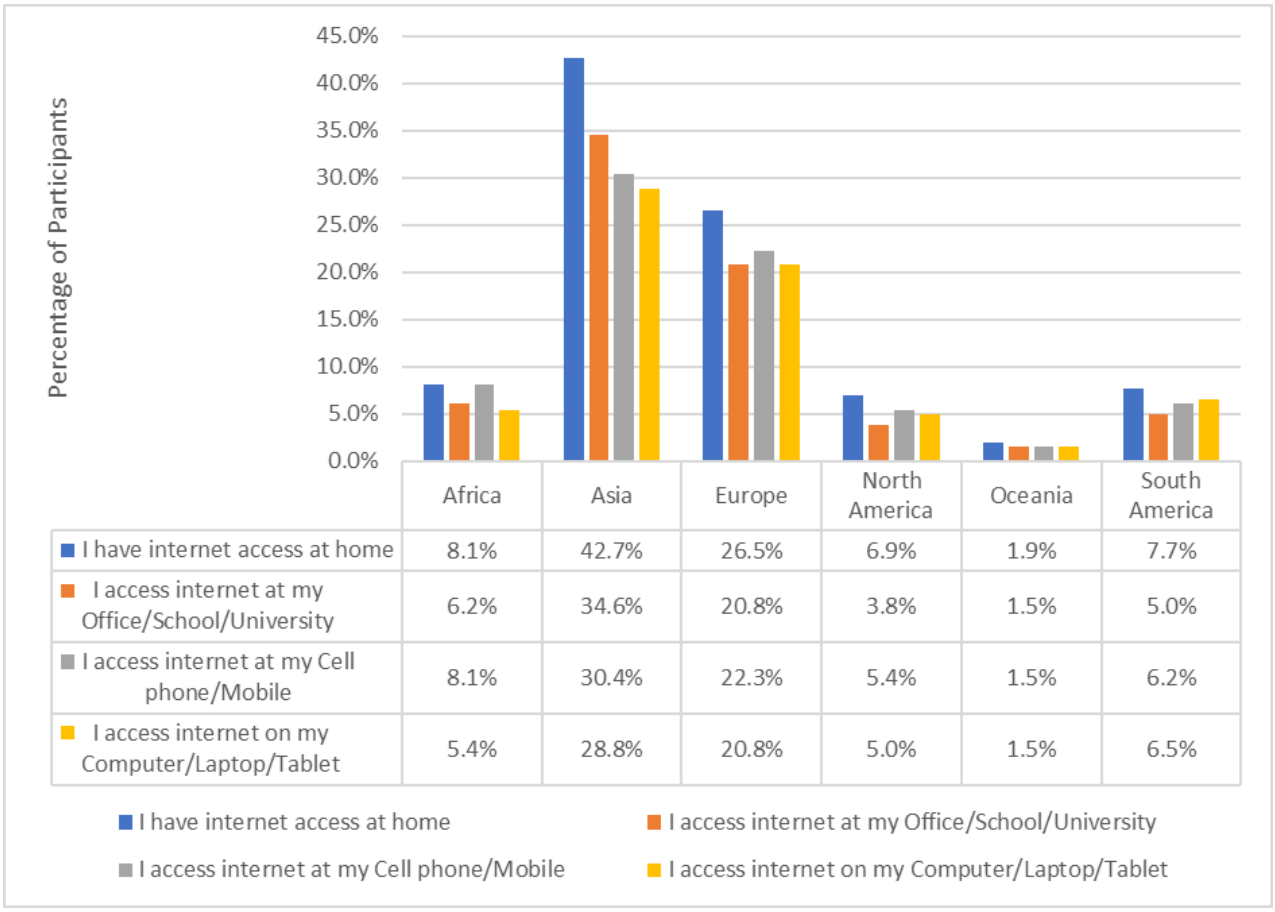


Figure 12:



	Africa	Asia	Europe	North America	Oceania	South America
I have internet access at home	8.1%	42.7%	26.5%	6.9%	1.9%	7.7%
I access internet at my Office/School/University	6.2%	34.6%	20.8%	3.8%	1.5%	5.0%
I access internet at my Cell phone/Mobile	8.1%	30.4%	22.3%	5.4%	1.5%	6.2%
I access internet on my Computer/Laptop/Tablet	5.4%	28.8%	20.8%	5.0%	1.5%	6.5%

It was observed that 93.85% of the survey respondents access the Internet at home, 73.85% access it on cell phone/mobile while 68.08% access it on computer/laptop/tablet (Figure 11). There is a possibility that people would start preferring more handheld devices than big and large screen devices. As a trend can be seen, in the 2021 DC-Jobs survey, 79.12% of 2021 survey respondents access the Internet on a computer/laptop/tablet.

As per the Figure 12, 26.9 % of the Europeans, 6.9% North American, and 1.9% Oceania nationals access the Internet at home. But 42.7% of Asian nationals, 8.1% of African nationals, and 7.7% of South American nationals access the internet at home.

All stakeholders should work towards making the Internet accessible and affordable. The Internet is no more a luxury, it's a fundamental requirement for human as well as economic development.

Role of Internet

Did access to the internet help you in any of the following:

Figure 13:

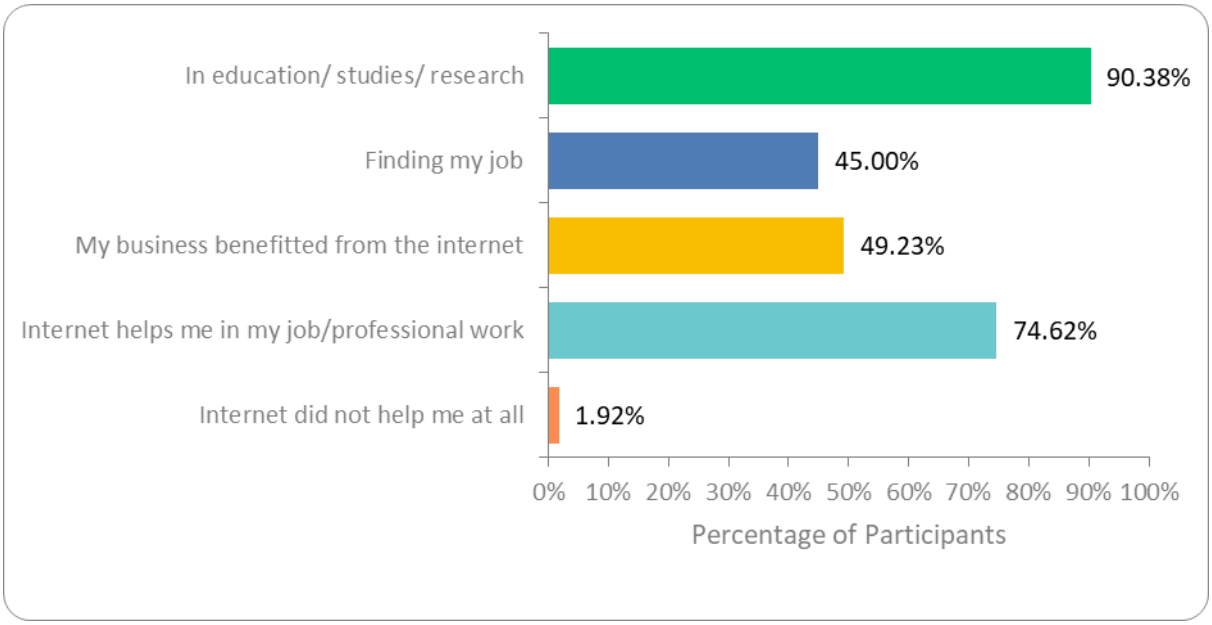
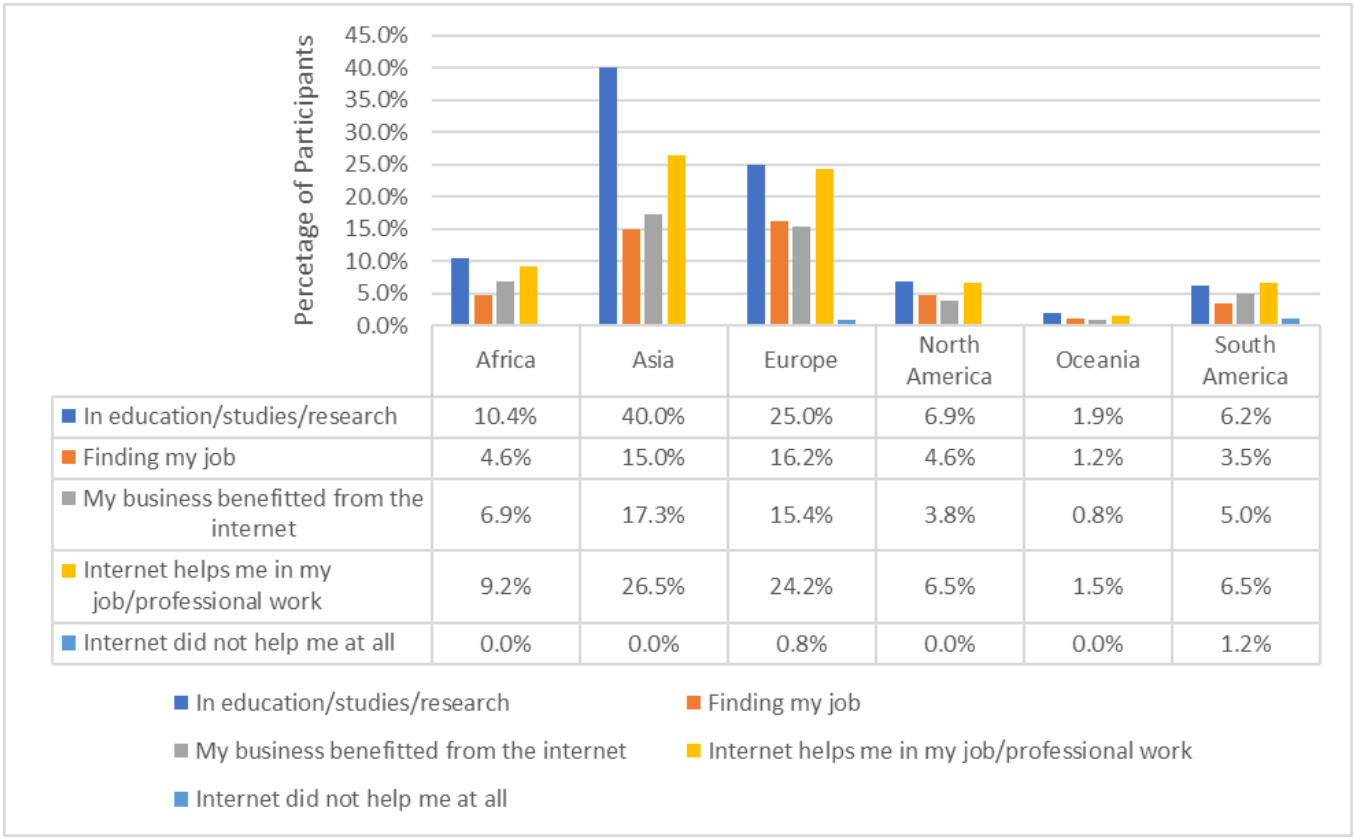


Figure 14:



	Africa	Asia	Europe	North America	Oceania	South America
In education/studies/research	10.4%	40.0%	25.0%	6.9%	1.9%	6.2%
Finding my job	4.6%	15.0%	16.2%	4.6%	1.2%	3.5%
My business benefitted from the internet	6.9%	17.3%	15.4%	3.8%	0.8%	5.0%
Internet helps me in my job/professional work	9.2%	26.5%	24.2%	6.5%	1.5%	6.5%
Internet did not help me at all	0.0%	0.0%	0.8%	0.0%	0.0%	1.2%

In our survey, 90.38% of the respondents claimed that the Internet helped them in education/ studies/research (Figure 13).

As we can see, Figure 14, 9.2% of survey respondents from Africa, 26.5% from Asia, 24.2% from Europe, 1.5% from Oceania, and 6.5% from North America and South America respectively, revealed that the Internet helped them in their job/professional work.

The use of the Internet provides many benefits and profits to businesses from online payment systems, open-source software applications for information, and market research to data mining. As per the data, around half of the global respondents (49.23%) benefitted from the Internet in their businesses. 17.3% of respondents from Asia, 15.4% from Europe, 6.9% from Africa, 5% from South America, 3.8% from North America, and 0.8% from Oceania region (Figure 14), benefitted from the internet in their businesses.

In the age of digitalization, there are people whom the Internet did not help at all. As per our data, in 2021, 2.2% of survey respondents claimed that the Internet did not help them at all whereas, in 2022, that percentage declined to 1.92%. We believe this percentage will keep getting thinner as the penetration of internet increases with time.

Internet & Money Making

Did you ever make money using the internet?

Figure 15:

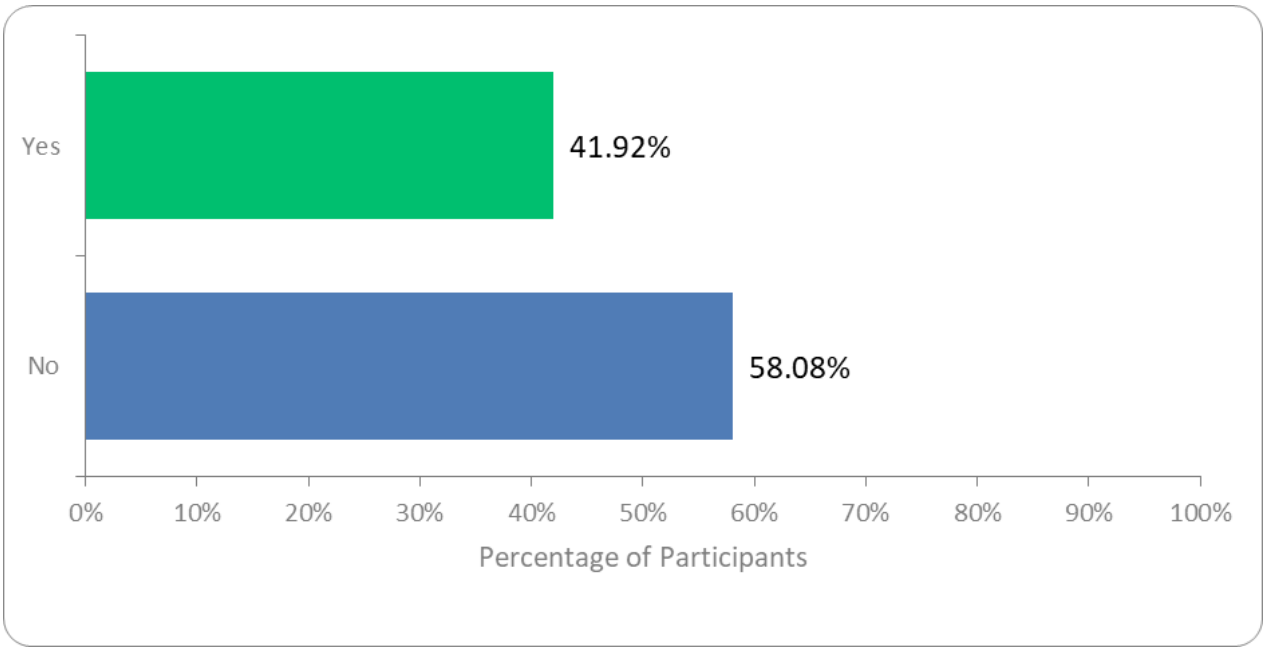
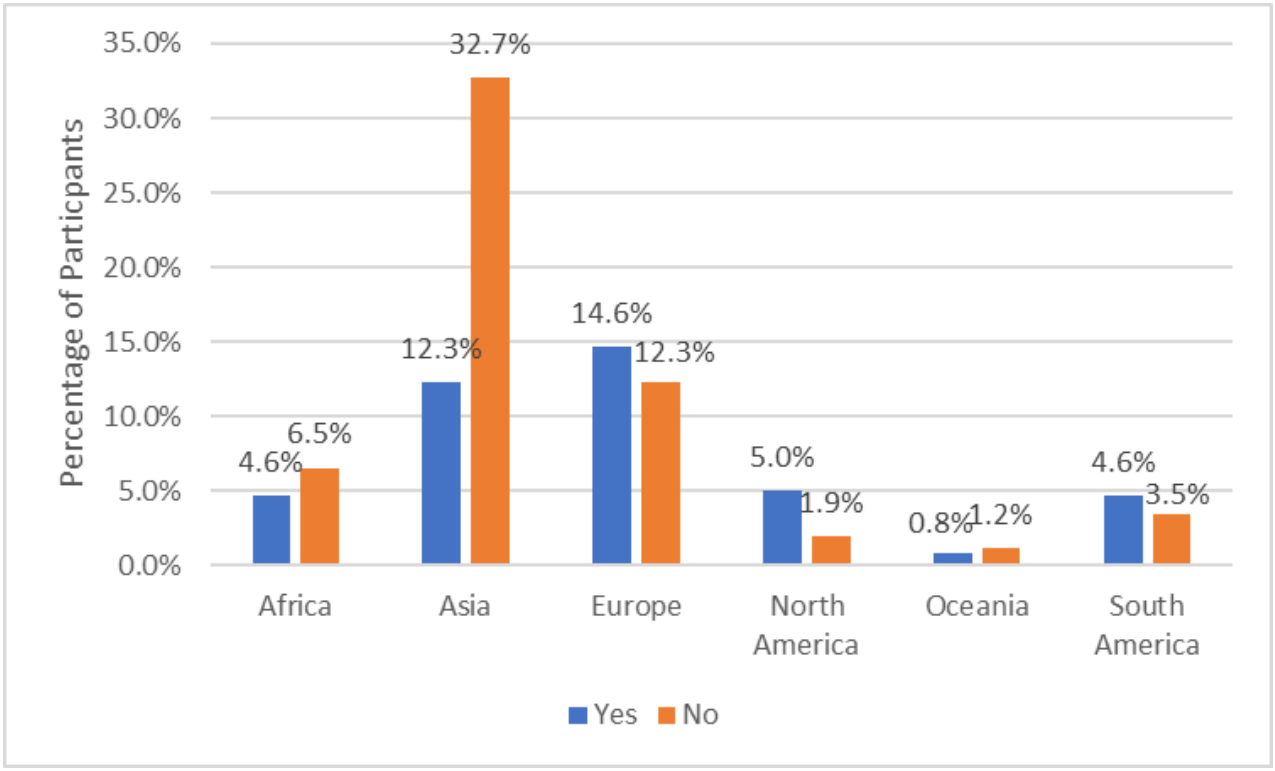


Figure 16:



According to the Figure 15, 41.92% of the respondents stated that they have made money using the Internet. The respondents include 4.6% from Africa, 12.3% from Asia, 14.6% from Europe, 5% from North America, 0.8% from Oceania, and 4.6% from South America (Figure 16).

As technology continues to advance and the internet grows, more people are expected to generate income through online resources and tools. The diversity and accessibility of online marketplaces and platforms are increasing, which is simplifying the process of selling products or services online or collaborating with others. Additionally, the COVID-19 pandemic has accelerated the adoption of remote work, causing more individuals and companies to use online platforms for work. This trend is expected to continue in the future, allowing people to work from anywhere in the world and making it easier for individuals to create income streams using the Internet.

Automation & Obsoletion of Manual Jobs

Do you believe manual Jobs will gradually become obsolete with the evolution of the Automation?

