



JABATAN PERDANA MENTERI
JABATAN PERANGKAAN MALAYSIA

LAPORAN SURVEI PENGGUNAAN DAN CAPAIAN ICT OLEH INDIVIDU DAN ISI RUMAH

ICT USE AND ACCESS BY INDIVIDUALS AND HOUSEHOLDS SURVEY REPORT

2021

Pemakluman/ Announcement:

Jabatan Perangkaan Malaysia sedang menjalankan Survei Pendapatan, Perbelanjaan Isi Rumah dan Kemudahan Asas (HIES/BA) 2022 bermula dari 1 Januari 2022 sehingga 31 Disember 2022.

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Diterbit dan dicetak oleh/ *Published and printed by:*

Jabatan Perangkaan Malaysia
Department of Statistics, Malaysia

Blok C6, Kompleks C,
Pusat Pentadbiran Kerajaan Persekutuan,
62514 Putrajaya,
MALAYSIA

Tel.	: 03-8885 7000
Faks	: 03-8888 9248
Portal	: https://www.dosm.gov.my
Facebook/ Twitter/ Instagram	: StatsMalaysia
Emel/ <i>Email</i>	: info@dosm.gov.my (pertanyaan umum/ <i>general enquiries</i>) data@dosm.gov.my (pertanyaan & permintaan data/ <i>data request & enquiries</i>)

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ISSN 2289 - 7240

PRAKATA

Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2021 membentangkan statistik mengenai penggunaan dan capaian ICT oleh individu dan isi rumah. Statistik yang diterbitkan dalam laporan ini adalah berdasarkan konsep dan garis panduan daripada *Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition* yang diterbitkan oleh *International Telecommunication Union (ITU)*.

Statistik daripada laporan ini digunakan oleh agensi kerajaan dan pihak swasta sebagai input dalam perancangan, pembentukan dan pemantauan rancangan pembangunan ICT negara. Statistik ini juga digunakan oleh ahli ekonomi, ahli akademik serta individu lain bagi tujuan penyelidikan dan penganalisan.

Laporan ini mengandungi tiga bahagian utama. Ringkasan penemuan dibentangkan di bahagian pertama manakala bahagian kedua memuatkan jadual terperinci mengenai statistik penggunaan dan capaian ICT. Aspek teknikal seperti konsep, definisi dan metodologi diterangkan di bahagian ketiga bagi memudahkan pengguna memahami statistik dan terma yang diterbitkan.

Jabatan Perangkaan Malaysia (DOSM) merakamkan setinggi-tinggi penghargaan atas kerjasama yang diberikan oleh semua pihak dalam membekalkan data yang diperlukan dan menyumbang kepada kejayaan penerbitan ini. Setiap maklum balas dan cadangan untuk penambahbaikan penerbitan ini pada masa akan datang amat dihargai.

DATO' SRI DR. MOHD UZIR MAHIDIN

Ketua Perangkawan Malaysia

April 2022



PREFACE

The ICT Use and Access by Individuals and Households 2021 Survey Report presents statistics on the use and access of ICT by individuals and households. Statistics published in this report are based on the concepts and guidelines from the Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition published by the International Telecommunication Union (ITU).

Statistics from this report are primarily used by government and private agencies as an input in the planning, formulating and monitoring of national ICT development plans. These statistics can be used by economists, academicians and other individuals for research and analysis purposes.

This report consists of three main sections. Summary of findings is presented in the first section while second section contains detailed tables on the use and access of ICT statistics. Technical aspects such as concepts, definitions and methodologies are described in section three in order to facilitate users with better understanding pertaining to the published statistics.

The Department of Statistics Malaysia (DOSM) gratefully acknowledges cooperation provided by all parties that provided the required data and contributed to the success of this publication. Every feedback and suggestion towards improving future reports are highly appreciated.

DATO' SRI DR. MOHD UZIR MAHIDIN

Chief Statistician Malaysia

April 2022

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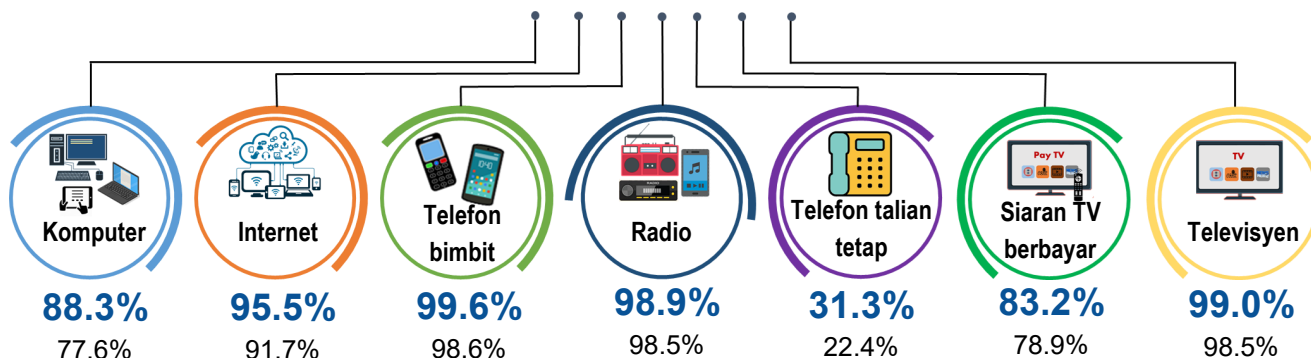
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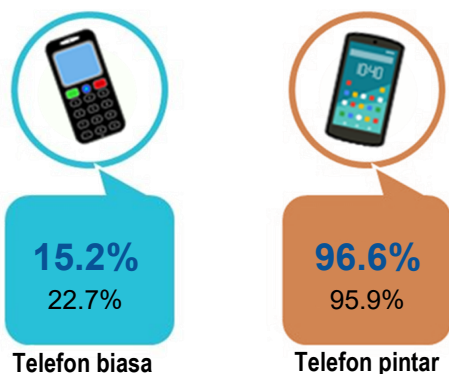
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CAPAIAH ICT OLEH ISI RUMAH 2021

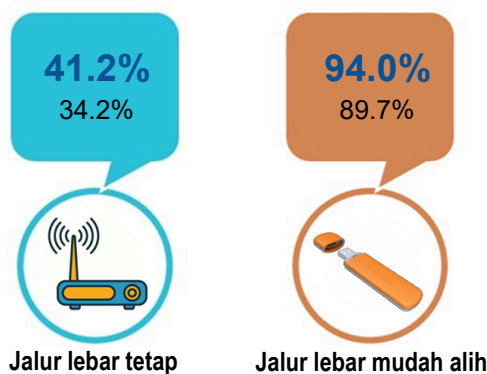
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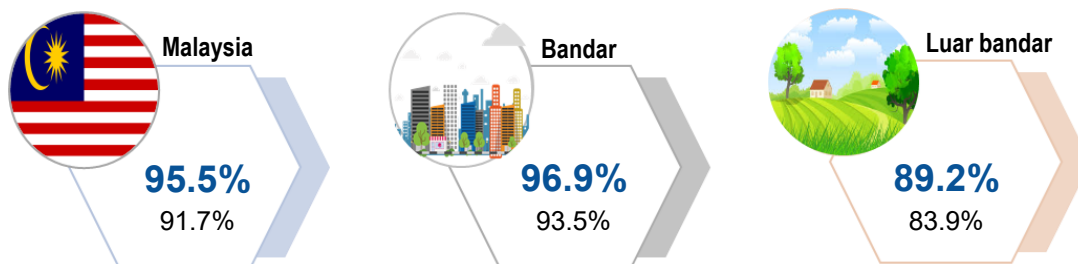
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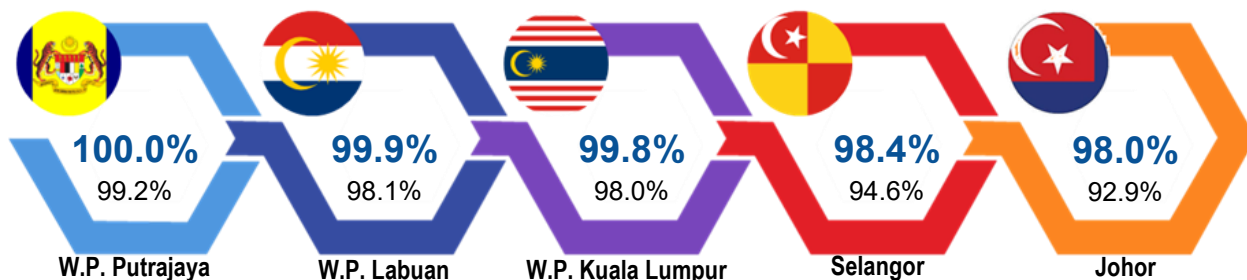
CAPAIAH INTERNET



CAPAIAH INTERNET MENGIKUT STRATA



5 NEGERI DENGAN CAPAIAH INTERNET TERTINGGI



2021 2020



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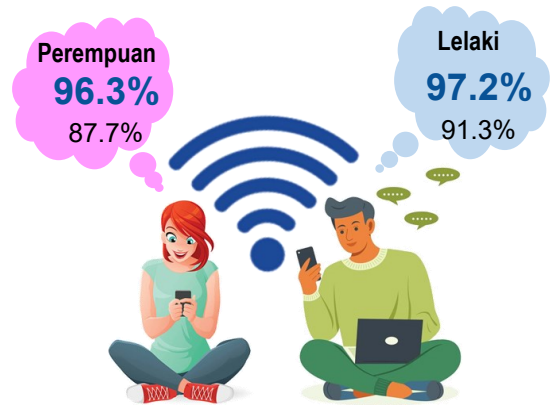


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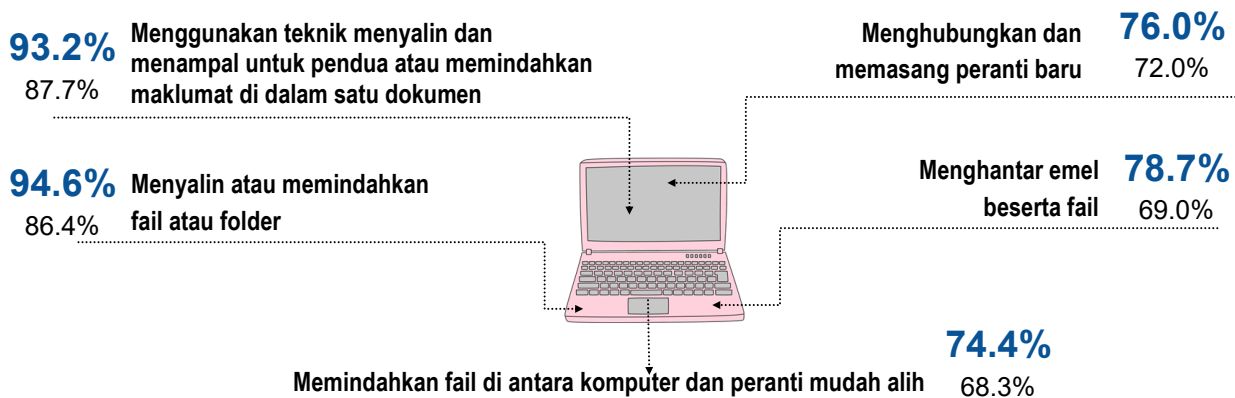
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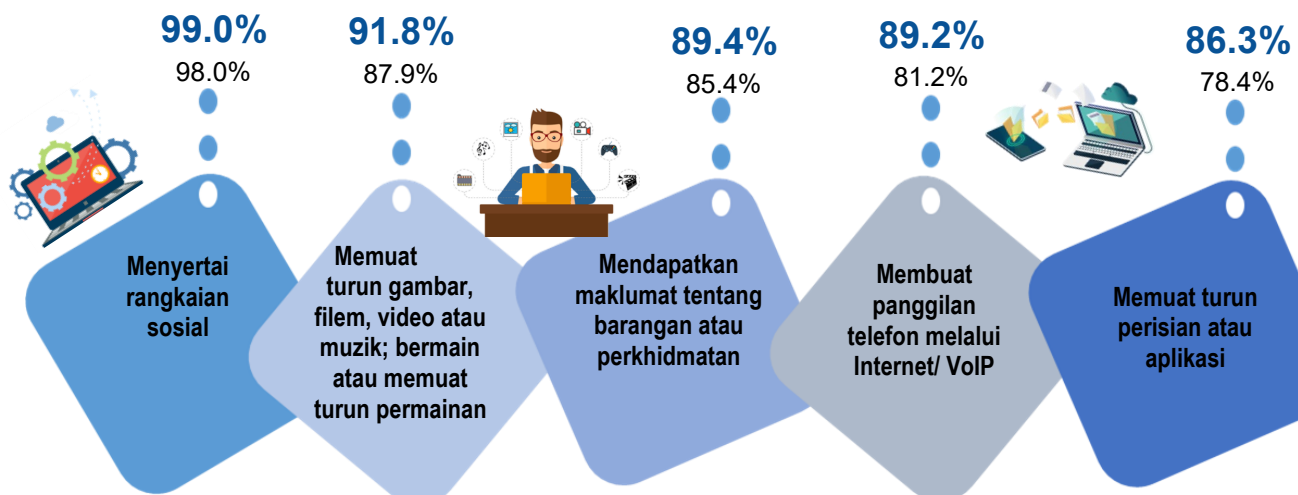
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5 KEMAHIRAN ICT TERTINGGI PENGUNAAN KOMPUTER



5 AKTIVITI POPULAR PENGUNAAN INTERNET



Sumber: Laporan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah 2021, Jabatan Perangkaan Malaysia



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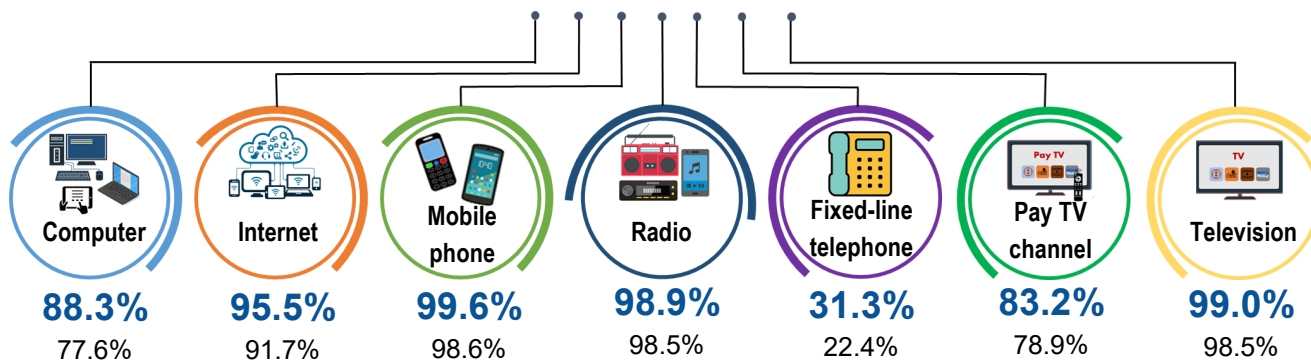


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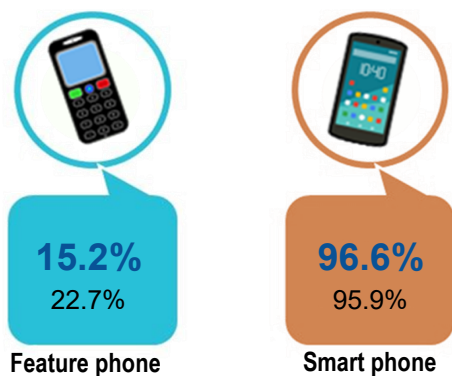


ICT ACCESS BY HOUSEHOLD 2021

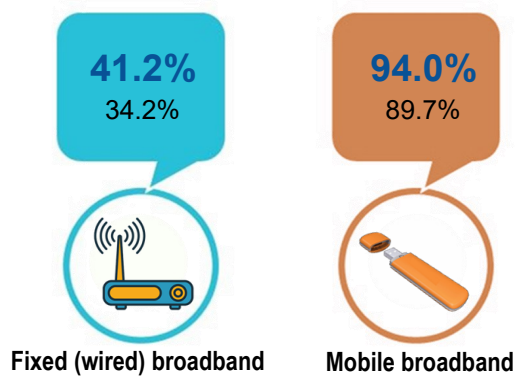
ACCESS TO ICT SERVICES AND EQUIPMENTS



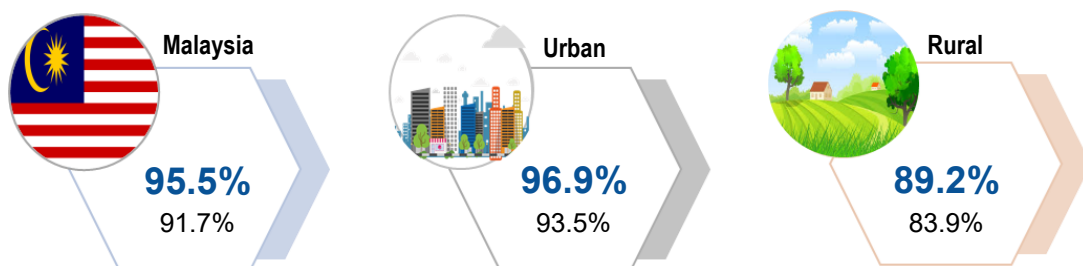
ACCESS TO MOBILE PHONE



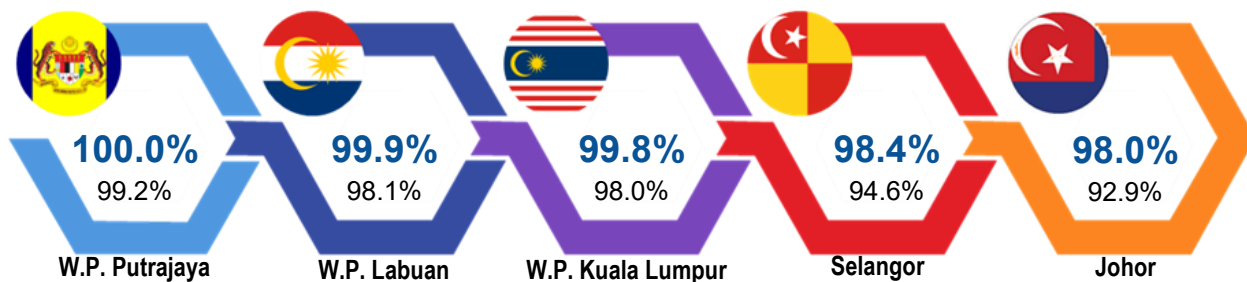
ACCESS TO INTERNET



INTERNET ACCESS BY STRATA



TOP 5 STATES WITH HIGHEST INTERNET ACCESS



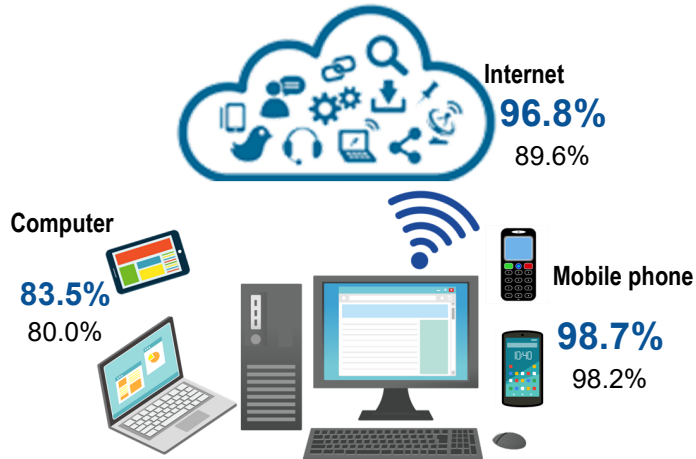
2021 2020

Source: ICT Use and Access by Individuals and Households Survey Report 2021, Department of Statistics, Malaysia

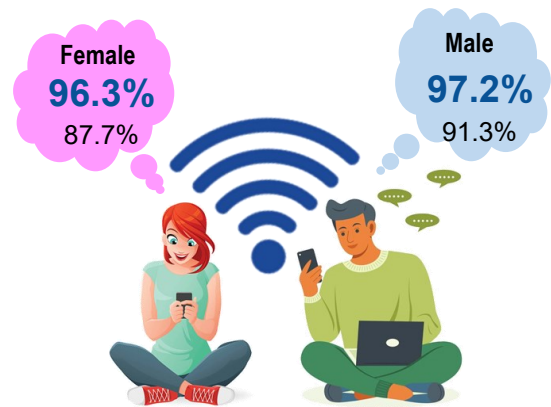


ICT USE BY INDIVIDUALS 2021

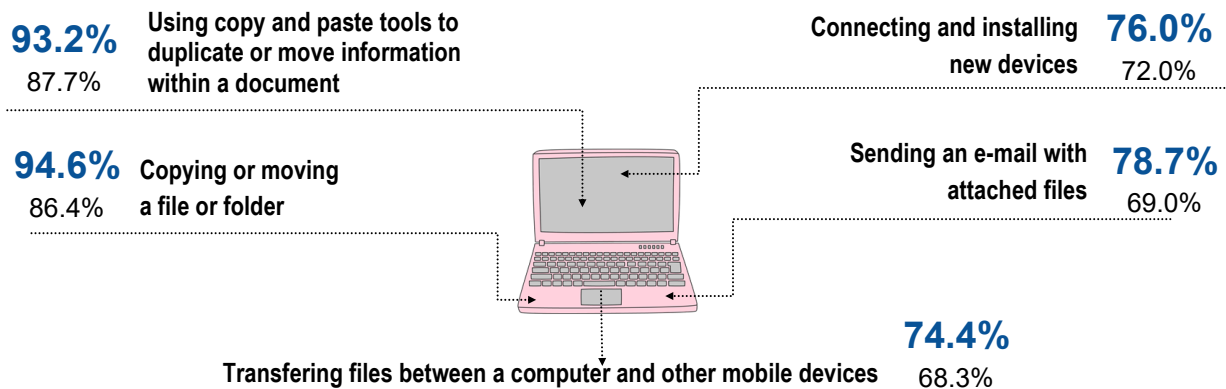
USE OF ICT SERVICES AND EQUIPMENT



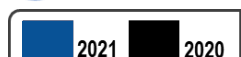
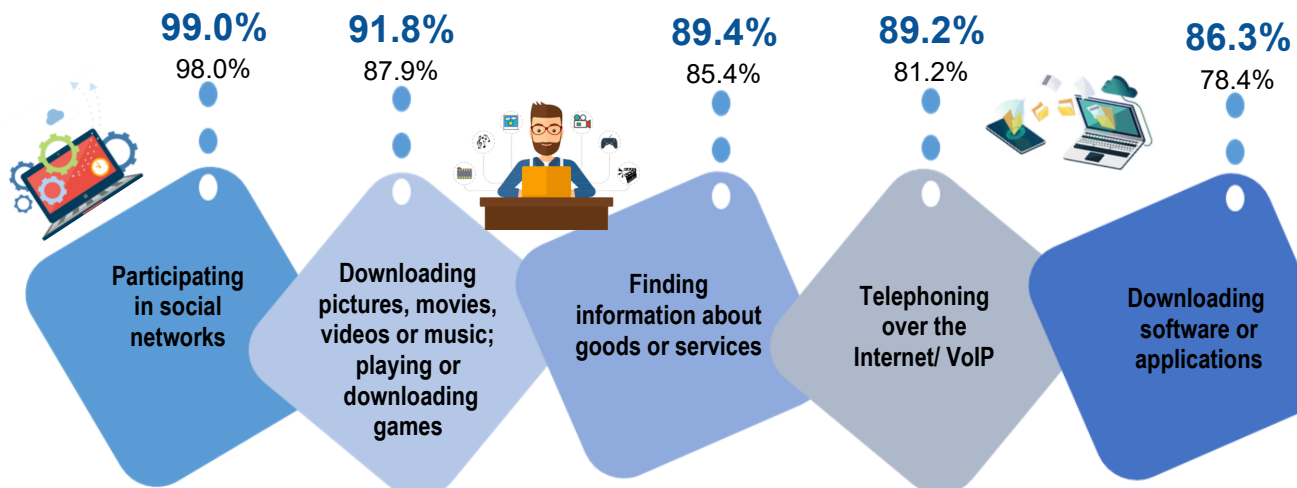
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TOP 5 ICT SKILLS BY COMPUTER USAGE



5 POPULAR ACTIVITIES OF INTERNET USAGE



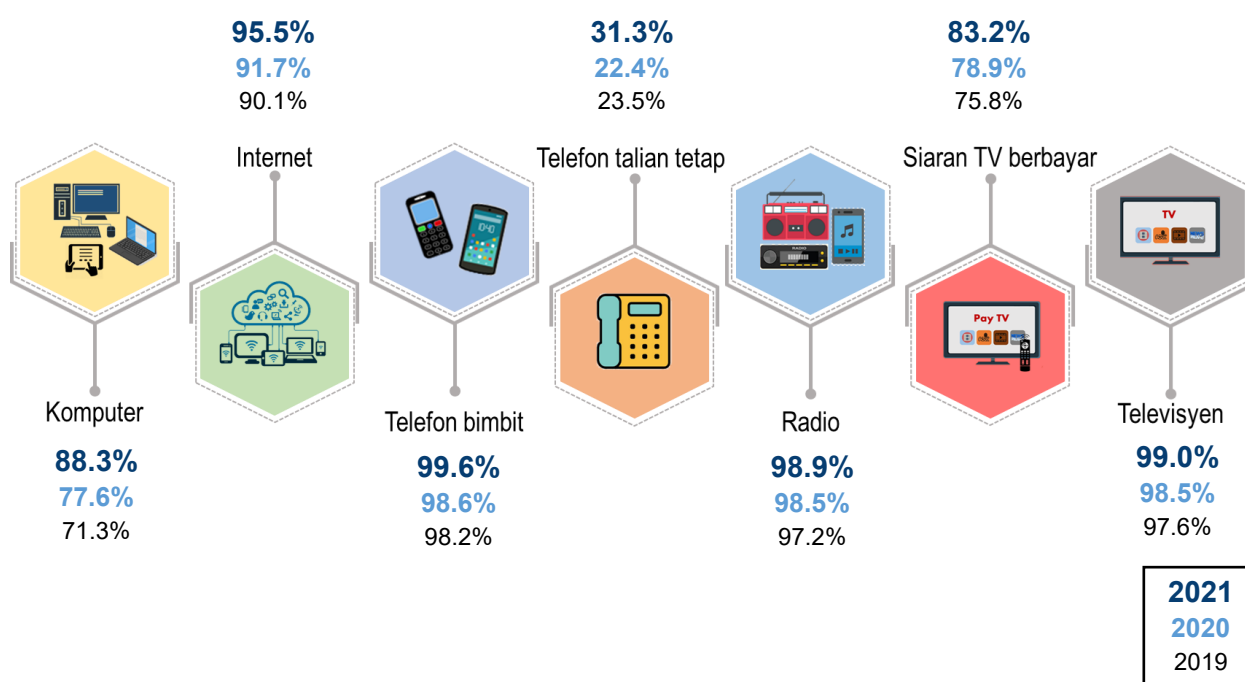
1. PENGENALAN

Laporan ini membentangkan hasil penemuan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah (ICTHS) yang dilaksanakan pada 2021. Penemuan ini menunjukkan statistik terkini mengenai capaian dan penggunaan peralatan serta perkhidmatan ICT oleh individu dan isi rumah. Garis panduan, konsep dan definisi yang digunakan dalam laporan ini adalah berdasarkan *Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition* yang diterbitkan oleh *International Telecommunication Union (ITU)*. Survei ICTHS 2021 dilaksanakan selepas kemuncak pandemik COVID-19 yang mana penggunaan teknologi digital telah digunakan secara meluas dalam aktiviti seharian setiap lapisan masyarakat. Oleh itu, dapatan survei ini dapat memberi maklumat mengenai penerimaan masyarakat terhadap penggunaan ICT yang dapat membantu kerajaan dalam menjayakan MyDIGITAL - Ekonomi Digital Malaysia.

2. CAPAIAN PERKHIDMATAN DAN PERALATAN ICT OLEH ISI RUMAH

Sesebuah isi rumah dianggap mempunyai capaian kepada perkhidmatan dan peralatan ICT sekiranya ia masih boleh digunakan ketika temu ramah dijalankan. Berdasarkan penemuan survei, peratusan capaian isi rumah menunjukkan peningkatan dalam semua kategori capaian perkhidmatan dan peralatan ICT iaitu termasuk komputer (88.3%), Internet (95.5%), telefon bimbit (99.6%), telefon talian tetap (31.3%), radio (98.9%), siaran TV berbayar (83.2%) dan televisyen (99.0%).

Paparan 1: Peratusan capaian perkhidmatan dan peralatan ICT oleh isi rumah, Malaysia, 2019 - 2021

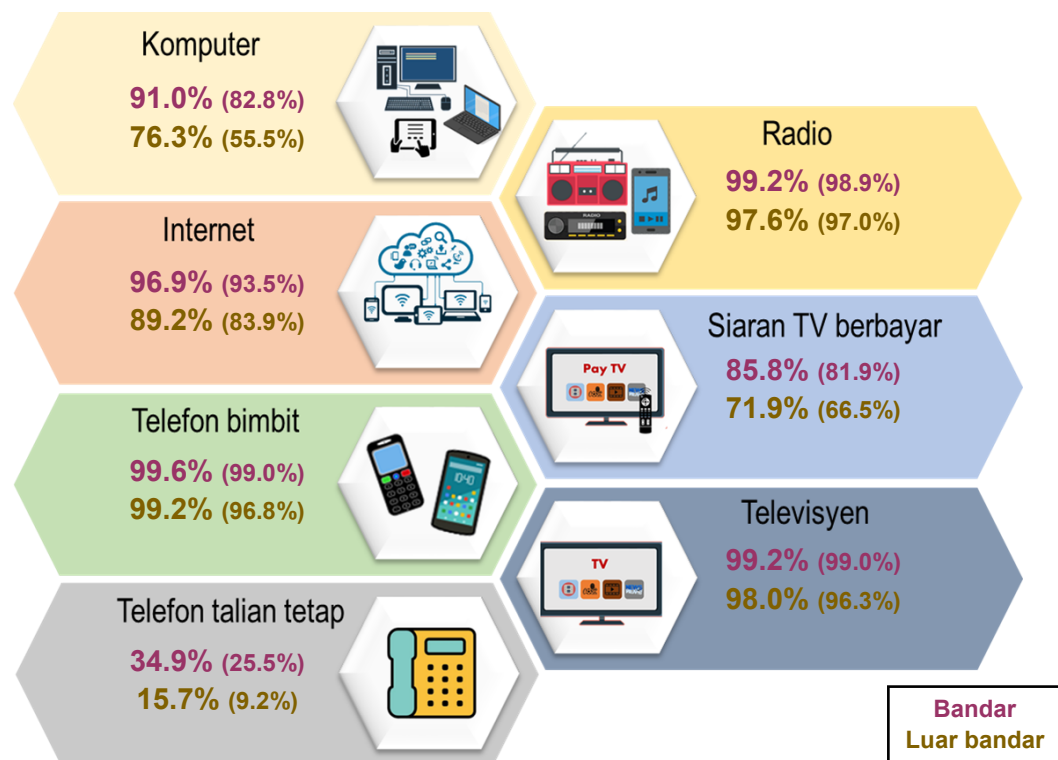


2.1 Capaian Perkhidmatan dan Peralatan ICT oleh Isi Rumah Mengikut Strata

Isi rumah di bandar menunjukkan peningkatan dalam peratusan capaian bagi kesemua peralatan dan perkhidmatan ICT iaitu telefon bimbit (99.6%), radio (99.2%), televisyen (99.2%), Internet (96.9%), komputer (91.0%), siaran TV berbayar (85.8%) dan telefon talian tetap (34.9%).