Figure 17:

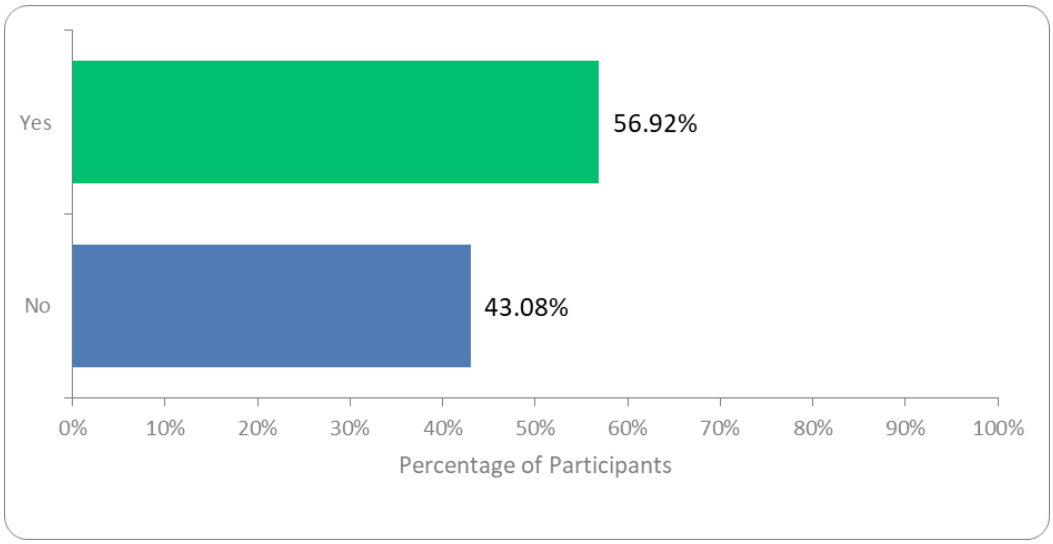
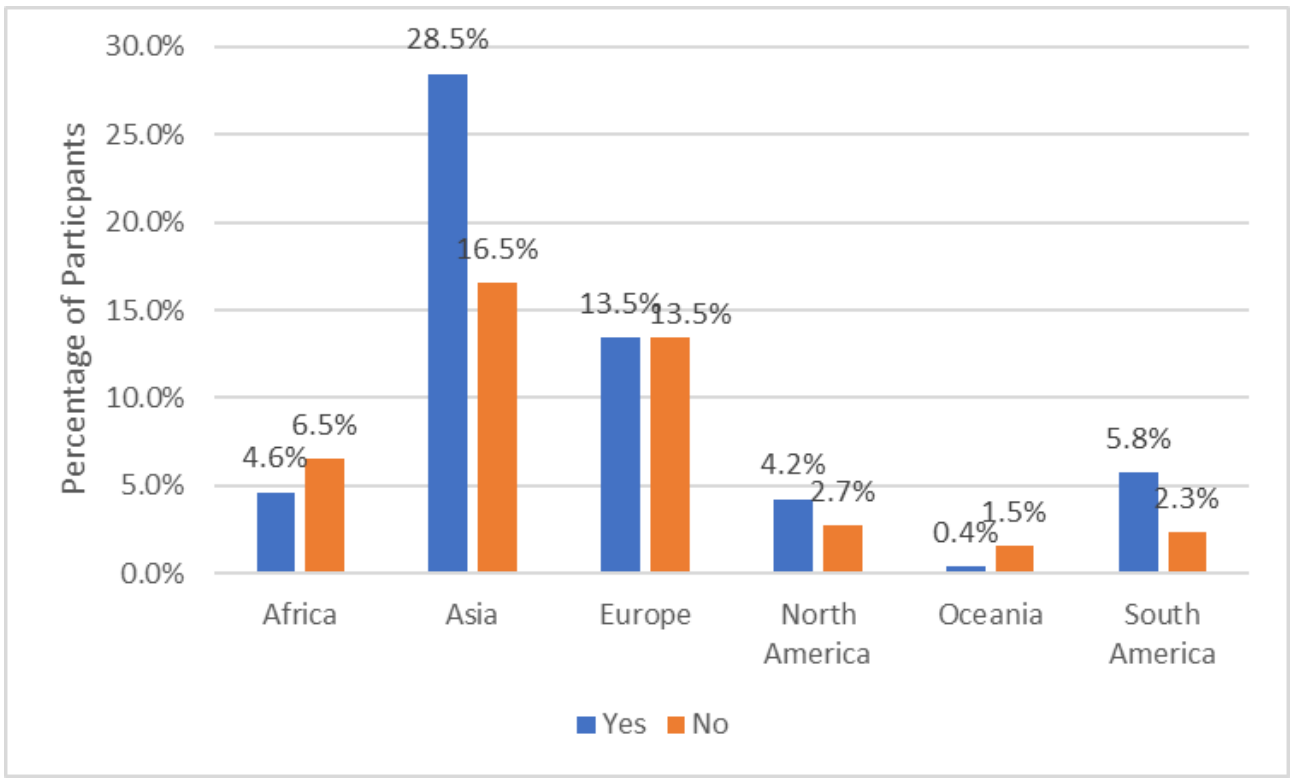


Figure 18:



The study reveals that 56.92% of the survey respondents believed that manual jobs will gradually become obsolete with the evolution of Automation (Figure 17). The requirement for physical and manual skills is declining fast. Automation has the potential to replace certain types of manual jobs with software and machines, for instance: in manufacturing, retail, banking, healthcare, and energy sectors (Bughin, et al., 2018). The impact of automation on the job market will be dependent sector-wise. Adopting technology into a particular sector can increase its productivity and efficiency, and create new and different opportunities for a business/organization/company.

According to the Figure 18, more than 50% of the survey respondents from Africa and Oceania, believe that manual jobs will not become obsolete due to automation.

Skills for Internet

Do you believe you have the skills to make full use of the opportunities provided by the internet?

Figure 19:

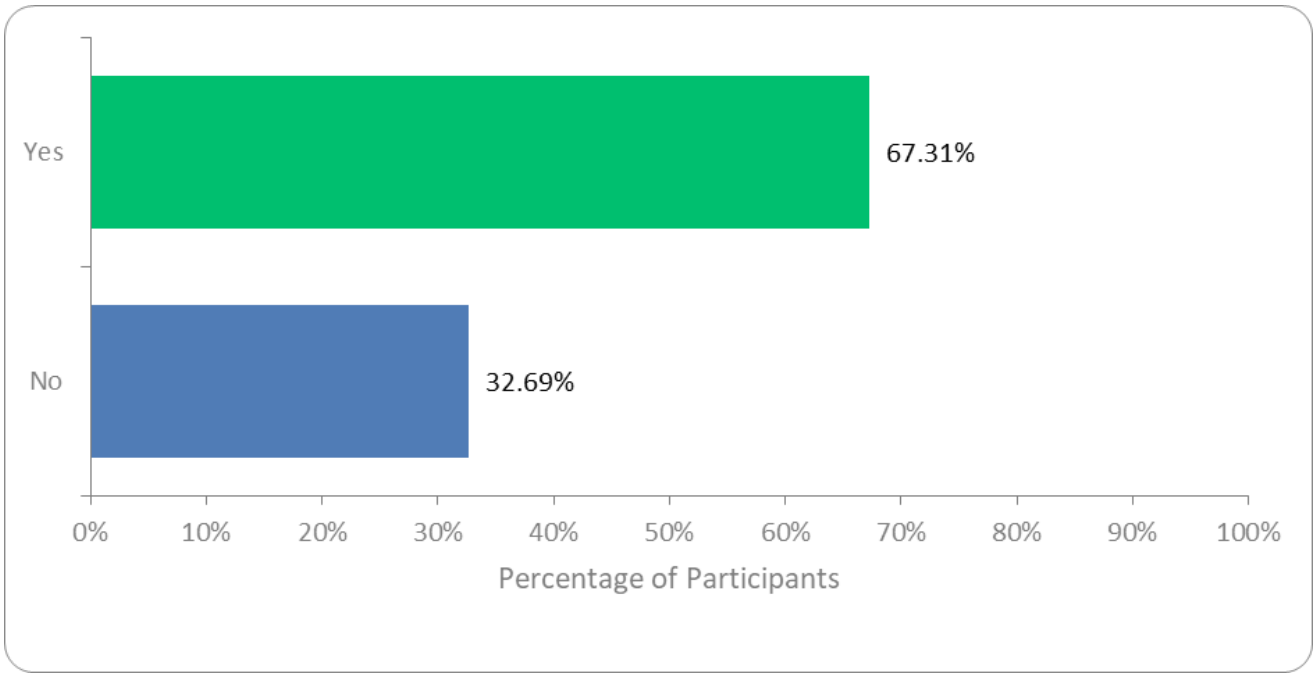
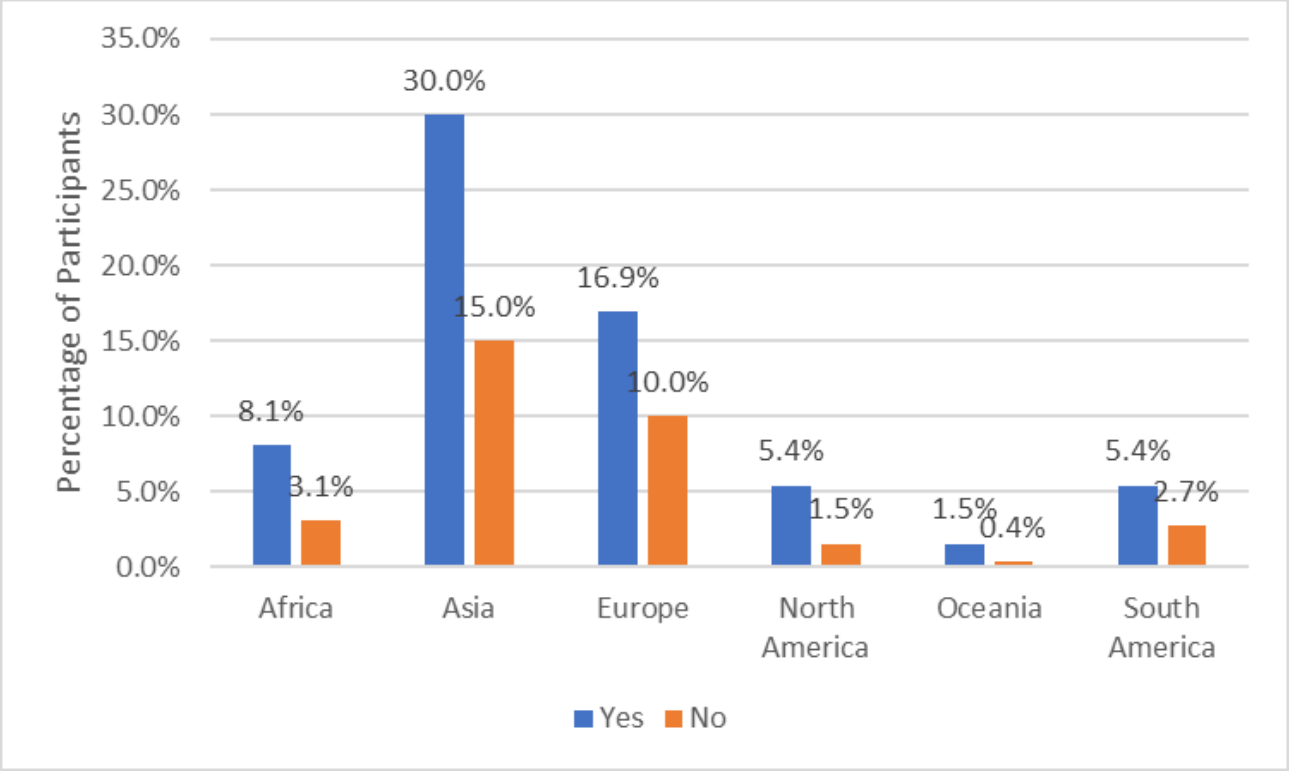


Figure 20:



32.69% of the survey respondents shared that they do not have necessary skills for the Internet (Figure 19). The respondents include 3.1% from Africa, 15% from Asia, 10% from Europe, 1.5% from North America, 0.4% from Oceania, 2.7% from South Africa (Figure 20). One reason could be the lack of Internet accessibility, especially in remote parts of the world. One of the challenges in those areas would be high internet costs and less profits/revenues. This calls for different approaches by different stakeholders to address various kinds of constraints. Government, private, and other stakeholders need to invest in proper infrastructure, and for good returns, they will also need to provide training/upskilling to communities, which will directly contribute to the digital economy.

Internet based SMEs (i-SMEs) have to create profitable business models for democratizing the internet to leverage its full economic potential.

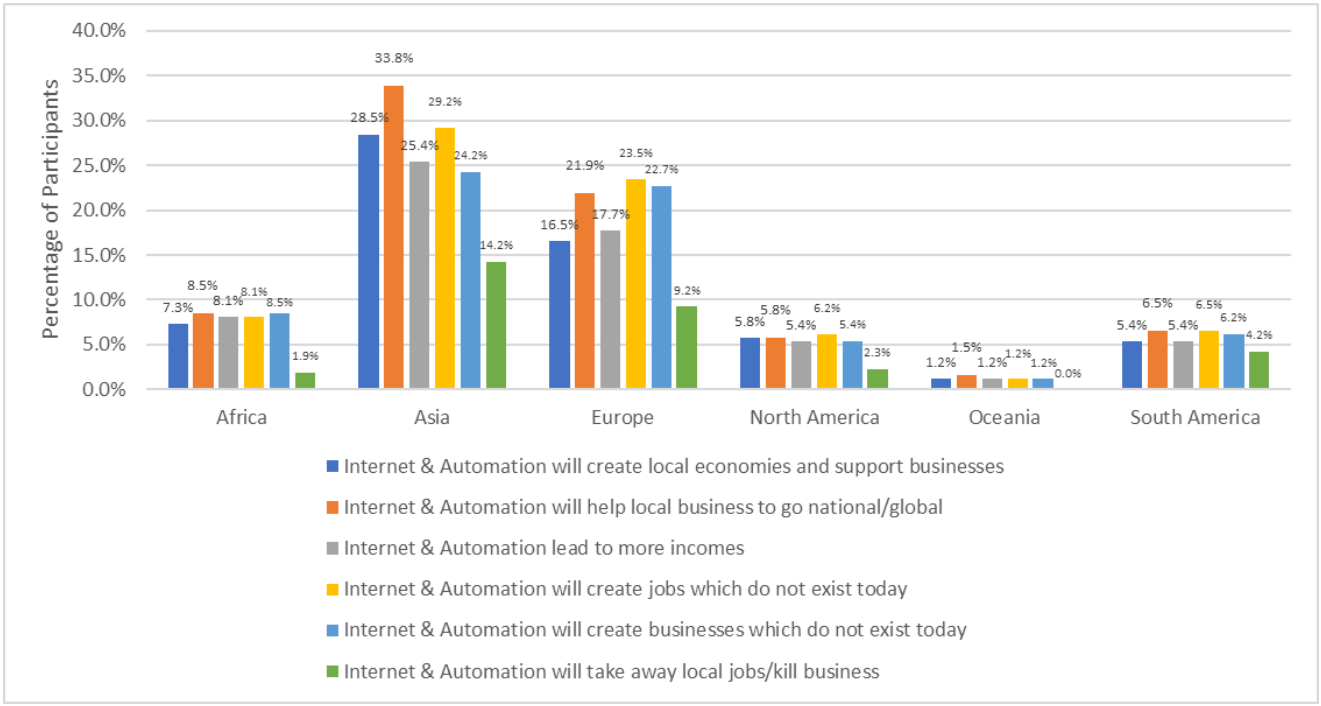
Dr. Rajendra Pratap Gupta
Chairman- Dynamic Coalition on Internet & Jobs

Internet & Automation

When it comes to the Internet and Automation, which of the following apply?

Figure 21:

Figure 22



Businesses can significantly increase their revenues by embracing digital technologies and engaging with them. Using social media and e-commerce can enable businesses to expand their market reach and enhance their ability to connect with customers. Technology and automation can also improve business operations and prevent costly errors, thereby contributing to business growth. According to study, Figure 21, 64.62% of the respondents believe that the Internet and Automation will create local economies and support businesses. Further, 78.08% of the respondents stated that the Internet and Automation will help local businesses to scale / grow nationally and internationally (Figure 21). The respondents include 8.5% from Africa, 33.8% from Asia, 21.9% from Europe, 5.8% from North America, 1.5% from Oceania, and 6.5% from South America (Figure 22). The use of technology can enable local businesses to expand their reach beyond their geographical boundaries and become national or even international entities.

Moreover, 74.62% and 68.08% of the total respondents believe that Internet and Automation will create jobs and businesses, respectively, which do not exist today (Figure 21). The development of automation is likely to create new job opportunities that don't currently exist, as well as transform the nature of existing roles. This reinforces our recommendation of lifelong upskilling.