Begitu juga dengan isi rumah di luar bandar yang turut mengalami peningkatan bagi kesemua capaian perkhidmatan dan peralatan ICT iaitu termasuk telefon bimbit (99.2%), televisyen (98.0%), radio (97.6%), Internet (89.2%), komputer (76.3%), siaran TV berbayar (71.9%) dan telefon talian tetap (15.7%).

Paparan 2: Peratusan capaian perkhidmatan dan peralatan ICT oleh isi rumah mengikut strata, Malaysia, 2020 dan 2021



Nota: Angka di dalam kurungan merujuk kepada tahun 2020

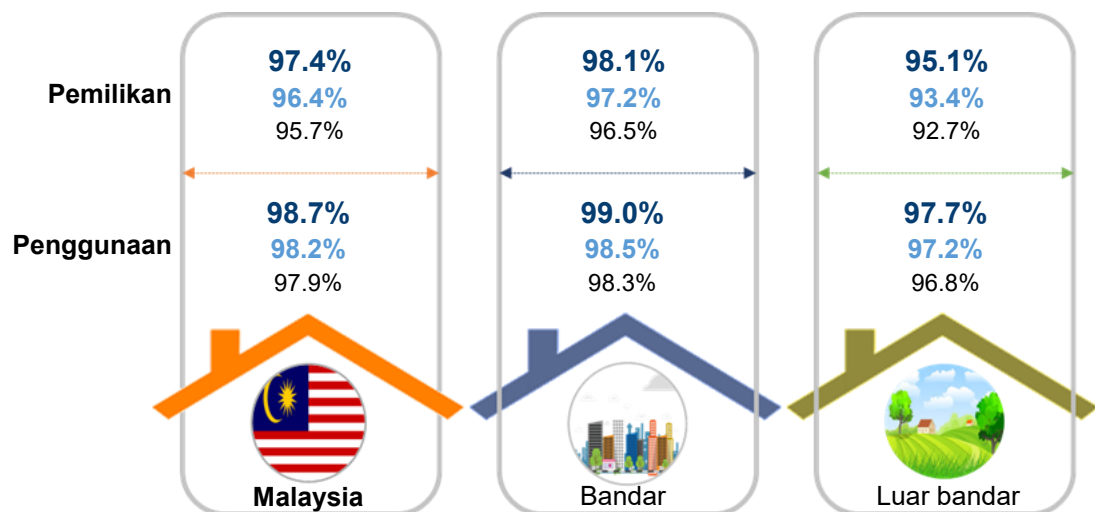
3. PENGGUNAAN PERKHIDMATAN DAN PERALATAN ICT OLEH INDIVIDU

3.1 Pemilikan dan Penggunaan Telefon Bimbit

Pemilikan telefon bimbit oleh individu di Malaysia menunjukkan peningkatan daripada 96.4 peratus pada 2020 kepada 97.4 peratus pada 2021. Sumbangan peratusan pemilikan telefon bimbit oleh individu di kawasan bandar dan luar bandar masing-masing merekodkan 98.1 peratus dan 95.1 peratus.

Dari segi penggunaan pula, individu yang menggunakan telefon bimbit mencapai 98.7 peratus. Sementara itu, penggunaan telefon bimbit di kawasan bandar dan luar bandar masing-masing adalah 99.0 peratus dan 97.7 peratus.

Paparan 3: Peratusan pemilikan dan penggunaan telefon bimbit oleh individu mengikut strata, Malaysia, 2019 - 2021

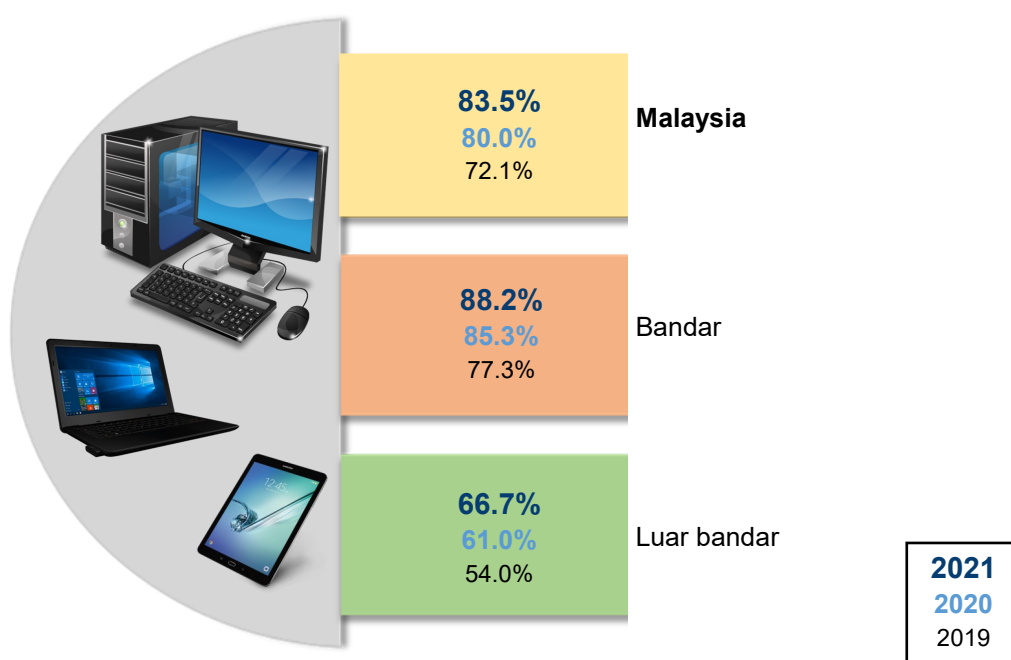


2021
2020
2019

3.2 Penggunaan Komputer

Penggunaan komputer merangkumi penggunaan semua jenis komputer iaitu komputer peribadi, komputer riba atau papan elektronik mudah alih. Berdasarkan penemuan survei, penggunaan komputer juga menunjukkan peningkatan iaitu daripada 80.0 peratus pada 2020 kepada 83.5 peratus pada 2021 (+3.5 mata peratus). Begitu juga penggunaan komputer di bandar dan luar bandar masing-masing meningkat kepada 88.2 peratus (+2.9 mata peratus) dan 66.7 peratus (+5.7 mata peratus).

Paparan 4: Peratusan penggunaan komputer oleh individu mengikut strata, Malaysia, 2019 - 2021

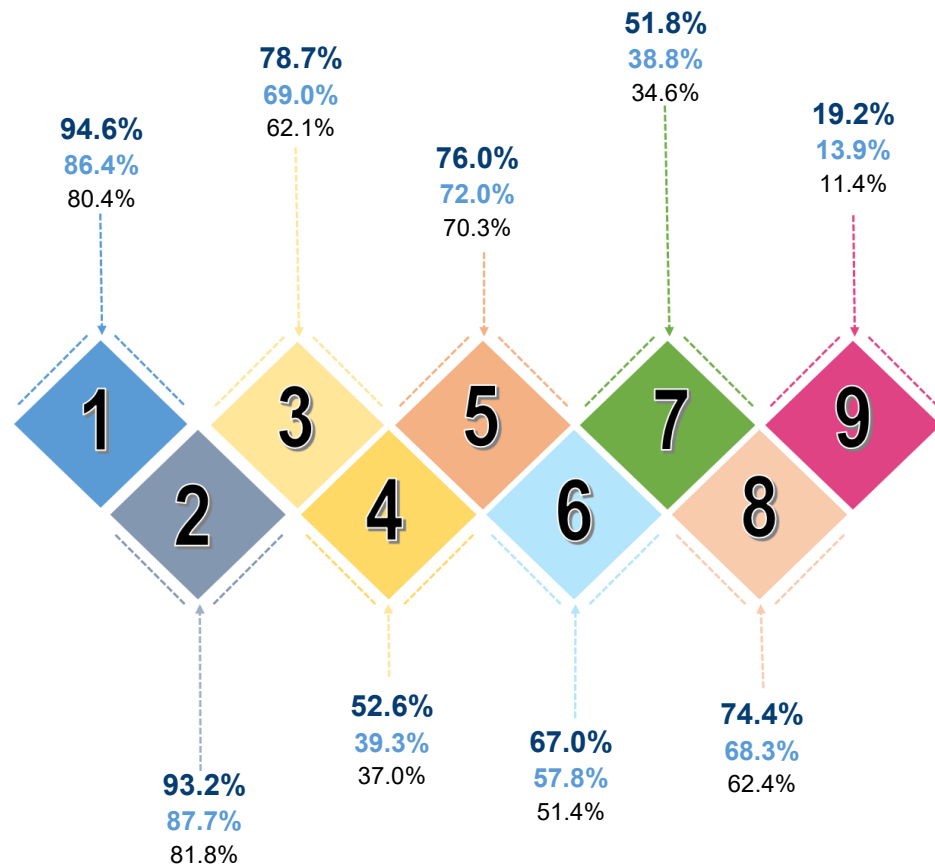


3.3 Kemahiran ICT

Kemahiran ICT merupakan salah satu indikator dalam pemantauan Matlamat Pembangunan Mampan (SDG): Matlamat 4 (Memastikan pendidikan berkualiti, menyeluruh dan saksama serta menggalakkan peluang pembelajaran sepanjang hayat untuk semua). Aktiviti komputer yang dijalankan oleh individu digunakan untuk mengukur kemahiran ICT. Statistik ini dapat digunakan untuk memantau pencapaian matlamat SDG dan seterusnya akan menyumbang kepada masyarakat digital.

Lima aktiviti yang menunjukkan peratus tertinggi pada 2021 adalah aktiviti menyalin atau memindahkan fail (94.6%). Ini diikuti oleh aktiviti menggunakan teknik menyalin dan menampal untuk mendua atau memindahkan maklumat di dalam satu dokumen (93.2%), menghantar emel berserta fail (78.7%), menghubungkan & memasang peranti baru (76.0%) dan memindahkan fail di antara komputer dan peranti mudah alih lain (74.4%)

Paparan 5: Peratusan penggunaan komputer oleh individu mengikut kemahiran ICT, Malaysia, 2019 - 2021



2021
2020
2019

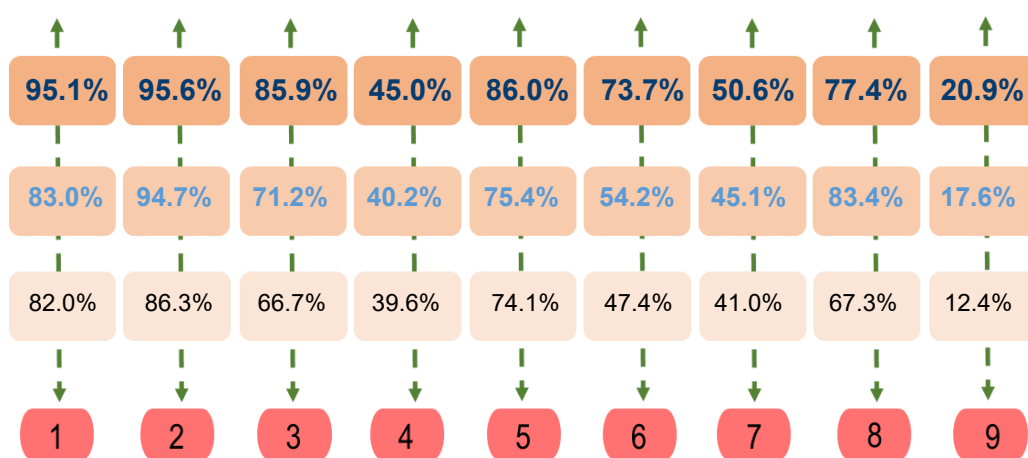
1. Menyalin atau memindahkan fail atau <i>folder</i>	2. Menggunakan teknik menyalin dan menampal untuk mendua atau memindahkan di dalam satu dokumen	3. Menghantar emel beserta fail
4. Menggunakan teknik aritmetik asas di dalam lembaran kerja	5. Menghubungkan dan memasang peranti baru	6. Mencari, memuat turun, memasang dan mengkonfigurasi perisian
8. Memindahkan fail di antara komputer dan peranti mudah alih lain	7. Membuat persembahan elektronik dengan menggunakan perisian komputer	
9. Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus		

3.4 Kemahiran ICT oleh Belia

Kemahiran ICT dikategorikan mengikut tiga tahap kemahiran iaitu asas, pertengahan dan lanjutan. Kemahiran komputer oleh belia diukur dalam kalangan individu yang berumur 15 hingga 24 tahun.

Secara keseluruhan, prestasi kemahiran ICT belia berada di tahap asas dan pertengahan, manakala prestasi kemahiran lanjutan masih berada di tahap rendah. Berdasarkan penemuan survei, 95.6 peratus daripada belia yang menggunakan komputer menjalankan aktiviti menggunakan teknik menyalin dan menampal untuk mendua atau memindahkan di dalam satu dokumen. Bagi tahap pertengahan, 77.4 peratus belia menjalankan aktiviti memindahkan fail di antara komputer dan peranti mudah alih lain. Manakala untuk aktiviti lanjutan seperti menulis program komputer dengan menggunakan bahasa pengaturcaraan yang khusus hanya mencatatkan sebanyak 20.9 peratus.

Paparan 6: Peratusan penggunaan komputer oleh belia mengikut kemahiran ICT, Malaysia, 2019 - 2021



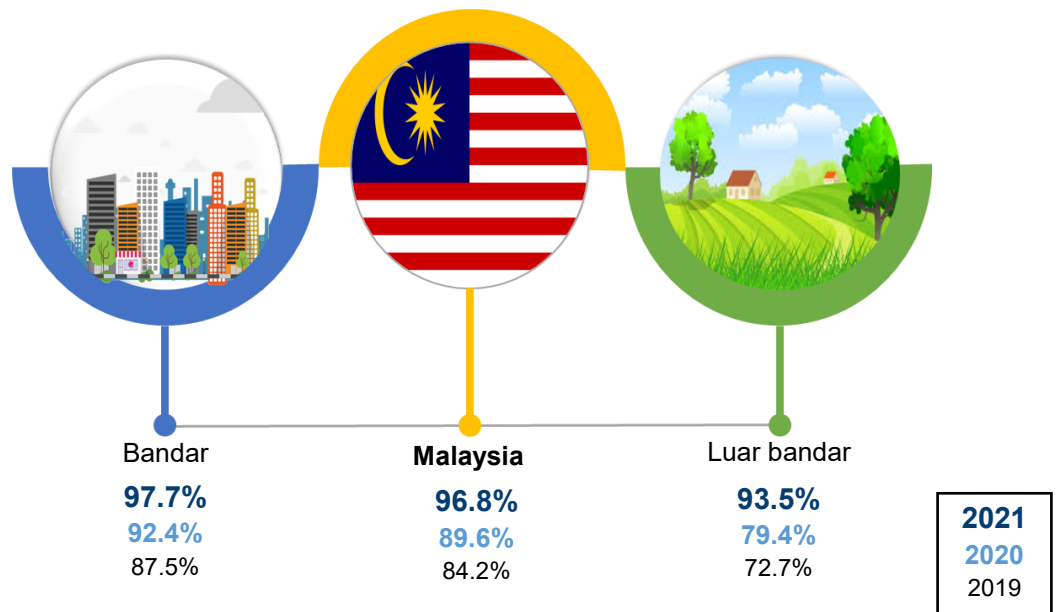
2021
2020
2019

1. Menyalin atau memindahkan fail atau folder	2. Menggunakan teknik menyalin dan menampal untuk mendua atau memindahkan di dalam satu dokumen	3. Menghantar emel beserta fail
4. Menggunakan teknik aritmetik asas di dalam lembaran kerja	5. Menghubungkan dan memasang peranti baru	6. Mencari, memuat turun, memasang dan mengkonfigurasi perisian
7. Membuat persembahan elektronik dengan menggunakan perisian komputer	8. Memindahkan fail di antara komputer dan peranti mudah alih lain	9. Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus

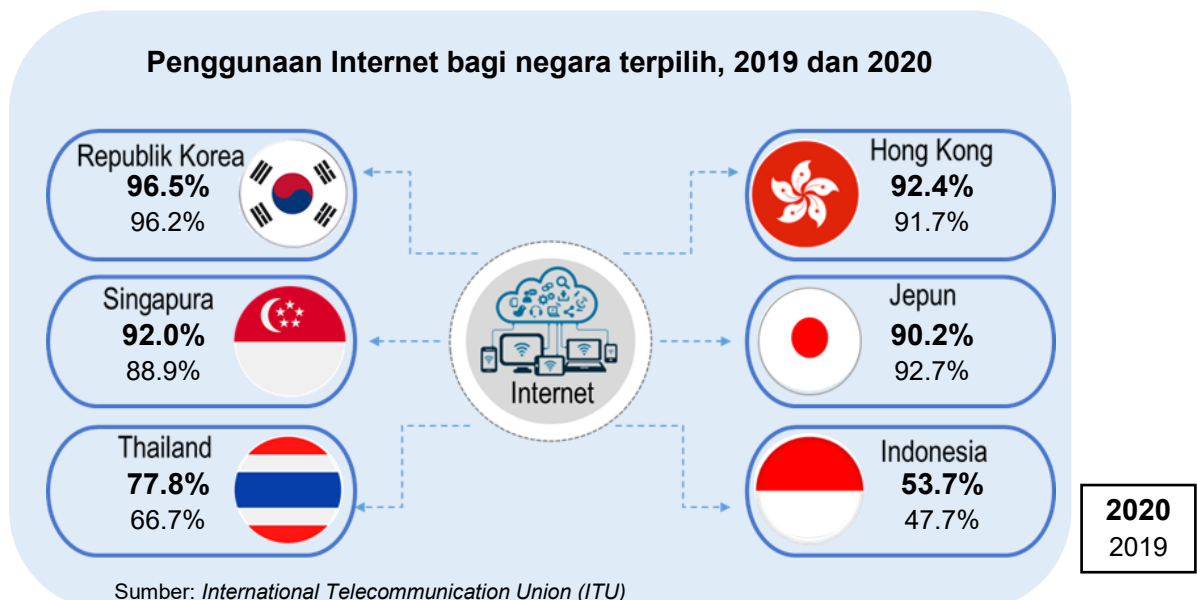
3.5 Penggunaan Internet

Pada 2021, penggunaan Internet oleh individu di Malaysia meningkat kepada 96.8 peratus daripada 89.6 peratus pada 2020 (+7.2 mata peratus). Sementara itu pengguna Internet di bandar dan luar bandar masing-masing adalah 97.7 peratus dan 93.5 peratus pada 2021.

Paparan 7: Peratusan penggunaan Internet oleh individu mengikut strata, Malaysia, 2019 - 2021



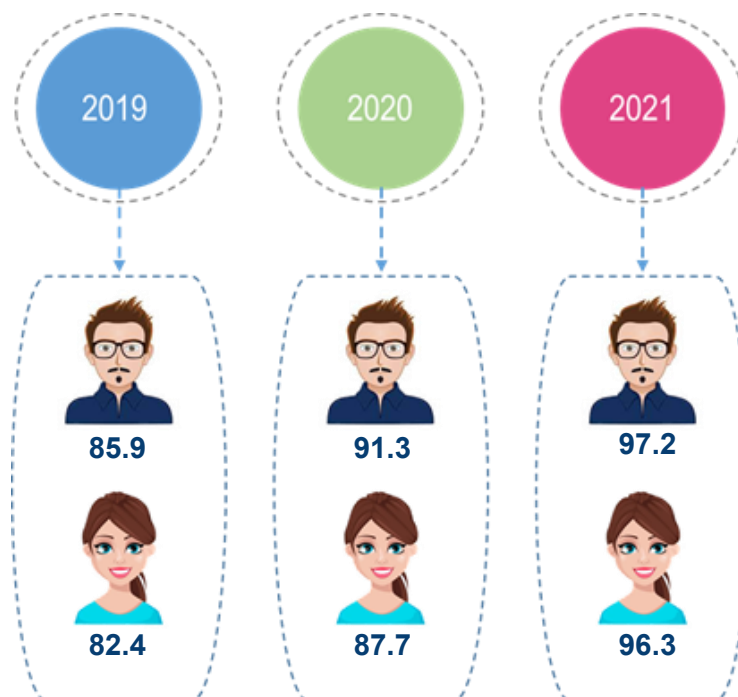
Berdasarkan enam negara terpilih bagi tahun 2020, Republik Korea mencatatkan penggunaan Internet tertinggi iaitu 96.5 peratus, diikuti oleh Hong Kong (92.4%), Singapura (92.0%), Jepun (90.2%), Thailand (77.8%) dan Indonesia (53.7%).



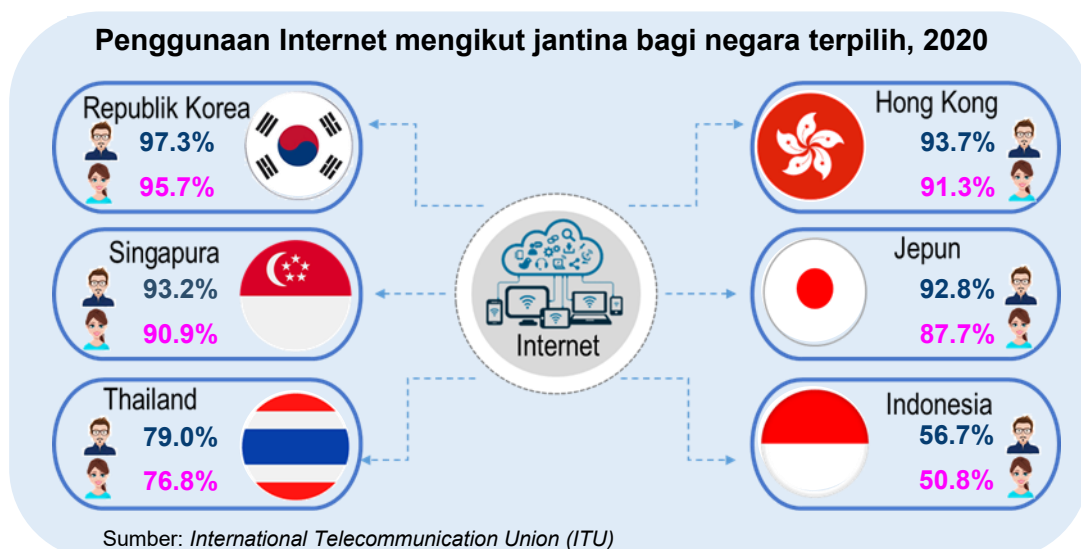
3.6 Penggunaan Internet Mengikut Jantina

Penggunaan Internet di kalangan lelaki adalah lebih tinggi berbanding perempuan iaitu 97.2 peratus berbanding 96.3 peratus. Jurang penggunaan Internet antara jantina adalah perbezaan peratus penggunaan Internet antara pengguna lelaki dan pengguna perempuan. Pada 2021 jurang penggunaan Internet mengikut jantina mengecil sebanyak 0.9 mata peratus berbanding pada 2020 (3.6 mata peratus).

Paparan 8: Peratusan penggunaan Internet oleh individu mengikut jantina, Malaysia, 2019 - 2021



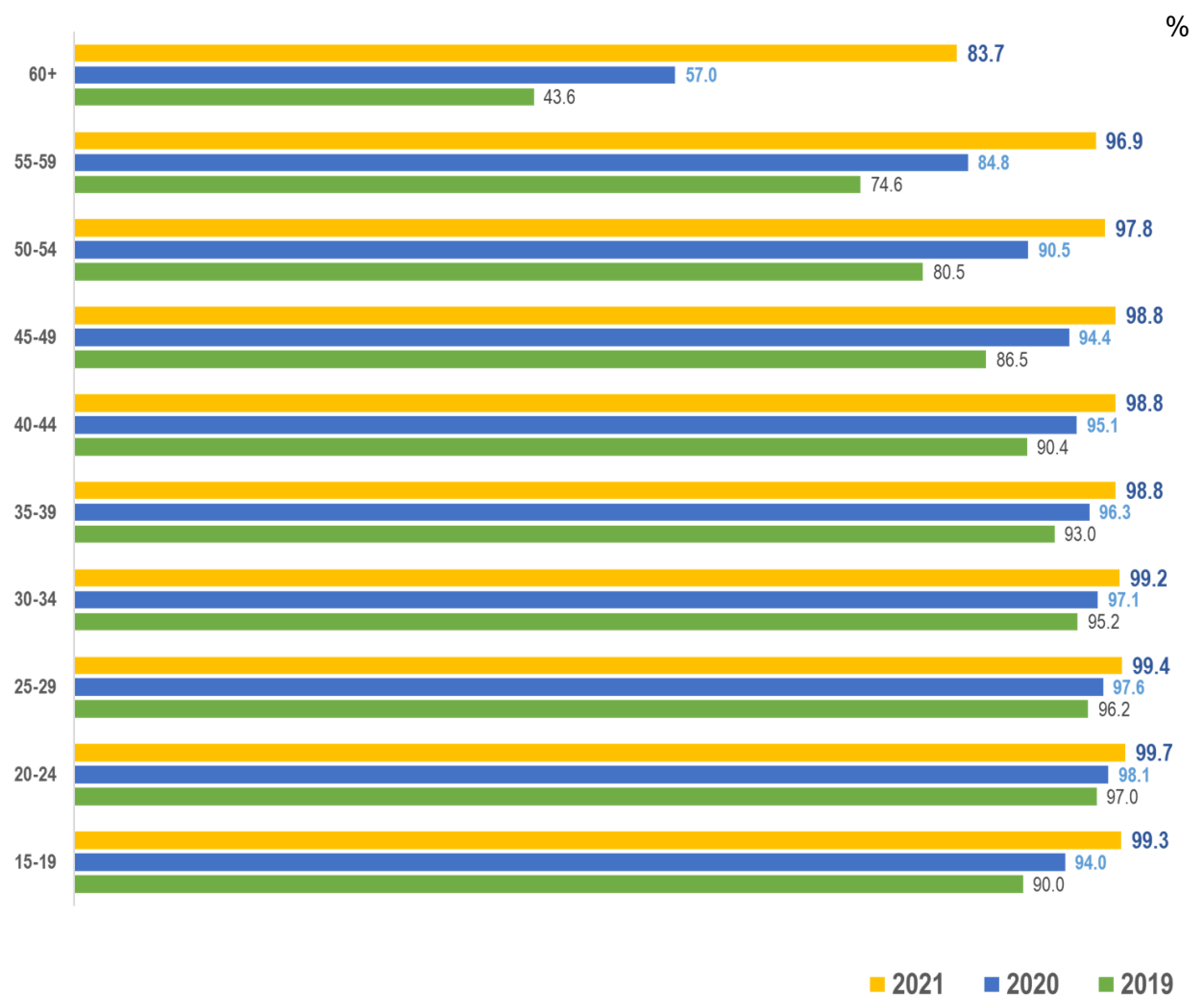
Enam negara terpilih juga menunjukkan penggunaan Internet yang lebih tinggi dalam kalangan lelaki berbanding perempuan.



3.7 Penggunaan Internet Mengikut Kumpulan Umur

Penggunaan Internet mengikut kumpulan umur melebihi 90 peratus kecuali untuk kumpulan umur 60 tahun dan ke atas. Pada 2021, pengguna Internet yang tertinggi adalah dalam kumpulan umur 20 - 24 tahun iaitu 99.7 peratus. Seiring dengan peningkatan umur, penggunaan Internet semakin berkurangan. Dalam pada itu, kumpulan umur 60 tahun dan ke atas mencatatkan peratusan penggunaan Internet yang rendah iaitu 83.7 peratus pada 2021.

Carta 1: Peratusan penggunaan Internet oleh individu mengikut kumpulan umur, Malaysia, 2019 - 2021



3.8 Aktiviti Penggunaan Internet

Aktiviti penggunaan Internet yang paling popular pada 2021 adalah menyertai dalam rangkaian sosial iaitu 99.0 peratus, diikuti oleh aktiviti memuat turun gambar, filem, video atau muzik; bermain atau memuat turun permainan (91.8%), mendapatkan maklumat tentang barangan atau perkhidmatan (89.4%), membuat panggilan telefon melalui Internet/ VoIP (89.2%) dan memuat turun perisian atau aplikasi (86.3%).

Paparan 9: Peratusan penggunaan Internet oleh individu mengikut lima aktiviti Internet tertinggi, Malaysia, 2019 - 2021



Nota: Individu boleh memilih lebih daripada satu aktiviti Internet

2021
2020
2019

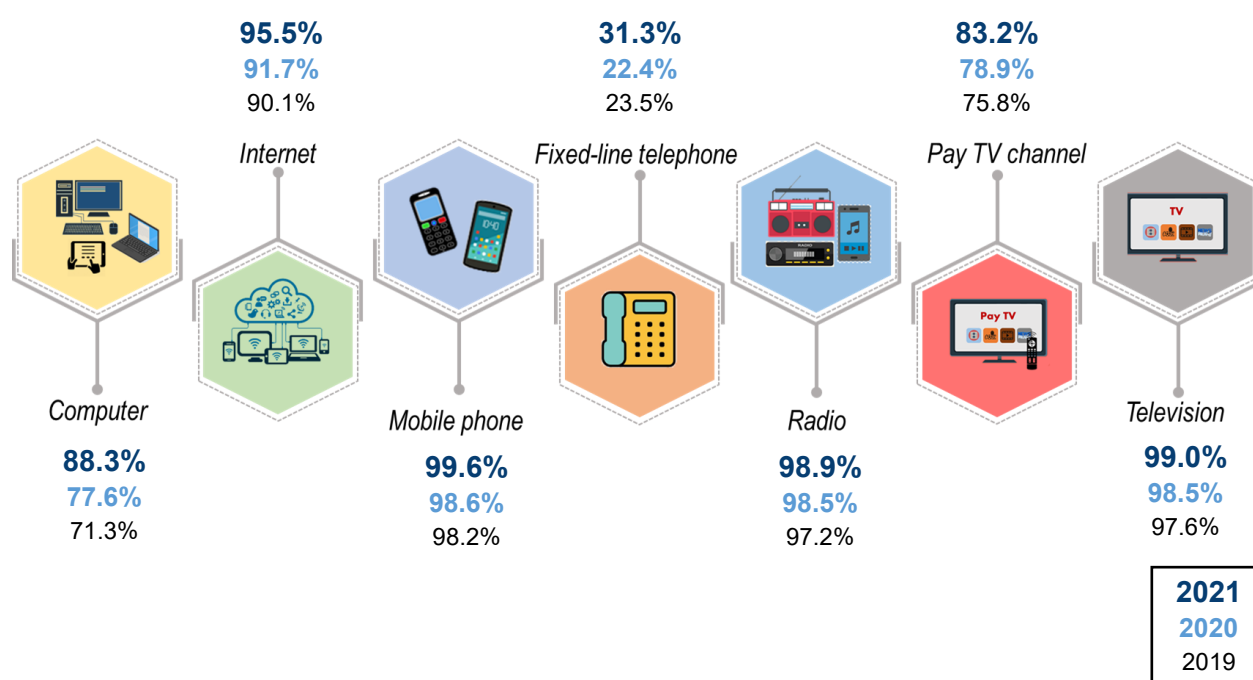
1. INTRODUCTION

This report presents the findings of the Survey of ICT Use and Access by Individuals and Households (ICTHS) conducted in 2021. These findings provide the latest statistics on the access and use of ICT equipment and services by individuals and households. The guidelines, concepts and definitions used in this report are based on the Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition published by the International Telecommunication Union (ITU). The ICTHS 2021 survey was conducted after the culmination of the COVID-19 pandemic where the use of digital technology has been widespread in the daily activities of society. Therefore, the survey findings can provide information on public acceptance of the ICT usage that can help the government to achieve MyDIGITAL - Malaysia Digital Economy.