Leveraging Opportunities via Internet

To maximize the opportunities through the internet:

Figure 23

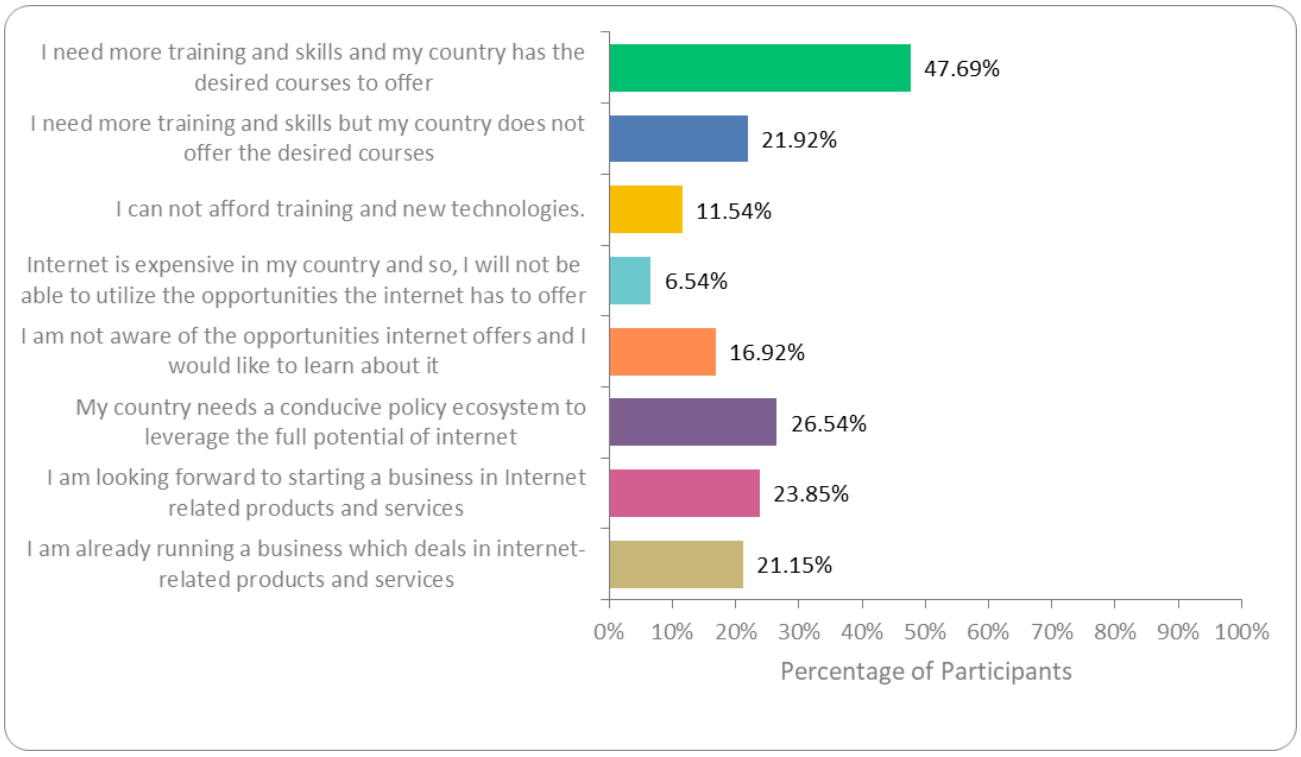
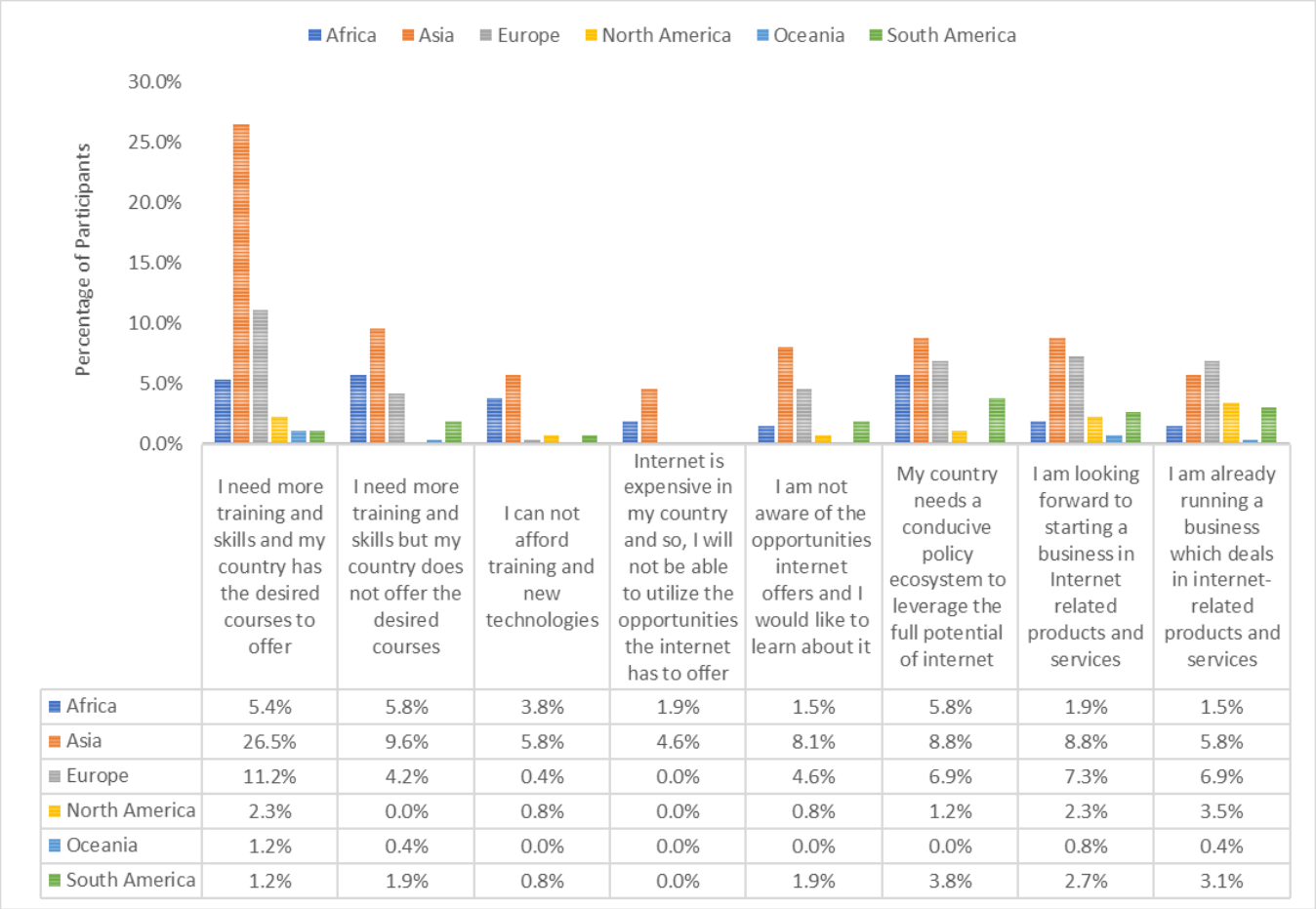


Figure 24



	I need more training and skills and my country has the desired courses to offer	I need more training and skills but my country does not offer the desired courses	I can not afford training and new technologies	Internet is expensive in my country and so, I will not be able to utilize the opportunities the internet has to offer	I am not aware of the opportunities internet offers and I would like to learn about it	My country needs a conducive policy ecosystem to leverage the full potential of internet	I am looking forward to starting a business in Internet related products and services	I am already running a business which deals in internet-related products and services
Africa	5.4%	5.8%	3.8%	1.9%	1.5%	5.8%	1.9%	1.5%
Asia	26.5%	9.6%	5.8%	4.6%	8.1%	8.8%	8.8%	5.8%
Europe	11.2%	4.2%	0.4%	0.0%	4.6%	6.9%	7.3%	6.9%
North America	2.3%	0.0%	0.8%	0.0%	0.8%	1.2%	2.3%	3.5%
Oceania	1.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.8%	0.4%
South America	1.2%	1.9%	0.8%	0.0%	1.9%	3.8%	2.7%	3.1%

According to the Figure 23, 26.54% of the respondents state that their country needs a conducive policy ecosystem to leverage the full potential of the Internet. This fraction of people is 5.8% from Africa, 8.8% from Asia, 6.9% from Europe, 1.2% from North America, and 3.8% from South America (Figure 24). With the emergence of digitalization, countries need to build a supportive policy framework in order to bring the full potential of the Internet while protecting the rights and privacy of people. This will ultimately maximize the potential of the digital economy and create opportunities for growth and development.

Rise of New Age Entrepreneurs

23.85% of the respondents showed interest in starting a business in internet-related products and services (Figure 23). However, 6.54% of the total respondents, 1.9% from Africa and 4.6% from Asia stated that the Internet is expensive in their country because of which they will not be able to utilize the opportunities the Internet has to offer (Figure 23 & 24).

There are many opportunities the Internet can offer but, according to this study, 11.54% of the respondents cannot afford training and new technologies (Figure 23).

> *People are interested and willing to leverage the Internet for their work. The Private and public sectors need to come forward and provide affordable training in tech as digitalization is the future.*
>
> **Ms. Smriti Lohia**
> **Co-ordinator, DC - Internet & Jobs (2022-23)**

There are steps that individuals, businesses, and governments need to take collectively from investing in digital infrastructure, building digital skills, funding for Research & Development, and encouraging digital entrepreneurship.

Digital Skills

Do you have any of the digital skills as mentioned below?

Figure 25

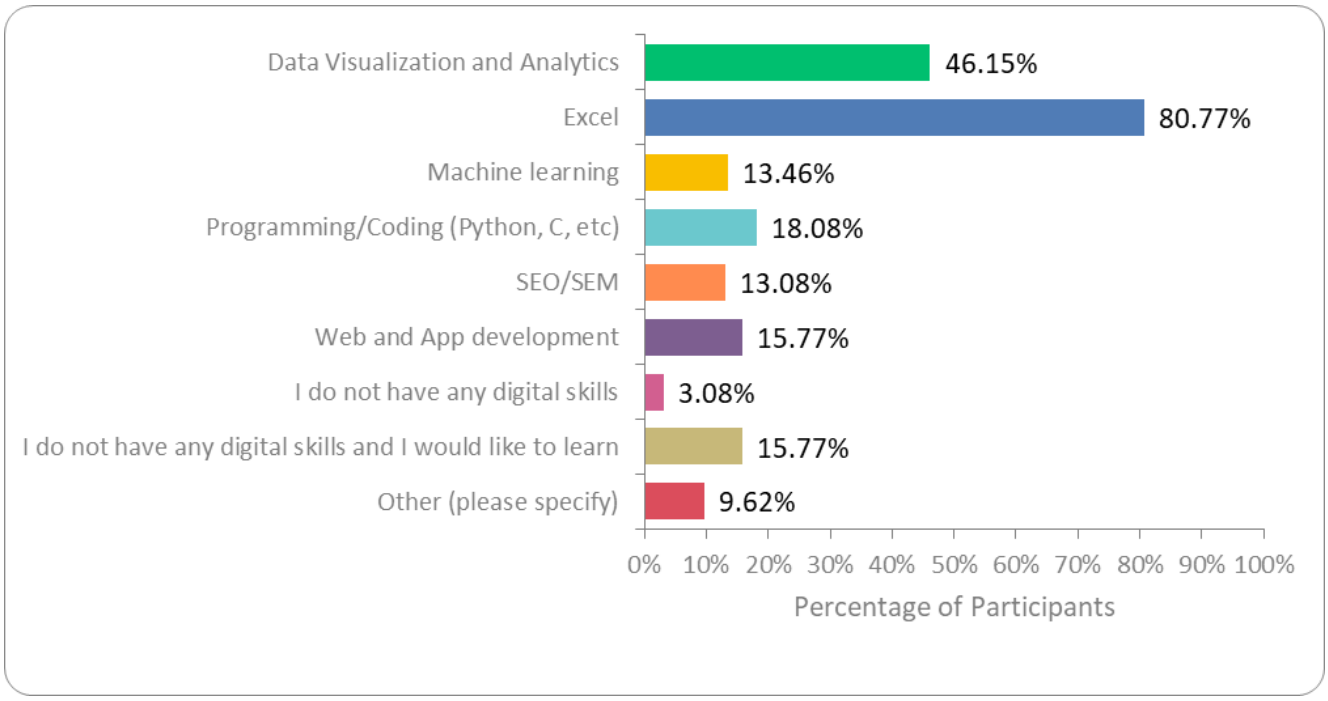
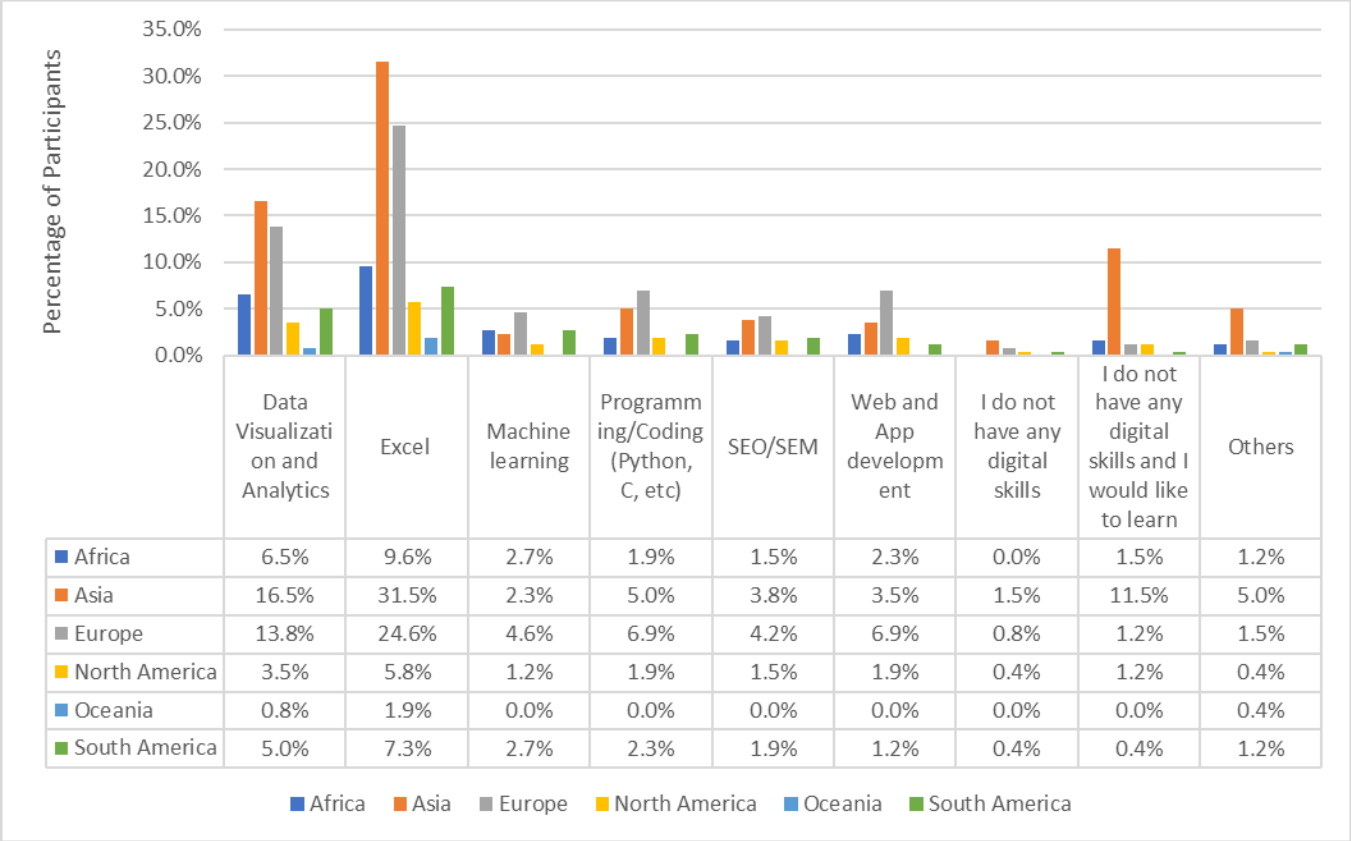


Figure 26



	Data Visualization and Analytics	Excel	Machine learning	Programming/Coding (Python, C, etc)	SEO/SEM	Web and App development	I do not have any digital skills	I do not have any digital skills and I would like to learn	Others
Africa	6.5%	9.6%	2.7%	1.9%	1.5%	2.3%	0.0%	1.5%	1.2%
Asia	16.5%	31.5%	2.3%	5.0%	3.8%	3.5%	1.5%	11.5%	5.0%
Europe	13.8%	24.6%	4.6%	6.9%	4.2%	6.9%	0.8%	1.2%	1.5%
North America	3.5%	5.8%	1.2%	1.9%	1.5%	1.9%	0.4%	1.2%	0.4%
Oceania	0.8%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
South America	5.0%	7.3%	2.7%	2.3%	1.9%	1.2%	0.4%	0.4%	1.2%

According to the study (Figure 25), the respondents' proficiency in different digital skills is as follows: Excel (80.77%), followed by Data Visualization and Analytics (46.5%), Programming/ Coding (18.08%), Web and App Development (15.77%), Machine Learning (13.46%), and SEO/ SEM (13.08%).

Having digital skills is imperative for succeeding in today's job market and society. It can enable individuals to progress in their careers, simplify workflows, facilitate data analysis, stimulate innovation, and enhance one's digital proficiency. 15.77% of the respondents expressed that they do not have any digital skills, but they would like to learn (Figure 25). These respondents include; 1.5% from Africa, 11.5% from Asia, 1.2% from Europe and North America respectively, and 0.4% from South Africa (Figure 26). The Public and Private sectors need to promote the training of digital skills and literacy programs to help people to leverage Internet usage and contribute to the digital economy.

As technology advances and becomes more ubiquitous in our daily routines, proficiency in digital skills will become even more critical for both individuals and organizations. The ability to use digital tools and languages will be increasingly essential for success in the modern world.

Social Media

In my opinion, social media:

Figure 27

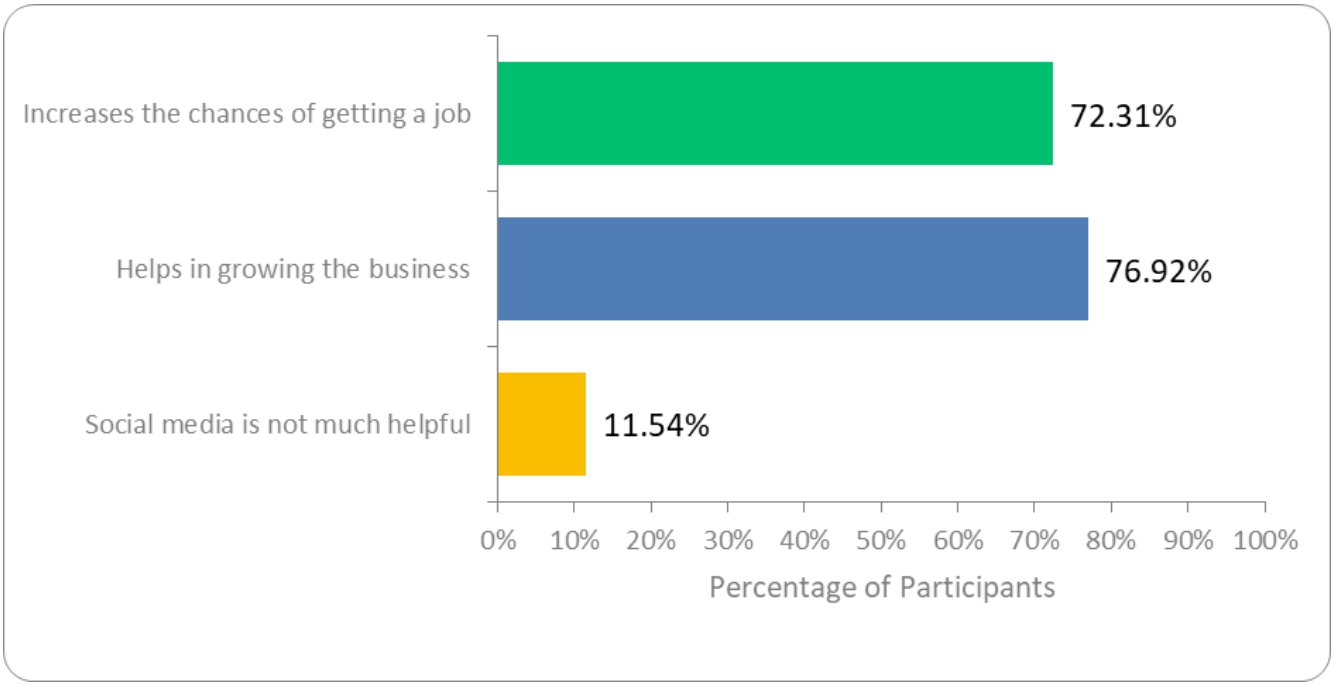
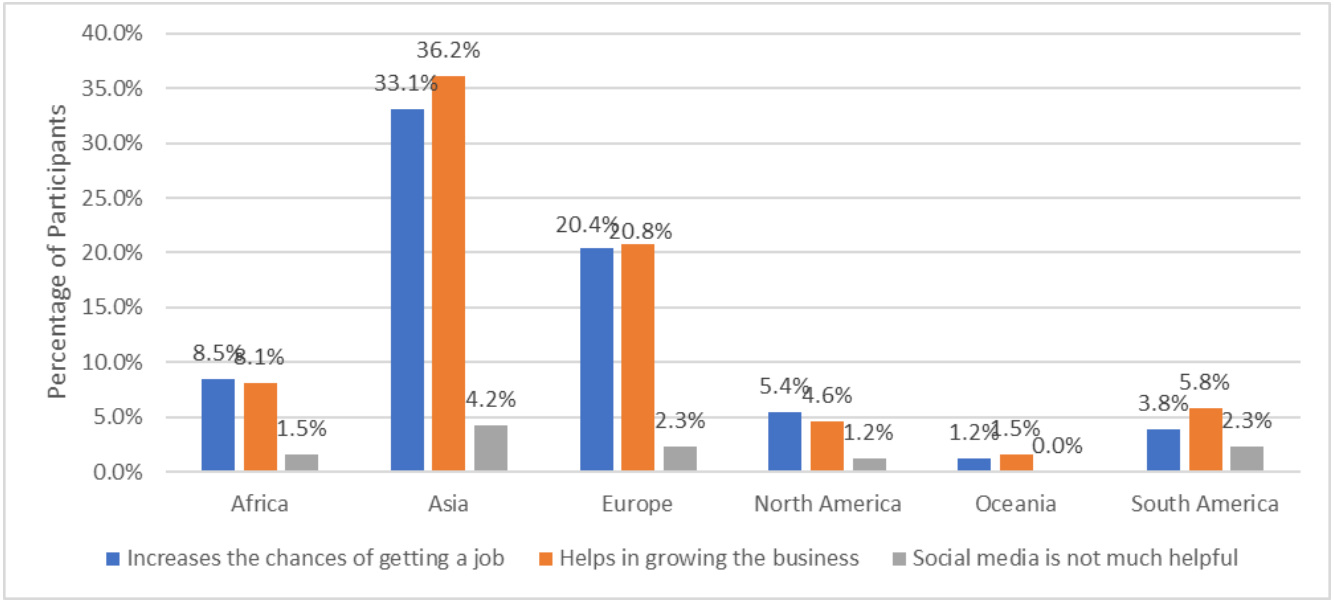


Figure 28



Social media platforms have significantly impacted how we connect and communicate in our daily lives. It is a great medium to reach people regardless of geographical boundaries, an essential resource for information, and a crucial source for businesses to reach a larger audience for their services and products. According to the study (Figure 27), 76.92% of the respondents claim that social media helps in growing businesses. These respondents include 8.1% from Africa, 36.2% from Asia, 20.8% from Europe, 4.6% from North America, 1.5% from Oceania, and 5.8% from South America (Figure 28).

Social media platforms can be important tools in a job search by providing job opportunities, helping in building a brand, and offering a medium to connect and network with potential employers and professionals. According to the study (Figure 27), 72.31% of the respondents opine that social media increases the chances of getting a job. As per the last year's 'Internet and Jobs 2021' report, 71.43% of the survey respondents thought the same. These findings suggest that social media remains a powerful tool for job seekers.

Use of Internet

Has Coronavirus changed the way you or your organization are using the Internet?

Figure 29

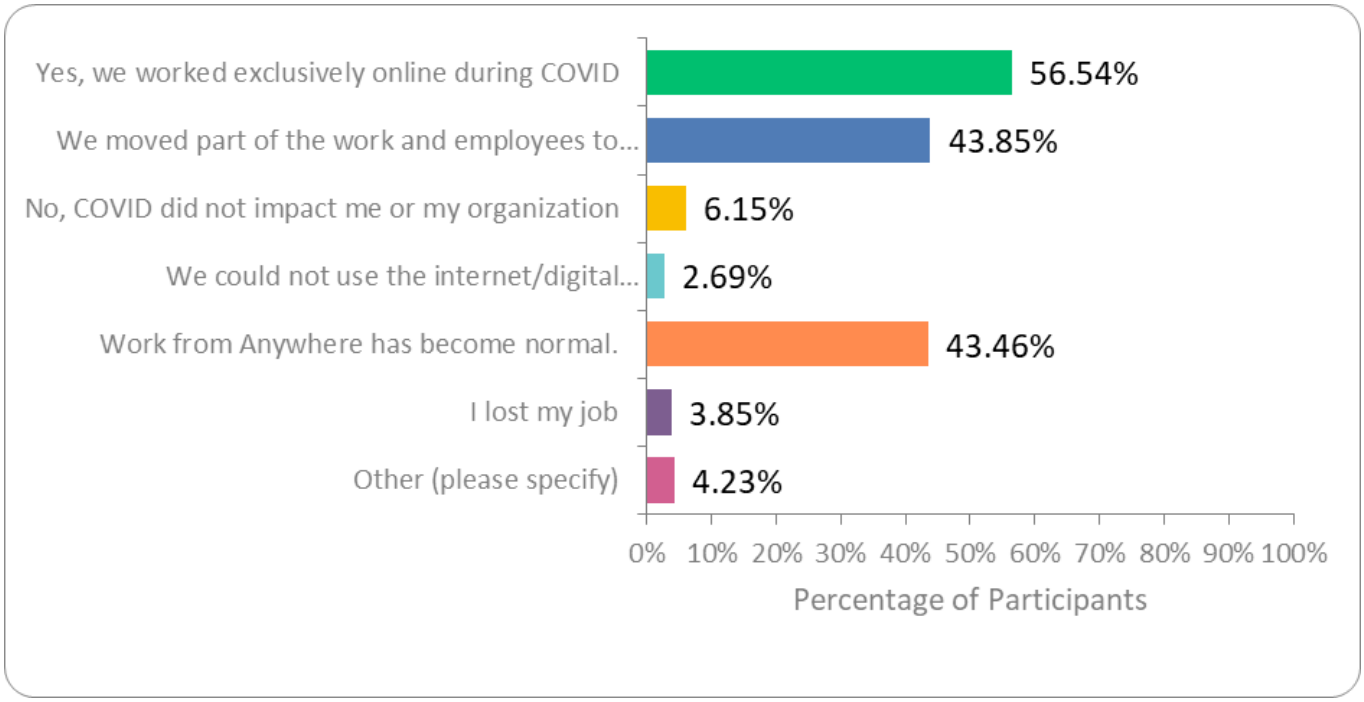
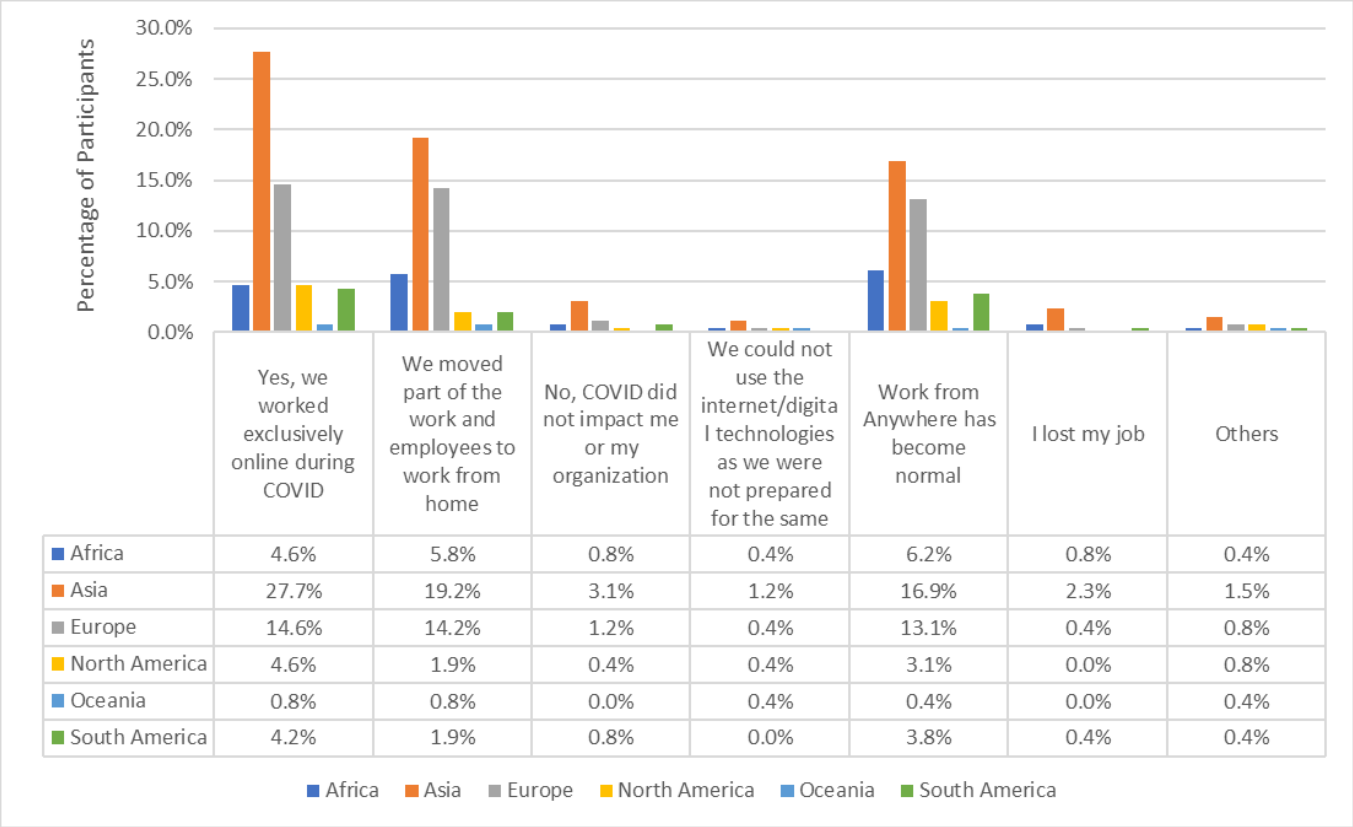


Figure 30



	Yes, we worked exclusively online during COVID	We moved part of the work and employees to work from home	No, COVID did not impact me or my organization	We could not use the internet/digital technologies as we were not prepared for the same	Work from Anywhere has become normal	I lost my job	Others
Africa	4.6%	5.8%	0.8%	0.4%	6.2%	0.8%	0.4%
Asia	27.7%	19.2%	3.1%	1.2%	16.9%	2.3%	1.5%
Europe	14.6%	14.2%	1.2%	0.4%	13.1%	0.4%	0.8%
North America	4.6%	1.9%	0.4%	0.4%	3.1%	0.0%	0.8%
Oceania	0.8%	0.8%	0.0%	0.4%	0.4%	0.0%	0.4%
South America	4.2%	1.9%	0.8%	0.0%	3.8%	0.4%	0.4%

According to the study (Figure 29), 56.54% of the respondents stated that they worked exclusively online during the COVID-19 pandemic. The respondents included 4.6% from Africa, 27.7% from Asia, 14.6% from Europe, 4.6% from North America, 0.8% from Oceania, and 4.2% from South America (Figure 30). The COVID-19 pandemic has accelerated the shift towards digital transformation, making the Internet an even more essential part of our lives and work. Due to the COVID-19 pandemic, individuals and institutions globally have had to adapt to alternative ways of living and working. 43.85% of the respondents expressed that they moved some part of the work and employees to work from home (Figure 29). Furthermore, 43.46% of the respondents believe that 'work from anywhere' has become normal (Figure 29). From 'work from home' to 'work from anywhere', 'working with flexibility' should be a new option. COVID-19 pandemic made us realize how internet can change the way whole world operates.

Real Time in the Virtual World

On a typical weekday, how much time (total time across all devices) do you spend using your mobile, cell phone, tablet, and computer using the Internet?

Figure 31

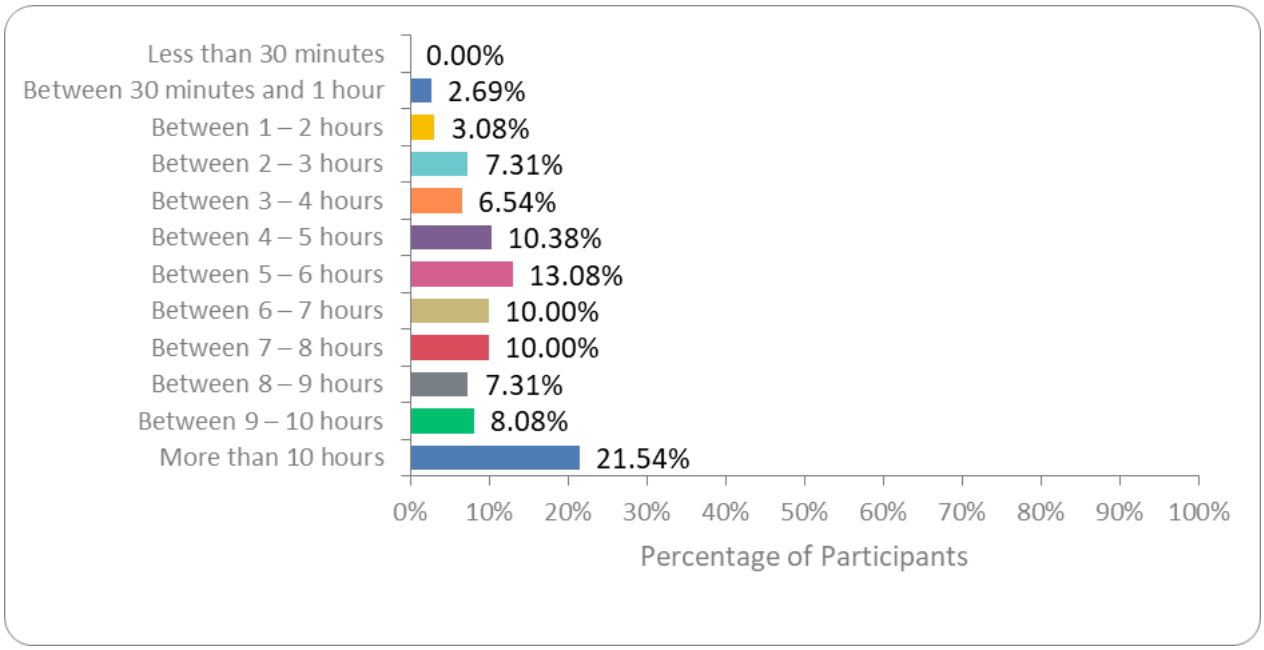
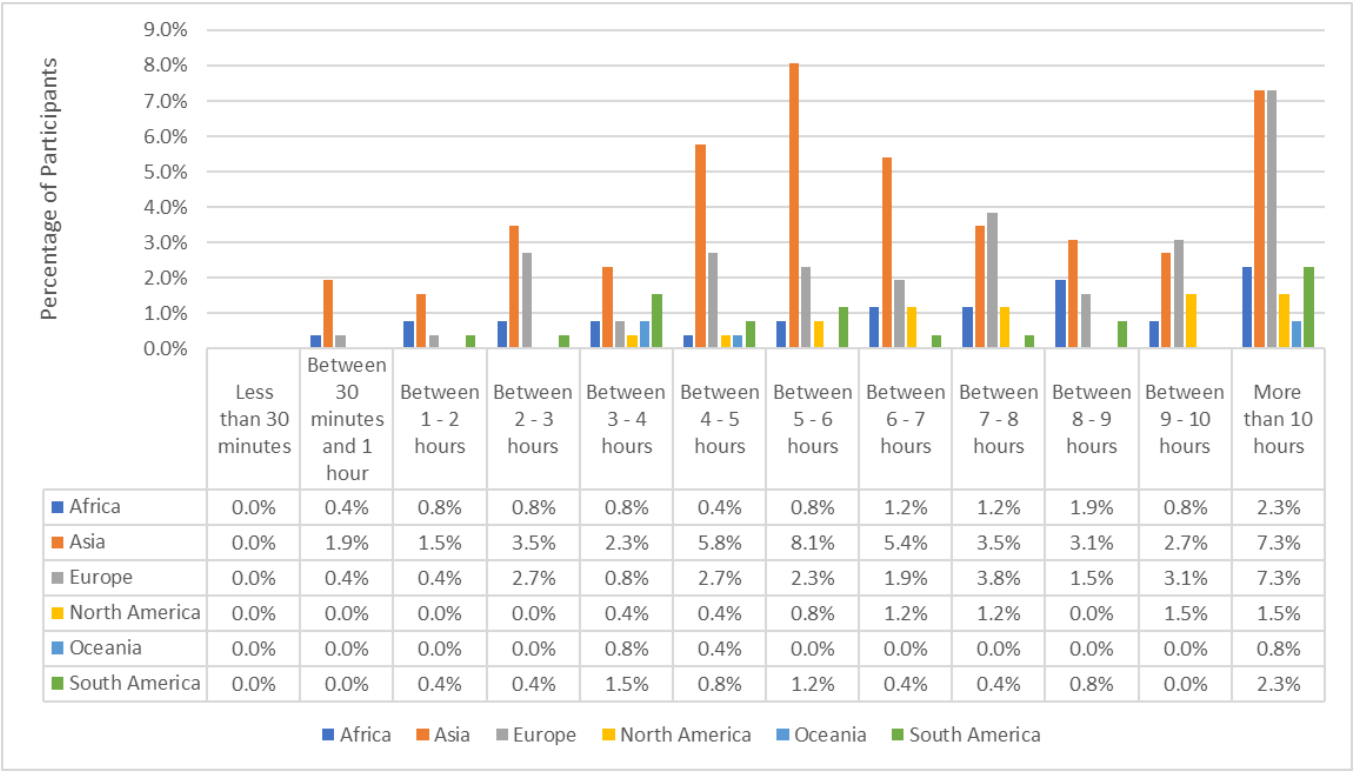


Figure 32



	Less than 30 minutes	Between 30 minutes and 1 hour	Between 1 - 2 hours	Between 2 - 3 hours	Between 3 - 4 hours	Between 4 - 5 hours	Between 5 - 6 hours	Between 6 - 7 hours	Between 7 - 8 hours	Between 8 - 9 hours	Between 9 - 10 hours	More than 10 hours
Africa	0.0%	0.4%	0.8%	0.8%	0.8%	0.4%	0.8%	1.2%	1.2%	1.9%	0.8%	2.3%
Asia	0.0%	1.9%	1.5%	3.5%	2.3%	5.8%	8.1%	5.4%	3.5%	3.1%	2.7%	7.3%
Europe	0.0%	0.4%	0.4%	2.7%	0.8%	2.7%	2.3%	1.9%	3.8%	1.5%	3.1%	7.3%
North America	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.8%	1.2%	1.2%	0.0%	1.5%	1.5%
Oceania	0.0%	0.0%	0.0%	0.0%	0.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
South America	0.0%	0.0%	0.4%	0.4%	1.5%	0.8%	1.2%	0.4%	0.4%	0.8%	0.0%	2.3%

With the growing ease of digital device accessibility, people are spending time on different digital devices. Though increased screen time can be due to work and education requirements, access to information, entertainment, to social networking.

According to the study, 21.54% of the respondents spend more than 10 hours on digital devices using the Internet (Figure 31). This respondents included 2.3% from Africa, 7.3% from Asia and Europe respectively, 1.5% from North America, 0.8% from Oceania, and 2.3% from South America (Figure 32).

The digital world has become an integral part of our lives, with technology systems enhancing our day-to-day activities, making them more efficient and convenient. From remote work and online learning to shopping, social media engagement, navigation, and even filing taxes, our dependence on digital services has increased. Through online connectivity, we can easily connect with people regardless of geographical barriers, thereby promoting instant communication.

Impact on Health

Has sitting in front of a screen for long hours (or excessive use of the Internet) impacted your health in any way?