2. ACCESS TO ICT SERVICES AND EQUIPMENT BY HOUSEHOLDS

A household is considered to have access to ICT services and equipment if it can still be used during the interview. Based on the survey findings, the percentage of household access showed an increase in all categories of ICT services and equipment which include computer (88.3%), Internet (95.5%), mobile phone (99.6%), fixed-line telephone (31.3%), radio (98.9%), pay TV channel (83.2%) and television (99.0%).

Exhibit 1: Percentage of households with access to ICT services and equipment, Malaysia, 2019 - 2021

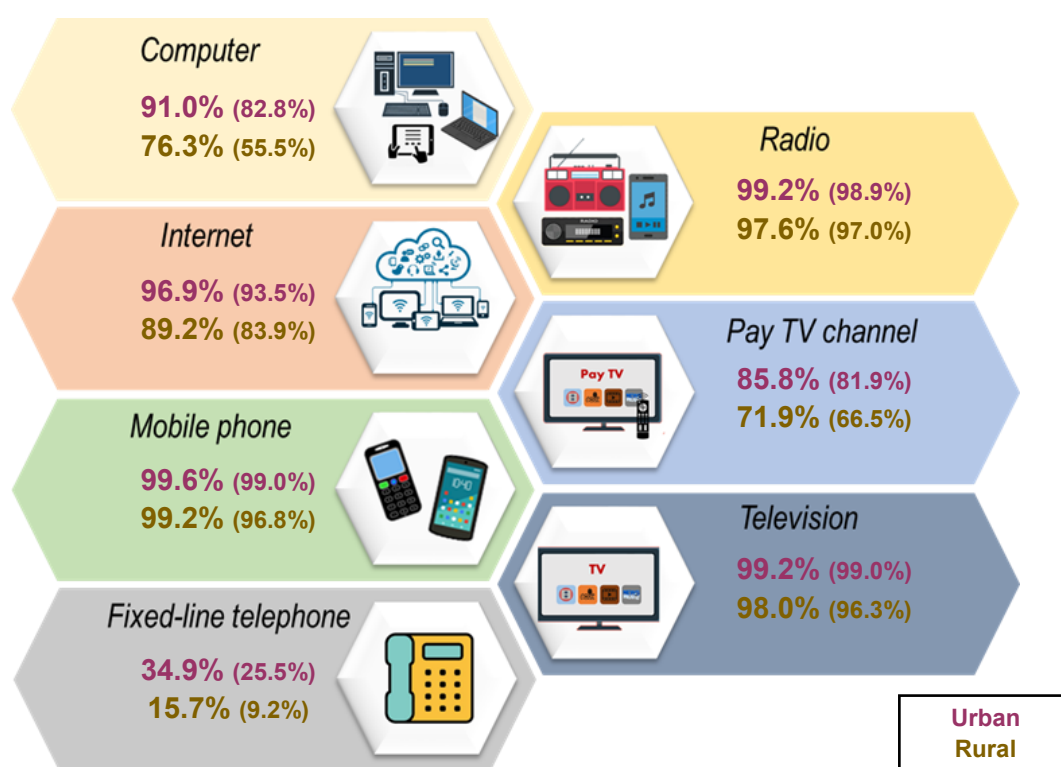


2.1 Access To ICT Services and Equipment by Strata

Urban households showed an increase in the percentage of access to all ICT equipment and services, namely mobile phones (99.6%), radio (99.2%), television (99.2%), Internet (96.9%), computer (91.0%), pay TV channel (85.8%) and fixed-line telephone (34.9%).

Similarly, households in rural areas also experienced an increase in access to all ICT services and equipment, which include mobile phones (99.2%), television (98.0%), radio (97.6%), Internet (89.2%), computer (76.3%), pay TV channel (71.9%) and fixed-line telephones (15.7%).

Exhibit 2: Percentage of households with access to ICT services and equipment by strata, Malaysia, 2020 and 2021



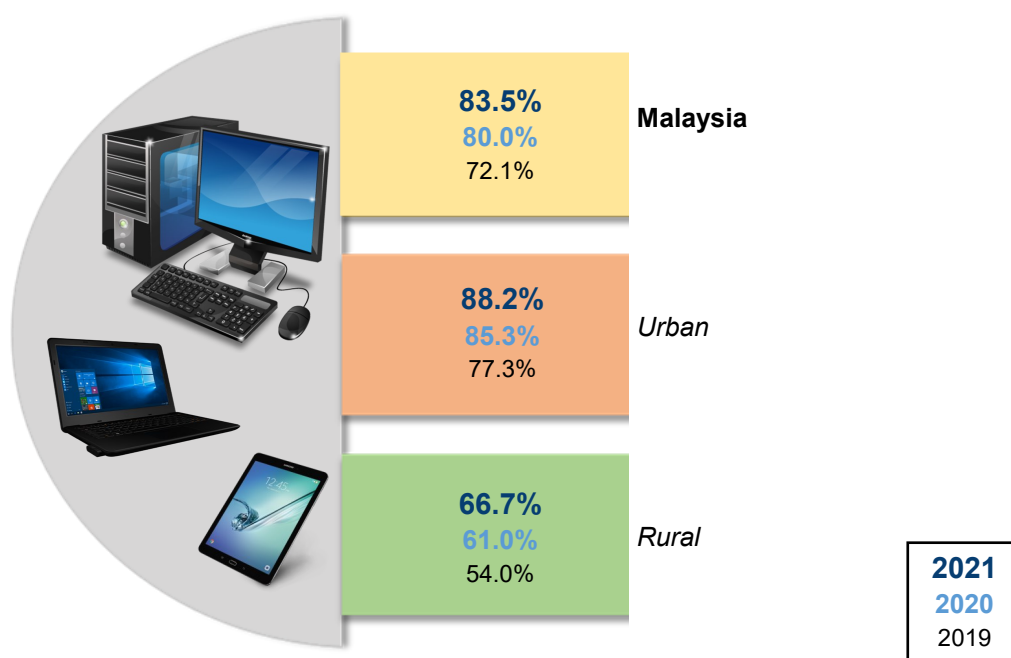
Note: Figures in bracket refers to year 2020



3.2 Computer Usage

Computer usage includes the use of all types of computers, namely personal computers, laptops or portable electronic boards. Based on the survey findings, computer usage also showed an increase from 80.0 per cent in 2020 to 83.5 per cent in 2021 (+3.5 percentage points). Similarly, computer usage in urban and rural areas also increased to 88.2 per cent (+2.9 percentage points) and 66.7 per cent (+5.7 percentage points) respectively.

Exhibit 4: Percentage of individuals using computer by strata, Malaysia, 2019 - 2021

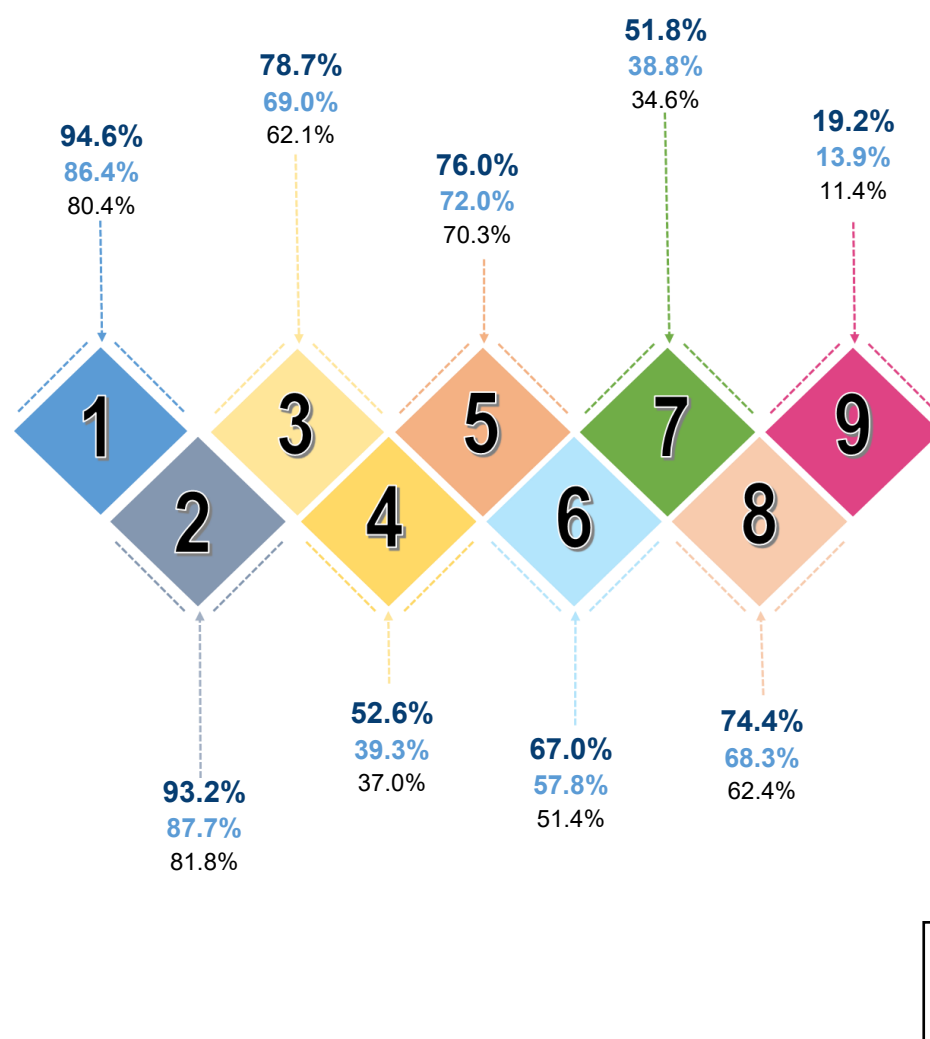


3.3 ICT Skills

ICT skills is one of the indicators in the monitoring of the Sustainable Development Goals (SDGs): Goal 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all). Computer activities by individuals are used to measure ICT skills. These statistics can be used to monitor the achievement of SDG goals, which in turn will contribute to the digital society.

Five activities that showed the highest percentage in 2021 are copying or moving a file or folder (94.6%). This is followed by the activity of using copy and paste tools to duplicate or move information within a document (93.2%), sending an e-mail with attached files (78.7%), connecting and installing new devices (76.0%) and transferring files between a computer and other mobile devices (74.4%).

Exhibit 5: Percentage of individuals using computer by ICT skills, Malaysia, 2019 - 2021



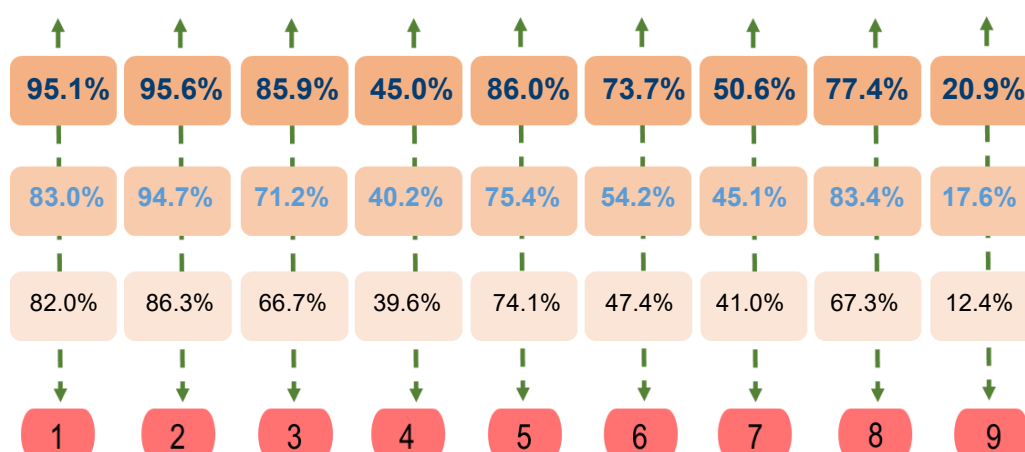
1. Copying or moving a file or folder	2. Using copy and paste tools to duplicate or move information within a document		3. Sending an e-mail with attached files
4. Using basic arithmetic formulas in a spreadsheet	5. Connecting and installing new devices	6. Searching, downloading, installing and configuring software	7. Creating electronic presentations using computer software
8. Transferring files between a computer and other mobile devices		9. Writing a computer program using a specialised programming language	

3.4 ICT Skills by Youth

ICT skills are categorised according to three skill levels, namely basic, standard and advanced. Computer skills by youth were measured amongst individuals aged 15 to 24 years.

Overall, the youth ICT performance skills is at the basic and standard stage, while the advanced skills performance is still at a lower stage. Based on the findings, 95.6 per cent of youth using computer for activities of using copy and paste tools to duplicate or move information within a document. At the standard stage, 77.4 per cent of youth engaged in file transferring activities between a computer and other mobile devices. Meanwhile, for advanced activities such as writing computer program using specialized programming languages was recorded only 20.9 per cent.

Exhibit 6: Percentage of youth using computer by ICT skills, Malaysia, 2019 - 2021



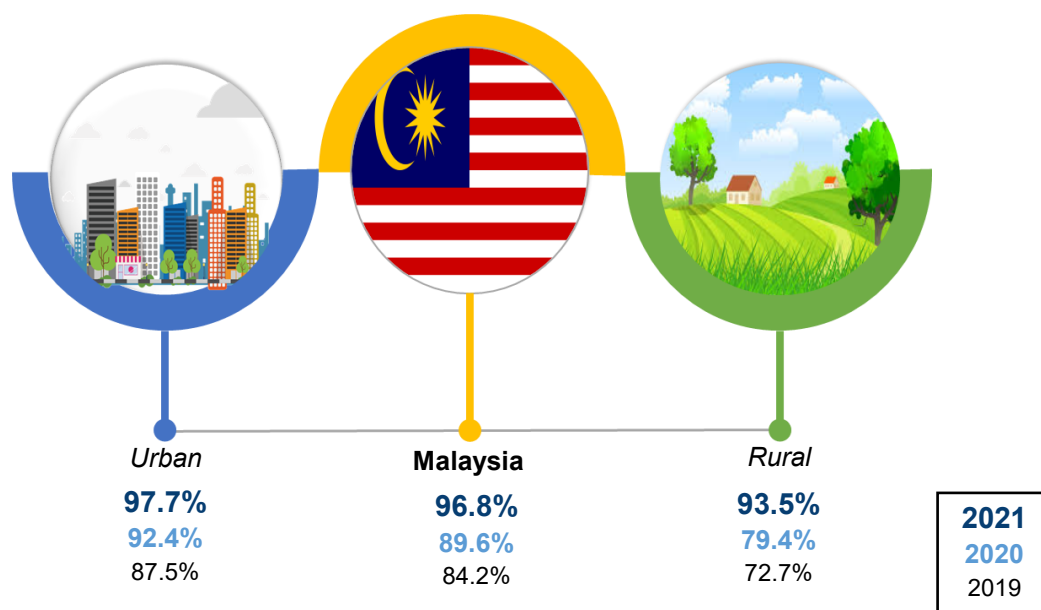
2021
2020
2019

1. Copying or moving a file or folder	2. Using copy and paste tools to duplicate or move information within a document		3. Sending an e-mail with attached files
4. Using basic arithmetic formulas in a spreadsheet	5. Connecting and installing new devices	6. Searching, downloading, installing and configuring software	7. Creating electronic presentations using computer software
8. Transferring files between a computer and other mobile devices		9. Writing a computer program using a specialised programming language	

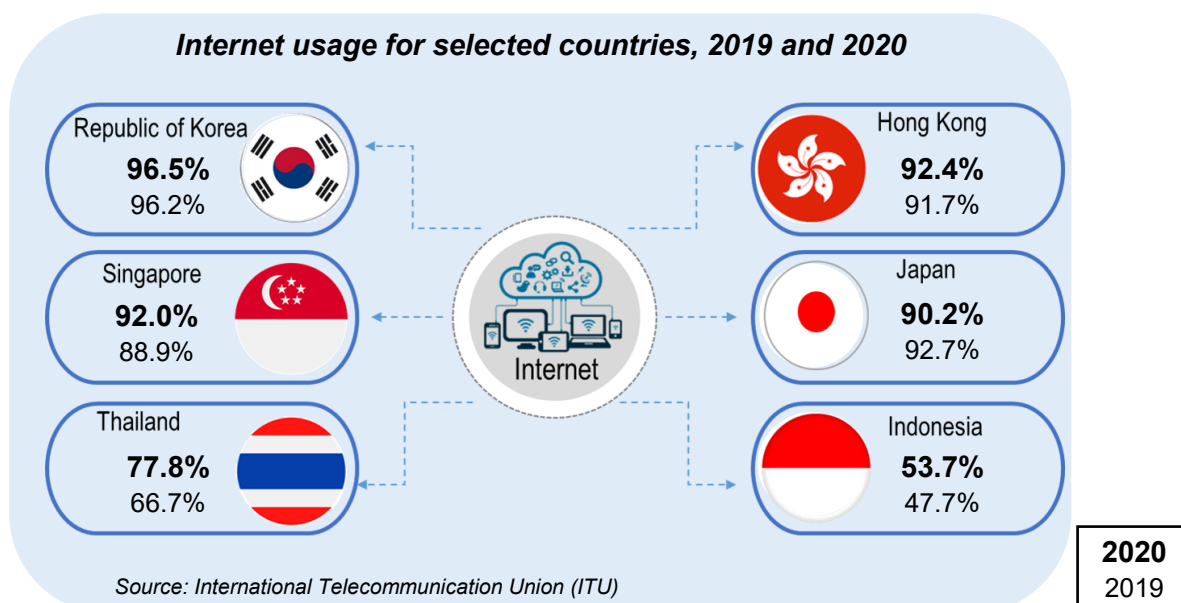
3.5 Internet Usage

In 2021, Internet usage by individuals in Malaysia increased to 96.8 per cent from 89.6 per cent in 2020 (+7.2 percentage points). Meanwhile, Internet users in urban and rural areas are 97.7 per cent and 93.5 per cent respectively in 2021.

Exhibit 7: Percentage of individuals using the Internet by strata, 2019 - 2021



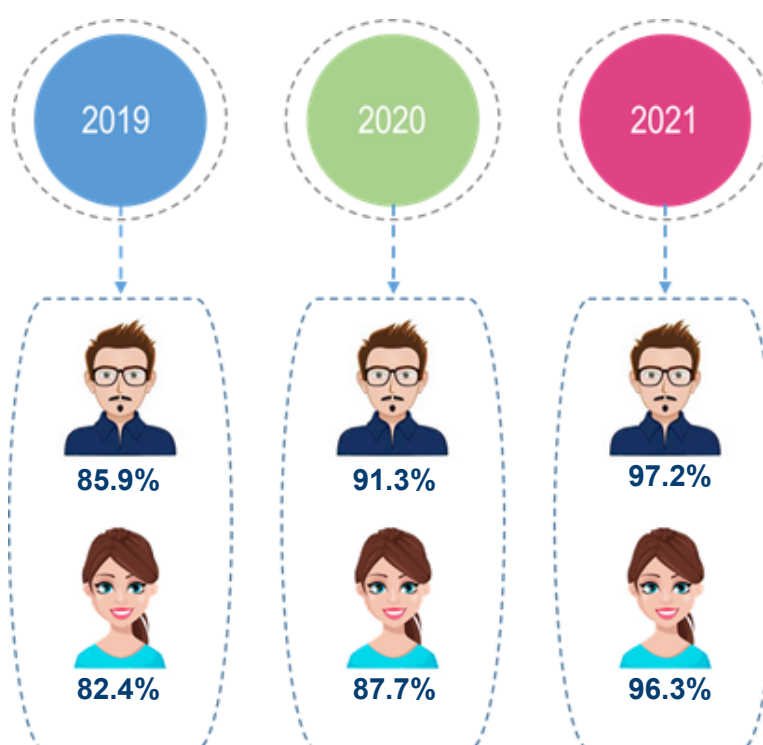
Based on six selected countries in 2020, Republic of Korea recorded the highest Internet usage of 96.5 per cent, followed by Hong Kong (92.4%), Singapore (92.0%), Japan (90.2%), Thailand (77.8%) and Indonesia (53.7%).



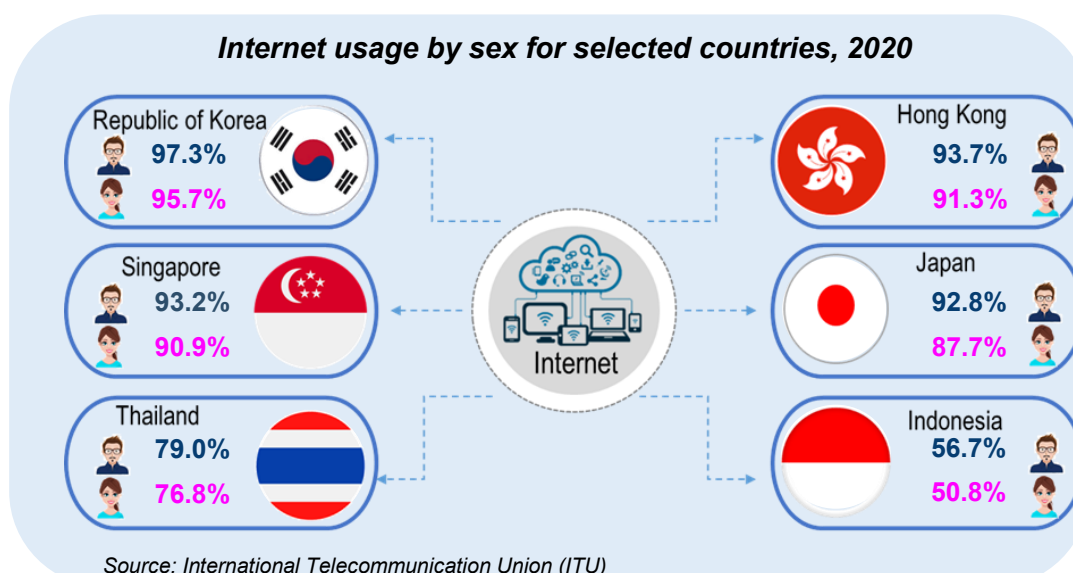
3.6 Internet Usage by Sex

Internet usage among men was higher than women at 97.2 per cent as compared to 96.3 per cent. The gap of Internet usage between gender is the difference in the percentage of the Internet usage between male and female users. In 2021, the gap of Internet users by gender narrowed to 0.9 percentage points compared to 2020 (3.6 percentage points).

Exhibit 8: Percentage of individuals using the Internet by sex, Malaysia, 2019 - 2021



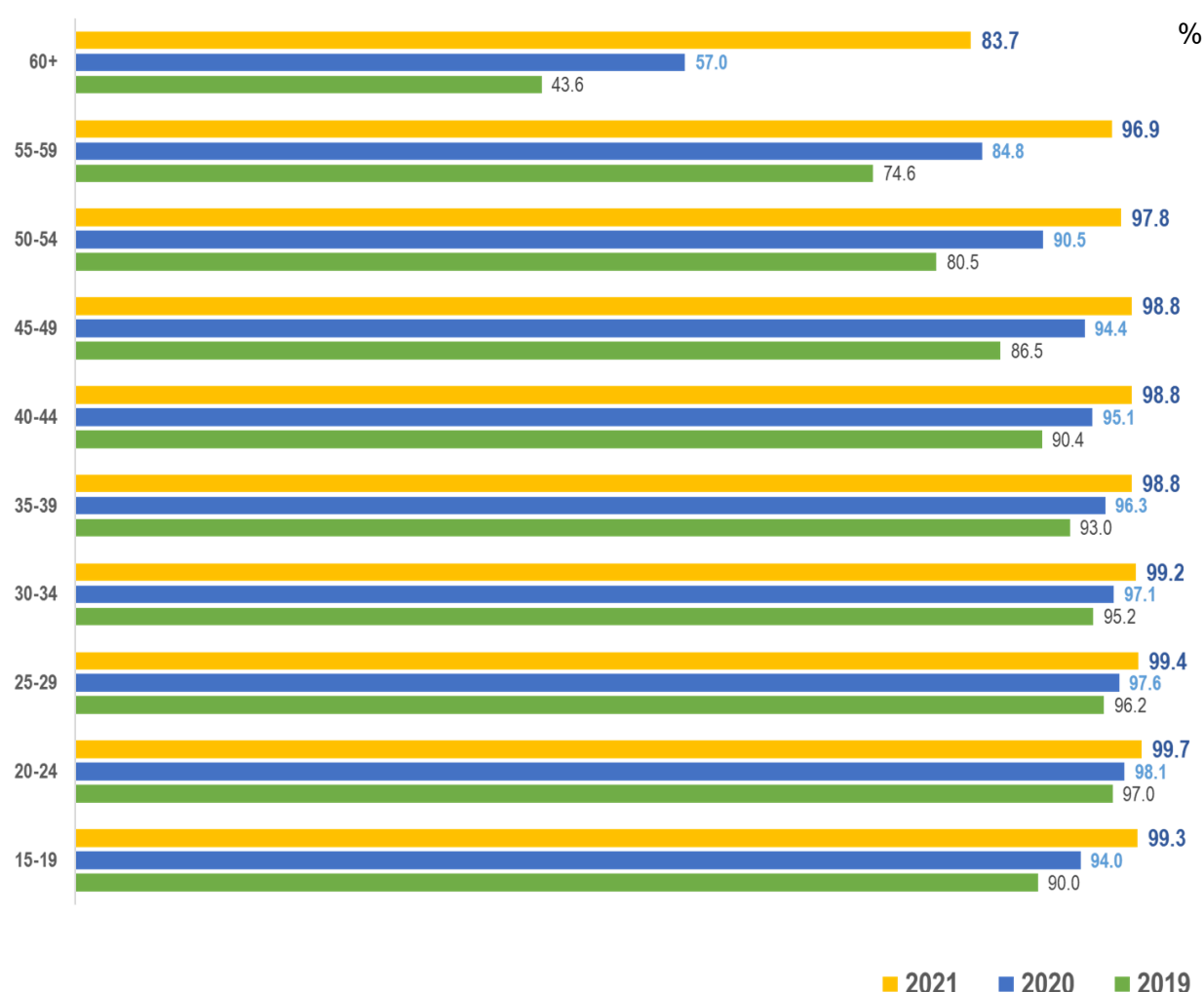
Six selected countries also showed the internet usage among men were higher than women.



3.7 Internet Usage by Age Group

Internet usage by age group exceeds 90 per cent except for the age group of 60 years and above. In 2021, the highest Internet users are in the age group of 20 - 24 years, which is 99.7 per cent. As age increases, Internet usage is declining. Meanwhile, the age group of 60 years and above recorded the lowest percentage of Internet usage at 83.7 per cent in 2021.

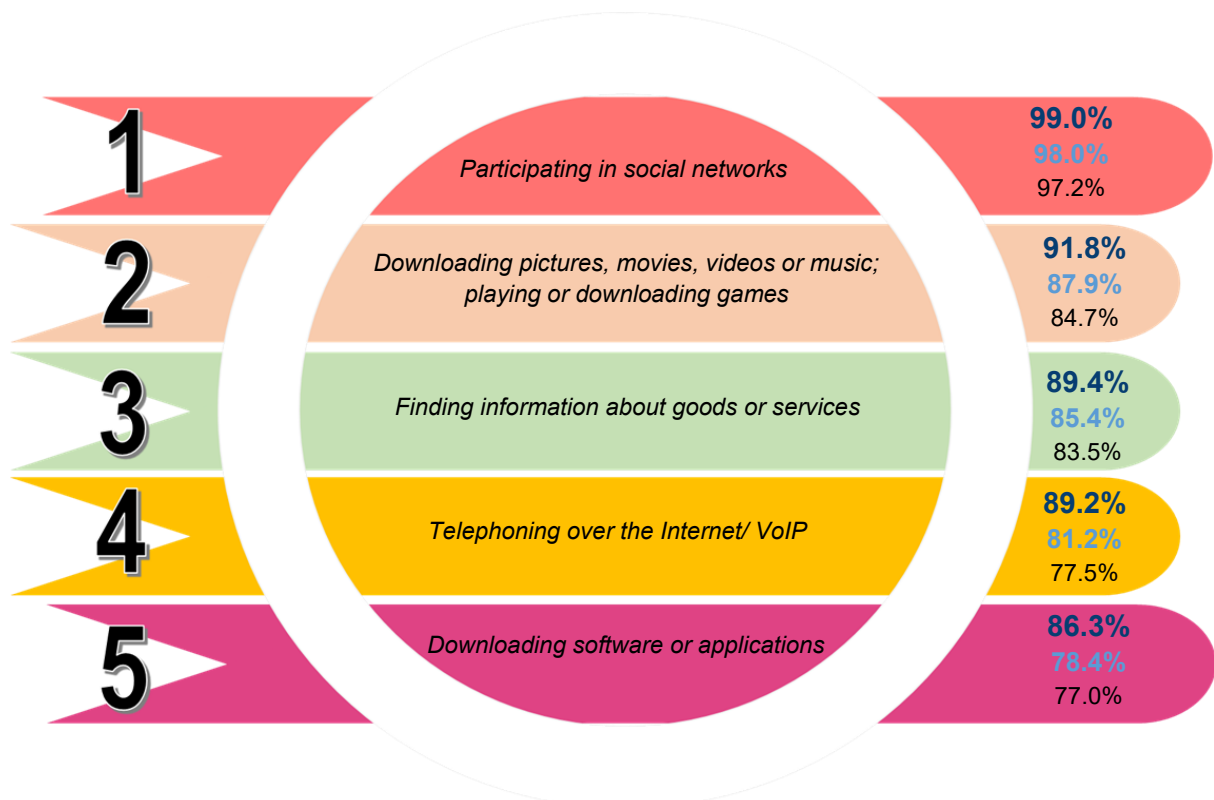
Chart 1: Percentage of individuals using the Internet by age group, Malaysia, 2019 - 2021



3.8 Internet Usage Activities

The most popular internet usage activity in 2021 was participating in social networks, with 99.0 per cent, followed by downloading pictures, movies, videos or music; playing or downloading games (91.8%), finding information about goods or services (89.4%), making phone calls via Internet/ VoIP (89.2%) and downloading software or applications (86.3%).

Exhibit 9: Percentage of individuals using the Internet by top five Internet activities, Malaysia, 2019 - 2021



Note: Each individuals can choose more than one Internet activities

2021
2020
2019



ARTIKEL

ARTICLES



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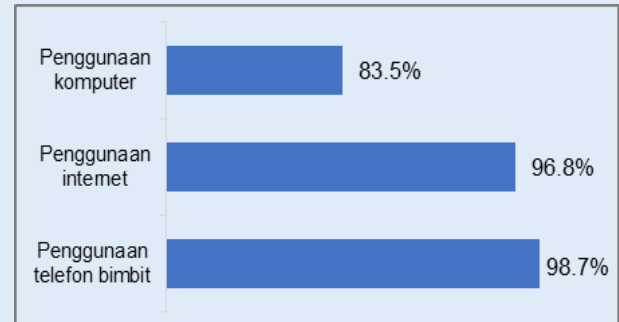
PENGUNAAN ICT DALAM KALANGAN KANAK-KANAK BERUMUR 5 HINGGA 14 TAHUN

PENGENALAN

Teknologi maklumat dan komunikasi (ICT) ialah teknologi yang berkaitan dengan pemerolehan, penyimpanan, pemprosesan dan penyebaran maklumat melalui penggunaan teknologi komputer dan telekomunikasi¹ untuk menghasilkan informasi yang berkualiti. ICT merupakan suatu perkara yang tidak asing lagi dalam masyarakat. Penggunaan ICT pada masa kini memainkan peranan yang sangat penting dalam semua bidang seperti pendidikan, ekonomi, sosial, budaya, geografi, agama, dan lain-lain bidang. Penggunaan ICT merupakan salah satu indikator kepada kemajuan. Kemajuan dalam bidang ICT secara tidak langsung meningkatkan imej negara di peringkat antarabangsa. Kebanyakan negara di seluruh dunia telah bersaing untuk membangun dan maju dalam teknologi, informasi dan komunikasi.

Aplikasi ICT telah digunakan secara meluas dan didominasi oleh semua peringkat umur termasuk kanak-kanak berumur 5 hingga 14 tahun. Penggunaan ICT oleh kanak-kanak boleh ditakrifkan sebagai satu aktiviti yang dijalankan oleh setiap kanak-kanak yang menggunakan peralatan dan kemudahan ICT dalam kehidupan seharian mereka. Pelbagai faktor mempengaruhi penggunaan ICT yang agak tinggi dalam kalangan mereka. Carta 1 menunjukkan peratusan penggunaan ICT iaitu penggunaan telefon bimbit, penggunaan internet dan penggunaan komputer dalam kalangan kanak-kanak berumur 5 hingga 14 tahun di Malaysia pada tahun 2021.

Carta 1 : Peratusan penggunaan ICT dalam kalangan kanak-kanak berumur 5 - 14 tahun, Malaysia, 2021



PEMBELAJARAN ABAD KE-21

Selari dengan perkembangan dunia teknologi yang semakin pesat berkembang, sistem pendidikan juga sedang melalui fasa revolusi. Dalam menuju ke arah pendidikan bertaraf dunia, Pembelajaran Abad Ke-21 (PAK21) telah diperkenalkan. PAK21 merupakan suatu sistem pendidikan yang dirangka seiring dengan perkembangan teknologi pada masa kini. Penggunaan ICT dalam PAK21 membantu memudahkan proses pengajaran dan pembelajaran (PdP) bagi kanak-kanak berumur 5 hingga 14 tahun. Antara sistem aplikasi pendidikan yang digunakan ialah, *Kahoot*, *Quizizz*, *Padlet*, *Edmodo*, *Google Classroom*, *Google Form*, *Google Meet* dan lain-lain.

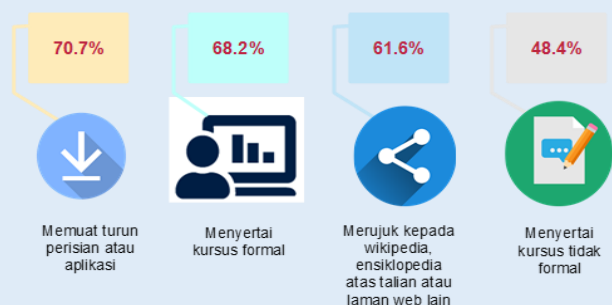
Maklumat aktiviti penggunaan ICT dalam Pembelajaran Abad Ke-21 (PAK21) dapat dicerap melalui indikator terpilih yang dikumpul melalui Survei Capaian dan Penggunaan ICT oleh Individu dan Isi Rumah 2021. Antara aktiviti tersebut ialah memuat turun perisian atau aplikasi, menyertai kursus formal atas talian, merujuk kepada wikipedia, ensiklopedia atas

¹ Kamus Dewan Edisi Keempat, Pusat Rujukan Persuratan Melayu, Dewan Bahasa dan Pustaka

talian atau laman web lain untuk tujuan pembelajaran formal dan menyertai kursus tidak formal atas talian.

Penggunaan ICT dalam kalangan kanak-kanak untuk tujuan pembelajaran menunjukkan aktiviti memuat turun perisian atau aplikasi direkodkan sebanyak 70.7 peratus, diikuti menjalani kursus formal atas talian (68.2%), merujuk kepada wikipedia, ensiklopedia atas talian atau laman web lain untuk tujuan pembelajaran formal (61.6%), manakala menyertai kursus tidak formal atas talian mencatatkan 48.4 peratus. Hal ini menunjukkan hampir separuh kanak-kanak berumur 5 hingga 14 tahun di Malaysia menggunakan kemudahan ICT dalam pendidikan mereka.

Paparan 1: Penggunaan ICT dalam kalangan kanak-kanak untuk tujuan pembelajaran, Malaysia, 2021

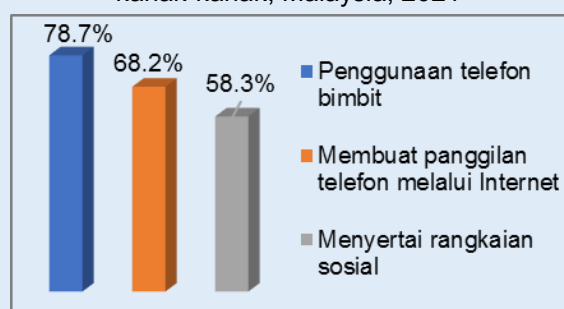


MEDIUM PERHUBUNGAN

Penggunaan ICT telah membantu memudahkan kaedah komunikasi antara satu sama lain. Selaras dengan ledakan teknologi, kanak-kanak berumur 5 hingga 14 tahun juga berkomunikasi dengan menggunakan ICT sebagai medium perhubungan. Aplikasi tersedia seperti *WhatsApp*, *Facebook*, *Telegram*, *Instagram* dan *Twitter* digunakan untuk berhubung sesama mereka. Aplikasi-aplikasi tersebut juga boleh dimuat turun hampir di semua peranti ICT.

Peratusan penggunaan ICT yang tertinggi sebagai satu medium perhubungan ialah penggunaan telefon bimbit (78.7%), diikuti membuat panggilan telefon melalui internet (68.2%) dan menyertai rangkaian sosial (58.3%). Ini membuktikan bahawa kanak-kanak berumur 5 hingga 14 tahun menggunakan ICT bagi membolehkan mereka berkomunikasi dengan orang lain.

Carta 2: Medium perhubungan ICT dalam kalangan kanak-kanak, Malaysia, 2021



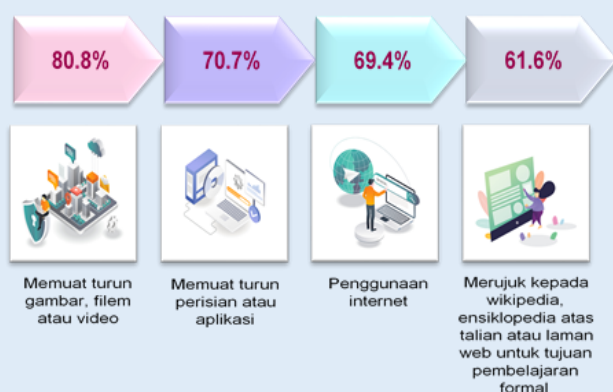
KEMUDAHAN UNTUK MENGAKSES MAKLUMAT

Kewujudan pelbagai teknologi maklumat dan komunikasi (ICT) telah mengubah kaedah berkomunikasi, bekerja, berdagang dan melakukan aktiviti harian. Akses untuk mendapatkan maklumat kini menjadi mudah dengan penggunaan ICT. Penggunaan ICT membantu proses pencarian maklumat menjadi lebih mudah terutama bagi kanak-kanak berumur 5 hingga 14 tahun. Hal ini kerana, mereka telah didedahkan kepada penggunaan ICT sejak kecil melalui ibu bapa mereka. Mereka kerap menggunakan ICT dalam fasa mempelajari benda baharu. Oleh yang demikian, kemudahan untuk mengakses maklumat telah mempengaruhi kanak-kanak berumur 5 hingga 14 tahun untuk menggunakan ICT.

Memuat turun gambar, filem atau video, memuat turun perisian atau aplikasi, penggunaan internet dan juga merujuk kepada wikipedia, ensiklopedia atas talian atau laman web lain untuk tujuan pembelajaran formal merupakan empat aktiviti ICT yang popular dalam kalangan kanak-kanak berumur 5 hingga 14 tahun dalam mencari semua jenis maklumat.

Pada tahun 2021, aktiviti paling popular dilakukan bagi kanak-kanak berumur 5 hingga 14 tahun untuk mengakses maklumat ialah memuat turun gambar, filem atau video (80.8%). Ini diikuti dengan aktiviti-aktiviti iaitu memuat turun perisian atau aplikasi (70.7%), penggunaan internet (69.4%) dan merujuk kepada wikipedia, ensiklopedia atas talian atau laman web lain untuk tujuan pembelajaran formal (61.6%). Ini menunjukkan bahawa kebergantungan kepada ICT adalah ketara dalam kalangan kanak-kanak berumur 5 hingga 14 tahun, terutama disebabkan oleh kemampuan dalam mendapatkan maklumat dengan mudah.

Paparan 2: Peratusan pengaksesan maklumat dalam kalangan kanak-kanak, Malaysia, 2021



Semasa pelaksanaan Perintah Kawalan Pergerakan (PKP) dan dalam usaha mengawal penularan wabak COVID-19 di Malaysia, Kementerian Pendidikan Malaysia (KPM) telah membuat garis panduan dalam melaksanakan Pembelajaran dan Pengajaran Di Rumah (PdPR). Guru dan murid telah menggunakan ICT sebagai medium utama di rumah. Oleh itu, penggunaan ICT dalam kalangan kanak-kanak berumur 5 hingga 14 tahun telah meningkat dalam tempoh tersebut.

Perintah Kawalan Pergerakan (PKP) yang berpanjangan sepanjang tahun 2020 dan 2021 merupakan antara faktor yang menyumbang kepada kanak-kanak berumur 5 hingga 14 tahun terdedah kepada ICT.

Kesimpulannya, penggunaan ICT bagi kanak-kanak berumur 5 hingga 14 tahun bukan sahaja membantu dalam proses pembelajaran mereka, malah memudahkan mereka dalam pencarian maklumat. Pendedahan kepada ICT pada usia muda juga mampu melahirkan generasi celik IT.

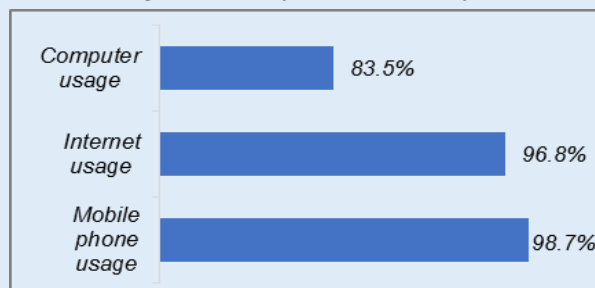
ICT USAGE AMONG CHILDREN AGED 5 TO 14 YEARS OLD

INTRODUCTION

Information and communication technology (ICT) is a technology related to the acquisition, storage, processing and dissemination of information through the use of computer and telecommunication technology¹ to produce quality information. ICT is a common term in today's society. The usage of ICT at the moment plays an important role in a variety of fields, including education, economy, social, cultural, geography, religion, and others. ICT usage is one of the indicators used to measure development. Advances in ICT field indirectly enhance a nation's image at international level. Most of the countries around the world have competed to develop and progress in technology, information, and communication.

The application of ICT has been widely used and dominated by all age groups, including children aged 5 to 14 years old. ICT usage among children can be defined as an activity carried out by every child who uses ICT equipment and facilities in their daily lives. Various factors are considered for the relatively high usage of ICT among them. Chart 1 shows the percentage of ICT usage, namely mobile phones usage, internet usage and computer usage among children aged 5 to 14 years old in Malaysia for the year 2021.

Chart 1 : Percentage of ICT usage among children aged 5 to 14 years old, Malaysia, 2021



21ST CENTURY LEARNING

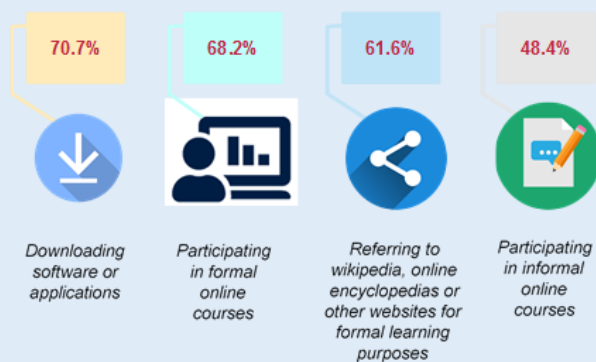
In line with the development of rapidly evolving world of technology, the education system is also going through a phase of revolution. In achieving a world-class education, 21st Century Learning (PAK21) has been introduced. PAK21 is a modern-day education system that is designed to keep up with technological advancements. Usage of ICT in PAK21 serves to facilitate lesson plans and teaching materials (PdP) for children aged 5 to 14 years old. Among the educational application systems used are Kahoot, Quizizz, Padlet, Edmodo, Google Classroom, Google Form, Google Meet, and others.

Information on ICT usage activities in 21st Century Learning (PAK21) can be obtained through selected indicators in the ICT Use and Access by Individuals and Households Survey 2021. Among the activities are downloading software or applications, participating in formal online courses, referring to wikipedia, online encyclopedias or other websites for formal learning purposes and participating in informal online courses.

¹ Fourth Edition Dictionary, Malay Literary Reference Centre, Institute of Language and Literature

ICT usage among children for learning purposes showed that downloading activity of software or applications recorded at 70.7 per cent, followed by participating in formal online courses (68.2%), referring to wikipedia, online encyclopedias or other websites for formal learning purposes (61.6%), meanwhile participating in informal online courses registered 48.4 per cent. This demonstrates that nearly half of the children aged 5 to 14 years old in Malaysia use ICT in their education.

Exhibit 1: The use of ICT among children for learning purposes, Malaysia, 2021



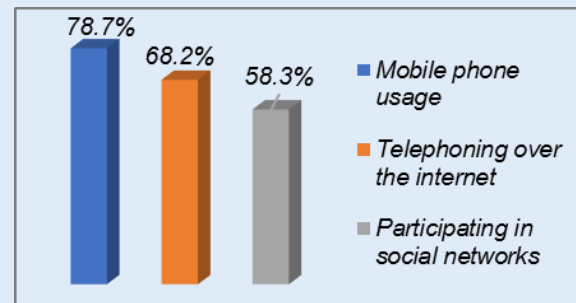
MEDIUM OF COMMUNICATION

The use of ICT has made it easier to communicate with one another. In keeping with the technological advancement, children aged 5 to 14 years old also use ICT as a medium of communication. Available applications like WhatsApp, Facebook, Telegram, Instagram, and Twitter are used to communicate among them. These applications can also be downloaded in almost all ICT devices.

The highest percentage of the ICT usage as a medium of communication was the mobile phone usage (78.7%), followed by telephoning over the internet (68.2%), and participating in

social networks (58.3%). This proves that children aged 5 to 14 years old use ICT to enable them to communicate with others.

Chart 2: ICT communication medium among children, Malaysia, 2021



ABILITY TO ACCESS INFORMATION

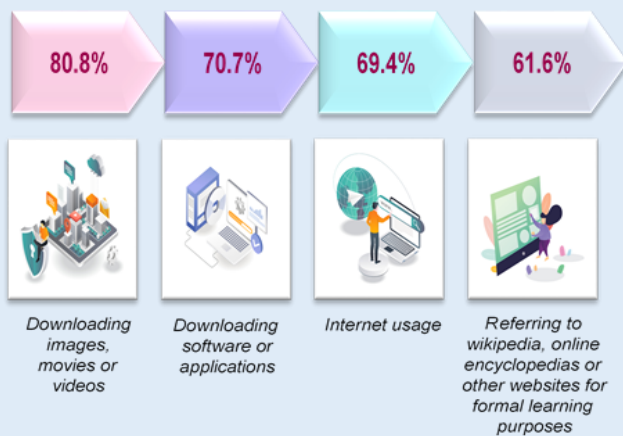
The existence of various information and communication technologies (ICT) has changed methods of communicating, working, trading and carrying out daily activities. Access to information has become much easier with the use of ICT. ICT usage facilitates the process of finding information, particularly for children aged 5 to 14 years old. This is because they have been exposed to the use of ICT from their parents since childhood. They frequently utilise ICT in the process of learning new things. Thus, ability to access information has influenced children aged 5 to 14 years old to use ICT.

Downloading images, movies, or videos, downloading software or applications, internet usage, and referring to wikipedia, online encyclopedias, or other websites for formal learning purposes are four popular activities of ICT among children aged 5 to 14 years in accessing all types of information.

In 2021, the most popular activity for children aged 5 to 14 years old to access information was downloading pictures, movies or videos

activity (80.8%). This was followed by activities namely downloading software or applications (70.7%), internet usage (69.4%) and referring to wikipedia, online encyclopedias or other websites for formal learning purposes (61.6%). This indicates that the dependency on ICT is significant among children aged 5 to 14 years old, especially due to its ability in getting information easily.

Exhibit 2: Percentage of information access among children, Malaysia, 2021



During the implementation of Movement Control Order (MCO) and as an effort to curb the spread of the COVID-19 pandemic in Malaysia, the Ministry of Education Malaysia (MOE) has issued guidelines for conducting Home-based Teaching and Learning (PdPR). Teachers and students have utilised ICT as a primary medium at home. Thus, ICT usage among children aged 5 to 14 years old have grown during the period.

The prolonged implementation of the Movement Control Order (MCO) throughout 2020 and 2021 are one of the factors that contributed towards children aged 5 to 14 years old exposed to ICT.

In conclusion, ICT usage for children aged 5 to 14 years old not only facilitates in their learning process, but also helps them in searching information. Exposure to ICT at a young age is also capable in producing an IT-literate generation.

**STATISTIK CAPAIAN ICT
OLEH ISI RUMAH**
*STATISTICS OF ICT ACCESS
BY HOUSEHOLDS*

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Jadual 1.1: Peratusan capaian telefon bimbit oleh isi rumah mengikut negeri, jenis dan strata, Malaysia, 2021
Table 1.1: Percentage of households with access to mobile phone by state, type and strata, Malaysia, 2021

Negeri State	Telefon bimbit Mobile phone			Telefon biasa Feature phone			Telefon pintar Smart phone		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	99.6	99.6	99.2	15.2	13.1	24.5	96.6	97.7	91.8
Johor	99.9	99.9	99.6	16.1	15.3	19.8	98.9	99.0	98.6
Kedah	99.7	99.7	99.6	20.3	16.4	31.9	94.8	96.1	91.2
Kelantan	99.8	99.7	99.8	21.2	17.0	26.2	93.6	95.0	91.9
Melaka	98.8	98.8	98.8	19.9	19.8	22.7	96.3	96.4	95.8
Negeri Sembilan	99.6	99.8	99.1	11.6	10.7	14.9	97.2	99.0	90.4
Pahang	98.7	98.8	98.6	18.8	16.4	23.1	93.8	95.2	91.4
Pulau Pinang	99.8	99.8	99.7	11.4	11.2	19.3	97.6	97.6	95.9
Perak	98.5	98.7	97.7	20.2	19.0	26.3	93.8	94.2	91.8
Perlis	99.3	99.3	99.3	21.3	19.6	25.4	95.0	96.2	92.2
Selangor	99.9	99.9	99.4	9.0	8.8	12.4	98.5	98.6	95.8
Terengganu	99.2	99.3	98.9	17.3	15.2	22.3	94.6	95.2	93.1
Sabah	99.8	99.8	99.8	21.5	17.2	29.4	96.5	97.8	94.1
Sarawak	99.4	99.8	98.8	17.9	13.1	26.1	92.7	98.3	83.2
W.P. Kuala Lumpur	99.9	99.9	n.a.	8.6	8.6	n.a.	99.7	99.7	n.a.
W.P. Labuan	99.0	99.0	99.3	10.4	9.9	14.8	99.0	99.0	99.3
W.P. Putrajaya	100.0	100.0	n.a.	4.2	4.2	n.a.	100.0	100.0	n.a.

Nota: Telefon bimbit meliputi telefon biasa dan telefon pintar
Note: Mobile phone includes feature phone and smart phone

Jadual 1.2: Peratusan capaian Internet oleh isi rumah mengikut negeri, jenis perkhidmatan dan strata, Malaysia, 2021
 Table 1.2: Percentage of households with Internet access by state, type of service and strata, Malaysia, 2021

Negeri State	Internet (%)									
	Jalur lebar mudah alih Mobile broadband					Jalur lebar tetap Fixed broadband				
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	
MALAYSIA	95.5	96.9	89.2	94.0	95.3	88.1	41.2	46.5	18.1	
Johor	98.0	98.5	95.7	96.4	97.0	93.4	47.4	50.7	33.3	
Kedah	95.1	96.3	91.5	94.7	96.1	90.8	32.5	38.4	14.8	
Kelantan	92.6	94.3	90.6	90.9	91.8	89.7	17.8	21.2	13.8	
Melaka	95.1	95.3	91.6	95.1	95.3	91.3	48.3	48.9	32.7	
Negeri Sembilan	94.4	96.3	87.7	94.0	96.3	85.7	45.9	52.3	22.6	
Pahang	93.8	94.9	91.7	91.8	92.4	90.9	23.8	28.7	15.0	
Pulau Pinang	97.4	97.4	96.4	96.3	96.4	96.0	42.6	42.9	33.8	
Perak	89.1	89.4	87.7	82.5	82.0	85.2	37.2	40.4	21.6	
Perlis	93.8	95.0	90.9	92.2	93.2	89.7	29.5	35.0	16.1	
Selangor	98.4	98.6	96.2	97.9	98.0	95.9	52.9	53.6	39.2	
Terengganu	92.7	94.2	89.3	92.3	93.7	89.0	25.9	28.2	20.6	
Sabah	95.7	97.6	92.1	95.2	96.9	92.0	24.3	31.3	11.4	
Sarawak	89.3	97.4	75.6	88.7	97.2	74.4	25.3	35.8	7.2	
W.P. Kuala Lumpur	99.8	99.8	n.a.	95.9	95.9	n.a.	72.6	72.6	n.a.	
W.P. Labuan	99.9	100.0	99.3	98.1	98.0	99.3	41.1	41.1	40.7	
W.P. Putrajaya	100.0	100.0	n.a.	99.2	99.2	n.a.	66.2	66.2	n.a.	

Nota: Internet meliputi jalur lebar mudah alih dan jalur lebar tetap
 Note: Internet includes mobile broadband and fixed broadband

Jadual 1.3: Peratusan capaian isi rumah terhadap perkhidmatan dan peralatan ICT mengikut negeri dan strata, Malaysia, 2021
 Table 1.3: Percentage of households with access to ICT services and equipment by state and strata, Malaysia, 2021

Negeri State	Komputer Computer			Siaran TV berbayar Pay TV channel			Televisyen Television		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	88.3	91.0	76.3	83.2	85.8	71.9	99.0	99.2	98.0
Johor	91.7	93.3	85.0	83.5	85.3	75.7	99.5	99.6	99.2
Kedah	85.6	87.7	79.3	71.7	73.9	65.1	99.3	99.5	98.8
Kelantan	87.5	89.9	84.5	67.7	69.2	65.9	98.2	99.1	97.1
Melaka	90.9	90.8	91.8	92.6	92.8	85.3	99.6	99.6	99.3
Negeri Sembilan	85.5	88.9	73.0	86.3	87.0	83.9	99.2	99.5	98.4
Pahang	87.2	91.3	80.1	82.2	83.9	79.0	98.1	99.1	96.4
Pulau Pinang	89.6	89.6	90.7	83.0	83.3	73.8	99.6	99.6	99.4
Perak	86.0	86.8	82.5	84.3	86.0	76.4	99.3	99.7	97.4
Perlis	88.0	89.0	85.7	82.2	84.5	76.6	98.9	98.8	99.2
Selangor	94.7	94.7	96.1	89.4	89.5	88.3	99.3	99.2	99.5
Terengganu	87.1	89.6	81.1	82.5	84.0	78.9	99.8	99.8	99.7
Sabah	73.1	77.3	65.4	73.3	77.7	65.2	96.3	96.3	96.2
Sarawak	77.1	87.7	58.9	76.6	83.6	64.6	98.4	98.3	98.6
W.P. Kuala Lumpur	99.1	99.1	n.a.	95.9	95.9	n.a.	99.9	99.9	n.a.
W.P. Labuan	93.8	94.1	91.1	97.1	97.0	97.8	99.0	99.0	99.3
W.P. Putrajaya	100.0	100.0	n.a.	96.6	96.6	n.a.	99.8	99.8	n.a.

Jadual 1.3: Peratusan capaian isi rumah terhadap perkhidmatan dan peralatan ICT mengikut negeri dan strata, Malaysia, 2021 (samb.)
 Table 1.3: Percentage of households with access to ICT services and equipment by state and strata, Malaysia, 2021 (cont'd)

Negeri State	Radio			Telefon talian tetap Fixed-line telephone			(%)
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	
MALAYSIA	98.9	99.2	97.6	31.3	34.9	15.7	
Johor	99.6	99.6	99.3	31.2	31.3	30.8	
Kedah	99.3	99.6	98.4	17.3	20.6	7.6	
Kelantan	98.7	99.2	98.1	19.0	24.8	12.1	
Melaka	98.5	98.5	98.1	57.5	58.8	25.9	
Negeri Sembilan	98.6	99.1	96.5	53.1	61.6	22.0	
Pahang	97.6	98.2	96.5	21.0	23.1	17.3	
Pulau Pinang	99.8	99.8	99.4	37.0	36.9	38.9	
Perak	97.3	97.4	96.6	25.7	28.0	14.4	
Perlis	98.2	98.0	98.7	33.3	41.4	13.3	
Selangor	99.4	99.6	97.2	32.9	33.4	24.5	
Terengganu	99.8	99.7	99.9	29.6	31.9	24.3	
Sabah	97.3	98.4	95.4	24.9	32.8	10.4	
Sarawak	98.9	99.3	98.2	18.8	25.9	6.7	
W.P. Kuala Lumpur	99.8	99.8	n.a.	54.4	54.4	n.a.	
W.P. Labuan	99.5	99.5	99.3	38.1	38.6	34.1	
W.P. Putrajaya	99.8	99.8	n.a.	59.9	59.9	n.a.	

STATISTIK PENGGUNAAN ICT OLEH INDIVIDU

*STATISTICS OF ICT USE
BY INDIVIDUALS*

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Jadual 2.1: Peratusan penggunaan dan pemilikan telefon bimbit oleh individu mengikut negeri dan strata, Malaysia, 2021
 Table Percentage of individuals using and owning mobile phone by state and strata, Malaysia, 2021

Negeri State	Penggunaan / Usage			Pemilikan / Ownership		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	98.7	99.0	97.7	97.4	98.1	95.1
Johor	99.0	99.3	98.0	98.9	99.3	97.4
Kedah	97.7	98.2	96.3	96.6	97.1	95.4
Kelantan	98.6	98.7	98.4	94.7	95.8	93.5
Melaka	97.7	97.8	97.5	96.7	96.7	96.9
Negeri Sembilan	98.3	98.8	97.0	96.4	96.8	95.1
Pahang	98.9	99.2	98.5	97.0	99.1	93.7
Pulau Pinang	99.0	99.1	96.9	98.4	98.6	95.8
Perak	98.1	98.2	97.4	95.0	95.4	93.5
Perlis	98.0	98.2	97.6	96.0	96.2	95.5
Selangor	99.5	99.5	98.8	99.3	99.3	98.0
Terengganu	98.3	98.3	98.5	97.2	97.4	96.8
Sabah	99.0	99.1	98.8	96.8	96.9	96.7
Sarawak	97.5	98.7	95.7	95.5	97.7	92.0
W.P. Kuala Lumpur	99.7	99.7	n.a.	99.7	99.7	n.a.
W.P. Labuan	99.8	99.8	99.6	99.7	99.8	99.0
W.P. Putrajaya	99.8	99.8	n.a.	99.6	99.6	n.a.

Jadual 2.2: Peratusan individu menggunakan komputer mengikut negeri dan strata, Malaysia, 2021
 Table Percentage of individuals using computer by state and strata, Malaysia, 2021

Negeri State	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	83.5	88.2	66.7
Johor	89.2	92.1	79.9
Kedah	76.6	80.1	66.4
Kelantan	78.8	84.4	72.1
Melaka	88.1	88.7	81.6
Negeri Sembilan	80.1	84.9	66.2
Pahang	81.6	87.7	72.6
Pulau Pinang	87.5	87.8	79.9
Perak	80.4	82.0	73.6
Perlis	79.2	80.8	75.3
Selangor	95.0	95.4	87.4
Terengganu	85.3	88.7	77.1
Sabah	65.2	75.4	48.0
Sarawak	74.2	84.2	58.4
W.P. Kuala Lumpur	96.0	96.0	n.a.
W.P. Labuan	91.6	93.3	82.9
W.P. Putrajaya	99.9	99.9	n.a.