Figure 33

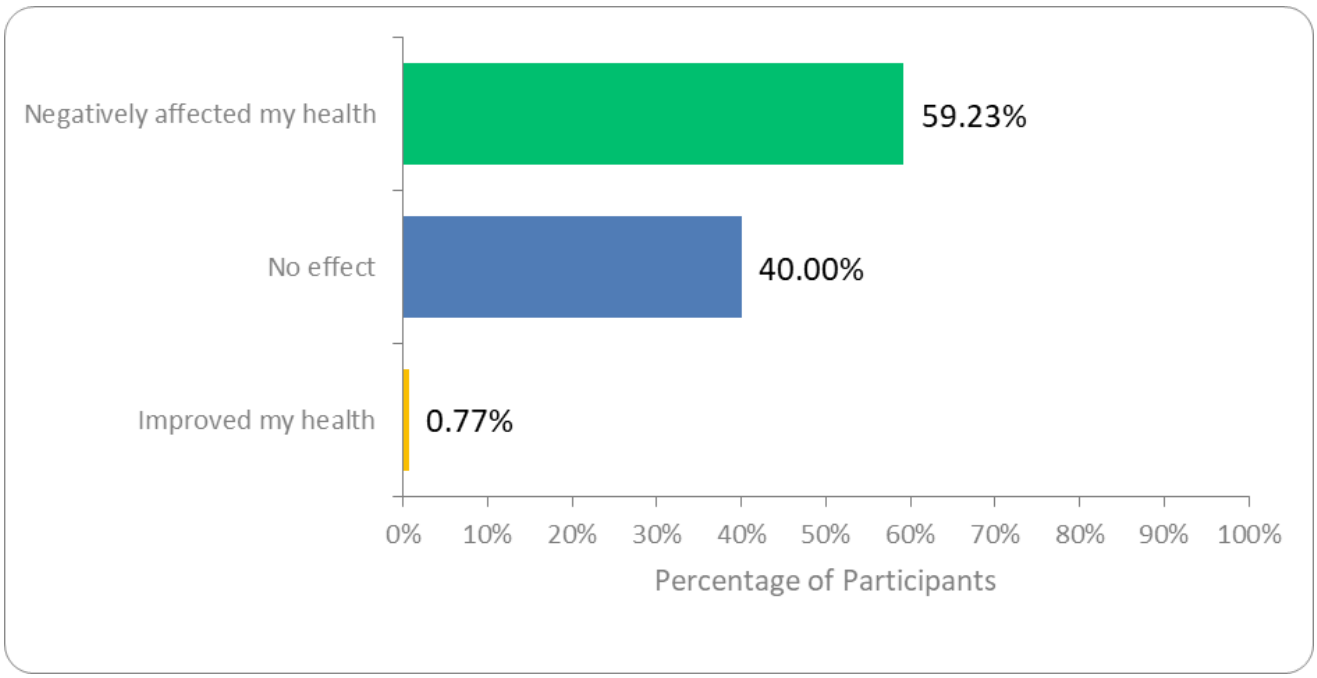
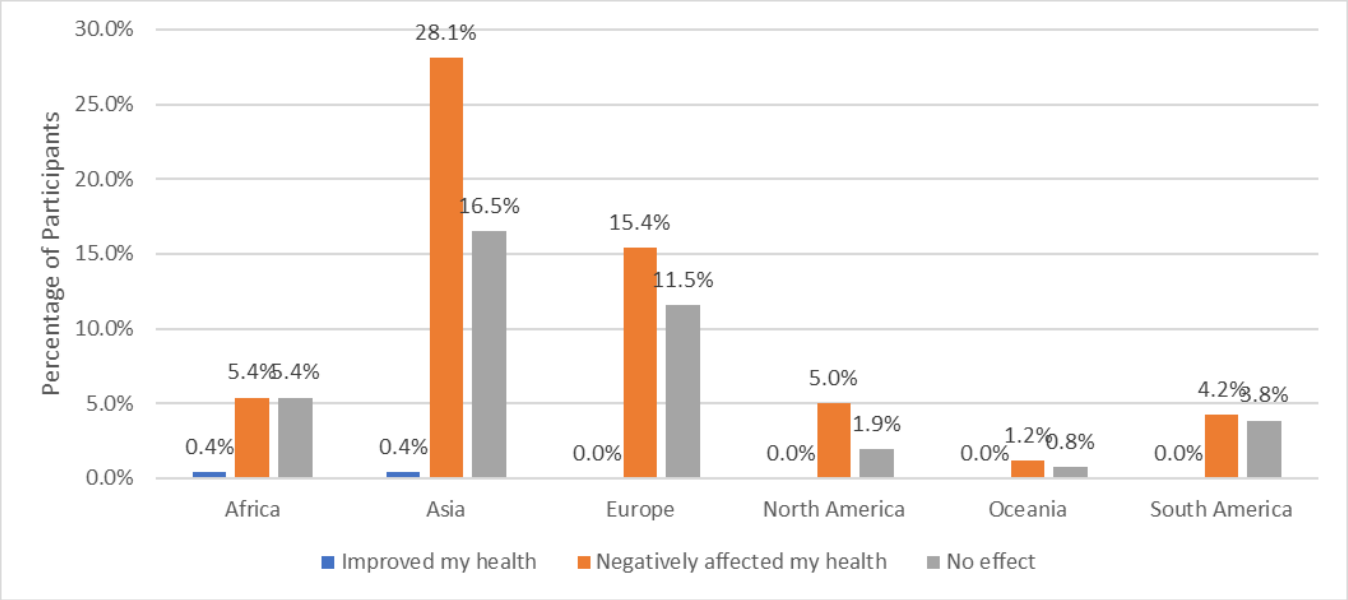


Figure 34



According to the study (Figure 33), 59.23% of the respondents expressed that the use of the Internet has negatively impacted their health. These respondents include, 5.4% from Africa, 28.1% from Asia, 15.4% from Europe, 5% from North America, 1.2% from Oceania, and 4.2% from South America (Figure 34). Excessive use of the internet, particularly when it involves prolonged periods of sitting in front of a computer screen, can indeed have negative health consequences from physical health problems, dry eyes, sleep disorders to affecting mental health. It is necessary to maintain a healthy balance in the use of the internet and to take breaks from screens regularly to avoid negative health consequences.

Harmful Effects

In my view, following are the harmful effects of using technology/digital devices:

Figure 35

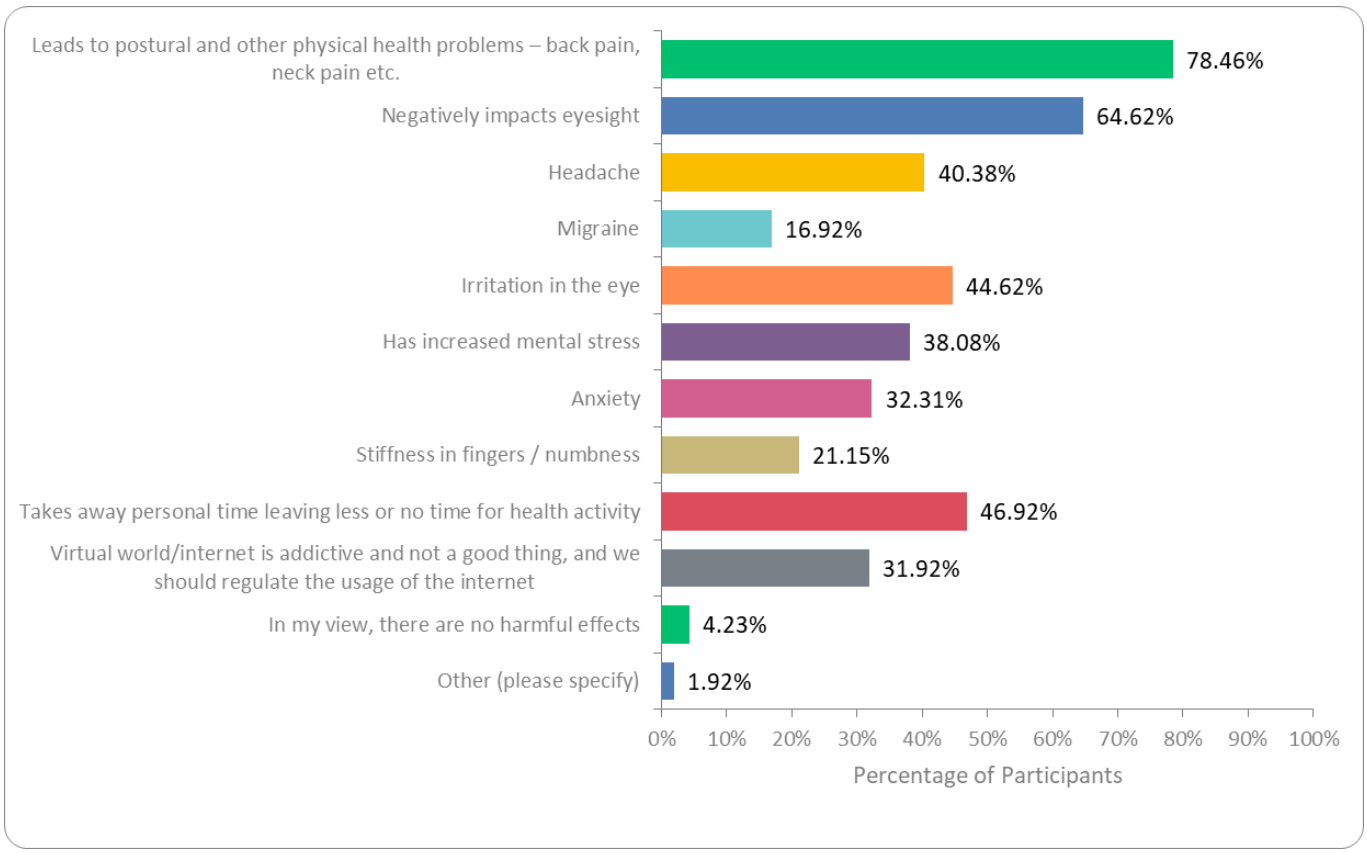
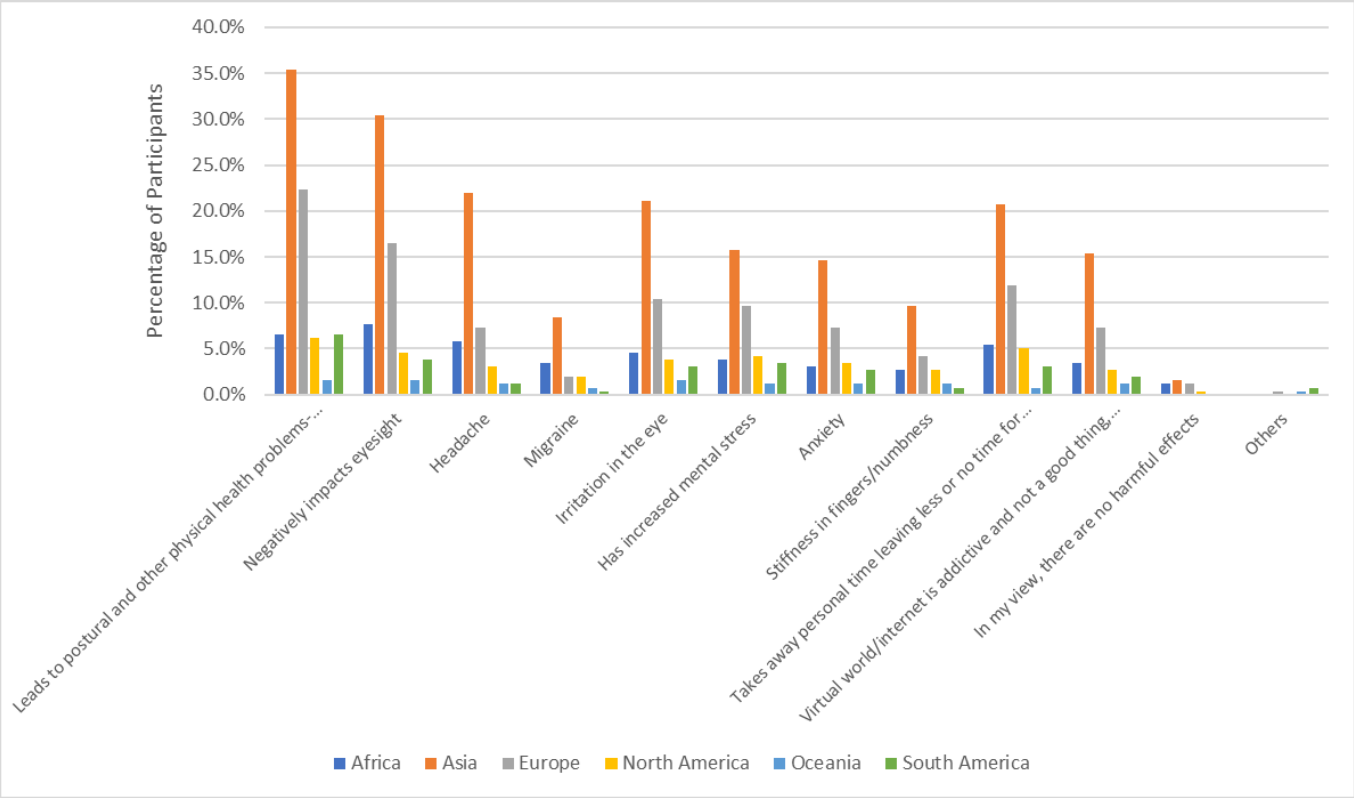


Figure 36



Alongside the benefits of the Internet, there are several health consequences that cannot be neglected. Constant use of digital devices can affect people's physical and mental health. According to study, (Figure 35), 78.46% of the respondents believe that using technology or digital devices can lead to postural problems. This was followed by those who think it can negatively impact eyesight (64.62%), eye irritation (44.62%), headache (40.38%), mental stress (38.08%), anxiety (32.31%), stiffness/numbness (21.15%), and migraine (16.92%) (Figure 35).

The stakeholders can play a crucial role in reducing the harmful effects of technology/digital devices on physical and mental health. Governments can define and promote guidelines, fund awareness campaigns that inform the public about the potential risks of excessive use of technology, and suggest ways to mitigate the risks in order to promote safe and responsible use of technology. Moreover, they can also provide financial support for research that investigates the effects of technology on mental and physical health, and encourage healthy habits, such as outdoor activities and physical exercise, that can counteract the negative effects of technology.

Internet: Leveraging the potential

In your view, what needs to be done to leverage the full potential of the internet for boosting the local economies, creating business and jobs.

Figure 37

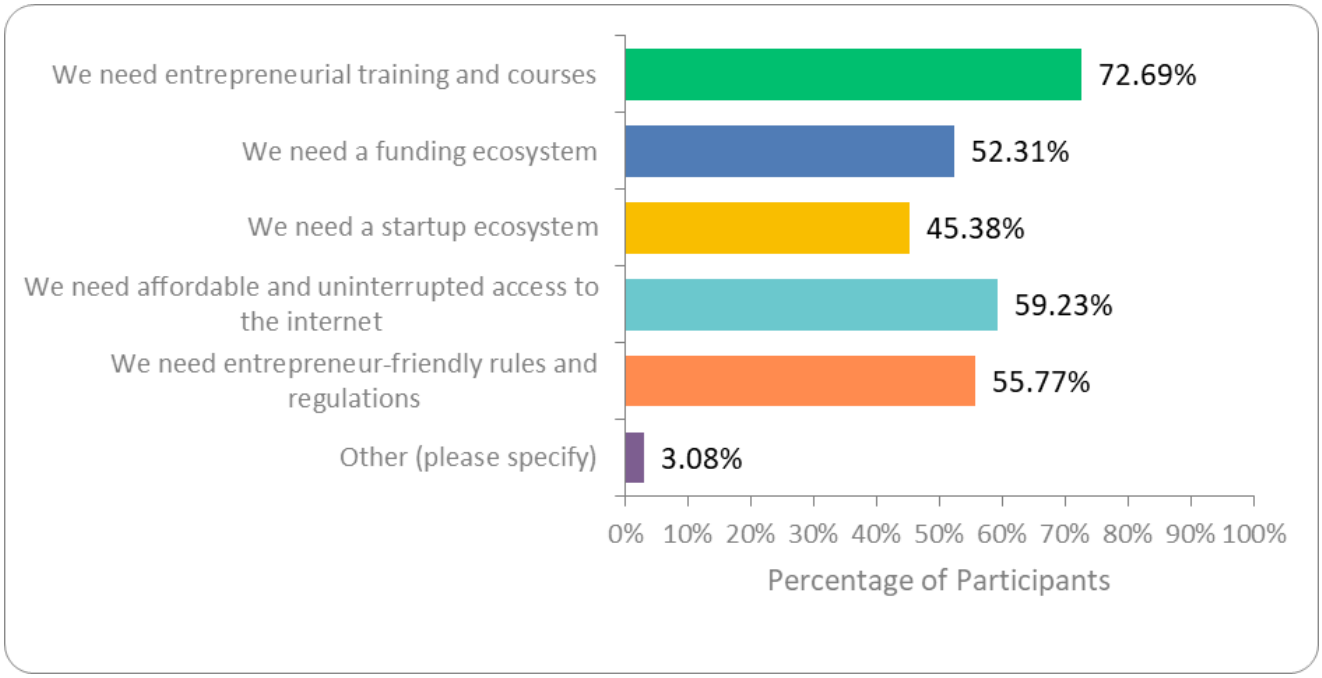
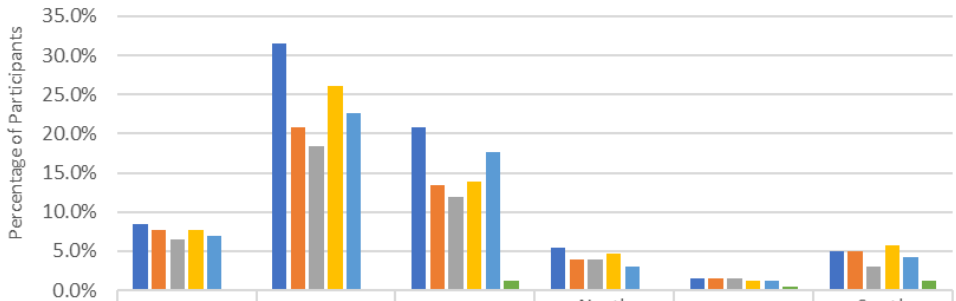


Figure 38



	Africa	Asia	Europe	North America	Oceania	South America
We need entrepreneurial training and courses	8.5%	31.5%	20.8%	5.4%	1.5%	5.0%
We need a funding ecosystem	7.7%	20.8%	13.5%	3.8%	1.5%	5.0%
We need a startup ecosystem	6.5%	18.5%	11.9%	3.8%	1.5%	3.1%
We need affordable and uninterrupted access to the internet	7.7%	26.2%	13.8%	4.6%	1.2%	5.8%
We need entrepreneur-friendly rules and regulations	6.9%	22.7%	17.7%	3.1%	1.2%	4.2%
Others	0.0%	0.0%	1.2%	0.0%	0.4%	1.2%

Startups have become a major contributor to the global economy through their ability to innovate, generate employment, and stimulate economic growth. There is a growing demand for entrepreneurial training and courses as 72.69% of the respondents reported in the study. The respondents include 8.5% from Africa, 31.5% from Asia, 20.8% from Europe, 5.4% from North America, 1.5% from Oceania, and 5% from South America (Figures 37 & 38). Additionally, 45.38% of the respondents expressed that they need a startup ecosystem (Figure 37). As the global economy continues to evolve, entrepreneurship is becoming an increasingly important aspect of economic growth and job creation. Moreover, technological advancements and the rise of the digital economy have opened new opportunities for entrepreneurs to create innovative products and services.

59.23% of the respondents stated that they need affordable and uninterrupted access to the Internet (Figure 37). These respondents include 7.7% (Africa), 26.2% (Asia), 13.8% (Europe), 4.6% (North America), 1.2% (Oceania) and 5.8% (South America) (Figure 38). In order to leverage the full potential of the Internet, affordable and uninterrupted access to the Internet is important for education, economic opportunities, access to information, and social inclusion.