Jadual 2.3:

Peratusan individu menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021

Table Percentage of individuals using computer by state, type of ICT skills and strata, Malaysia, 2021

(%)

Negeri State	Menyalin atau memindahkan fail <i>Copying or moving a file or folder</i>			Menggunakan teknik menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen <i>Using copy and paste tools to duplicate or move information within a document</i>			Menghantar e-mel berserta fail <i>Sending an e-mail with attached files</i>		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	94.6	94.8	93.8	93.2	94.2	88.5	78.7	79.5	74.9
Johor	96.4	96.3	96.8	93.4	94.9	87.8	78.6	78.9	77.3
Kedah	96.3	97.0	93.6	91.5	93.3	84.8	75.7	77.5	69.6
Kelantan	96.5	96.4	96.7	91.5	94.0	88.0	70.2	75.4	62.8
Melaka	99.4	99.6	97.7	93.7	93.9	90.5	76.8	76.5	80.7
Negeri Sembilan	96.5	96.5	96.7	93.5	93.8	92.5	73.6	73.0	76.0
Pahang	94.6	95.1	93.7	94.5	96.1	91.8	74.3	76.5	70.3
Pulau Pinang	90.1	89.8	98.1	87.6	87.6	88.2	73.5	73.4	76.6
Perak	89.5	89.7	88.4	93.4	94.0	90.6	80.2	80.8	77.6
Perlis	90.7	91.4	88.9	92.0	93.9	86.9	62.1	63.9	57.2
Selangor	92.6	92.8	89.1	93.0	93.2	89.7	85.2	85.3	82.9
Terengganu	96.8	97.6	94.6	92.1	95.1	84.1	69.1	69.7	67.5
Sabah	94.8	95.7	92.2	94.7	95.3	93.0	77.0	72.3	89.4
Sarawak	95.6	96.5	93.6	91.7	95.3	83.6	74.8	76.3	71.2
W.P. Kuala Lumpur	99.4	99.4	n.a.	99.6	99.6	n.a.	89.2	89.2	n.a.
W.P. Labuan	97.7	98.3	93.9	98.2	99.6	89.9	83.6	84.3	79.6
W.P. Putrajaya	98.5	98.5	n.a.	98.6	98.6	n.a.	93.2	93.2	n.a.

Jadual 2.3: Peratusan individu menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021 (samb.)
 Table Percentage of individuals using computer by state, type of ICT skills and strata, Malaysia, 2021 (cont'd)

Negeri State	Menggunakan teknik aritmetik asas di dalam lembaran kerja <i>Using basic arithmetic formulas in a spreadsheet</i>			Menghubungkan dan memasang peranti baru <i>Connecting and installing new devices</i>			Mencari, memuat turun, memasang dan mengkonfigurasi perisian <i>Searching, downloading, installing and configuring software</i>		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	52.6	52.7	51.8	76.0	76.9	71.6	67.0	67.3	65.7
Johor	48.1	45.6	57.1	71.9	72.7	68.9	56.9	54.9	64.1
Kedah	59.5	62.0	50.4	78.8	80.1	74.4	61.9	63.8	55.0
Kelantan	40.1	40.5	39.4	67.5	70.7	63.0	62.7	61.8	64.0
Melaka	53.9	53.2	64.7	75.1	75.3	72.9	59.0	59.4	53.5
Negeri Sembilan	62.7	62.5	63.5	78.2	78.0	78.8	67.5	65.0	76.7
Pahang	51.0	51.3	50.4	71.0	72.7	68.0	67.4	71.6	59.9
Pulau Pinang	55.0	54.9	57.5	78.5	78.8	70.0	67.8	67.7	72.1
Perak	42.7	42.7	42.4	74.3	75.5	68.9	63.2	63.3	62.3
Perlis	45.6	47.3	41.3	76.2	77.8	72.0	63.2	66.5	54.5
Selangor	53.2	53.4	48.8	78.3	78.4	77.3	72.3	72.6	66.2
Terengganu	52.0	52.3	51.2	71.1	71.3	70.5	60.0	60.4	59.0
Sabah	58.8	57.0	63.4	77.4	77.7	76.6	71.9	69.7	77.8
Sarawak	50.6	51.6	48.3	75.6	75.9	75.0	70.4	71.6	67.6
W.P. Kuala Lumpur	60.2	60.2	n.a.	81.8	81.8	n.a.	75.3	75.3	n.a.
W.P. Labuan	56.8	55.4	65.0	84.4	86.5	71.9	72.7	72.6	73.0
W.P. Putrajaya	75.4	75.4	n.a.	88.6	88.6	n.a.	85.7	85.7	n.a.

Jadual 2.3: Peratusan individu menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021 (samb.)
 Table Percentage of individuals using computer by state, type of ICT skills and strata, Malaysia, 2021 (cont'd)

Negeri State	Membuat persembahan elektronik dengan menggunakan perisian komputer <i>Creating electronic presentations using computer software</i>			Memindahkan fail di antara komputer dan peranti mudah alih lain <i>Transferring files between a computer and other devices</i>			Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus <i>Writing a computer program using a specialised programming language</i>		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	51.8	52.6	48.4	74.4	75.8	67.7	19.2	20.3	14.3
Johor	42.0	43.9	35.2	72.6	73.7	68.5	13.6	14.6	10.0
Kedah	59.4	61.2	53.1	75.5	77.3	69.2	15.4	15.0	17.0
Kelantan	50.3	50.1	50.7	59.3	66.2	49.5	16.3	16.8	15.5
Melaka	49.1	50.9	23.5	67.5	67.2	71.5	25.3	26.1	14.9
Negeri Sembilan	56.0	53.0	67.3	73.7	73.2	75.5	19.2	20.4	14.6
Pahang	45.9	52.3	34.5	70.9	73.9	65.5	19.6	20.2	18.4
Pulau Pinang	50.3	50.2	52.4	65.5	65.3	71.6	21.2	21.1	23.8
Perak	42.7	41.9	46.3	67.2	68.3	61.9	18.4	19.1	15.0
Perlis	48.3	48.5	47.7	64.7	66.8	59.3	20.0	21.5	16.1
Selangor	54.2	54.6	47.6	84.6	85.1	76.7	18.8	18.6	21.9
Terengganu	52.7	52.8	52.4	63.8	65.3	59.6	20.5	22.1	16.0
Sabah	55.7	53.3	61.9	77.0	74.9	82.6	20.9	23.3	14.5
Sarawak	51.4	51.9	50.2	70.1	71.6	66.7	12.7	15.2	7.2
W.P. Kuala Lumpur	65.9	65.9	n.a.	83.8	83.8	n.a.	32.8	32.8	n.a.
W.P. Labuan	51.7	52.9	44.3	75.6	75.7	75.2	55.5	56.7	48.5
W.P. Putrajaya	86.3	86.3	n.a.	97.1	97.1	n.a.	72.9	72.9	n.a.

Jadual 2.4: Peratusan belia menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021
 Table Percentage of youth using computer by state, type of ICT skills and strata, Malaysia, 2021

Negeri State	Menyalin atau memindahkan fail Copying or moving a file or folder				Menggunakan teknik menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen Using copy and paste tools to duplicate or move information within a document				Menghantar e-mel berserta fail Sending an e-mail with attached files			
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Jumlah Total	Bandar Urban	Luar bandar Rural	(%)
MALAYSIA	95.1	96.0	91.9	95.6	96.1	93.9	85.9	86.2	84.6			
Johor	94.2	93.0	97.4	94.2	93.0	97.4	86.4	85.6	88.5			
Kedah	92.2	93.3	89.4	92.2	93.3	89.4	81.8	83.0	78.6			
Kelantan	93.1	92.7	93.6	93.1	92.7	93.6	89.0	95.3	81.3			
Melaka	97.9	98.1	93.8	97.9	98.1	93.8	82.7	82.7	83.3			
Negeri Sembilan	91.4	91.7	90.7	91.4	91.7	90.7	77.5	81.3	67.0			
Pahang	92.0	93.6	89.1	96.9	97.6	95.7	82.8	84.7	79.5			
Pulau Pinang	94.5	94.6	93.2	94.5	94.6	93.2	90.3	90.5	86.4			
Perak	98.1	99.4	93.6	98.1	99.4	93.6	92.7	92.5	93.5			
Perlis	91.9	94.3	85.3	94.3	94.3	94.3	78.7	77.7	81.5			
Selangor	99.2	99.6	92.3	98.5	98.8	94.7	89.4	89.2	93.7			
Terengganu	94.6	96.6	89.5	94.6	96.6	89.5	84.7	85.6	82.4			
Sabah	92.9	93.9	91.0	95.2	93.9	97.9	79.1	74.3	88.8			
Sarawak	94.1	96.6	89.2	94.1	96.6	89.2	84.6	85.6	82.8			
W.P. Kuala Lumpur	96.6	96.6	n.a.	97.9	97.9	n.a.	90.3	90.3	n.a.			
W.P. Labuan	94.7	95.3	89.8	98.5	99.3	92.0	91.5	91.1	95.1			
W.P. Putrajaya	98.2	98.2	n.a.	98.2	98.2	n.a.	83.8	83.8	n.a.			

Jadual 2.4: Peratusan belia menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021 (samb.)

Table Percentage of youth using computer by state, type of ICT skills and strata, Malaysia, 2021 (cont'd)

Negeri State	Menggunakan teknik aritmetik asas di dalam lembaran kerja <i>Using basic arithmetic formulas in a spreadsheet</i>			Menghubungkan dan memasang peranti baru <i>Connecting and installing new devices</i>			Mencari, memuat turun, memasang dan mengkonfigurasi perisian <i>Searching, downloading, installing and configuring software</i>		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	45.0	46.2	40.8	86.0	89.4	74.4	73.7	76.0	66.1
Johor	42.6	36.9	58.0	84.3	91.1	66.0	63.6	59.2	75.4
Kedah	44.6	47.3	37.5	89.5	90.8	85.9	63.4	65.4	58.1
Kelantan	36.9	38.5	34.9	75.7	90.1	57.9	65.0	65.2	64.7
Melaka	50.7	51.3	39.3	88.3	90.3	50.5	65.7	65.3	71.8
Negeri Sembilan	53.3	59.6	36.3	80.5	88.5	58.7	72.1	72.9	70.0
Pahang	41.0	42.1	39.1	70.7	73.4	66.1	74.8	84.0	58.9
Pulau Pinang	54.9	55.4	45.1	91.6	93.5	58.4	77.2	77.9	65.6
Perak	48.5	48.2	49.5	91.2	90.5	93.1	72.5	71.8	74.6
Perlis	41.5	44.9	32.1	86.8	83.7	95.4	78.8	84.9	62.1
Selangor	47.9	47.6	53.6	91.4	90.9	99.0	90.1	90.4	85.0
Terengganu	49.1	52.2	41.0	85.7	85.8	85.4	66.4	68.3	61.3
Sabah	42.9	47.3	34.3	82.0	88.2	69.5	66.1	69.4	59.5
Sarawak	36.7	39.3	31.7	85.3	84.9	86.2	70.5	73.7	64.2
W.P. Kuala Lumpur	47.2	47.2	n.a.	95.6	95.6	n.a.	96.7	96.7	n.a.
W.P. Labuan	53.7	54.4	47.6	84.9	84.6	87.5	83.6	83.5	85.4
W.P. Putrajaya	54.7	54.7	n.a.	90.2	90.2	n.a.	90.7	90.7	n.a.

(%)

Jadual 2.4: Peratusan belia menggunakan komputer mengikut negeri, jenis kemahiran ICT dan strata, Malaysia, 2021 (samb.)
 Table Percentage of youth using computer by state, type of ICT skills and strata, Malaysia, 2021 (cont'd)

Negeri State	Membuat persembahan elektronik dengan menggunakan perisian komputer <i>Creating electronic presentations using computer software</i>			Memindahkan fail di antara komputer dan peranti mudah alih lain <i>Transferring files between a computer and other devices</i>			Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus <i>Writing a computer program using a specialised programming language</i>		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	50.6	52.4	44.6	77.4	79.8	69.5	20.9	22.1	16.7
Johor	44.1	47.4	35.4	78.3	80.5	72.4	14.8	16.3	10.8
Kedah	63.1	66.4	54.3	80.3	82.4	74.7	13.2	11.9	16.9
Kelantan	49.8	51.4	47.8	68.4	79.8	54.4	18.6	16.8	20.8
Melaka	50.1	50.2	47.4	69.7	69.8	66.9	28.3	28.0	34.7
Negeri Sembilan	55.9	55.4	57.2	82.8	88.2	68.3	22.7	25.0	16.3
Pahang	47.5	48.3	46.1	79.3	82.3	74.1	19.2	19.7	18.4
Pulau Pinang	56.7	56.8	54.9	70.7	70.8	69.2	27.9	27.9	29.0
Perak	49.9	48.9	53.3	77.6	80.8	67.2	33.6	36.1	25.5
Perlis	41.6	41.7	41.3	67.1	71.1	56.2	24.2	26.5	18.0
Selangor	53.7	53.9	50.3	77.6	78.7	60.3	18.5	17.8	29.8
Terengganu	51.8	54.2	45.4	68.8	75.4	51.8	25.1	28.0	17.5
Sabah	40.6	41.3	39.3	84.2	87.9	76.9	17.5	20.6	11.3
Sarawak	48.1	52.2	40.0	77.7	78.4	76.4	20.7	24.1	13.8
W.P. Kuala Lumpur	62.3	62.3	n.a.	75.4	75.4	n.a.	26.5	26.5	n.a.
W.P. Labuan	64.3	64.2	64.9	81.7	82.0	78.9	57.3	57.0	60.2
W.P. Putrajaya	82.2	82.2	n.a.	95.4	95.4	n.a.	71.1	71.1	n.a.

Jadual 2.5: Peratusan individu menggunakan komputer mengikut jenis kemahiran ICT dan jantina, Malaysia, 2021
 Table Percentage of individuals using computer by type of ICT skills and sex, Malaysia, 2021

Jenis Kemahiran ICT Type of ICT Skills	Jantina / Sex		Jumlah Total	Lelaki Male	Perempuan Female
Jumlah / Total			83.5	86.9	79.8
Menyalin atau memindahkan fail Copying or moving a file or folder			94.6	93.5	95.8
Menggunakan teknik menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen Using copy and paste tools to duplicate or move information within a document			93.2	93.1	93.2
Menghantar emel berserta fail Sending an e-mail with attached files			78.7	84.2	72.4
Menggunakan teknik aritmetik asas di dalam lembaran kerja Using basic arithmetic formulas in a spreadsheet			52.6	61.4	42.4
Menghubungkan dan memasang peranti baru Connecting and installing new devices			76.0	87.0	63.2
Mencari, memuat turun, memasang dan mengkonfigurasi perisian Searching, downloading, installing and configuring software			67.0	77.3	55.1
Membuat persembahan elektronik dengan menggunakan perisian komputer Creating electronic presentations using computer software			51.8	59.5	43.0
Memindahkan fail di antara komputer dan peranti mudah alih lain Transferring files between a computer and other devices			74.4	80.0	67.9
Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus Writing a computer program using a specialised programming language			19.2	19.6	18.8

Jadual 2.6: Peratusan individu menggunakan komputer mengikut jenis kemahiran ICT dan kumpulan umur, Malaysia, 2021
 Table Percentage of individuals using computer by type of ICT skills and age group, Malaysia, 2021

Jenis Kemahiran ICT Type of ICT Skills		Kumpulan Umur / Age Group											(%)
		15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60+		
Jumlah / Total		96.9	92.5	90.8	90.7	90.4	90.7	89.4	86.4	82.3	39.8		
Menyalin atau memindahkan fail Copying or moving a file or folder		96.1	94.1	99.5	99.8	99.9	99.9	99.9	99.9	99.6	41.4		
Menggunakan teknik menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen Using copy and paste tools to duplicate or move information within a document		96.1	95.1	99.5	99.9	99.9	99.9	98.5	90.4	70.5	54.1		
Menghantar emel berserta fail Sending an e-mail with attached files		85.7	86.0	82.6	84.4	84.2	82.5	78.2	72.0	56.0	45.1		
Menggunakan teknik aritmetik asas di dalam lembaran kerja Using basic arithmetic formulas in a spreadsheet		21.8	66.6	64.8	64.9	64.8	61.9	56.8	50.3	40.9	7.5		
Menghubungkan dan memasang peranti baru Connecting and installing new devices		85.5	86.4	78.1	80.9	81.6	79.4	63.9	57.7	61.7	53.6		
Mencari, memuat turun, memasang dan mengkonfigurasi perisian Searching, downloading, installing and configuring software		58.3	88.1	73.9	76.7	77.2	74.5	72.5	58.3	36.7	10.3		
Membuat persembahan elektronik dengan menggunakan perisian komputer Creating electronic presentations using computer software		20.9	78.2	65.5	65.8	64.6	62.7	56.3	28.0	23.4	8.7		
Memindahkan fail di antara komputer dan peranti mudah alih lain Transferring files between a computer and other devices		63.7	90.2	83.7	85.2	85.2	83.9	79.8	59.2	47.0	24.9		
Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus Writing a computer program using a specialised programming language		8.1	32.7	29.0	24.4	18.7	19.1	13.8	12.2	9.2	5.4		

Jadual 2.7: Peratusan individu menggunakan Internet mengikut negeri dan strata, Malaysia, 2021
 Table 2.7: Percentage of individuals using the Internet by state and strata, Malaysia, 2021

Negeri State	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	96.8	97.7	93.5
Johor	98.1	98.6	96.4
Kedah	95.5	96.6	92.4
Kelantan	95.9	96.9	94.7
Melaka	96.4	96.5	95.6
Negeri Sembilan	95.5	97.1	90.8
Pahang	94.9	96.8	92.2
Pulau Pinang	97.8	97.9	95.6
Perak	95.7	95.9	94.6
Perlis	95.0	95.4	94.1
Selangor	98.0	98.1	96.1
Terengganu	95.5	96.0	94.4
Sabah	97.3	98.0	96.2
Sarawak	93.6	98.0	86.7
W.P. Kuala Lumpur	99.6	99.6	n.a.
W.P. Labuan	99.8	99.8	99.5
W.P. Putrajaya	99.8	99.8	n.a.

Jadual 2.8:

Peratusan individu menggunakan Internet mengikut negeri, jenis peranti mudah alih yang digunakan dan strata, Malaysia, 2021

Table Percentage of individuals using the Internet by state, type of portable devices used and strata, Malaysia, 2021

(%)

Negeri State	Telefon bimbit Mobile phone			Papan elektronik mudah alih Tablet			Komputer mudah alih Portable computer			Lain-lain peranti mudah alih Other portable devices		
	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural	Jumlah Total	Bandar Urban	Luar bandar Rural
MALAYSIA	99.7	99.7	99.6	30.9	33.2	22.5	45.1	49.6	28.5	18.0	19.9	11.1
Johor	99.8	99.8	99.9	30.4	32.5	23.7	46.9	51.3	32.4	12.3	13.0	10.1
Kedah	99.7	99.7	99.7	28.7	29.9	25.2	46.4	50.3	34.5	13.0	14.0	9.9
Kelantan	99.6	99.5	99.8	30.7	32.8	28.1	40.6	45.7	34.3	15.2	17.2	12.8
Melaka	99.6	99.6	99.0	30.9	31.9	17.5	48.7	50.5	25.1	24.5	25.5	12.0
Negeri Sembilan	99.8	99.8	99.8	30.0	34.1	17.6	50.6	57.1	30.6	19.2	22.0	10.5
Pahang	99.6	99.7	99.5	30.3	34.7	23.4	40.8	48.8	28.1	17.5	20.9	12.1
Pulau Pinang	99.9	99.9	99.7	31.8	31.8	30.8	46.4	46.4	44.3	17.0	16.9	18.0
Perak	98.9	99.1	98.4	28.7	29.8	24.0	41.7	44.5	29.9	15.7	17.0	10.1
Perlis	99.9	99.9	99.7	27.0	29.9	20.2	36.9	41.1	26.6	16.6	18.7	11.6
Selangor	99.9	99.9	99.3	35.9	36.2	30.2	53.3	54.0	40.7	24.6	25.0	17.4
Terengganu	99.7	99.7	99.9	35.2	36.7	31.5	46.3	49.1	39.7	20.2	20.9	18.5
Sabah	99.8	99.8	99.8	22.4	26.2	15.8	28.8	34.0	20.0	16.6	21.5	8.4
Sarawak	99.8	99.8	99.7	29.4	35.0	19.5	35.0	43.3	20.3	14.9	17.6	10.1
W.P. Kuala Lumpur	99.2	99.2	n.a.	36.6	36.6	n.a.	64.3	64.3	n.a.	20.4	20.4	n.a.
W.P. Labuan	99.5	99.6	99.0	36.4	36.3	37.0	60.0	62.8	45.5	39.5	42.4	24.4
W.P. Putrajaya	99.7	99.7	n.a.	52.0	52.0	n.a.	77.8	77.8	n.a.	40.6	40.6	n.a.

Jadual 2.9: Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021
 Table Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021

(%)

Negeri State	Mendapatkan Maklumat Access to Information			Profesional Professional		
	Mendapatkan maklumat barang/ perkhidmatan Finding information about goods/ services	Membaca akhbar/ majalah atas talian Reading newspaper/ magazines online	Memohon pekerjaan Applying for jobs	Menyertai rangkaian profesional Participating in professional networks	Bekerja dari rumah Work from home	
MALAYSIA	89.4	78.0	33.0	12.4	18.1	
Johor	97.3	76.8	29.9	10.1	14.9	
Kedah	92.4	84.5	28.6	1.7	10.0	
Kelantan	89.6	69.5	36.7	12.2	11.0	
Melaka	91.6	76.1	31.2	9.0	21.2	
Negeri Sembilan	89.0	79.6	33.8	6.7	18.7	
Pahang	88.8	72.9	34.9	13.9	14.6	
Pulau Pinang	93.8	86.3	29.5	9.6	18.0	
Perak	90.4	79.3	31.9	7.5	14.7	
Perlis	85.8	65.3	27.9	4.4	10.0	
Selangor	93.1	83.9	28.7	16.8	24.6	
Terengganu	96.5	74.9	33.9	22.4	16.8	
Sabah	74.1	74.6	42.2	9.8	12.2	
Sarawak	78.3	68.3	38.7	12.4	17.7	
W.P. Kuala Lumpur	95.0	79.4	32.4	25.4	34.4	
W.P. Labuan	98.3	91.0	34.8	30.4	28.4	
W.P. Putrajaya	95.1	74.0	24.1	18.9	50.0	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.9:

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021 (cont'd)

(%)

Negeri State	Komunikasi Communication					
	Menyertai rangkaian sosial <i>Participating in social networks</i>	Menghantar emel Sending e-mail	Membuat panggilan telefon melalui Internet <i>Telephoning over the Internet</i>	Memuat naik kandungan ke laman web <i>Uploading content to a website</i>	Mengurus laman web persendirian <i>Managing personal homepage</i>	Mengakses perbincangan atas talian <i>Accessing online discussion</i>
MALAYSIA	99.0	79.6	89.2	10.3	7.2	5.3
Johor	99.0	78.2	88.2	10.9	2.8	2.6
Kedah	99.2	84.9	96.9	1.1	0.4	0.3
Kelantan	99.4	78.1	94.6	4.7	1.3	1.2
Melaka	98.4	75.5	91.9	5.2	3.7	5.1
Negeri Sembilan	98.5	76.2	93.1	12.6	11.5	11.2
Pahang	98.7	79.4	86.2	3.6	0.9	1.1
Pulau Pinang	99.2	74.6	82.0	12.9	12.7	5.0
Perak	98.3	70.4	84.1	12.8	8.8	8.0
Perlis	99.2	76.2	86.8	7.5	7.0	5.8
Selangor	99.2	86.3	88.0	14.1	11.7	9.0
Terengganu	99.8	89.9	93.1	3.4	2.0	0.9
Sabah	99.2	77.7	94.0	8.8	5.6	4.0
Sarawak	98.9	73.1	82.4	2.3	1.5	1.3
W.P. Kuala Lumpur	98.8	85.1	92.9	28.7	23.9	13.4
W.P. Labuan	99.1	82.2	99.4	30.7	29.5	28.9
W.P. Putrajaya	99.9	96.1	97.2	3.3	2.9	4.6

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.9:

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021 (cont'd)

(%)

Negeri State	Lain-lain Perkhidmatan Atas Talian Other Online Services						
	Melaksanakan tugas jana pendapatan Performing tasks to generate income	Menggunakan perkhidmatan berkaitan perjalanan/penginapan Using services related to travel/accommodation	Menjual barangan/perkhidmatan Selling goods/services	Membuat pesanan barangan/perkhidmatan atas talian Ordering goods/services online	Menggunakan perbankan Internet Using Internet banking	Menggunakan perisian untuk menyunting teks Using software for editing texts	Memuat turun perisian/aplikasi Downloading software/applications
MALAYSIA	10.9	40.8	11.3	60.6	70.5	39.9	86.3
Johor	9.9	36.3	11.4	60.7	72.0	34.2	79.9
Kedah	3.6	41.4	5.5	59.7	72.4	27.2	95.7
Kelantan	10.4	31.5	9.9	49.3	61.3	37.4	83.4
Melaka	9.5	39.8	10.2	67.9	69.2	45.1	82.7
Negeri Sembilan	8.1	46.9	5.7	61.4	69.0	59.9	92.3
Pahang	6.1	26.7	6.7	52.3	66.7	35.0	80.3
Pulau Pinang	8.6	44.9	6.7	58.0	75.4	32.2	86.3
Perak	7.5	32.0	11.5	50.4	66.2	30.4	73.3
Perlis	5.0	14.6	5.4	45.4	52.7	15.6	78.2
Selangor	17.2	52.1	16.0	79.3	84.6	63.2	93.4
Terengganu	20.0	60.3	20.6	80.2	81.0	39.1	85.8
Sabah	9.1	32.2	10.1	49.7	49.2	22.4	91.7
Sarawak	9.8	28.9	9.6	34.2	59.5	28.2	83.0
W.P. Kuala Lumpur	12.6	61.4	13.7	78.0	85.8	54.2	83.2
W.P. Labuan	28.4	59.8	30.7	82.0	85.5	59.2	83.6
W.P. Putrajaya	10.2	52.2	16.2	72.4	89.5	36.2	95.3

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.9: Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021(samb.)
 Table Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021(cont'd)

Negeri State	Aktiviti Pembelajaran Learning Activities			Hiburan Entertainment			(%)
	Menjalani kursus formal atas talian Doing a formal online course	Merujuk laman web untuk pembelajaran formal Consulting websites for formal learning purposes	Menjalani kursus tidak formal atas talian Doing an informal online course	Mendengar radio secara atas talian Listening to radio online	Menonton televisyen secara atas talian Watching television online	Muat turun gambar/ filem/ permainan Downloading pictures/ movie/ games	
MALAYSIA	29.9	59.0	28.7	64.9	65.0	91.8	
Johor	28.0	59.3	21.9	78.3	63.1	88.9	
Kedah	24.5	56.0	18.5	68.2	63.8	96.7	
Kelantan	30.9	47.4	29.2	48.0	49.5	90.0	
Melaka	24.3	61.7	31.3	73.6	72.6	92.1	
Negeri Sembilan	17.7	56.2	25.3	73.7	65.5	93.9	
Pahang	25.2	56.7	20.3	38.3	50.8	85.5	
Pulau Pinang	22.7	60.3	20.6	80.3	84.5	92.6	
Perak	33.7	54.7	38.0	55.1	67.4	86.1	
Perlis	26.7	50.1	17.4	67.8	55.1	85.7	
Selangor	40.1	69.4	46.3	71.8	66.9	96.6	
Terengganu	46.3	60.6	49.0	94.5	78.0	96.6	
Sabah	21.4	51.8	17.4	45.5	54.3	92.5	
Sarawak	28.9	52.7	16.2	49.3	67.8	86.0	
W.P. Kuala Lumpur	29.0	65.9	28.2	78.7	69.4	92.2	
W.P. Labuan	38.7	62.3	37.8	83.2	98.4	98.5	
W.P. Putrajaya	61.1	76.0	33.7	76.8	83.3	96.2	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.9:

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021 (samb.)

Table Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021 (cont'd)

Negeri State	Ruang Penyimpanan Storage Space		e-Kesihatan e-Health		e-Kerajaan e-Government	
	Menggunakan ruang simpanan di internet Using storage space on the internet	Mendapatkan maklumat kesihatan Seeking health information	Membuat temujanji kesihatan Making a medical appointment	Mendapatkan maklumat daripada organisasi kerajaan Getting information from government organisations	Berinteraksi dengan organisasi kerajaan Interacting with government organisations	(%)
MALAYSIA	64.6	73.8	43.5	68.1	51.9	
Johor	65.5	75.7	41.7	74.9	62.3	
Kedah	68.0	87.6	22.8	95.8	67.5	
Kelantan	60.8	77.7	63.3	60.7	29.4	
Melaka	64.9	74.6	29.3	63.3	43.1	
Negeri Sembilan	62.4	81.8	24.8	71.5	29.8	
Pahang	62.7	63.5	38.6	59.3	40.8	
Pulau Pinang	58.7	66.2	22.0	68.6	65.9	
Perak	59.5	71.1	37.2	68.9	69.9	
Perlis	54.9	70.9	11.9	74.9	60.2	
Selangor	75.1	74.7	56.5	65.4	44.5	
Terengganu	67.2	91.5	75.5	93.6	90.8	
Sabah	54.6	79.9	47.8	66.3	41.2	
Sarawak	58.3	57.9	39.2	46.6	45.4	
W.P. Kuala Lumpur	70.1	65.6	43.7	66.6	54.2	
W.P. Labuan	76.5	79.3	49.7	54.8	29.6	
W.P. Putrajaya	86.2	71.4	31.3	94.8	87.7	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.9: Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by state and type of activity, Malaysia, 2021 (cont'd)

Keselamatan dan Perlindungan Online Safety and Online Protection				
Negeri State	Sivik dan Politik Civic and Politics	e-Dagang e-Commerce		Mempunyai peralatan keselamatan dalam talian Owning online security tools
	Memberi pendapat/ undi Posting opinions/ voting	Membeli barangan/ perkhidmatan melalui e-Dagang Purchasing goods/ services via e-Commerce	Menjual barangan/ perkhidmatan melalui e-Dagang Selling goods/ services via e-Commerce	
MALAYSIA	41.2	64.7	7.0	48.3
Johor	43.5	65.8	5.7	54.5
Kedah	29.2	71.2	1.6	57.2
Kelantan	50.6	61.5	5.7	36.1
Melaka	53.9	66.7	6.4	47.2
Negeri Sembilan	29.7	64.2	4.9	57.9
Pahang	27.1	58.8	4.2	22.0
Pulau Pinang	40.6	56.3	3.5	72.1
Perak	24.9	53.3	3.8	34.4
Perlis	13.0	43.8	3.4	46.7
Selangor	59.0	83.7	13.9	56.9
Terengganu	70.3	79.5	4.2	68.2
Sabah	22.7	47.1	7.0	35.9
Sarawak	35.9	45.4	4.7	19.2
W.P. Kuala Lumpur	46.9	79.5	8.3	72.6
W.P. Labuan	49.4	91.4	27.9	95.9
W.P. Putrajaya	55.8	90.9	9.5	29.4

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021
 Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021

Jantina Sex	Jumlah Total	Mendapatkan Maklumat Access to Information			Professional Professional	
		Mendapatkan maklumat barangan/ perkhidmatan Finding information about goods/ services	Membaca akhbar/ majalah atas talian Reading newspaper/ magazines online	Memohon pekerjaan Applying for jobs	Menyertai rangkaian profesional Participating in professional networks	Bekerja dari rumah Work from home
Jumlah / Total	96.8	89.4	78.0	33.0	12.4	18.1
Lelaki / Male	97.2	94.0	79.5	34.6	13.2	18.4
Perempuan / Female	96.3	84.5	76.4	31.3	11.5	17.7

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
 Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021 (samb.)
Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021 (cont'd)

(%)

Komunikasi Communication							
Jantina Sex	Menyertai rangkaian sosial Participating in social networks	Menghantar emel Sending e-mail	Membuat panggilan telefon melalui Internet Telephoning over the Internet	Memuat naik kandungan ke laman web Uploading content to a website	Mengurus laman web persendirian Managing personal homepage	Menguruskan blog Managing blog	Mengakses perbincangan atas talian Accessing online discussion
Jumlah / Total	99.0	79.6	89.2	10.3	7.2	5.3	38.2
Lelaki / Male	99.0	81.4	88.5	10.3	7.3	5.5	37.5
Perempuan / Female	99.0	77.8	90.0	10.3	7.1	5.1	39.1

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021 (cont'd)

(%)

Lain-lain Perkhidmatan Atas Talian Other Online Services							
Jantina Sex	Melaksanakan tugas jana pendapatan Performing tasks to generate income	Menggunakan perkhidmatan berkaitan perjalanan/ penginapan Using services related to travel/ accommodation	Menjual barangan/ perkhidmatan Selling goods/ services	Menggunakan perbankan Internet Using Internet banking	Menggunakan perisian untuk menyunting teks Using software for editing texts	Memuat turun perisian/ aplikasi Downloading software/ applications	Membuat pesanan barangan/ perkhidmatan atas talian Ordering goods/ services online
Jumlah / Total	10.9	40.8	11.3	70.5	39.9	86.3	60.6
Lelaki / Male	11.0	41.8	11.0	70.5	39.9	87.1	59.8
Perempuan / Female	10.7	39.8	11.6	70.5	39.9	85.4	61.6

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021 (cont'd)

Jantina Sex	Aktiviti Pembelajaran Learning Activities			Hiburan Entertainment		
	Menjalani kursus formal atas talian Doing a formal online course	Merujuk laman web untuk pembelajaran formal Consulting websites for formal learning purposes	Menjalani kursus tidak formal atas talian Doing an informal online course	Mendengar radio secara atas talian Listening to radio online	Menonton televisyen secara atas talian Watching television online	Muat turun gambar/ filem/ permainan Downloading images/ movie/ games
Jumlah / Total	29.9	59.0	28.7	64.9	65.0	91.8
Lelaki / Male	29.5	68.8	28.5	67.9	67.2	92.6
Perempuan / Female	30.4	48.4	28.9	61.7	62.5	90.9

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021 (samb.)
Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021 (cont'd)

Jantina Sex	Ruang Penyimpanan Storage Space		e-Kesihatan e-Health		e-Kerajaan e-Government	
	Menggunakan ruang simpanan di Internet Using storage space on the Internet	Mendapatkan maklumat kesihatan Seeking health information	Membuat temujanji kesihatan Making a medical appointment	Mendapatkan maklumat daripada organisasi kerajaan Getting information from government organisations	Berinteraksi dengan organisasi kerajaan Interacting with government organisations	
Jumlah / Total	64.6	73.8	43.5	68.1	51.9	
Lelaki / Male	72.9	72.2	42.5	67.2	51.2	
Perempuan / Female	55.6	75.6	44.5	69.1	52.6	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.10: Peratusan individu menggunakan Internet mengikut jantina dan jenis aktiviti, Malaysia, 2021 (samb.)
Table Percentage of individuals using the Internet by sex and type of activity, Malaysia, 2021 (cont'd)

Jantina Sex	Keselamatan dan Perlindungan Online <i>Safety and Online Protection</i>		
	Sivik dan Politik <i>Civic and Politics</i>	e-Dagang <i>e-Commerce</i>	
	Memberi pendapat/ undi <i>Posting opinions/ voting</i>	Membeli barangan/ perkhidmatan melalui e-Dagang <i>Purchasing goods/ services via e-Commerce</i>	Menjual barangan/ perkhidmatan melalui e-Dagang <i>Selling goods/ services via e-Commerce</i>
			Mempunyai peralatan keselamatan dalam talian <i>Owning online security tools</i>
Jumlah / Total	41.2	64.7	7.0
Lelaki / Male	40.5	63.6	6.7
Perempuan / Female	41.9	66.0	7.3

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021
Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021

(%)

Kumpulan Umur Age Group	Jumlah Total	Mendapatkan Maklumat Access to Information				Profesional Professional	
		Mendapatkan maklumat barangan/ perkhidmatan Finding information about goods/ services	Membaca akhbar/ majalah atas talian Reading newspaper/ magazines online	Memohon pekerjaan Applying for jobs	Menyertai rangkaian profesional Participating in professional networks	Bekerja dari rumah Work from home	
Jumlah / Total	96.8	89.4	78.0	33.0	12.4	18.1	
15 - 19	99.3	50.7	60.3	10.4	4.2	1.8	
20 - 24	99.7	97.6	74.7	70.6	14.8	8.0	
25 - 29	99.4	94.8	74.3	100.0	18.3	20.4	
30 - 34	99.2	94.5	76.6	35.1	16.7	27.3	
35 - 39	98.8	94.6	77.9	18.3	17.1	30.4	
40 - 44	98.8	94.9	91.5	15.3	13.7	28.9	
45 - 49	98.8	94.2	90.9	11.8	12.8	26.0	
50 - 54	97.8	93.6	90.1	8.6	10.9	23.7	
55 - 59	96.9	93.4	89.6	7.0	8.6	18.1	
60+	83.7	89.9	73.9	2.6	3.6	5.3	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021 (samb.)
Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021 (cont'd)

(%)

Kumpulan Umur Age Group	Komunikasi Communication						
	Menyertai rangkaian sosial Participating in social networks	Menghantar emel Sending e-mail	Membuat panggilan telefon melalui Internet Telephoning over the Internet	Memuat naik kandungan ke laman web Uploading content to a website	Mengurus laman web persendirian Managing personal homepage	Menguruskan blog Managing blog	Mengakses perbincangan atas talian Accessing online discussion
Jumlah / Total	99.0	79.6	89.2	10.3	7.2	5.3	38.2
15 - 19	99.9	96.8	98.3	7.4	4.2	3.0	40.4
20 - 24	99.9	90.2	93.7	10.1	6.3	4.5	40.3
25 - 29	99.8	82.2	86.5	10.5	7.4	5.4	35.7
30 - 34	99.9	81.2	89.9	13.8	10.9	8.7	40.7
35 - 39	99.9	82.5	90.1	13.1	9.3	7.2	40.1
40 - 44	99.9	81.3	88.9	12.6	9.1	6.3	37.5
45 - 49	99.9	76.6	88.3	11.9	7.8	6.1	36.5
50 - 54	99.6	70.7	86.0	9.6	7.5	4.7	35.8
55 - 59	98.4	65.4	84.0	9.1	6.7	4.8	33.4
60+	93.6	59.0	82.8	5.3	4.0	2.5	38.3

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021 (cont'd)

Kumpulan Umur Age Group	Lain-lain Perkhidmatan Atas Talian Other Online Services						Membuat pesanan barangan/ perkhidmatan atas talian Ordering goods/ services online
	Melaksanakan tugasan jana pendapatan Performing tasks to generate income	Menggunakan perkhidmatan berkaitan perjalanan/ penginapan Using services related to travell/ accommodation	Menjual barangan/ perkhidmatan Selling goods/ services	Menggunakan perbankan Internet Using Internet banking	Menggunakan perisian untuk menyunting teks Using software for editing texts	Memuat turun perisian/ aplikasi Downloading software/ applications	
Jumlah / Total	10.9	40.8	11.3	70.5	39.9	86.3	60.6
15 - 19	4.2	20.5	3.5	20.8	36.4	90.1	33.8
20 - 24	10.5	42.2	10.5	74.8	50.5	93.3	67.8
25 - 29	12.9	47.2	12.8	79.0	42.4	88.7	71.6
30 - 34	14.1	50.9	14.3	81.7	47.4	90.6	73.5
35 - 39	15.9	52.1	17.2	84.2	47.5	89.8	74.1
40 - 44	14.4	50.7	15.3	83.4	44.7	88.9	72.9
45 - 49	14.2	47.4	14.7	80.8	42.8	85.7	68.3
50 - 54	11.0	43.6	12.4	75.8	38.1	83.5	62.2
55 - 59	9.2	37.5	10.0	70.7	31.3	79.7	54.8
60+	3.9	20.6	4.7	60.8	15.8	68.9	30.4

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
 Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021 (cont'd)

Kumpulan Umur Age Group	Aktiviti Pembelajaran Learning Activities			Hiburan Entertainment		
	Menjalani kursus formal atas talian Doing a formal online course	Merujuk laman web untuk pembelajaran formal Consulting websites for formal learning purposes	Menjalani kursus tidak formal atas talian Doing an informal online course	Mendengar radio secara atas talian Listening to radio online	Menonton televisyen secara atas talian Watching television online	Muat turun gambar/ filem/ permainan Downloading pictures/ movie/ games
Jumlah / Total	29.9	59.0	28.7	64.9	65.0	91.8
15 - 19	66.0	69.3	44.9	49.4	55.4	91.1
20 - 24	44.6	81.2	39.0	65.4	70.4	96.3
25 - 29	24.5	72.5	27.0	67.3	72.0	94.7
30 - 34	27.8	70.9	30.1	68.2	72.3	95.4
35 - 39	29.1	70.3	30.1	68.2	70.7	95.4
40 - 44	26.2	67.6	28.0	65.7	66.8	94.7
45 - 49	24.1	62.4	26.3	61.5	62.4	92.4
50 - 54	21.8	54.7	24.9	68.1	62.5	90.5
55 - 59	18.8	17.8	21.7	66.4	57.4	87.5
60+	7.1	4.9	10.5	68.6	53.3	78.2

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
 Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021 (samb.)
Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021 (cont'd)

Kumpulan Umur Age Group	Ruang Penyimpanan Storage Space		e-Kesihatan e-Health		e-Kerajaan e-Government	
	Menggunakan ruang simpanan di Internet Using storage space on the Internet	Mendapatkan maklumat kesihatan Seeking health information	Membuat temujanji kesihatan Making a medical appointment	Mendapatkan maklumat daripada organisasi kerajaan Getting information from government organisations	Berinteraksi dengan organisasi kerajaan Interacting with government organisations	(%)
Jumlah / Total	64.6	73.8	43.5	68.1	51.9	
15 - 19	39.8	52.8	29.7	48.9	34.2	
20 - 24	86.9	72.8	37.7	64.6	45.4	
25 - 29	83.0	71.3	37.5	66.7	48.0	
30 - 34	85.0	77.5	45.8	72.4	55.0	
35 - 39	84.7	78.4	45.4	73.3	55.2	
40 - 44	83.3	77.8	45.6	73.3	55.1	
45 - 49	80.9	79.0	44.6	74.2	55.5	
50 - 54	37.5	80.3	46.5	72.7	57.0	
55 - 59	30.2	79.3	48.4	72.9	58.4	
60+	14.7	77.2	58.1	70.0	62.3	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 2.11: Peratusan individu menggunakan Internet mengikut kumpulan umur dan jenis aktiviti, Malaysia, 2021 (samb.)
 Table Percentage of individuals using the Internet by age group and type of activity, Malaysia, 2021 (cont'd)

Keselamatan dan Perlindungan Online Safety and Online Protection				
Kumpulan Umur Age Group	Sivik dan Politik Civic and Politics	e-Dagang e-Commerce		Mempunyai peralatan keselamatan dalam talian Owning online security tools
	Memberi pendapat/undi Posting opinions/ voting	Membeli barangan/ perkhidmatan melalui e-Dagang Purchasing goods/ services via e-Commerce	Menjual barangan/ perkhidmatan melalui e-Dagang Selling goods/ services via e-Commerce	
Jumlah / Total	41.2	64.7	7.0	48.3
15 - 19	22.9	37.2	2.0	42.2
20 - 24	38.2	74.6	6.5	48.9
25 - 29	40.4	75.9	8.0	50.2
30 - 34	44.7	78.2	8.9	54.7
35 - 39	47.1	78.0	11.3	55.6
40 - 44	47.1	77.0	9.6	54.6
45 - 49	45.8	73.7	8.4	53.2
50 - 54	44.1	66.6	7.4	49.9
55 - 59	41.7	58.1	6.1	45.7
60+	44.4	31.2	2.7	31.4

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
 Note: Refer to technical notes page 136 - 138 for detailed activities

STATISTIK TERPILIH
MALAYSIA
SELECTED STATISTICS OF
MALAYSIA

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Jadual 3.1: Kadar penembusan perkhidmatan dan peralatan ICT, Malaysia, 2017 - 2021
Table 3.1: ICT services and equipment penetration rate, Malaysia, 2017 - 2021

Perkhidmatan dan Peralatan ICT ICT Services and Equipment		2017	2018	2019	2020	2021
		(%)				
Jalur lebar Broadband		117.3	121.1	131.7	n.a.	n.a.
Mudah alih Mobile		n.a.	n.a.	n.a.	118.7	128.2
Tetap Fixed		n.a.	n.a.	n.a.	37.2	41.4
Selular mudah alih Mobile-cellular		131.2	130.2	135.4	133.6	144.0
TV berbayar Pay TV		83.2	87.3	86.4	83.4	81.1

Nota/ Note

1. Jalur lebar tetap merujuk kepada kadar penembusan bagi 100 premis/ Fixed-broadband refers to penetration rate per 100 premises
2. Jalur lebar mudah alih dan selular mudah alih merujuk kepada kadar penembusan bagi 100 penduduk/ Mobile-broadband and mobile-cellular refer to penetration rate per 100 inhabitants
3. TV berbayar merujuk kepada kadar penembusan bagi 100 isi rumah/ Pay TV refers to penetration rate per 100 households

Jadual 3.2: Bilangan langganan TV berbayar, Malaysia, 2017 - 2021
Table 3.2: Number of pay TV subscriptions, Malaysia, 2017 - 2021

TV berbayar Pay TV channel		2017	2018	2019	2020	2021
		('000)				
Jumlah langganan isi rumah Total household subscriptions		6,542.3	7,062.2	7,103.4	6,880.5	6,699.60

Nota: Televisyen berbayar termasuk IPTV

Note: Pay TV is inclusive of IPTV

Sumber: Komunikasi dan Multimedia, Buku Maklumat Statistik (Suruhanjaya Komunikasi dan Multimedia Malaysia)

Source: Communications and Multimedia, Pocket Book of Statistics (Malaysian Communications and Multimedia Commission)

Jadual 3.3: Bilangan langganan jalur lebar, Malaysia, 2017 - 2021
Table Number of broadband subscriptions, Malaysia, 2017 - 2021

	2017	2018	2019	2020	2021
Jalur lebar <i>Broadband</i>					
Mudah alih <i>Mobile</i>	35,256.6	36,794.5	40,430.9	38,837.2	42,016.0
Tetap <i>Fixed</i>	2,588.4	2,655.4	2,947.0	3,349.5	3,727.4

Jadual 3.4: Bilangan langganan selular mudah alih, Malaysia, 2017 - 2021
Table Number of mobile-cellular subscriptions, Malaysia, 2017 - 2021

	2017	2018	2019	2020	2021
Selular mudah alih <i>Mobile-cellular</i>					
Prabayar <i>Prepaid</i>	32,107.3	30,837.1	31,260.8	30,152.9	33,023.0
Pascabayar <i>Postpaid</i>	10,231.2	11,576.3	13,340.6	13,570.7	14,178.6

Sumber: Komunikasi dan Multimedia, Buku Maklumat Statistik (Suruhanjaya Komunikasi dan Multimedia Malaysia)

Source: Communications and Multimedia, Pocket Book of Statistics (Malaysian Communications and Multimedia Commission)

Nota: Bermula 2017, kadar penembusan mudah alih adalah berdasarkan data sekunder

Note: Commencing 2017, the mobile-cellular penetration rate is based on secondary data

TANDA ARAS ICT NEGARA TERPILIH

*ICT BENCHMARKS OF
SELECTED COUNTRIES*

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Jadual 4.1: Peratusan capaian Internet oleh isi rumah mengikut negara terpilih, 2017 - 2020
Table 4.1: Percentage of households with Internet access by selected countries, 2017 - 2020

Tahun / Year	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
2020	91.7	98.4	85.2	99.7	97.3	93.9	78.2
2019	90.1	98.4	74.6	99.7	96.9	94.1	73.7
2018	87.0	97.7	67.7	99.5	95.7	92.3	66.2
2017	85.7	91.1	64.4	99.5	98.5	80.2	57.3

Jadual 4.2: Peratusan capaian komputer oleh isi rumah mengikut negara terpilih, 2017 - 2020
Table 4.2: Percentage of households with access to computer by selected countries, 2017 - 2020

Tahun / Year	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
2020	77.6	89.1	19.3	71.6	75.9	75.3	18.8
2019	71.3	88.8	15.9	71.7	74.6	77.6	18.8
2018	71.7	88.7	20.9	72.4	75.1	75.3	20.1
2017	74.1	86.5	24.8	74.7	76.4	80.9	19.1

Sumber/ Source : International Telecommunication Union (ITU)

Jadual 4.3: Peratusan individu menggunakan Internet mengikut negara terpilih, 2017 - 2020
Table Percentage of individuals using the Internet by selected countries, 2017 - 2020

Tahun / Year	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
2020	89.6	92.0	77.8	96.5	90.2	92.4	53.7
2019	84.2	88.9	66.7	96.2	92.7	91.7	47.7
2018	81.2	88.2	56.8	96.0	91.3	90.5	39.9
2017	80.1	84.4	52.9	95.1	84.6	89.4	32.3

Jadual 4.4: Peratusan individu menggunakan komputer mengikut negara terpilih, 2017 - 2020
Table Percentage of individuals using computer by selected countries, 2017 - 2020

Tahun / Year	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
2020	80.0	n.a.	26.4	82.3	n.a.	79.8	14.1
2019	72.1	73.5	25.3	83.0	75.5	82.7	14.5
2018	70.5	n.a.	28.3	82.0	n.a.	80.3	19.1
2017	69.8	73.5	30.7	79.3	75.5	79.8	n.a.

Sumber/ Source : International Telecommunication Union (ITU)

Jadual 4.5: Peratusan individu menggunakan Internet mengikut jantina dan negara terpilih, 2020
Table 4.5: Percentage of individuals using the Internet by sex and selected countries, 2020

Jantina Sex	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
							(%)
Lelaki / Male	91.3	93.2	79.0	97.3	92.8	93.7	56.7
Perempuan / Female	87.7	90.9	76.8	95.7	87.7	91.3	50.8

Jadual 4.6: Kedudukan indeks berkaitan ICT bagi negara terpilih, 2017 dan 2020
Table 4.6: Ranking of ICT-related indices for selected countries, 2017 and 2020

Kedudukan Rank	Malaysia	Singapura Singapore	Thailand	Republik Korea Republic of Korea	Jepun Japan	Hong Kong	Indonesia
ICT Development Index (IDI) 2017 ¹	63	18	78	2	10	6	111
E-Government Development Index (EGDI) 2020 ²	47	11	57	2	14	n.a.	88

Sumber/ Source :

¹ Measuring the Information Society Report 2017 Volume 1, International Telecommunication Union (ITU)

² United Nation e-Government Survey 2020, United Nation

Nota/ Note:

ICT Development Index (IDI) is a unique benchmark of the level of ICT development in countries across the world. The IDI combines 11 indicators on ICT access, use and skills, capturing key aspects of ICT development in one measure that allows for comparisons to be made between countries and over time. IDI 2017 covers 176 economies worldwide.

E-Government Development Index (EGDI) is a composite index based on the weighted average of three normalize indices. One-third is derived from a Telecommunication Infrastructure Index (TII) based on data provided by the International Telecommunication Union (ITU), one-third from a Human Capital Index (HCI) based on data provided by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), and one-third from the Online Service Index (OSI), based on data collected from an independent survey questionnaire, conducted by UNDESA. The EGDI is used to measure the readiness and capacity of national institutions to use ICTs to deliver public services. This measure is useful for government official, policy maker, researchers and representatives of civil society and the private sector to gain a deeper understanding of the relative position of a country in utilising e-Government for the delivery of public services.

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SIRI MASA

TIME SERIES



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Jadual 5.1: Peratusan capaian telefon bimbit oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021
Table Percentage of households with access to mobile phone by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	98.2	98.6	96.5	98.2	98.8	96.2	98.6	99.0	96.8	99.6	99.6	99.2
Johor	98.6	98.8	98.2	99.3	99.5	98.5	99.4	99.5	99.1	99.9	99.9	99.6
Kedah	96.7	97.4	94.9	97.1	97.7	95.6	98.6	98.7	98.0	99.7	99.7	99.6
Kelantan	98.3	98.8	97.7	97.2	98.3	96.1	97.3	98.2	96.3	99.8	99.7	99.8
Melaka	97.0	97.0	95.9	97.4	97.5	95.1	98.5	98.5	97.0	98.8	98.8	98.8
Negeri Sembilan	97.0	97.9	94.1	98.4	98.8	96.9	98.4	99.4	95.3	99.6	99.8	99.1
Pahang	95.5	97.0	93.2	97.9	98.5	96.9	98.0	98.7	96.9	98.7	98.8	98.6
Pulau Pinang	97.9	97.9	97.8	97.7	97.7	98.2	98.9	98.9	98.1	99.8	99.8	99.7
Perak	97.0	97.1	96.7	97.0	97.7	94.3	97.4	97.6	96.1	98.5	98.7	97.7
Perlis	98.9	99.1	98.6	98.4	98.6	98.0	97.7	97.6	97.8	99.3	99.3	99.3
Selangor	99.4	99.4	98.0	99.5	99.5	98.5	99.3	99.4	98.7	99.9	99.9	99.4
Terengganu	98.7	99.0	98.0	97.7	98.3	96.6	98.2	98.4	97.6	99.2	99.3	98.9
Sabah	98.6	99.2	97.6	98.1	98.7	97.3	98.6	98.8	98.2	99.8	99.8	99.8
Sarawak	97.7	99.2	95.4	96.3	98.5	92.8	96.6	99.0	92.8	99.4	99.8	98.8
W.P. Kuala Lumpur	99.4	99.4	n.a.	99.2	99.2	n.a.	99.5	99.5	n.a.	99.9	99.9	n.a.
W.P. Labuan	99.0	99.1	98.6	98.4	98.3	99.3	98.6	98.6	99.2	99.0	99.0	99.3
W.P. Putrajaya	100.0	100.0	n.a.	99.7	99.7	n.a.	99.5	99.5	n.a.	100.0	100.0	n.a.

Jadual 5.2:

Peratusan capaian Internet oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with Internet access by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	87.0	89.1	78.9	90.1	92.2	81.5	91.7	93.5	83.9	95.5	96.9	89.2
Johor	88.3	89.6	83.4	94.1	95.1	89.9	92.9	93.7	89.5	98.0	98.5	95.7
Kedah	80.7	82.0	77.2	82.6	84.3	77.7	90.8	92.1	86.9	95.1	96.3	91.5
Kelantan	81.7	84.8	78.4	83.4	86.9	79.5	89.3	91.2	87.1	92.6	94.3	90.6
Melaka	87.6	88.1	79.7	88.8	89.1	82.7	93.1	93.2	91.6	95.1	95.3	91.6
Negeri Sembilan	85.4	87.3	79.8	90.8	92.5	85.2	93.3	95.8	85.0	94.4	96.3	87.7
Pahang	81.2	85.0	75.3	85.2	89.0	78.9	86.8	88.7	83.6	93.8	94.9	91.7
Pulau Pinang	88.8	88.8	88.3	90.0	90.0	88.4	94.7	94.8	92.3	97.4	97.4	96.4
Perak	81.5	82.2	78.7	83.0	83.9	78.8	81.1	82.5	74.5	89.1	89.4	87.7
Perlis	91.4	92.6	89.0	92.2	93.0	90.4	93.0	94.7	89.2	93.8	95.0	90.9
Selangor	90.4	90.8	83.6	95.3	95.8	87.7	94.6	94.9	88.9	98.4	98.6	96.2
Terengganu	89.6	91.8	85.1	91.2	93.1	87.0	90.5	91.0	89.4	92.7	94.2	89.3
Sabah	90.7	93.0	87.0	91.4	94.9	85.5	94.6	96.6	91.0	95.7	97.6	92.1
Sarawak	80.8	91.2	64.9	83.4	91.5	70.7	85.4	95.8	68.5	89.3	97.4	75.6
W.P. Kuala Lumpur	92.6	92.6	n.a.	94.6	94.6	n.a.	98.0	98.0	n.a.	99.8	99.8	n.a.
W.P. Labuan	88.4	88.9	83.7	98.0	98.3	95.6	98.1	98.1	98.4	99.9	100.0	99.3
W.P. Putrajaya	99.7	99.7	n.a.	96.8	96.8	n.a.	99.2	99.2	n.a.	100.0	100.0	n.a.

Jadual

5.3: Peratusan capaian komputer oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with access to computer by state and strata, Malaysia, 2018 - 2021

Negeri													(%)
State	2018			2019			2020			2021			
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	
MALAYSIA	71.7	77.0	50.9	71.3	76.6	50.1	77.6	82.8	55.5	88.3	91.0	76.3	
Johor	70.2	73.8	56.5	71.7	75.9	55.0	81.4	85.9	62.9	91.7	93.3	85.0	
Kedah	56.6	60.9	45.1	59.6	66.1	41.7	62.1	65.8	51.6	85.6	87.7	79.3	
Kelantan	59.2	67.9	49.9	58.2	68.1	47.1	56.6	68.5	42.7	87.5	89.9	84.5	
Melaka	72.6	73.5	56.3	73.3	74.2	54.4	87.2	87.2	87.8	90.9	90.8	91.8	
Negeri Sembilan	64.2	69.2	48.9	61.7	66.9	45.2	74.1	80.9	50.7	85.5	88.9	73.0	
Pahang	58.3	67.5	43.7	59.7	71.9	39.7	71.2	77.1	60.9	87.2	91.3	80.1	
Pulau Pinang	75.5	75.6	73.7	76.9	77.1	71.7	86.7	87.2	72.6	89.6	89.6	90.7	
Perak	68.8	71.0	60.2	66.9	69.5	55.9	69.0	71.7	57.1	86.0	86.8	82.5	
Perlis	67.6	71.4	60.0	68.2	71.9	60.4	70.6	75.0	60.5	88.0	89.0	85.7	
Selangor	88.5	90.3	56.6	86.2	87.8	58.0	91.4	91.8	83.6	94.7	94.7	96.1	
Terengganu	74.0	79.8	61.9	71.3	76.7	59.5	74.2	81.1	58.4	87.1	89.6	81.1	
Sabah	59.8	68.1	46.1	59.8	65.8	49.7	60.7	67.2	49.4	73.1	77.3	65.4	
Sarawak	63.8	75.2	46.5	63.6	72.9	48.9	64.8	74.0	49.7	77.1	87.7	58.9	
W.P. Kuala Lumpur	77.1	77.1	n.a.	77.0	77.0	n.a.	94.5	94.5	n.a.	99.1	99.1	n.a.	
W.P. Labuan	70.3	70.5	68.8	71.3	71.7	68.4	89.3	90.0	84.0	93.8	94.1	91.1	
W.P. Putrajaya	96.4	96.4	n.a.	94.2	94.2	n.a.	99.2	99.2	n.a.	100.0	100.0	n.a.	

Jadual

5.4: Peratusan capaian siaran TV berbayar oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with access to pay TV channel by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	73.1	76.0	62.1	75.8	79.0	63.0	78.9	81.9	66.5	83.2	85.8	71.9
Johor	74.3	75.5	69.8	78.8	79.9	74.4	78.6	80.1	72.3	83.5	85.3	75.7
Kedah	51.5	54.3	44.1	56.5	59.3	48.9	69.7	73.9	57.5	71.7	73.9	65.1
Kelantan	58.7	61.8	55.4	62.1	67.9	55.7	63.1	67.4	58.0	67.7	69.2	65.9
Melaka	82.5	82.9	74.2	81.2	81.7	72.3	89.7	90.3	75.8	92.6	92.8	85.3
Negeri Sembilan	81.3	82.1	78.7	81.6	83.4	75.6	82.2	84.6	73.9	86.3	87.0	83.9
Pahang	76.6	80.0	71.3	76.7	78.7	73.5	79.6	80.8	77.5	82.2	83.9	79.0
Pulau Pinang	78.8	79.2	69.3	79.9	80.2	72.5	80.3	80.7	67.9	83.0	83.3	73.8
Perak	67.8	68.7	64.2	70.1	72.1	61.7	74.8	76.9	65.6	84.3	86.0	76.4
Perlis	74.3	77.6	67.8	72.9	75.8	66.7	74.5	76.2	70.6	82.2	84.5	76.6
Selangor	81.8	82.0	78.0	85.4	85.6	81.3	86.4	86.6	81.5	89.4	89.5	88.3
Terengganu	70.2	71.2	68.1	72.2	73.1	70.1	80.7	81.8	78.2	82.5	84.0	78.9
Sabah	66.5	72.2	57.2	68.4	76.6	54.5	70.9	77.5	59.3	73.3	77.7	65.2
Sarawak	62.1	67.0	54.7	62.3	66.2	56.0	68.7	72.9	61.9	76.6	83.6	64.6
W.P. Kuala Lumpur	84.4	84.4	n.a.	89.3	89.3	n.a.	91.4	91.4	n.a.	95.9	95.9	n.a.
W.P. Labuan	92.9	93.1	91.5	88.3	88.3	88.2	92.0	91.4	97.6	97.1	97.0	97.8
W.P. Putrajaya	91.3	91.3	n.a.	96.1	96.1	n.a.	96.5	96.5	n.a.	96.6	96.6	n.a.

(%)

Jadual

5.5: Peratusan capaian televisyen oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with access to television by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
MALAYSIA	98.6	99.0	96.9	97.6	98.2	95.4	98.5	99.0	96.3	99.0	99.2	98.0
Johor	99.2	99.3	99.1	98.7	99.0	97.4	99.7	99.7	99.4	99.5	99.6	99.2
Kedah	99.1	99.4	98.4	98.3	99.0	96.3	99.1	99.2	98.7	99.3	99.5	98.8
Kelantan	98.7	98.8	98.6	95.7	96.8	94.5	98.2	98.4	98.0	98.2	99.1	97.1
Melaka	99.2	99.2	98.5	97.8	97.8	97.0	99.0	99.1	98.5	99.6	99.6	99.3
Negeri Sembilan	98.8	99.2	97.6	98.7	98.9	98.3	99.2	99.7	97.3	99.2	99.5	98.4
Pahang	97.5	99.3	94.6	97.8	98.5	96.5	98.1	98.7	97.2	98.1	99.1	96.4
Pulau Pinang	99.1	99.1	99.6	97.0	96.9	97.5	99.0	99.0	98.6	99.6	99.6	99.4
Perak	98.8	98.9	98.5	96.7	96.8	96.1	99.0	99.4	97.3	99.3	99.7	97.4
Perlis	99.7	99.7	99.8	96.9	96.4	97.8	96.5	96.6	96.2	98.9	98.8	99.2
Selangor	98.9	99.0	98.7	98.5	98.6	97.8	98.9	99.0	98.1	99.3	99.2	99.5
Terengganu	99.6	100.0	98.8	98.9	99.8	97.0	98.9	99.5	97.8	99.8	99.8	99.7
Sabah	96.5	98.5	93.1	95.2	96.9	92.2	95.4	97.5	91.8	96.3	96.3	96.2
Sarawak	97.2	98.3	95.6	95.3	96.4	93.6	96.2	97.8	93.6	98.4	98.3	98.6
W.P. Kuala Lumpur	99.4	99.4	n.a.	99.6	99.6	n.a.	99.9	99.9	n.a.	99.9	99.9	n.a.
W.P. Labuan	98.7	98.6	99.3	97.9	97.8	98.5	98.2	98.1	99.2	99.0	99.0	99.3
W.P. Putrajaya	98.8	98.8	n.a.	98.7	98.7	n.a.	99.5	99.5	n.a.	99.8	99.8	n.a.