Big Tech

In my view, Big Tech companies like Amazon, Apple, Facebook, Google, Microsoft, etc have:

Figure 39

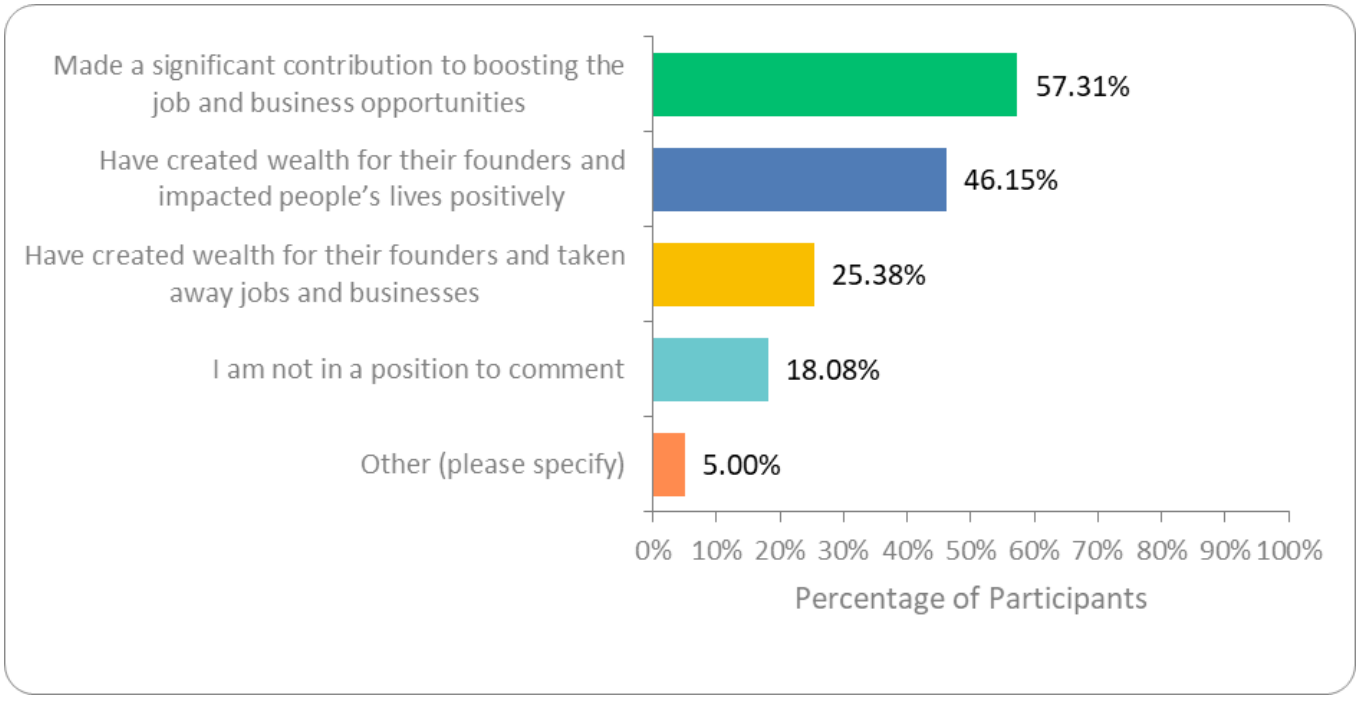
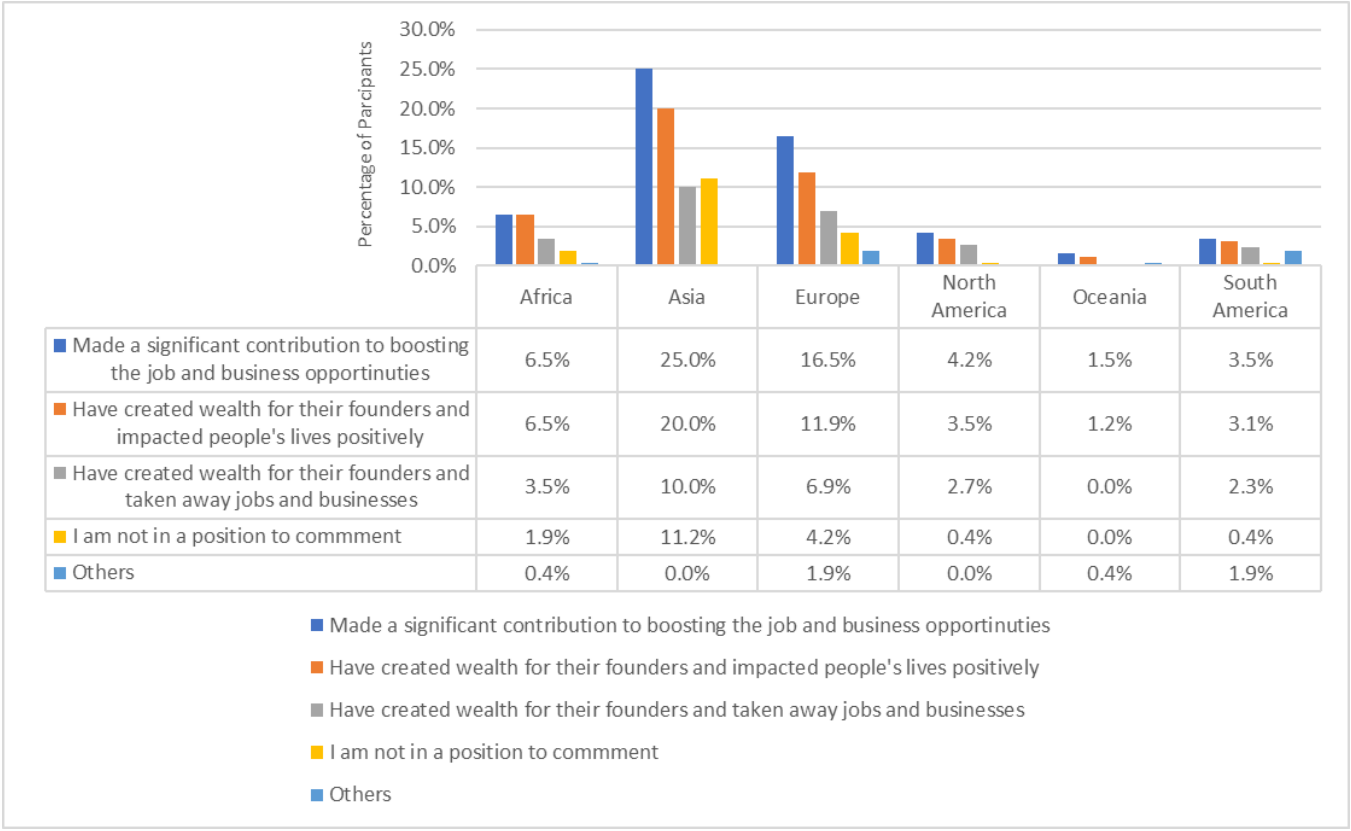


Figure 40



	Africa	Asia	Europe	North America	Oceania	South America
Made a significant contribution to boosting the job and business opportinuties	6.5%	25.0%	16.5%	4.2%	1.5%	3.5%
Have created wealth for their founders and impacted people's lives positively	6.5%	20.0%	11.9%	3.5%	1.2%	3.1%
Have created wealth for their founders and taken away jobs and businesses	3.5%	10.0%	6.9%	2.7%	0.0%	2.3%
I am not in a position to commment	1.9%	11.2%	4.2%	0.4%	0.0%	0.4%
Others	0.4%	0.0%	1.9%	0.0%	0.4%	1.9%

In response to the question, 57.31% of the respondents stated that Big-Tech made a significant contribution to boosting job and business opportunities (Figure 39). Furthermore, 25.38% of the respondents believe that Big-Tech have created wealth for their founders and taken away other jobs & businesses (Figure 39). However, 46.15% of the respondents believe that Big-Tech have created wealth for their founders but, at the same time, have positively impacted people's lives (Figure 39). While looking at this percentage, we need to consider that 18.08% of the study respondents are from Science and Technology background (Table 4).

Big tech companies bring innovative products & services and generate employment directly or indirectly. However, we saw mass layoffs in the tech industry in 2022- 2023 (Capoot & Pitt, 2023). While big tech companies have created many job opportunities but due to automation, manual jobs are getting replaced by Technology, especially in the manufacturing sector where automation has made many jobs obsolete.

As the world is moving towards digitalization, Big tech companies need to take responsibility to create a viable ecosystem for all. These companies need to invest in upskilling initiatives (as emphasized in our 2021 annual flagship report) and create more job opportunities across sectors.

Internet in Daily Routine

Which of the following applies to you?

Figure 41

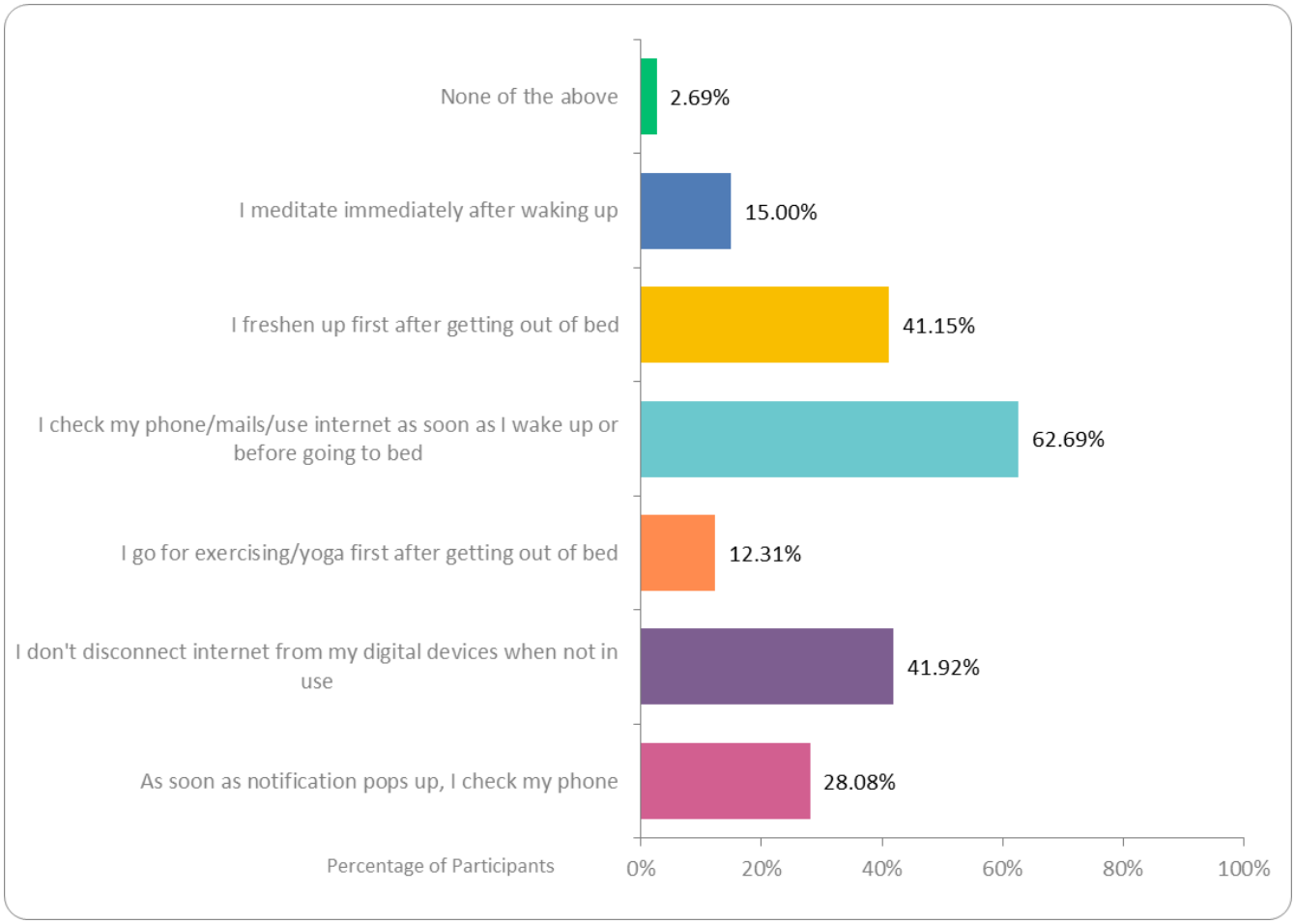
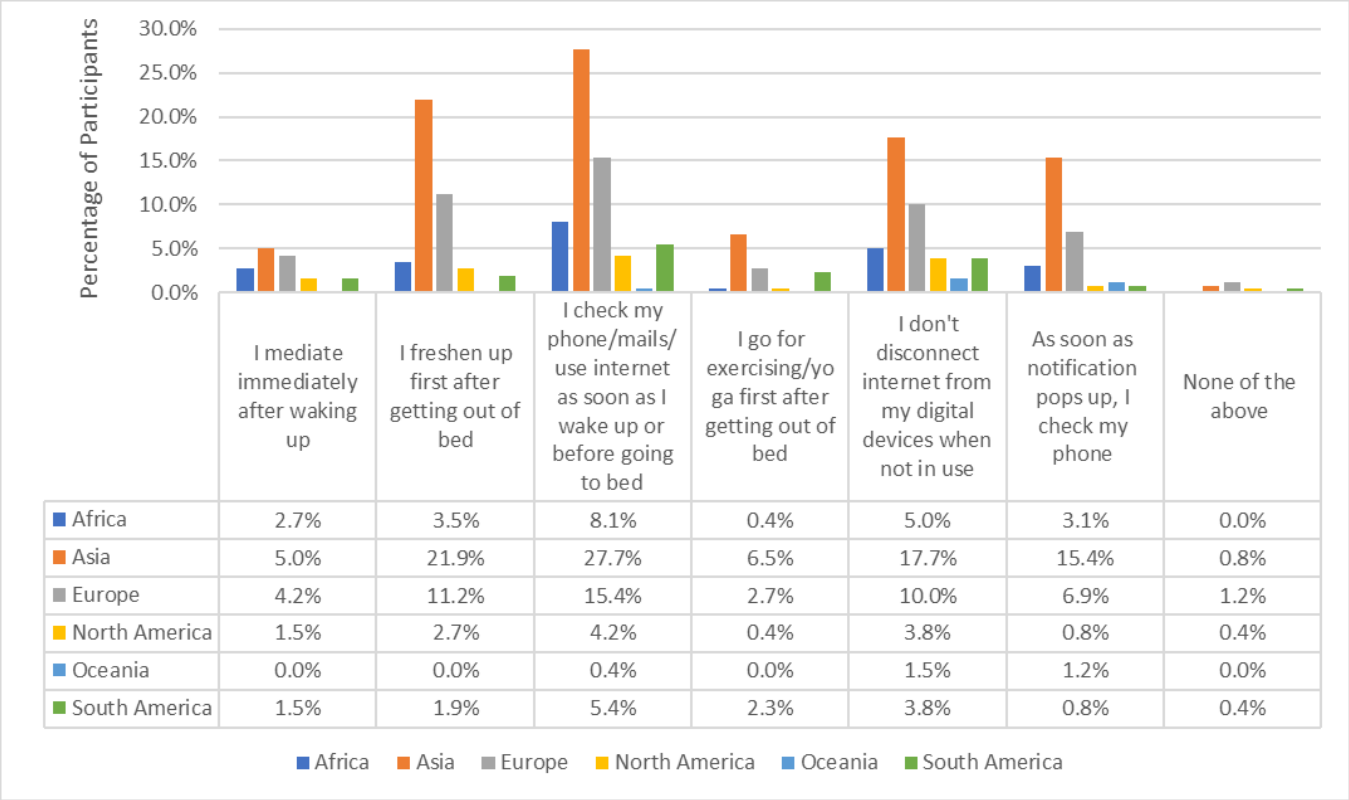


Figure 42



	I mediate immediately after waking up	I freshen up first after getting out of bed	I check my phone/mails/ use internet as soon as I wake up or before going to bed	I go for exercising/yoga first after getting out of bed	I don't disconnect internet from my digital devices when not in use	As soon as notification pops up, I check my phone	None of the above
Africa	2.7%	3.5%	8.1%	0.4%	5.0%	3.1%	0.0%
Asia	5.0%	21.9%	27.7%	6.5%	17.7%	15.4%	0.8%
Europe	4.2%	11.2%	15.4%	2.7%	10.0%	6.9%	1.2%
North America	1.5%	2.7%	4.2%	0.4%	3.8%	0.8%	0.4%
Oceania	0.0%	0.0%	0.4%	0.0%	1.5%	1.2%	0.0%
South America	1.5%	1.9%	5.4%	2.3%	3.8%	0.8%	0.4%

According to the study (Figure 41), 62.69% of the respondents check their phones, emails, or use the internet as soon as they wake up in the morning. The respondents include 8.1% from Africa, 27.7% (Asia), 15.4% (Europe), 4.2% (North America), 0.4% (Oceania), and 5.4% (South America) (Figure 42). Technology has positively benefitted us immensely in many ways, but it has also developed an addiction to technological devices. We found out that 28.08% of the respondents check their phones as soon as any notification pops up (Figure 41). Those addicted to digital devices often feel a compulsive need to use their devices, even when it's not necessary as 41.92% of the respondents claim that they do not disconnect the internet from their digital devices when not in use (Figure 41).

It's important to understand that unnecessary use of digital devices is contributing to digital carbon footprints as well as affecting physical and mental health. As technology continues to play a significant role in our daily lives, it becomes essential to realize how to use digital technologies effectively and responsibly.

Internet - Making a Difference

How has the internet made difference in your life?

Figure 43

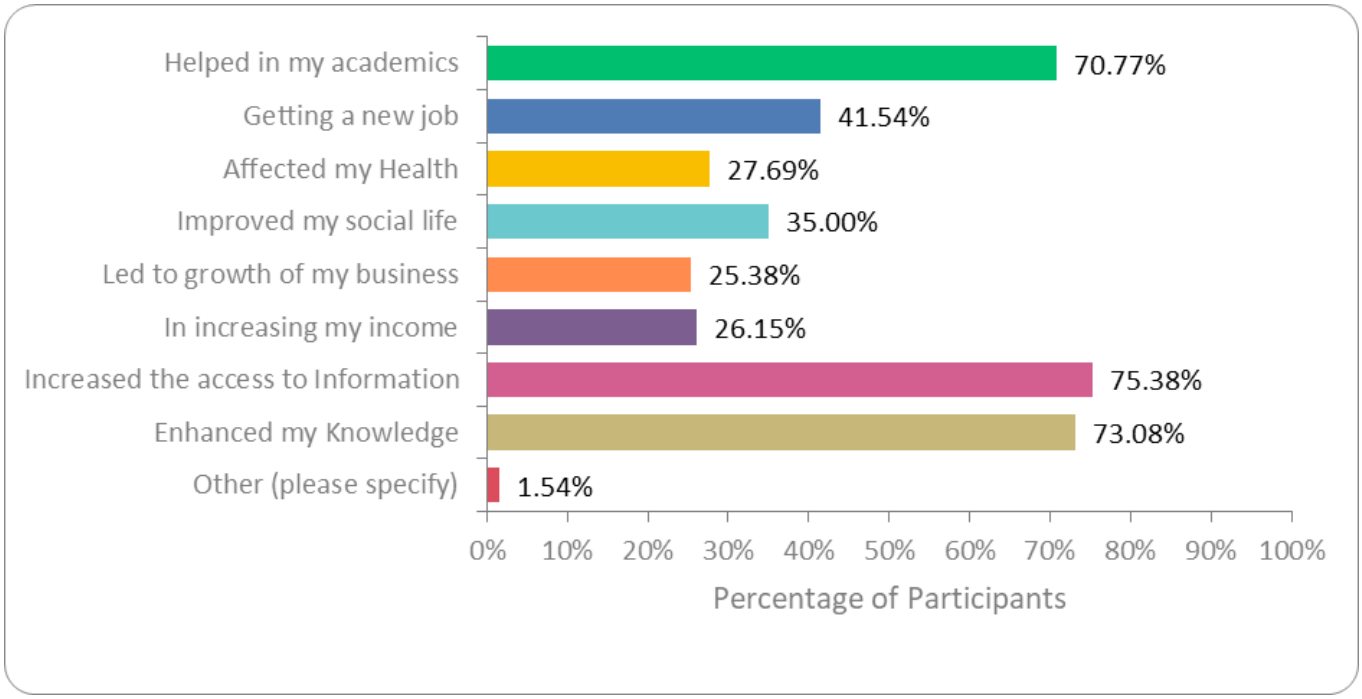
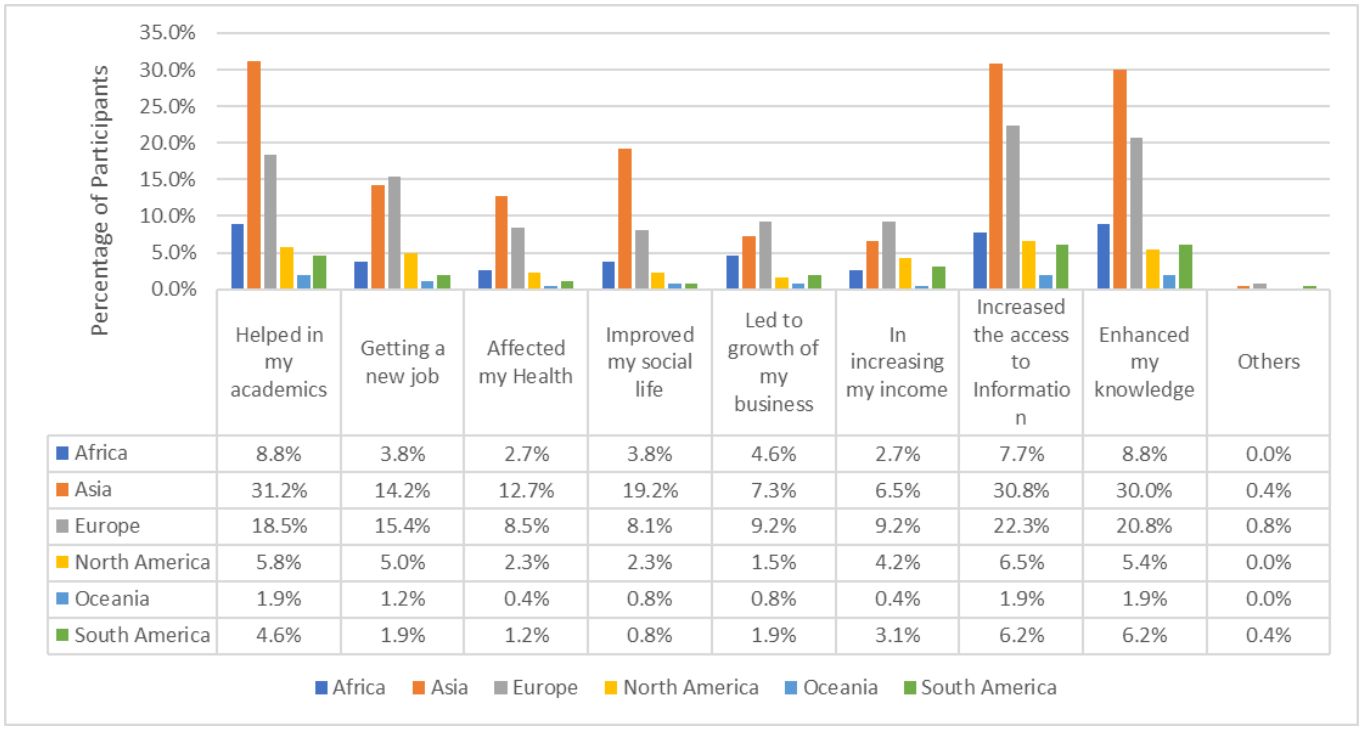


Figure 44



	Helped in my academics	Getting a new job	Affected my Health	Improved my social life	Led to growth of my business	In increasing my income	Increased the access to Information	Enhanced my knowledge	Others
Africa	8.8%	3.8%	2.7%	3.8%	4.6%	2.7%	7.7%	8.8%	0.0%
Asia	31.2%	14.2%	12.7%	19.2%	7.3%	6.5%	30.8%	30.0%	0.4%
Europe	18.5%	15.4%	8.5%	8.1%	9.2%	9.2%	22.3%	20.8%	0.8%
North America	5.8%	5.0%	2.3%	2.3%	1.5%	4.2%	6.5%	5.4%	0.0%
Oceania	1.9%	1.2%	0.4%	0.8%	0.8%	0.4%	1.9%	1.9%	0.0%
South America	4.6%	1.9%	1.2%	0.8%	1.9%	3.1%	6.2%	6.2%	0.4%

According to the study (Figure 43), 70.77% of the respondents stated that the Internet helped them in their academics. The respondents include 8.8% from Africa, 31.2% (Asia), 18.5% (Europe), 5.8% (North America), 1.9% (Oceania), and 4.6% (South America) (Figure 44). The internet has significantly transformed the process of accessing information and learning, and this impact has been particularly evident in the academic sphere.

The internet has created new opportunities for individuals seeking employment, enabling them to discover and apply for job openings, make connections with potential employers, and acquire new skills that can enhance their chances of securing a new job. 41.54% of the total respondents claim that the Internet helps in getting a new job (Figure 43). Also, 25.38% of the respondents state that the Internet has led to the growth of their business (Figure 43). The Internet has significantly influenced the expansion of businesses by offering diverse resources and platforms that enable them to broaden their customer base, increase their visibility, and enhance their revenue potential.

In addition to creating new job opportunities and helping in the growth of their business, the Internet has also helped in increasing people's income as reported by 26.15% of the respondents, 2.7% from Africa, 6.5% (Asia), 9.2% (Europe), 4.2% (North America), 0.4% (Oceania), 3.1% (South America) (Figure 44).

75.38% and 73.08% of the respondents believe that the Internet has increased access to Information and enhanced their knowledge, respectively (Figure 43).

Internet for Education

How can we utilize internet for Education?

Figure 45

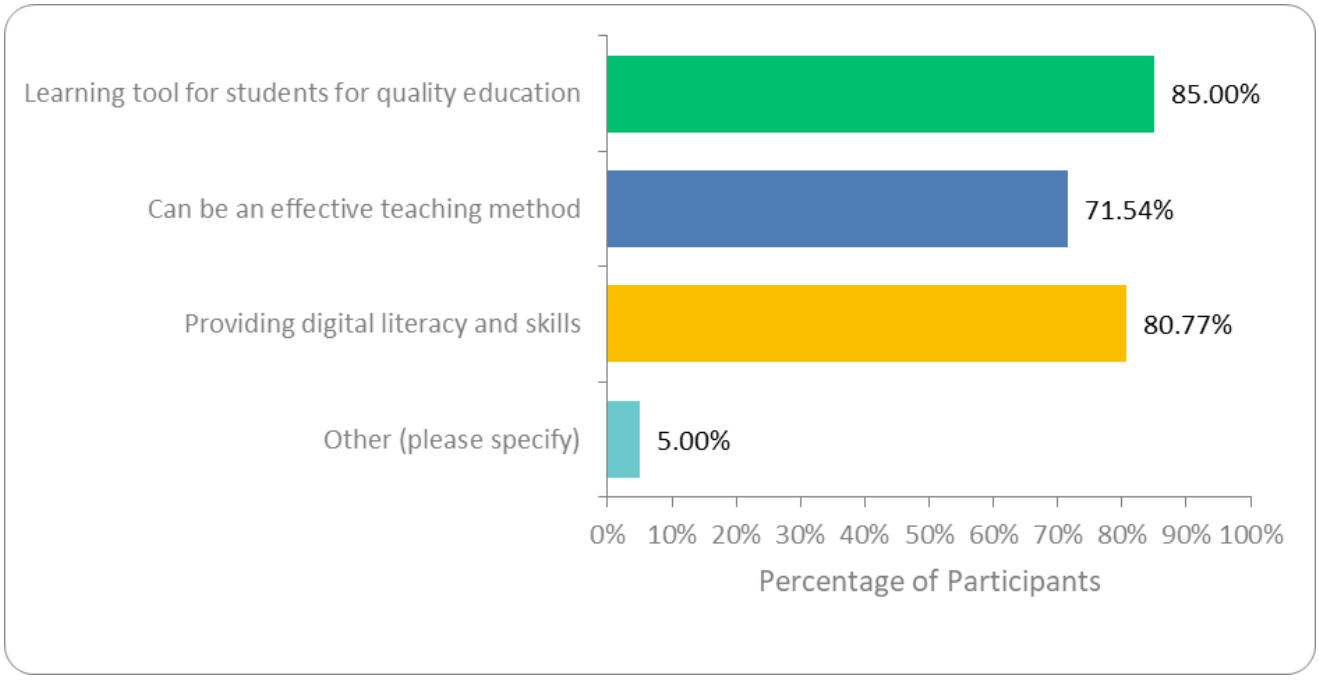
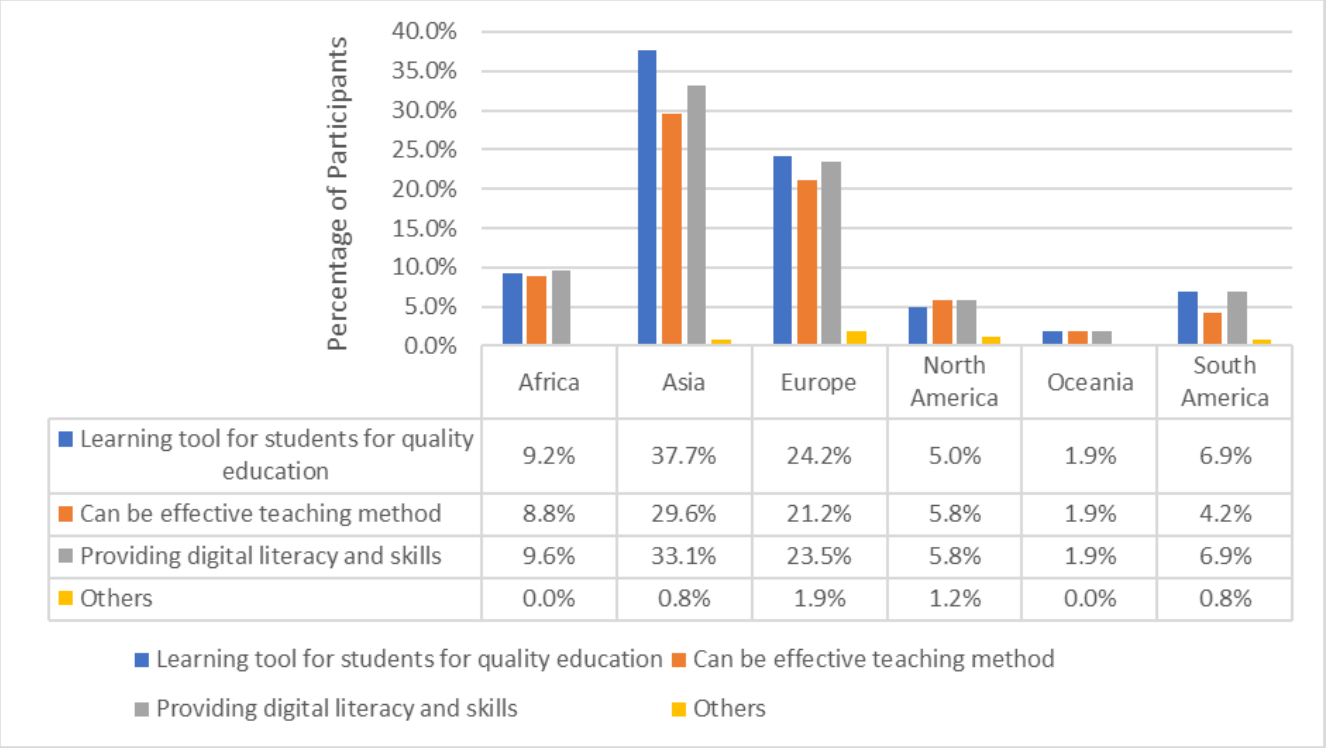


Figure 46



	Africa	Asia	Europe	North America	Oceania	South America
Learning tool for students for quality education	9.2%	37.7%	24.2%	5.0%	1.9%	6.9%
Can be effective teaching method	8.8%	29.6%	21.2%	5.8%	1.9%	4.2%
Providing digital literacy and skills	9.6%	33.1%	23.5%	5.8%	1.9%	6.9%
Others	0.0%	0.8%	1.9%	1.2%	0.0%	0.8%

The Internet has enhanced the accessibility, flexibility, and engagement of education for individuals from diverse age groups and backgrounds, creating new prospects for those who previously lacked access to traditional educational resources.

The internet is a powerful tool for information accessibility. The Internet has also proven to give interactive learning experiences which are more effective and engaging than conventional teaching methods. 85% of the total respondents stated that the Internet is a learning tool for students for quality education (Figure 45).

After the COVID-19 pandemic, the world witnessed a big change in terms of e-learning. Online learning has also made education possible for students from remote areas. Of the 71.54% of the total respondents with 8.8% from Africa, 29.6% (Asia), 21.2% (Europe), 5.8% (North America), 1.9% (Oceania), and 4.2% (South America), expressed that the Internet can be an effective teaching method (Figure 46).

According to the study (Figure 45), 80.77% of the respondents believe that the Internet can provide digital literacy and skills which are essential in the today's digital age.

Metaverse

With regards to Metaverse, what do you think?

Figure 47

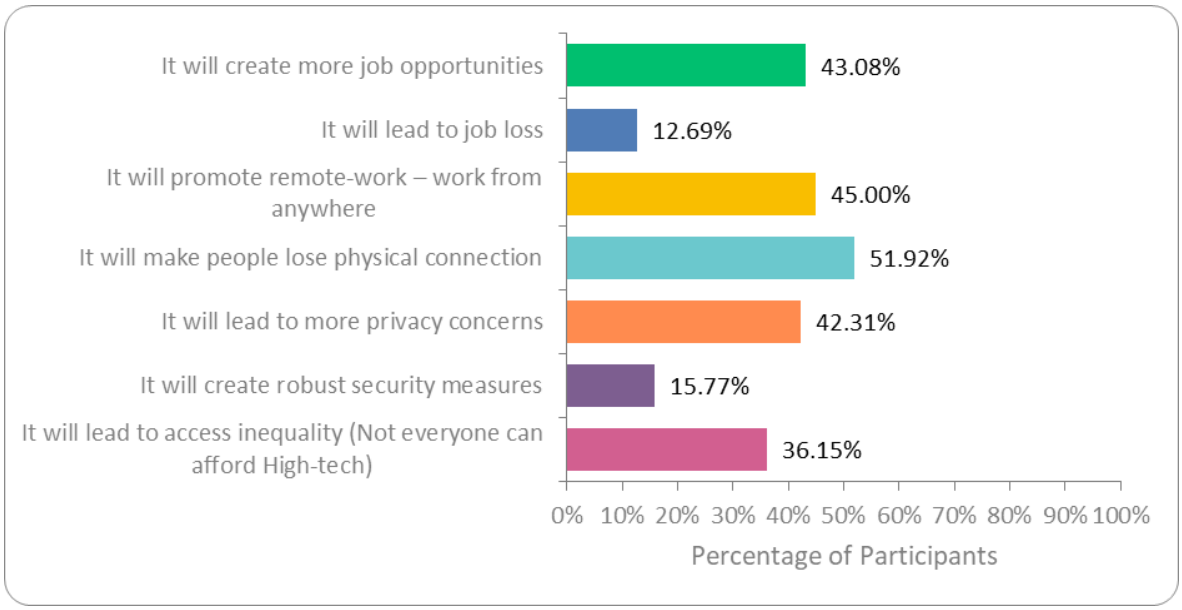
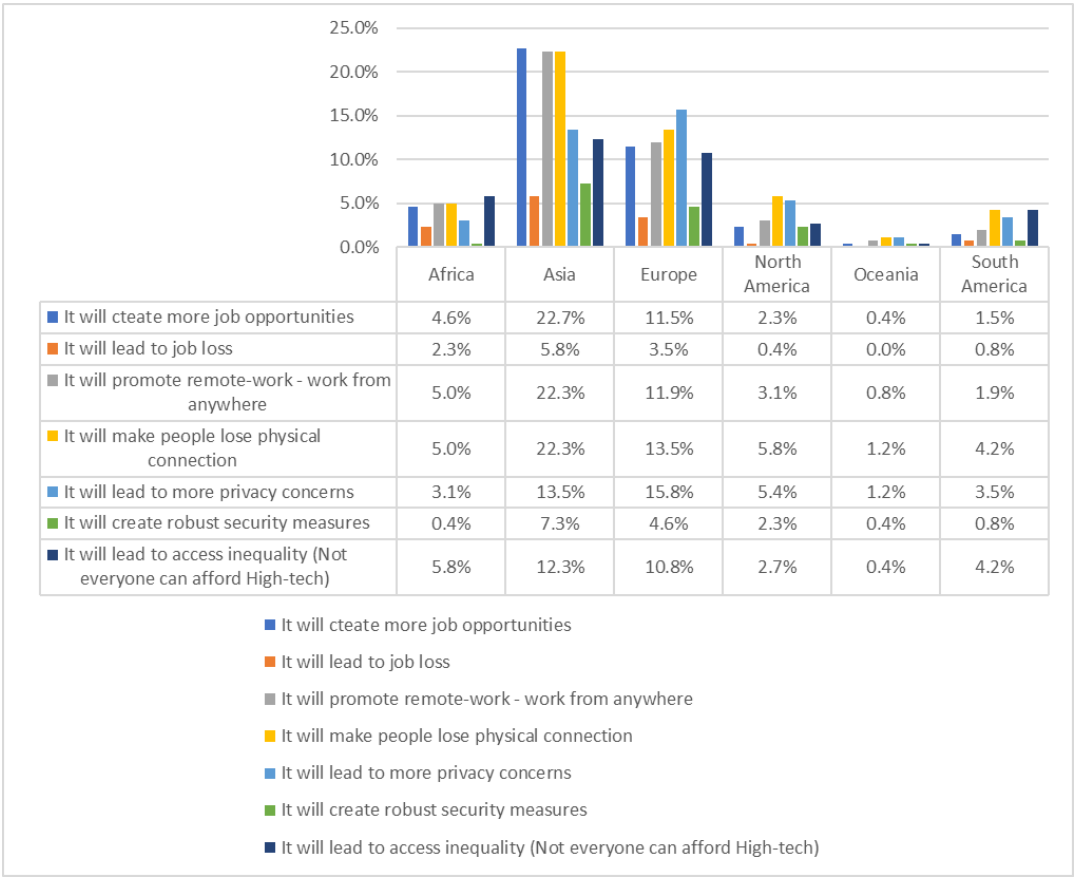


Figure 48



	Africa	Asia	Europe	North America	Oceania	South America
It will cteate more job opportunities	4.6%	22.7%	11.5%	2.3%	0.4%	1.5%
It will lead to job loss	2.3%	5.8%	3.5%	0.4%	0.0%	0.8%
It will promote remote-work - work from anywhere	5.0%	22.3%	11.9%	3.1%	0.8%	1.9%
It will make people lose physical connection	5.0%	22.3%	13.5%	5.8%	1.2%	4.2%
It will lead to more privacy concerns	3.1%	13.5%	15.8%	5.4%	1.2%	3.5%
It will create robust security measures	0.4%	7.3%	4.6%	2.3%	0.4%	0.8%
It will lead to access inequality (Not everyone can afford High-tech)	5.8%	12.3%	10.8%	2.7%	0.4%	4.2%

According to the study (Figure 47), 43.08% of the respondents believe that Metaverse is likely to create more job opportunities. People, around the world, seem positive in regard to Metaverse creating more job opportunities. This group of people is 4.6% from Africa, 22.7% (Asia), 11.5% (Europe), 2.3% (North America), 0.4% (Oceania), and 1.5% (South America) (Figure 48). There will be growing demand for developers, designers, and allied professionals to build, manage, and operate virtual environments and similar experiences. With the evolvement of Metaverse and as it becomes more integrated into people's lives, new types of jobs may emerge altogether.

12.69% of the respondents believe that Metaverse will lead to job loss (Figure 47). It is important to consider that Metaverse, with digital disruption, may impact existing jobs which can become obsolete in the new future. So, it becomes imperative for individuals to adopt new skills and technologies.

According to the study (Figure 47), 42.31% of the respondents state that Metaverse will lead to more privacy concerns.

With the advent of digitalization, there needs to be more stringent privacy rules and regulations.

Ms. Priya Shukla
Co-ordinator, DC- Internet & Jobs

36.15% of the respondents opine that Metaverse will lead to access inequality because not everyone can afford High-tech. The respondents include 5.8% from Africa, 12.3% (Asia), 10.8% (Europe), 2.7% (North America), 0.4% (Oceania), and 4.2% (South America). The issue of affordability needs to be addressed globally.

The full impact of the Metaverse remains to be seen as it is still in the evolutionary phase.

E-commerce

When it comes to E-commerce, what do you think:

Figure 49

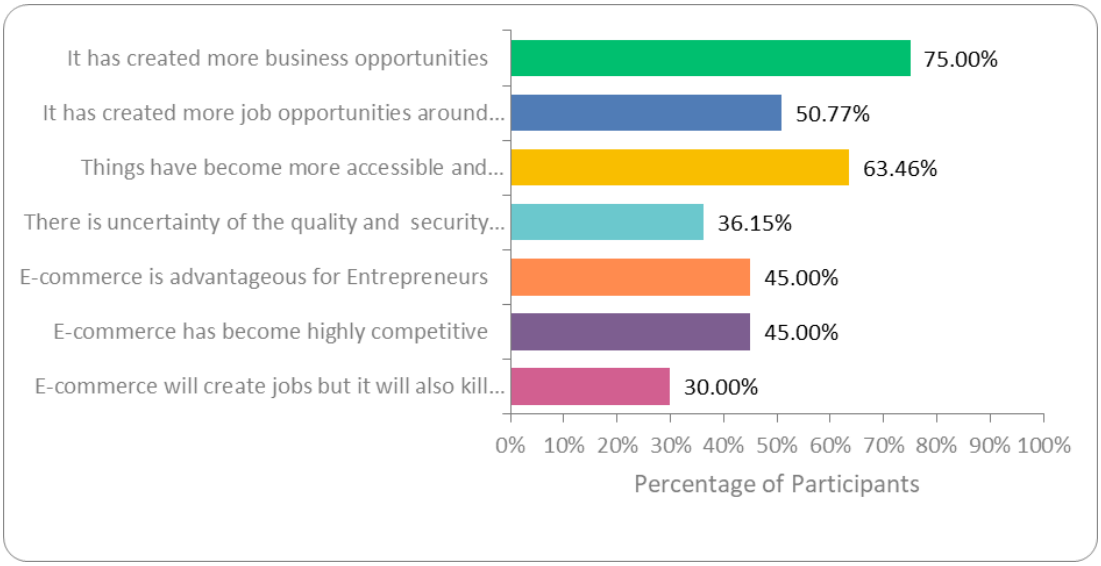
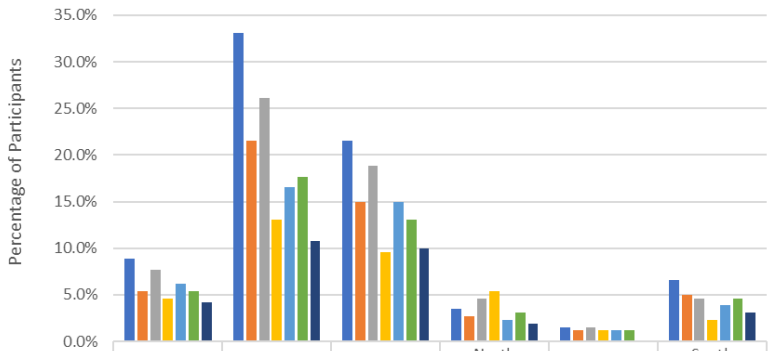


Figure 50



	Africa	Asia	Europe	North America	Oceania	South America
It has created more business opportunities	8.8%	33.1%	21.5%	3.5%	1.5%	6.5%
It has created more job opportunities around the sectors	5.4%	21.5%	15.0%	2.7%	1.2%	5.0%
Things have become more accessible and affordable	7.7%	26.2%	18.8%	4.6%	1.5%	4.6%
There is uncertainty of the quality and security issues of products	4.6%	13.1%	9.6%	5.4%	1.2%	2.3%
E-commerce is advantageous for Entrepreneurs	6.2%	16.5%	15.0%	2.3%	1.2%	3.8%
E-commerce has become highly competitive	5.4%	17.7%	13.1%	3.1%	1.2%	4.6%
E-commerce will create jobs but it will also kill businesses and take away jobs resulting in a net job loss	4.2%	10.8%	10.0%	1.9%	0.0%	3.1%

According the study, 75% of the respondents claim that e-commerce has created more business opportunities (Figure 49). Now, many businesses are moving online, the demands for professionals with tech skills, such as web designing, online marketing, and data analysis, are increasing. By leveraging e-commerce platforms and tools, people find it easy to start and grow their own businesses.

There are several reasons why e-commerce can be advantageous, including low start-up costs, access to a global market, flexibility in running a business, the availability of detailed analytics and data, and not needing physical infrastructure. The study findings suggests that 45% of the respondents find e-commerce advantageous for entrepreneurs (Figure 49). If we consider continent-wise, the percentage of the respondents is as follows: 6.2% from Africa, 16.5% (Asia), 15% (Europe), 2.3% (North America), 1.2% (Oceania), and 3.8% (South America) (Figure 50).

With all the advantages, there can be an uncertainty of the quality and security issues of products in e-commerce and according to the study (Figure 49), 36.15% believe so. E-commerce businesses can handle quality and security issues by implementing various measures. For instance, they can conduct product testing and quality control procedures to guarantee that their products meet the required standards. To assist customers in making informed purchasing decisions, they can offer in-depth product descriptions, images, and videos. Furthermore, to safeguard customer information and prevent fraud, e-commerce businesses can invest in secure payment gateways and data protection measures.

The study finding indicates that 30% of the total respondents believe that e-commerce will create jobs but it will also kill businesses and take away jobs resulting in a net job loss. There is a need for effective marketing strategies and a sustainable model. (Figure 49)

Carbon footprint of Digital Footprint

Are you aware of your carbon footprint of your gadgets and use of internet:

Figure 51

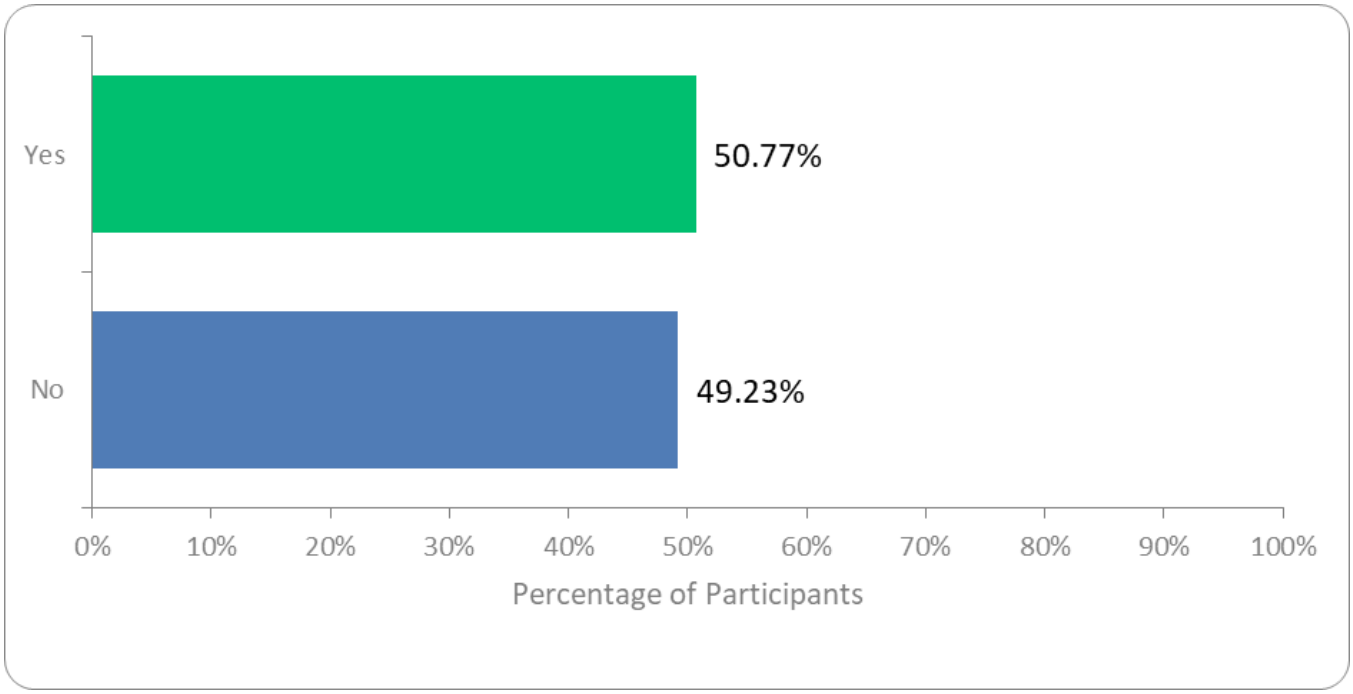
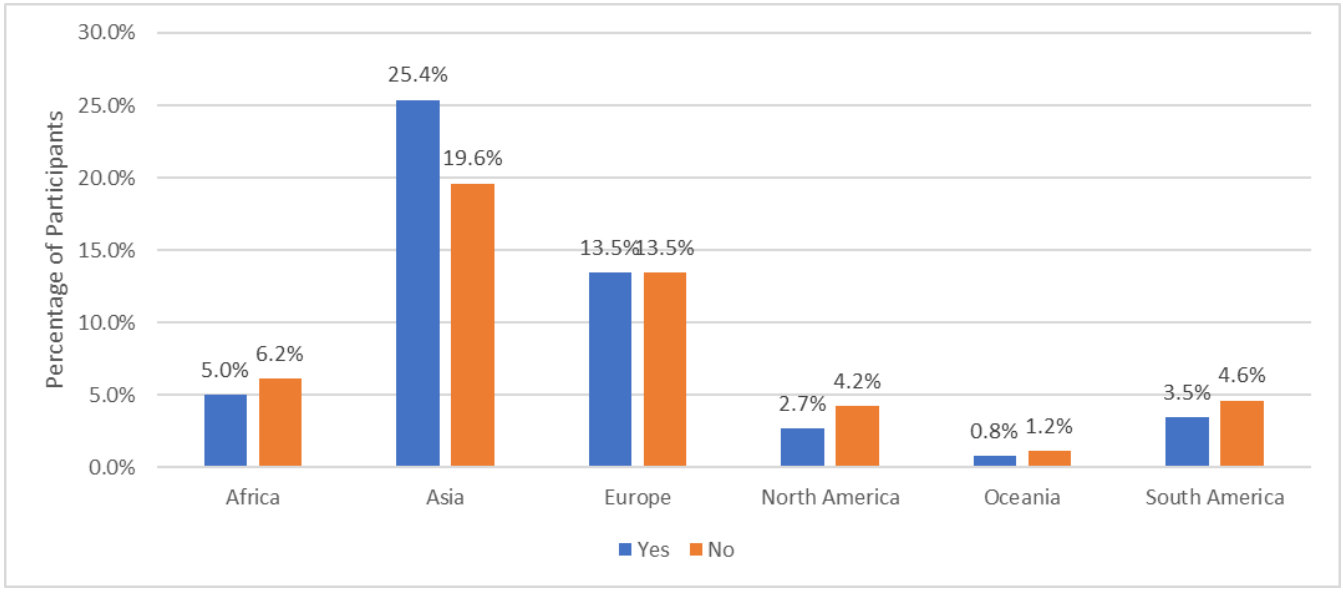


Figure 52



The rapid growth of Internet usage is leading to more energy consumption which is contributing to climate change. The Internet has a huge environmental impact for which timely awareness is critical. Change first comes with awareness and eventually with implementation. 50.77% of the respondents claim that they are aware of the carbon footprint of their gadgets and the use of the Internet (Figure 51). If they practically use the Internet responsibly then that would also bring a good impact.

According to the study, half of the total survey respondents do not know the carbon footprint of their gadgets. These respondents (49.23%) include, 6.2% from Africa, 19.6% (Asia), 13.5% (Europe), 4.2% (North America), 1.2% (Oceania), and 4.6% (South America). (Figure 52)

Recommendations

1) **Right to Internet by 2032:**

UN IGF needs to develop a charter to ensure 'Internet for All' by 2032. This topic should be taken up in the Parliamentary track and the youth track to work on a charter and roadmap to leave no one behind.

2) **Reskilling and Upskilling:**

It is crucial for governments, businesses, and educational institutions to prioritize investment in programs aimed at re-skilling and up-skilling workers. Such programs will assist workers in transitioning to new industries and opportunities. It's crucial for governments and the private sector to offer opportunities for skill and capability development. As technology replaces traditional jobs, individuals must adapt to new roles, and they require support in this transition. The stakeholders should not only provide encouragement but also outline career progression and actionable steps towards skill development. By doing so, individuals will feel less worried about their future and more motivated to take an active role in shaping it.

3) **Online learning:**

With the growing space for digitalization, it is crucial to develop digital literacy programs to get easy access to digital knowledge and skills to a wider range of people, including those who live in remote areas, have mobility issues, or cannot attend traditional in-person classes for other reasons. Online learning platforms offer the flexibility for individuals to learn at their own pace and schedule, making it convenient for those who need to balance their education with work or other commitments. Additionally, they are often more cost-effective than traditional in- person courses, making education more accessible to people who may not have the financial resources to attend college or university. With the changing nature of work, individuals need to continuously update their skills to remain competitive in the job market, and online learning platforms offer a convenient and efficient way to gain the necessary knowledge and skills for career success.

4) Stringent data privacy rules:

Strict regulations for data privacy are essential to safeguard the personal data of individuals, prevent any fraudulent activities, establish trust and credibility, eliminate discrimination, and thwart any data breaches. By taking measures to protect sensitive information, both organizations and individuals can avoid the adverse outcomes that may arise from its unauthorized use. For reference: General Data Protection Regulation (GDPR) of European Union (European Council , 2016), California Consumer Privacy Act (CCPA) of United States (State of California Department of Justice, 2018), Digital Personal Data Protection Bill 2022 of India (PIB Delhi, 2022).

5) **Responsible Internet Usage:**

The increasing dependence on the Internet is contributing to digital carbon footprints, which is having a detrimental impact on the environment. Additionally, this excessive use of the Internet is leading to adverse health effects on individuals. Key stakeholders need to focus on awareness campaigns and education to sensitize people. Please refer to the report titled ' Responsible Internet Usage' released by the DC-Jobs at IGF 2022 in Ethiopia.

6) **Public-Private Partnerships:**

Public Private Partnerships (PPPs) can play a major role in adressing the issues of jobs. PPPs allow the public sector to utilize the expertise, resources, and innovative solutions of the private sector to enhance the delivery of public services and infrastructure, leading to better quality and efficient outcomes. Additionally, PPPs can help bridge the gap in funding for public services, especially in situations where governments face budget constraints. This allows for reduced financial burden on taxpayers as private sector partners can provide funding. Furthermore, PPPs promote accountability and transparency, ensuring that services are delivered in an accountable and transparent manner that protects public interests. By collaborating, the public and private sectors can achieve mutually beneficial outcomes.

7) **Business Models for SMEs:**

We need to create profitable business models for SMEs - to totally democratize the internet and fully leverage its economic potential

8) **Project CREATE:**

Announced at 17th IGF in Ethiopia, Project CREATE needs to be adopted by Governments and industry bodies across the globe. We should start working on the job creation potential of the internet, and work out the pathways for ensuring 'Internet for All & Livelihood for All' through a technology ecosystem.

9) **Women in Digital Age:**

Women, the progenitor, who take care of the household and plays a key role in socio-economic development may be left behind in the digital age. This must be a focus area and there should be special skilling programs funded or subsidized by the government

10) **Seniors or Older Adults:**

It has been highlighted in our earlier report (2021), that we need special skilling courses for people who are in their 60s and above. Else, we would have created a bigger digital divide.

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IGF Internet Governance Forum
Dynamic Coalition on Internet & Jobs

CREATE
INTERNET FOR ALL
LIVELIHOOD FOR ALL
Collaborate to Realize Employment & Entrepreneurship For All Through Technology Ecosystem

We are living in the Digital age, and increased technology adoption should lead to job creation. Still, we see mass layoffs across the tech industry, and this will continue, which brings to the fore the biggest challenge of 'job creation' for countries, more so, for the LMICs (Low- and Middle-Income Countries) - which have huge populations to serve, but lack the financial wherewithal, and the increased digital divide with nearly 2.7 billion of the world are out of the internet era.

We can reverse this by creating decentralized technology models around individuals and communities to ensure 'Internet for All & Livelihood for All'. We need to engage multiple stakeholders (Academia, Government, Industry, Multi-lateral bodies & Civil Society) to come together with a goal to:

a) Bridge the digital divide by connecting everyone to the internet.

b) Create a tech-enabled ecosystem to provide employment and entrepreneurial opportunities to everyone.

We believe that Internet technologies can create a tech-enabled ecosystem that can connect the world seamlessly and provide a pathway for ensuring 'Livelihood for All' through 'Internet for All.' Hence the Project CREATE.

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Metaverse
Digital
Austria
Oman
Thailand
Finland
Jobs
Automation
France
High-tech
Romania
Brazil
Chile
Rwanda
Namibia
Big tech
Canada
Ethiopia
Yemen
UAE
Egypt
Bulgaria
Social Inclusion
Bangladesh
Mexico
United States
Cameroon
Upskilling
Global economy
Tunisia
E-commerce
Internet
Reskilling
Innovation
Netherlands