Jadual

5.6: Peratusan capaian radio oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with access to radio by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	95.7	96.6	92.0	97.2	98.0	93.6	98.5	98.9	97.0	98.9	99.2	97.6
Johor	97.6	97.7	97.3	99.0	99.2	98.3	99.0	99.2	98.5	99.6	99.6	99.3
Kedah	94.1	94.9	92.0	96.1	96.8	94.2	97.9	98.4	96.4	99.3	99.6	98.4
Kelantan	90.7	90.1	91.3	95.5	95.7	95.3	98.0	98.7	97.1	98.7	99.2	98.1
Melaka	94.2	94.2	95.5	93.8	94.0	90.1	98.5	98.5	96.9	98.5	98.5	98.1
Negeri Sembilan	97.5	97.7	97.0	98.8	99.0	98.1	98.4	99.1	95.8	98.6	99.1	96.5
Pahang	93.7	94.5	92.6	97.1	98.6	94.6	97.8	98.7	96.2	97.6	98.2	96.5
Pulau Pinang	98.9	98.9	98.5	97.7	97.7	98.1	99.4	99.4	98.6	99.8	99.8	99.4
Perak	94.1	94.5	92.2	94.5	95.4	90.9	97.6	97.6	97.4	97.3	97.4	96.6
Perlis	97.2	97.1	97.6	98.0	98.1	97.6	97.7	98.3	96.2	98.2	98.0	98.7
Selangor	97.2	97.5	92.3	99.2	99.3	96.6	99.2	99.3	96.7	99.4	99.6	97.2
Terengganu	98.6	98.9	97.9	98.7	99.1	97.8	97.0	96.6	97.8	99.8	99.7	99.9
Sabah	87.2	91.9	79.3	90.6	94.9	83.2	97.2	98.2	95.5	97.3	98.4	95.4
Sarawak	97.1	97.8	96.0	97.8	99.0	95.9	98.7	99.2	97.9	98.9	99.3	98.2
W.P. Kuala Lumpur	99.2	99.2	n.a.	99.2	99.2	n.a.	99.9	99.9	n.a.	99.8	99.8	n.a.
W.P. Labuan	93.4	93.1	95.7	97.0	97.2	95.6	99.1	99.0	99.2	99.5	99.5	99.3
W.P. Putrajaya	98.2	98.2	n.a.	99.7	99.7	n.a.	99.5	99.5	n.a.	99.8	99.8	n.a.

Jadual

5.7: Peratusan capaian telefon talian tetap oleh isi rumah mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of households with access to fixed-line telephone by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	26.5	29.9	13.2	23.5	26.3	12.1	22.4	25.5	9.2	31.3	34.9	15.7
Johor	37.3	39.7	28.3	26.8	27.6	23.4	18.8	20.1	13.4	31.2	31.3	30.8
Kedah	14.2	16.5	7.9	12.4	14.6	6.2	14.0	16.4	7.1	17.3	20.6	7.6
Kelantan	10.0	16.2	3.4	10.4	14.5	5.9	7.7	10.7	4.2	19.0	24.8	12.1
Melaka	37.7	38.0	32.5	32.3	32.5	27.7	36.3	36.9	23.7	57.5	58.8	25.9
Negeri Sembilan	28.9	28.0	31.7	33.1	35.5	25.6	30.7	33.5	21.2	53.1	61.6	22.0
Pahang	16.3	18.4	12.9	17.3	18.5	15.2	15.1	18.2	9.8	21.0	23.1	17.3
Pulau Pinang	32.5	32.5	33.7	28.4	28.9	15.5	31.9	32.0	29.6	37.0	36.9	38.9
Perak	29.5	31.7	20.4	24.3	26.1	16.8	20.9	21.8	16.5	25.7	28.0	14.4
Perlis	16.9	19.5	11.8	18.2	20.8	12.8	24.4	27.7	16.8	33.3	41.4	13.3
Selangor	32.0	32.5	22.0	28.0	28.5	19.1	28.1	28.4	23.5	32.9	33.4	24.5
Terengganu	18.4	22.8	9.2	18.3	21.7	10.9	13.0	15.7	6.9	29.6	31.9	24.3
Sabah	11.9	16.7	4.2	12.0	16.0	5.3	9.2	12.7	3.0	24.9	32.8	10.4
Sarawak	19.3	27.2	7.3	22.9	33.1	6.8	15.0	22.6	2.5	18.8	25.9	6.7
W.P. Kuala Lumpur	36.8	36.8	n.a.	29.7	29.7	n.a.	42.7	42.7	n.a.	54.4	54.4	n.a.
W.P. Labuan	23.2	23.0	24.8	31.4	32.2	25.0	36.6	37.3	30.4	38.1	38.6	34.1
W.P. Putrajaya	18.0	18.0	n.a.	26.8	26.8	n.a.	36.1	36.1	n.a.	59.9	59.9	n.a.

Jadual

5.8: Peratusan individu menggunakan telefon bimbit mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of individuals using mobile phone by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
MALAYSIA	97.9	98.3	96.8	97.9	98.3	96.8	98.2	98.5	97.2	98.7	99.0	97.7
Johor	97.9	98.2	96.8	98.2	98.5	97.4	98.7	99.0	97.6	99.0	99.3	98.0
Kedah	98.1	98.6	96.9	96.9	97.5	95.2	97.4	97.8	96.2	97.7	98.2	96.3
Kelantan	97.9	98.3	97.6	97.0	97.4	96.5	97.8	97.5	98.2	98.6	98.7	98.4
Melaka	98.3	98.4	97.4	96.7	96.9	94.4	97.2	97.3	95.6	97.7	97.8	97.5
Negeri Sembilan	97.6	98.3	95.7	96.7	97.1	95.5	97.4	97.8	96.3	98.3	98.8	97.0
Pahang	97.3	97.9	96.6	98.5	98.8	98.0	98.5	98.8	98.1	98.9	99.2	98.5
Pulau Pinang	97.9	97.9	98.2	96.9	96.9	96.8	97.4	97.5	96.7	99.0	99.1	96.9
Perak	95.4	95.4	95.1	97.0	97.3	96.1	97.1	97.3	96.2	98.1	98.2	97.4
Perlis	98.4	98.6	98.1	96.7	97.0	96.0	97.3	97.7	96.5	98.0	98.2	97.6
Selangor	99.1	99.2	97.4	98.9	99.0	95.7	99.0	99.1	97.1	99.5	99.5	98.8
Terengganu	98.9	98.9	98.9	97.0	97.4	96.2	97.4	97.7	96.6	98.3	98.3	98.5
Sabah	97.9	98.0	97.8	98.9	99.2	98.6	99.0	99.1	98.7	99.0	99.1	98.8
Sarawak	96.6	97.8	94.9	96.8	97.7	95.3	97.1	98.3	95.3	97.5	98.7	95.7
W.P. Kuala Lumpur	99.1	99.1	n.a.	99.6	99.6	n.a.	99.6	99.6	n.a.	99.7	99.7	n.a.
W.P. Labuan	99.2	99.3	98.6	99.7	99.8	99.4	99.7	99.7	99.6	99.8	99.8	99.6
W.P. Putrajaya	99.9	99.9	n.a.	99.7	99.7	n.a.	99.8	99.8	n.a.	99.8	99.8	n.a.

Jadual

5.9: Peratusan individu memiliki telefon bimbit mengikut jantina, Malaysia, 2018 - 2021

Table

Percentage of individuals owning mobile phone by sex, Malaysia, 2018 - 2021

(%)

Negeri State	2018	2019	2020	2021
Jumlah / Total	96.0	95.7	96.4	97.4
Lelaki / Male	96.7	96.8	97.7	98.2
Perempuan / Female	95.1	94.8	95.0	96.6

Goal 5: Achieve gender equality and empower all women and girls

Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

Indicator 5.b.1: Proportion of individuals who own a mobile telephone, by sex

Jadual 5.10

Peratusan individu memiliki telefon bimbit mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of individuals owning mobile phone by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	96.0	96.6	93.9	95.7	96.5	92.7	96.4	97.2	93.4	97.4	98.1	95.1
Johor	96.0	96.6	94.1	97.3	97.6	96.2	98.8	99.2	97.3	98.9	99.3	97.4
Kedah	95.2	95.8	93.7	93.5	94.5	90.8	93.7	94.8	91.0	96.6	97.1	95.4
Kelantan	95.5	96.3	94.7	92.6	94.1	90.9	93.2	95.2	90.9	94.7	95.8	93.5
Melaka	96.1	96.2	94.7	94.4	94.7	90.2	95.7	95.9	93.7	96.7	96.7	96.9
Negeri Sembilan	95.2	96.0	93.1	93.9	94.6	91.6	95.3	96.4	91.8	96.4	96.8	95.1
Pahang	95.3	96.2	94.1	95.5	97.2	92.7	96.0	97.8	93.1	97.0	99.1	93.7
Pulau Pinang	95.6	95.6	95.6	95.7	95.8	95.0	96.8	96.8	95.3	98.4	98.6	95.8
Perak	93.4	93.7	92.4	93.7	94.3	91.3	94.5	95.3	91.4	95.0	95.4	93.5
Perlis	96.8	97.1	96.1	94.4	95.4	92.4	95.7	96.0	95.1	96.0	96.2	95.5
Selangor	97.8	98.0	95.1	97.8	98.0	93.8	98.1	98.2	96.0	99.3	99.3	98.0
Terengganu	95.9	95.7	96.3	95.7	95.4	96.2	95.9	95.8	96.3	97.2	97.4	96.8
Sabah	95.2	96.1	93.9	95.2	95.9	94.3	95.7	95.9	95.4	96.8	96.9	96.7
Sarawak	94.8	96.2	92.7	93.5	95.9	89.7	94.5	97.4	89.9	95.5	97.7	92.0
W.P. Kuala Lumpur	98.7	98.7	n.a.	98.6	98.6	n.a.	99.2	99.2	n.a.	99.7	99.7	n.a.
W.P. Labuan	96.7	96.8	96.5	99.0	99.5	97.0	99.5	99.6	99.0	99.7	99.8	99.0
W.P. Putrajaya	99.8	99.8	n.a.	98.8	98.8	n.a.	99.6	99.6	n.a.	99.6	99.6	n.a.

Jadual 5.11

Peratusan individu menggunakan komputer mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of individuals using computer by state and strata, Malaysia, 2018 - 2021

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	70.5	75.6	54.1	72.1	77.3	54.0	80.0	85.3	61.0	83.5	88.2	66.7
Johor	69.5	72.2	60.3	75.5	78.9	63.4	86.9	90.7	73.5	89.2	92.1	79.9
Kedah	59.0	62.7	49.8	61.7	65.5	51.6	68.5	70.6	63.1	76.6	80.1	66.4
Kelantan	60.3	65.2	55.5	62.4	69.3	54.3	73.2	82.0	62.6	78.8	84.4	72.1
Melaka	77.2	77.8	68.3	80.7	81.2	71.9	86.1	86.5	81.1	88.1	88.7	81.6
Negeri Sembilan	68.9	73.8	55.2	69.6	75.2	53.5	74.7	80.1	58.3	80.1	84.9	66.2
Pahang	66.2	72.3	58.3	69.7	77.2	57.9	79.2	85.7	68.9	81.6	87.7	72.6
Pulau Pinang	75.9	76.1	71.8	75.9	76.3	66.3	87.1	87.5	77.6	87.5	87.8	79.9
Perak	65.1	67.8	56.5	67.5	70.7	55.5	76.8	79.5	65.4	80.4	82.0	73.6
Perlis	72.6	75.7	67.4	70.8	74.2	64.2	76.8	80.6	68.5	79.2	80.8	75.3
Selangor	87.0	87.9	74.3	85.1	85.6	74.7	93.2	93.7	84.8	95.0	95.4	87.4
Terengganu	71.0	74.5	64.1	74.5	79.3	63.2	82.4	88.5	69.2	85.3	88.7	77.1
Sabah	55.8	63.9	43.9	55.5	63.2	44.1	59.3	67.7	44.1	65.2	75.4	48.0
Sarawak	61.4	71.9	46.5	64.1	74.8	47.5	69.8	81.8	50.7	74.2	84.2	58.4
W.P. Kuala Lumpur	83.0	83.0	n.a.	86.7	86.7	n.a.	94.3	94.3	n.a.	96.0	96.0	n.a.
W.P. Labuan	79.6	81.7	68.0	78.6	80.7	71.1	88.4	90.0	80.4	91.6	93.3	82.9
W.P. Putrajaya	97.8	97.8	n.a.	99.2	99.2	n.a.	99.9	99.9	n.a.	99.9	99.9	n.a.

Jadual 5.12:

Peratusan individu menggunakan komputer mengikut negeri dan jenis kemahiran ICT, Malaysia, 2019 - 2021

Table Percentage of individuals using computer by state and type of ICT skills, Malaysia, 2019 - 2021

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	(%)
	Menyalin atau memindahkan fail atau folder Copying or moving a file or folder			Menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen Using copy and paste tools to duplicate or move information within a document			Menghantar e-mel berserta fail Sending an e-mail with attached files			Menggunakan teknik aritmetik asas di dalam lembaran kerja Using basic arithmetic formulas in spreadsheet			
MALAYSIA	80.4	86.4	94.6	81.8	87.7	93.2	62.1	69.0	78.7	37.0	39.3	52.6	
Johor	78.2	86.3	96.4	78.1	86.4	93.4	61.0	65.7	78.6	29.3	30.3	48.1	
Kedah	77.9	82.5	96.3	80.2	80.4	91.5	60.4	67.4	75.7	29.0	31.2	59.5	
Kelantan	75.7	76.5	96.5	74.9	81.8	91.5	54.9	62.7	70.2	27.1	28.9	40.1	
Melaka	79.4	88.7	99.4	73.9	81.1	93.7	58.2	65.1	76.8	28.7	41.3	53.9	
Negeri Sembilan	76.4	85.4	96.5	80.5	86.1	93.5	57.9	63.6	73.6	32.8	39.1	62.7	
Pahang	78.6	86.1	94.6	83.5	88.8	94.5	57.7	63.6	74.3	32.4	35.3	51.0	
Pulau Pinang	75.4	78.6	90.1	76.7	80.6	87.6	58.6	65.1	73.5	36.6	40.8	55.0	
Perak	76.7	85.4	89.5	83.0	90.9	93.4	59.8	68.9	80.2	32.1	35.6	42.7	
Perlis	79.8	86.2	90.7	83.1	89.3	92.0	55.6	61.0	62.1	23.1	25.3	45.6	
Selangor	86.5	89.9	92.6	86.5	91.8	93.0	69.0	76.5	85.2	51.1	51.0	53.2	
Terengganu	80.2	87.2	96.8	79.0	83.3	92.1	54.9	61.9	69.1	24.6	28.1	52.0	
Sabah	78.2	86.0	94.8	82.6	88.5	94.7	55.5	63.3	77.0	33.4	36.0	58.8	
Sarawak	80.6	88.6	95.6	82.1	87.8	91.7	58.9	65.8	74.8	33.2	33.7	50.6	
W.P. Kuala Lumpur	83.2	89.5	99.4	83.4	91.6	99.6	74.3	82.0	89.2	46.3	50.9	60.2	
W.P. Labuan	81.5	85.2	97.7	87.1	94.6	98.2	63.0	75.9	83.6	36.4	46.4	56.8	
W.P. Putrajaya	96.2	96.3	98.5	97.2	97.1	98.6	82.5	84.9	93.2	61.6	67.4	75.4	

Goal 4 : Ensure inclusive and equitable education and promote lifelong learning opportunities for all

Target 4.4 : By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Indicator 4.4.1 : Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
	Menghubungkan dan memasang peranti baru Connecting and installing new device			Mencari, memuat turun, memasang dan mengkonfigurasi perisian Searching, downloading, installing and configuring software			Membuat persembahan elektronik dengan menggunakan perisian komputer Creating electronic presentations using computer software			Memindahkan fail di antara komputer dan peranti mudah alih lain Transferring files between a computer and other devices			Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus Writing a computer program using a specialised programming language		
MALAYSIA	70.3	72.0	76.0	51.4	57.8	67.0	34.6	38.8	51.8	62.4	68.3	74.4	11.4	13.9	19.2
Johor	69.6	70.0	71.9	45.9	48.7	56.9	28.7	29.7	42.0	56.8	59.2	72.6	8.6	9.9	13.6
Kedah	64.1	69.1	78.8	43.4	51.1	61.9	25.7	35.9	59.4	60.7	69.9	75.5	6.2	8.0	15.4
Kelantan	63.1	63.5	67.5	37.7	46.2	62.7	18.4	28.3	50.3	52.4	53.6	59.3	5.8	11.3	16.3
Melaka	68.2	71.6	75.1	35.7	45.0	59.0	25.3	32.8	49.1	54.9	65.0	67.5	10.2	14.7	25.3
Negeri Sembilan	72.0	72.9	78.2	56.1	57.9	67.5	40.0	43.1	56.0	56.1	63.8	73.7	12.9	13.3	19.2
Pahang	64.9	68.1	71.0	44.9	49.0	67.4	27.8	33.1	45.9	60.7	68.8	70.9	8.0	10.5	19.6
Pulau Pinang	72.2	72.9	78.5	49.7	59.1	67.8	34.5	40.3	50.3	51.3	61.7	65.5	8.3	16.4	21.2
Perak	65.6	67.8	74.3	52.9	56.4	63.2	30.2	37.2	42.7	59.6	69.1	67.2	8.9	10.6	18.4
Perlis	69.4	75.0	76.2	45.9	54.4	63.2	30.0	38.6	48.3	54.7	61.7	64.7	8.6	12.5	20.0
Selangor	71.3	75.6	78.3	62.8	69.0	72.3	46.1	45.4	54.2	68.5	73.8	84.6	14.1	15.4	18.8
Terengganu	70.0	66.7	71.1	43.0	51.3	60.0	28.8	32.9	52.7	58.0	63.5	63.8	8.7	15.2	20.5
Sabah	75.9	73.7	77.4	43.4	54.3	71.9	32.6	36.6	55.7	73.9	74.1	77.0	10.8	13.9	20.9
Sarawak	71.3	70.2	75.6	53.1	57.3	70.4	27.9	33.1	51.4	62.2	70.2	70.1	10.4	10.5	12.7
W.P. Kuala Lumpur	75.1	78.7	81.8	59.8	70.5	75.3	46.2	58.8	65.9	65.2	75.0	83.8	23.8	27.4	32.8
W.P. Labuan	69.6	76.3	84.4	63.0	60.4	72.7	40.9	45.4	51.7	72.3	75.9	75.6	21.9	21.1	55.5
W.P. Putrajaya	86.4	87.9	88.6	76.1	77.8	85.7	65.9	69.7	86.3	93.6	95.6	97.1	37.6	46.2	72.9

Goal 4 : Ensure inclusive and equitable education and promote lifelong learning opportunities for all

Target 4.4 : By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Indicator 4.4.1 : Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

Jadual 5.13:

Peratusan belia menggunakan komputer mengikut negeri dan jenis kemahiran ICT, Malaysia, 2019 - 2021

Table Percentage of youth using computer by state and type of ICT skills, Malaysia, 2019 - 2021

(%)

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
	Menyalin atau memindahkan fail atau folder Copying or moving a file or folder			Menyalin dan menampal untuk pendua atau memindahkan maklumat di dalam satu dokumen Using copy and paste tools to duplicate or move information within a document			Menghantar e-mel berserta fail Sending an e-mail with attached files			Menggunakan teknik aritmetik asas di dalam lembaran kerja Using basic arithmetic formulas in spreadsheets		
MALAYSIA	82.0	83.0	95.1	86.3	94.7	95.6	66.7	71.2	85.9	39.6	40.2	45.0
Johor	78.1	89.4	94.2	86.8	97.4	94.2	68.3	69.0	86.4	35.8	41.8	42.6
Kedah	85.1	71.2	92.2	88.7	98.1	92.2	60.4	75.0	81.8	34.1	27.9	44.6
Kelantan	77.2	56.4	93.1	80.1	93.7	93.1	57.8	67.7	89.0	29.9	26.8	36.9
Melaka	85.7	83.5	97.9	83.2	96.4	97.9	65.9	75.8	82.7	34.6	34.6	50.7
Negeri Sembilan	78.9	92.6	91.4	84.6	96.5	91.4	59.1	80.0	77.5	34.0	49.1	53.3
Pahang	84.9	87.6	92.0	89.3	92.8	96.9	67.6	62.2	82.8	36.1	40.4	41.0
Pulau Pinang	87.0	84.0	94.5	78.7	97.9	94.5	70.9	79.2	90.3	48.1	54.3	54.9
Perak	83.4	80.9	98.1	88.0	95.2	98.1	64.8	72.3	92.7	37.6	47.4	48.5
Perlis	81.5	88.7	91.9	86.8	95.5	94.3	61.1	63.9	78.7	16.7	19.7	41.5
Selangor	88.4	88.7	99.2	90.3	91.1	98.5	77.1	76.2	89.4	54.2	59.3	47.9
Terengganu	82.5	83.5	94.6	83.8	86.8	94.6	65.6	69.1	84.7	23.3	24.7	49.1
Sabah	76.3	75.7	92.9	85.7	95.5	95.2	57.2	61.5	79.1	31.6	24.2	42.9
Sarawak	81.2	91.3	94.1	85.3	96.1	94.1	62.3	66.5	84.6	36.7	30.8	36.7
W.P. Kuala Lumpur	71.9	93.7	96.6	83.1	96.9	97.9	77.4	85.2	90.3	58.8	48.3	47.2
W.P. Labuan	76.3	94.5	94.7	98.2	91.9	98.5	59.0	79.2	91.5	35.9	34.4	53.7
W.P. Putrajaya	86.2	100.0	98.2	100.0	100.0	98.2	72.2	70.3	83.8	63.7	38.0	54.7

Goal 4 : Ensure inclusive and equitable education and promote lifelong learning opportunities for all

Target 4.4 : By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Indicator 4.4.1 : Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
	Menghubungkan dan memasang peranti baru <i>Connecting and installing new device</i>			Mencari, memuat turun, memasang dan mengkonfigurasi perisian <i>Searching, downloading, installing and configuring software</i>			Membuat persembahan elektronik dengan menggunakan perisian komputer <i>Creating electronic presentations using computer software</i>			Memindahkan fail di antara komputer dan peranti mudah alih lain <i>Transferring files between a computer and other devices</i>			Menulis program komputer menggunakan bahasa pengaturcaraan yang khusus <i>Writing a computer program using a specialised programming language</i>		
MALAYSIA	74.1	75.4	86.0	47.4	54.2	73.7	41.0	45.1	50.6	67.3	83.4	77.4	12.4	17.6	20.9
Johor	70.9	73.9	84.3	46.1	47.2	63.6	37.2	41.7	44.1	67.4	91.3	78.3	11.9	18.5	14.8
Kedah	71.1	68.5	89.5	43.1	52.6	63.4	36.4	44.2	63.1	67.0	90.1	80.3	8.3	10.8	13.2
Kelantan	74.3	57.9	75.7	33.5	40.8	65.0	21.4	33.1	49.8	55.4	47.1	68.4	7.5	13.0	18.6
Melaka	73.4	83.9	88.3	38.0	20.0	65.7	34.9	51.5	50.1	70.7	67.5	69.7	15.5	4.6	28.3
Negeri Sembilan	72.7	92.5	80.5	53.4	61.3	72.1	44.5	54.5	55.9	56.1	73.1	82.8	15.6	13.6	22.7
Pahang	64.9	71.3	70.7	42.4	50.8	74.8	32.0	39.3	47.5	59.2	82.7	79.3	9.5	13.5	19.2
Pulau Pinang	69.1	83.2	91.6	52.6	65.1	77.2	48.9	53.5	56.7	51.6	70.2	70.7	10.8	22.4	27.9
Perak	65.2	81.9	91.2	51.9	57.5	72.5	36.8	48.8	49.9	68.4	88.3	77.6	10.3	17.2	33.6
Perlis	81.0	78.0	86.8	42.2	51.1	78.8	34.1	42.5	41.6	53.4	68.8	67.1	9.7	14.9	24.2
Selangor	79.2	84.8	91.4	55.4	65.5	90.1	59.2	57.5	53.7	77.7	94.2	77.6	14.7	18.5	18.5
Terengganu	78.9	61.5	85.7	39.6	35.8	66.4	35.1	40.3	51.8	60.7	74.5	68.8	10.7	27.7	25.1
Sabah	76.8	75.3	82.0	38.7	46.4	66.1	34.4	32.5	40.6	79.2	85.1	84.2	10.0	11.0	17.5
Sarawak	74.7	60.7	85.3	57.6	65.2	70.5	31.2	32.2	48.1	71.3	87.2	77.7	10.6	19.7	20.7
W.P. Kuala Lumpur	87.6	88.6	95.6	46.0	69.9	96.7	59.0	66.4	62.3	49.3	85.1	75.4	29.9	42.4	26.5
W.P. Labuan	69.3	89.2	84.9	51.9	45.9	83.6	43.0	39.5	64.3	67.4	91.0	81.7	16.7	33.5	57.3
W.P. Putrajaya	86.9	79.5	90.2	73.1	68.6	90.7	70.0	52.8	82.2	85.2	100.0	95.4	35.0	38.4	71.1

Goal 4 : Ensure inclusive and equitable education and promote lifelong learning opportunities for all

Target 4.4 : By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Indicator 4.4.1 : Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

Jadual 5.14

Peratusan individu menggunakan Internet mengikut negeri dan strata, Malaysia, 2018 - 2021

Table Percentage of individuals using the Internet by state and strata, Malaysia, 2018 - 2021

(%)

Negeri State	2018			2019			2020			2021		
	Jumlah Bandar			Jumlah Bandar			Jumlah Bandar			Jumlah Bandar		
	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural	Total	Urban	Luar bandar Rural
MALAYSIA	81.2	84.9	69.4	84.2	87.5	72.7	89.6	92.4	79.4	96.8	97.7	93.5
Johor	83.2	84.6	78.3	89.6	91.7	82.2	93.9	95.3	89.2	98.1	98.6	96.4
Kedah	72.3	75.9	63.1	75.6	78.5	68.0	82.9	84.8	77.8	95.5	96.6	92.4
Kelantan	71.3	77.9	64.7	73.9	77.9	69.1	81.6	85.3	77.2	95.9	96.9	94.7
Melaka	85.4	85.9	77.6	85.6	85.7	84.5	92.2	92.3	90.8	96.4	96.5	95.6
Negeri Sembilan	80.3	83.1	72.3	81.3	83.3	75.5	88.9	92.7	77.4	95.5	97.1	90.8
Pahang	79.1	85.5	70.7	81.8	87.1	73.5	88.8	93.3	81.6	94.9	96.8	92.2
Pulau Pinang	86.7	86.9	83.1	86.7	86.9	82.9	90.2	90.2	88.2	97.8	97.9	95.6
Perak	74.5	76.7	67.6	80.6	82.4	74.1	87.5	88.6	82.9	95.7	95.9	94.6
Perlis	83.4	85.6	79.7	83.8	84.9	81.6	90.2	93.9	82.3	95.0	95.4	94.1
Selangor	91.0	91.9	79.4	91.7	92.4	78.4	96.1	96.8	85.8	98.0	98.1	96.1
Terengganu	78.2	81.3	72.2	81.0	83.6	74.7	84.2	85.8	80.5	95.5	96.0	94.4
Sabah	76.7	80.9	70.6	80.0	84.5	73.3	85.8	88.6	80.7	97.3	98.0	96.2
Sarawak	73.6	82.7	60.6	76.4	85.0	63.0	81.3	91.0	65.8	93.6	98.0	86.7
W.P. Kuala Lumpur	87.4	87.4	n.a.	93.4	93.4	n.a.	97.3	97.3	n.a.	99.6	99.6	n.a.
W.P. Labuan	89.1	91.1	77.9	94.9	98.2	82.5	95.9	98.3	84.2	99.8	99.8	99.5
W.P. Putrajaya	99.6	99.6	n.a.	98.4	98.4	n.a.	99.7	99.7	n.a.	99.8	99.8	n.a.

Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Target 17.8: Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology

Indicator 17.8.1: Proportion of individuals using the Internet

Negeri State	Mendapatkan Maklumat Access to Information										Menyertai rangkaian profesional Participating in professional networks										Bekerja dari rumah Work from home									
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
MALAYSIA	Mendapatkan maklumat Finding information about goods/ services										Membaca akhbar/ majalah online Reading newspaper/ magazines online										Memohon pekerjaan Applying for jobs									
	83.5	85.4	89.4	66.2	69.0	78.0	20.9	21.4	33.0	8.5	10.6	12.4	11.0	16.1	18.1	86.0	86.1	97.3	58.8	58.9	76.8	19.1	21.9	29.9	6.8	5.7	10.1	7.4	10.8	14.9
Johor	87.3	88.2	92.4	54.9	63.8	84.5	16.2	22.2	28.6	8.5	11.1	1.7	6.8	13.8	10.0	87.3	88.2	92.4	54.9	63.8	84.5	16.2	22.2	28.6	8.5	11.1	1.7	6.8	13.8	10.0
Kelantan	81.9	84.9	89.6	57.1	59.5	69.5	19.2	22.1	36.7	7.4	8.7	12.2	6.4	11.6	11.0	81.9	84.9	89.6	57.1	59.5	69.5	19.2	22.1	36.7	7.4	8.7	12.2	6.4	11.6	11.0
Melaka	85.9	90.3	91.6	73.5	74.1	76.1	21.3	20.1	31.2	5.6	5.7	9.0	5.9	13.3	21.2	85.9	90.3	91.6	73.5	74.1	76.1	21.3	20.1	31.2	5.6	5.7	9.0	5.9	13.3	21.2
Negeri Sembilan	83.7	87.4	89.0	61.4	68.6	79.6	25.5	26.8	33.8	5.1	6.5	6.7	10.6	14.2	18.7	83.7	87.4	89.0	61.4	68.6	79.6	25.5	26.8	33.8	5.1	6.5	6.7	10.6	14.2	18.7
Pahang	87.1	86.7	88.8	44.0	50.9	72.9	20.3	19.5	34.9	7.2	10.7	13.9	7.6	14.5	14.6	87.1	86.7	88.8	44.0	50.9	72.9	20.3	19.5	34.9	7.2	10.7	13.9	7.6	14.5	14.6
Pulau Pinang	80.8	89.8	93.8	66.5	68.9	86.3	11.5	15.6	29.5	4.6	10.8	9.6	10.9	18.1	18.0	80.8	89.8	93.8	66.5	68.9	86.3	11.5	15.6	29.5	4.6	10.8	9.6	10.9	18.1	18.0
Perak	79.0	81.5	90.4	71.7	74.8	79.3	16.6	16.8	31.9	3.7	6.6	7.5	7.6	10.5	14.7	79.0	81.5	90.4	71.7	74.8	79.3	16.6	16.8	31.9	3.7	6.6	7.5	7.6	10.5	14.7
Perlis	81.7	84.1	85.8	68.5	71.5	65.3	23.8	22.3	27.9	1.2	4.3	4.4	6.2	13.8	10.0	81.7	84.1	85.8	68.5	71.5	65.3	23.8	22.3	27.9	1.2	4.3	4.4	6.2	13.8	10.0
Selangor	89.3	91.4	93.1	80.1	82.6	83.9	26.2	21.6	28.7	14.7	16.7	16.8	15.9	21.1	24.6	89.3	91.4	93.1	80.1	82.6	83.9	26.2	21.6	28.7	14.7	16.7	16.8	15.9	21.1	24.6
Terengganu	87.8	93.4	96.5	65.8	75.0	74.9	23.8	26.7	33.9	4.6	6.0	22.4	7.6	12.1	16.8	87.8	93.4	96.5	65.8	75.0	74.9	23.8	26.7	33.9	4.6	6.0	22.4	7.6	12.1	16.8
Sabah	69.3	70.0	74.1	55.1	55.9	74.6	15.0	17.7	42.2	2.2	4.7	9.8	7.8	10.9	12.2	69.3	70.0	74.1	55.1	55.9	74.6	15.0	17.7	42.2	2.2	4.7	9.8	7.8	10.9	12.2
Sarawak	74.5	75.6	78.3	56.8	60.2	68.3	23.7	22.5	38.7	4.7	6.8	12.4	10.1	15.6	17.7	74.5	75.6	78.3	56.8	60.2	68.3	23.7	22.5	38.7	4.7	6.8	12.4	10.1	15.6	17.7
W.P. Kuala Lumpur	93.3	93.6	95.0	90.2	90.4	79.4	28.3	30.4	32.4	22.6	26.6	25.4	25.7	34.3	34.4	93.3	93.6	95.0	90.2	90.4	79.4	28.3	30.4	32.4	22.6	26.6	25.4	25.7	34.3	34.4
W.P. Labuan	93.9	94.2	98.3	53.4	61.7	91.0	13.9	15.4	34.8	3.1	6.5	30.4	9.8	13.7	28.4	93.9	94.2	98.3	53.4	61.7	91.0	13.9	15.4	34.8	3.1	6.5	30.4	9.8	13.7	28.4
W.P. Putrajaya	92.3	94.2	95.1	91.4	91.5	74.0	27.0	26.3	24.1	24.0	43.7	18.9	28.3	41.9	50.0	92.3	94.2	95.1	91.4	91.5	74.0	27.0	26.3	24.1	24.0	43.7	18.9	28.3	41.9	50.0

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

														2019			2020			2021			2019			2020			2021			(%)
														Komunikasi Communication																		
Negeri State	Menyertai rangkaian sosial Participating in social networks						Menghantar emel Sending e-mail			Membuat panggilan telefon melalui Internet Telephoning over the Internet			Memuat naik kandungan ke laman web Uploading content to a website			Mengurus laman web persendirian Managing personal homepage																
	MALAYSIA						97.2	98.0	99.0	76.3	76.3	79.6	77.5	81.2	89.2	6.4	9.2	10.3	3.5	5.4	7.2											
	Johor						97.5	98.1	99.0	76.5	74.2	78.2	76.4	77.0	88.2	7.0	6.9	10.9	3.7	1.1	2.8											
	Kedah						97.5	98.5	99.2	69.7	71.5	84.9	79.7	77.2	96.9	3.2	1.5	1.1	1.6	0.6	0.4											
	Kelantan						96.1	98.6	99.4	64.0	70.8	78.1	76.2	85.9	94.6	3.4	1.7	4.7	1.5	0.9	1.3											
	Melaka						95.0	95.6	98.4	69.8	70.9	75.5	76.1	78.6	91.9	12.2	12.5	5.2	3.2	9.2	3.7											
	Negeri Sembilan						96.2	97.8	98.5	72.1	73.8	76.2	87.2	86.6	93.1	8.5	7.6	12.6	6.1	2.5	11.5											
	Pahang						98.0	97.6	98.7	70.0	72.5	79.4	63.8	72.3	86.2	3.6	5.2	3.6	2.5	1.8	0.9											
	Pulau Pinang						94.7	99.0	99.2	69.8	73.0	74.6	61.6	67.8	82.0	5.0	13.6	12.9	2.0	8.6	12.7											
	Perak						96.6	97.9	98.3	64.9	66.7	70.4	76.0	82.8	84.1	2.1	6.7	12.8	1.5	2.9	8.8											
	Perlis						94.2	98.3	99.2	80.2	74.3	76.2	84.3	84.9	86.8	12.0	4.4	7.5	8.9	1.5	7.0											
	Selangor						98.0	98.0	99.2	84.8	82.7	86.3	78.3	80.0	88.0	6.3	17.4	14.1	4.3	14.4	11.7											
	Terengganu						96.4	100.0	99.8	80.2	81.2	89.9	79.2	88.5	93.1	5.0	10.6	3.4	1.7	3.3	2.0											
	Sabah						97.7	98.2	99.2	78.3	75.9	77.7	84.5	89.6	94.0	6.1	3.3	8.8	1.4	1.3	5.6											
	Sarawak						97.3	98.0	98.9	70.0	67.0	73.1	75.7	82.4	82.4	6.9	4.9	2.3	2.4	0.9	1.5											
	W.P. Kuala Lumpur						97.2	96.4	98.8	91.7	96.4	85.1	84.8	86.3	92.9	15.2	17.2	28.7	11.8	9.2	23.9											
	W.P. Labuan						98.9	99.1	99.1	84.8	93.5	82.2	97.1	98.1	99.4	0.3	3.7	30.7	0.1	0.9	29.5											
W.P. Putrajaya						98.7	99.4	99.9	93.0	98.5	96.1	72.9	82.5	97.2	24.2	18.2	3.3	16.1	21.0	2.9												

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 5.15:

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	(%)		
	Komunikasi Communication						Lain-lain Perkhidmatan Atas Talian Other Online Services											
	Menguruskan blog Managing blog	Mengkakses perbincangan atas talian Accessing online discussion			Melaksanakan tugasan jana pendapatan Performing tasks to generate income			Menggunakan perkhidmatan berkaitan perjalanan/ penginapan Using services related to travell/ accommodation			Menjual barangan/ perkhidmatan Selling goods/ services							
MALAYSIA	2.6	4.1	5.3	23.1	22.4	38.2	3.3	8.3	10.9	27.5	31.6	40.8	4.0	10.6	11.3			
Johor	2.7	1.6	2.6	14.4	9.9	33.7	2.2	3.9	9.9	31.5	23.7	36.3	3.4	8.5	11.4			
Kedah	1.1	0.7	0.3	23.3	17.4	20.3	1.7	4.7	3.6	16.9	30.7	41.4	2.0	5.4	5.5			
Kelantan	1.0	1.3	1.2	6.8	11.2	34.2	2.8	6.8	10.4	12.8	10.6	31.5	3.6	10.0	9.9			
Melaka	1.9	7.7	5.1	20.1	12.1	46.7	2.8	7.9	9.5	26.2	40.0	39.8	6.8	16.0	10.2			
Negeri Sembilan	4.5	2.5	11.2	19.1	16.5	42.0	2.8	5.9	8.1	39.2	21.5	46.9	4.7	9.1	5.7			
Pahang	2.2	1.5	1.1	34.6	19.1	24.0	2.8	3.2	6.1	34.9	17.5	26.7	3.3	5.7	6.7			
Pulau Pinang	1.4	10.5	5.0	9.9	30.8	28.4	0.9	8.1	8.6	17.8	46.8	44.9	4.1	8.8	6.7			
Perak	1.3	3.5	8.0	9.9	15.4	26.1	2.0	5.6	7.5	18.2	25.4	32.0	3.0	10.0	11.5			
Perlis	8.0	1.0	5.8	10.1	21.0	28.4	3.5	7.2	5.0	7.1	20.9	14.6	3.3	9.6	5.4			
Selangor	3.0	5.9	9.0	37.6	32.3	53.1	5.0	14.2	17.2	38.1	41.2	52.1	3.9	14.5	16.0			
Terengganu	0.7	3.0	0.9	13.0	11.2	16.2	2.5	16.2	20.0	30.7	55.1	60.3	3.9	19.2	20.6			
Sabah	0.8	0.9	4.0	18.4	20.6	39.0	1.6	7.8	9.1	8.3	22.4	32.2	2.4	9.7	10.1			
Sarawak	1.6	1.2	1.3	11.6	23.6	38.5	2.0	4.5	9.8	19.5	17.3	28.9	2.2	6.5	9.6			
W.P. Kuala Lumpur	9.9	15.1	13.4	52.2	45.6	62.3	10.8	11.7	12.6	55.8	61.0	61.4	13.1	13.9	13.7			
W.P. Labuan	0.1	1.3	28.9	1.9	2.1	30.0	0.0	4.2	28.4	24.6	16.9	59.8	1.2	5.9	30.7			
W.P. Putrajaya	3.3	9.8	4.6	58.3	37.6	60.8	3.4	16.7	10.2	47.2	51.9	52.2	4.2	13.2	16.2			

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

Negeri State	Lain-lain Perkhidmatan Atas Talian Other Online Services											Aktiviti Pembelajaran Learning Activities			
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
	Menggunakan perbankan Internet Using Internet banking			Menggunakan perisian untuk menyunting teks Using software for editing texts			Memuat turun perisian/ aplikasi Downloading software/ applications			Membuat pesanan barangan/ perkhidmatan atas talian Ordering goods/ services online			Menjalani kursus formal atas talian Doing a formal online course		
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
MALAYSIA	50.5	61.9	70.5	20.1	26.3	39.9	77.0	78.4	86.3	22.5	54.4	60.6	8.1	18.0	29.9
Johor	46.9	58.2	72.0	15.8	15.9	34.2	74.9	69.4	79.9	20.3	51.1	60.7	6.8	10.3	28.0
Kedah	39.3	60.3	72.4	13.9	23.3	27.2	66.7	73.2	95.7	10.7	55.8	59.7	2.6	19.7	24.5
Kelantan	31.6	49.2	61.3	11.0	14.4	37.4	77.1	81.3	83.4	11.6	52.5	49.3	2.7	12.9	30.9
Melaka	50.4	69.8	69.2	17.0	23.1	45.1	58.0	68.5	82.7	19.6	69.1	67.9	5.4	22.9	24.3
Negeri Sembilan	56.9	65.4	69.0	17.1	24.3	59.9	77.6	77.8	92.3	16.6	41.9	61.4	7.6	19.2	17.7
Pahang	53.9	56.2	66.7	17.1	18.4	35.0	84.8	75.6	80.3	23.3	43.4	52.3	2.0	8.9	25.2
Pulau Pinang	43.5	70.2	75.4	19.0	25.5	32.2	70.8	78.5	86.3	9.6	58.6	58.0	3.4	16.0	22.7
Perak	39.9	57.4	66.2	11.0	17.9	30.4	60.6	70.7	73.3	14.4	52.6	50.4	4.2	15.3	33.7
Perlis	36.7	51.1	52.7	16.7	24.3	15.6	74.2	79.3	78.2	13.9	63.0	45.4	3.7	19.6	26.7
Selangor	70.4	73.4	84.6	29.6	41.9	63.2	90.2	87.1	93.4	35.6	59.7	79.3	10.3	25.4	40.1
Terengganu	51.8	73.3	81.0	23.9	35.8	39.1	79.0	79.8	85.8	28.4	73.8	80.2	6.3	18.1	46.3
Sabah	33.5	42.5	49.2	13.9	16.2	22.4	75.4	83.1	91.7	14.3	46.0	49.7	3.1	10.4	21.4
Sarawak	36.9	49.0	59.5	14.8	17.3	28.2	74.8	75.5	83.0	10.5	44.1	34.2	3.2	11.0	28.9
W.P. Kuala Lumpur	72.6	83.2	85.8	40.2	49.0	54.2	78.7	79.9	83.2	52.8	68.0	78.0	40.6	39.1	29.0
W.P. Labuan	63.0	64.5	85.5	24.0	28.1	59.2	81.9	85.1	83.6	4.8	18.0	82.0	2.8	9.0	38.7
W.P. Putrajaya	80.5	86.3	89.5	37.5	44.2	36.2	82.7	88.8	95.3	48.2	72.3	72.4	55.9	69.0	61.1

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti

Note: Refer to technical notes page 136 - 138 for detailed activities

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)
Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	(%)
	Aktiviti Pembelajaran Learning Activities						Hiburan Entertainment									Muat turun gambar/ filem/ permainan Downloading pictures/ movie/ games
	Merujuk laman web untuk pembelajaran formal Consulting websites for formal learning purposes	Menjalani kursus tidak formal atas talian Doing an informal online course			Mendengar radio secara atas talian Listening to radio online			Menonton televisyen secara atas talian Watching television online								
MALAYSIA	39.9	40.3	59.0	9.5	20.8	28.7	50.8	53.8	64.9	47.9	55.5	65.0	84.7	87.9	91.8	
Johor	48.4	39.6	59.3	9.1	17.9	21.9	53.5	64.7	78.3	46.2	44.8	63.1	83.3	85.7	88.9	
Kedah	32.0	34.9	56.0	2.0	14.5	18.5	47.2	53.5	68.2	44.5	42.4	63.8	86.8	91.4	96.7	
Kelantan	45.3	37.2	47.4	7.2	14.5	29.2	40.9	43.9	48.0	42.6	36.6	49.5	83.2	87.8	90.0	
Melaka	19.9	32.7	61.7	4.6	17.5	31.3	49.1	49.6	73.6	39.0	57.9	72.6	70.1	89.4	92.1	
Negeri Sembilan	40.3	45.0	56.2	5.2	26.6	25.3	68.1	78.0	73.7	56.1	49.7	65.5	82.7	85.0	93.9	
Pahang	32.7	30.4	56.7	2.6	10.4	20.3	39.4	33.6	38.3	41.6	44.8	50.8	88.8	84.3	85.5	
Pulau Pinang	30.8	31.8	60.3	8.7	17.4	20.6	68.9	69.6	80.3	67.1	70.3	84.5	84.0	90.0	92.6	
Perak	35.7	39.1	54.7	6.4	17.0	38.0	41.0	49.9	55.1	41.2	54.0	67.4	74.1	81.1	86.1	
Perlis	37.6	37.0	50.1	39.1	34.6	17.4	46.4	67.6	67.8	47.3	38.9	55.1	81.6	84.3	85.7	
Selangor	51.4	60.6	69.4	19.8	37.5	46.3	52.2	49.0	71.8	53.3	63.3	66.9	89.3	89.7	96.6	
Terengganu	41.8	38.6	60.6	8.0	18.7	49.0	65.4	61.0	94.5	60.8	75.7	78.0	88.2	91.5	96.6	
Sabah	28.7	24.2	51.8	2.6	12.5	17.4	41.5	40.9	45.5	26.8	46.0	54.3	85.7	89.4	92.5	
Sarawak	32.4	26.8	52.7	5.0	9.0	16.2	42.8	47.2	49.3	43.1	66.5	67.8	83.1	86.7	86.0	
W.P. Kuala Lumpur	44.6	45.9	65.9	13.5	25.4	28.2	63.5	74.6	78.7	68.6	69.0	69.4	87.2	90.6	92.2	
W.P. Labuan	11.0	18.0	62.3	1.4	6.0	37.8	62.6	84.2	83.2	69.1	73.0	98.4	98.5	95.6	98.5	
W.P. Putrajaya	76.8	62.3	76.0	9.8	32.1	33.7	70.7	86.2	76.8	74.7	76.6	83.3	88.3	92.2	96.2	

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)

Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
Note: Refer to technical notes page 136 - 138 for detailed activities

Jadual 5.15: Peratusan individu menggunakan Internet mengikut negeri dan jenis aktiviti, Malaysia, 2019 - 2021 (samb.)
 Table Percentage of individuals using the Internet by state and type of activity, Malaysia, 2019 - 2021 (cont'd)

Negeri State	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021	Keselamatan dan Perindungan Online Safety and Online Protection		
	Sivik dan Politik Civic and Politics			e-Dagang e-Commerce											
	Membeli barangan/ perkhidmatan melalui e-Dagang Purchasing goods/ services via e-Commerce			Menjual barangan/ perkhidmatan melalui e-Dagang Selling goods/ services via e-Commerce											
	Memberi pendapat/ undi Posting opinions/ voting												Mempunyai peralatan keselamatan dalam talian Owning online security tools		
MALAYSIA	17.3	23.5	41.2	35.2	45.0	64.7	2.0	5.9	7.0	36.4	36.9	48.3			
Johor	22.0	15.5	43.5	31.8	40.8	65.8	1.1	2.2	5.7	62.7	41.7	54.5			
Kedah	15.1	18.6	29.2	20.9	52.3	71.2	0.6	3.2	1.6	20.2	36.9	57.2			
Kelantan	7.3	24.2	50.6	21.9	27.5	61.5	1.2	4.6	5.7	37.6	22.6	36.1			
Melaka	22.2	22.4	53.9	34.8	48.9	66.7	2.8	15.1	6.4	46.5	42.7	47.2			
Negeri Sembilan	14.6	10.1	29.7	30.6	45.7	64.2	1.3	4.6	4.9	17.6	20.3	57.9			
Pahang	22.0	13.4	27.1	38.5	38.2	58.8	1.0	2.2	4.2	41.1	30.6	22.0			
Pulau Pinang	17.6	25.8	40.6	27.3	53.3	56.3	1.1	6.8	3.5	16.1	47.9	72.1			
Perak	5.4	21.4	24.9	26.7	41.2	53.3	1.1	4.7	3.8	13.4	25.0	34.4			
Perlis	13.1	26.6	13.0	24.0	49.7	43.8	0.7	6.1	3.4	15.3	28.9	46.7			
Selangor	23.2	30.5	59.0	53.1	55.6	83.7	2.6	7.2	13.9	46.7	49.2	56.9			
Terengganu	20.9	34.8	70.3	36.4	45.5	79.5	1.5	15.6	4.2	22.5	27.5	68.2			
Sabah	9.9	20.6	22.7	21.8	27.1	47.1	1.5	6.5	7.0	27.1	23.7	35.9			
Sarawak	6.3	11.0	35.9	23.0	36.2	45.4	1.0	2.9	4.7	21.8	22.0	19.2			
W.P. Kuala Lumpur	31.6	48.5	46.9	59.9	66.2	79.5	8.9	9.2	8.3	54.3	58.2	72.6			
W.P. Labuan	4.1	7.8	49.4	22.9	23.5	91.4	0.4	4.0	27.9	60.4	58.2	95.9			
W.P. Putrajaya	47.2	64.3	55.8	62.6	78.6	90.9	2.8	13.9	9.5	54.9	72.0	29.4			

Nota: Rujuk nota teknikal muka surat 123 - 125 untuk perincian aktiviti
 Note: Refer to technical notes page 136 - 138 for detailed activities

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RALAT PIAWAI RELATIF

RELATIVE STANDARD ERROR



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Jadual 6.1: Ralat piawai relatif bagi anggaran peratusan capaian perkhidmatan dan peralatan ICT oleh isi rumah mengikut strata, Malaysia, 2021
 Table 6.1: Relative standard error of estimates for percentage of households with access to ICT services and equipment by strata, Malaysia, 2021

Perkhidmatan dan peralatan ICT ICT services and equipment	Peratusan capaian ICT oleh isi rumah Percentage of ICT access by households			Ralat piawai bagi anggaran Standard error of estimates (%)			Peratusan capaian ICT oleh isi rumah pada 95% selang keyakinan Percentage of ICT access by households at 95% confidence interval		
	Percentage of ICT access by households			Standard error of estimates (%)			Percentage of ICT access by households at 95% confidence interval		
	Malaysia	Bandar Urban	Luar bandar Rural	Malaysia	Bandar Urban	Luar bandar Rural	Malaysia	Bandar Urban	Luar bandar Rural
Internet	95.5	96.9	89.2	0.1	0.2	0.3	0.1	0.1	0.3
Komputer Computer	88.3	91.0	76.3	0.3	0.3	0.5	0.2	0.3	0.4
Telefon bimbit Mobile phone	99.6	99.6	99.2	0.0	0.0	0.1	0.0	0.0	0.1
Siaran TV berbayar Pay TV channel	83.2	85.8	71.9	0.3	0.4	0.6	0.3	0.3	0.4
Televisyen Television	99.0	99.2	98.0	0.1	0.1	0.1	0.1	0.1	0.1
Radio	98.9	99.2	97.6	0.1	0.1	0.1	0.1	0.1	0.1
Telefon talian tetap Fixed-line telephone	31.3	34.9	15.7	1.2	1.3	2.2	0.4	0.5	0.3

Jadual 6.2: Ralat piawai relatif bagi anggaran peratusan penggunaan perkhidmatan dan peralatan ICT oleh individu mengikut strata, Malaysia, 2021
Table 6.2: Relative standard error of estimates for percentage of individuals using ICT services and equipment by strata, Malaysia, 2021

Perkhidmatan dan peralatan ICT ICT services and equipment	Peratusan penggunaan ICT oleh individu Percentage of individuals using ICT			Ralat piawai bagi anggaran Standard error of estimates (%)						Peratusan penggunaan ICT oleh individu pada 95% selang keyakinan Percentage of individuals using ICT at 95% confidence interval		
				Nilai relatif Relative value			Ralat piawai Standard error					
				Malaysia	Bandar Urban	Luar bandar Rural	Malaysia	Bandar Urban	Luar bandar Rural			
Internet	96.8	97.7	93.5	0.1	0.1	0.3	0.1	0.1	0.3	96.5 - 96.9	97.5 - 97.9	92.8 - 93.8
Komputer Computer	83.5	88.2	66.7	0.3	0.3	1.0	0.3	0.3	0.6	82.6 - 83.6	87.4 - 88.5	64.8 - 67.3
Telefon bimbit Mobile phone	98.7	99.0	97.7	0.1	0.1	0.1	0.0	0.1	0.1	98.6 - 98.8	98.9 - 99.1	97.5 - 97.9



NOTA TEKNIKAL

TECHNICAL NOTES



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1. PENGENALAN

Statistik yang diterbitkan dalam laporan ini adalah hasil dapatan Survei Penggunaan dan Capaian ICT oleh Individu dan Isi Rumah (ICTHS) 2021. Ianya menyediakan data di peringkat nasional dan negeri. Garis panduan, konsep dan definisi yang digunakan dalam penerbitan ini adalah berdasarkan daripada *Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition* yang diterbitkan oleh *International Telecommunication Union* (ITU).

ICTHS telah dijalankan pada tahun rujukan 2013, diikuti pada 2015 dan 2017. Bermula tahun 2018, survei ini dijalankan secara tahunan. Nota teknikal ini membantu pengguna untuk memahami dengan lebih jelas berkaitan data yang diterbitkan.

2. OBJEKTIF SURVEI

Objektif utama adalah seperti berikut:

- i. mengumpul maklumat yang lengkap dan terkini berkenaan penggunaan dan capaian ICT oleh individu dan isi rumah (IR);
- ii. menjadi input dalam penyusunan Akaun Satelit ICT (ICTSA); dan
- iii. mengira penunjuk ICT bagi mengukur pembangunan ICT negara dan penjanaaan Ekonomi Digital.

3. KAEDAH PENGUMPULAN DATA

- 3.1 Survei ini menggunakan kaedah temu ramah bersemuka dengan menggunakan borang soal selidik bagi mendapatkan maklumat daripada responden. Dalam tempoh survei, penemuramah yang dilatih akan melawat IR di tempat kediaman (TK) terpilih bagi mengumpul maklumat berkaitan demografi ahli isi rumah dan maklumat terperinci berkaitan penggunaan dan capaian peralatan dan perkhidmatan ICT.
- 3.2 Semakan kualiti data akan dibuat oleh pegawai berpengalaman dari DOSM Negeri bagi mengesan dan membetulkan sebarang kesilapan atau maklumat yang tertinggal ketika survei dilaksanakan. Proses semakan semula juga dilaksanakan bagi IR terpilih untuk memastikan kualiti pungutan data.

4. TEMPOH RUJUKAN

ICTHS 2021 dilaksanakan selama tiga bulan iaitu pada Oktober hingga Disember 2021. Tempoh rujukan bagi penggunaan ICT oleh individu adalah merujuk kepada tiga bulan yang lalu sebelum temuramah. Contoh, sekiranya bulan survei adalah Oktober 2021, maka tempoh rujukan yang diukur adalah mulai 1 Julai 2021 sehingga 30 September 2021.

5. SKOP DAN LIPUTAN

- 5.1 Pemilihan sampel bagi survei ini telah mengambil kira kedua-dua kawasan bandar dan luar bandar dalam daerah pentadbiran bagi semua negeri di Malaysia.
- 5.2 Liputan survei meliputi IR yang tinggal di TK persendirian dan tidak termasuk mereka yang tinggal di TK institusi seperti asrama, hotel, hospital, rumah orang tua, berek tentera dan polis, penjara dan rumah kebajikan.
- 5.3 Survei ini meliputi ahli isi rumah yang berumur lima tahun dan ke atas. Walau bagaimanapun, bagi membolehkan perbandingan dibuat dengan survei terdahulu, analisis bagi penggunaan ICT hanya melibatkan individu berusia 15 tahun dan ke atas sahaja.

6. RANGKA PENSAMPELAN

- 6.1 Rangka yang digunakan bagi pemilihan sampel ICTHS 2021 adalah berdasarkan Rangka Pensampelan Isi Rumah yang terdiri daripada blok penghitungan (BP) yang diwujudkan untuk Banci Penduduk dan Perumahan 2010 yang dikemaskini dari semasa ke semasa. BP merupakan suatu kawasan muka bumi yang diwujudkan untuk tujuan pelaksanaan operasi survei yang secara puratanya mengandungi antara 80 hingga 120 TK. Semua BP dibentuk dalam lingkungan sempadan yang diwartakan iaitu di dalam daerah pentadbiran, mukim atau kawasan pihak berkuasa tempatan.

- 6.2 BP dalam rangka pensampelan dikelaskan mengikut kawasan bandar dan luar bandar. Kawasan bandar ialah kawasan yang diwartakan serta kawasan tepu bina yang bersempadan dengannya dan gabungan kedua-dua kawasan ini mempunyai jumlah penduduk seramai 10,000 atau lebih semasa Banci Penduduk dan Perumahan 2010. Kawasan selainnya yang diwartakan dan mempunyai jumlah penduduk kurang daripada 10,000 orang serta kawasan yang tidak diwartakan dikelaskan sebagai kawasan luar bandar.
- 6.3 Kawasan tepu bina adalah kawasan yang terletak bersebelahan kawasan yang diwartakan dan mempunyai sekurang-kurangnya 60 peratus penduduk (berumur 15 tahun dan ke atas) yang terlibat di dalam aktiviti bukan pertanian.
- 6.4 Definisi kawasan bandar juga mengambil kira kawasan pembangunan khusus iaitu kawasan pembangunan yang tidak diwartakan dan boleh dikenalpasti serta terpisah dari kawasan yang diwartakan atau kawasan tepu bina melebihi lima kilometer dan mempunyai penduduk sekurang-kurangnya 10,000 orang dengan 60 peratus penduduk (berumur 15 tahun dan ke atas) yang terlibat dalam aktiviti bukan pertanian.
- 6.5 Pembandaran merupakan proses yang dinamik dan sentiasa berubah mengikut kemajuan dan pembangunan. Oleh itu, kawasan bandar bagi Banci Penduduk dan Perumahan 2000 dan 2010 tidak semestinya merujuk kepada kawasan yang sama kerana kawasan yang memenuhi kriteria bandar akan terus bertambah dan berkembang mengikut masa.
- 6.6 Klasifikasi kawasan mengikut strata yang digunakan adalah seperti berikut:

Strata	Jumlah penduduk dalam kawasan yang diwartakan, tepu bina dan kawasan pembangunan khusus
Metropolitan	75,000 dan ke atas
Bandar besar	10,000 hingga 74,999
Bandar kecil	1,000 hingga 9,999
Luar bandar	Kawasan selebihnya

6.7 Bagi tujuan pensampelan, klasifikasi kawasan seperti di perkara 6.6 adalah digunakan untuk semua negeri serta Wilayah Persekutuan. Bagi Sabah dan Sarawak, memandangkan masalah kesukaran untuk akses ke kawasan pedalaman, strata luar bandar dikembangkan lagi berdasarkan kepada jangka waktu yang diambil untuk sampai ke sesuatu tempat dari pusat bandar yang terdekat.

6.8 Bagi tujuan penjadualan laporan, strata-strata dicantumkan seperti berikut:

Bandar = Metropolitan + Bandar besar

Luar bandar = Bandar kecil + Keseluruhan luar bandar

7. REKA BENTUK PENSAMPELAN

7.1 Reka bentuk pensampelan berstrata dua peringkat (*two-stage stratified sampling*) telah digunakan dalam ICTHS 2021. Unit pensampelan peringkat pertama adalah BP, dipilih secara rawak menggunakan kaedah *Systematic Random Sampling*.

7.2 BP dipilih secara berasingan mengikut strata seperti berikut:

Strata pertama	Negeri
Strata kedua	Bandar/ luar bandar mengikut negeri

7.3 Seterusnya unit pensampelan peringkat kedua adalah TK dan sampel TK dipilih dari BP yang terpilih menggunakan kaedah *Systematic Random Sampling* melalui penjaan nombor rawak dan menetapkan selang pemilihan supaya setiap TK mempunyai kebarangkalian yang sama untuk terpilih. Prosedur ini dilaksanakan secara teratur dan saintifik untuk menghasilkan sampel yang tidak pincang (*unbiased*) dan boleh mewakili keseluruhan populasi IR di Malaysia.

8. SAIZ SAMPEL

8.1 Saiz sampel ICTHS 2021 mewakili populasi mengikut peringkat analisis yang ditetapkan. Saiz sampel ini telah mengambil kira faktor-faktor berikut:

- i. statistik terpilih daripada survei yang lepas
- ii. peringkat reka bentuk pensampelan; dan
- iii. ralat yang disasarkan.
- iv. kadar respon

Negeri	Bilangan BP	Bilangan TK
Johor	312	2,389
Kedah	295	2,321
Kelantan	278	2,038
Melaka	226	1,727
Negeri Sembilan	232	1,725
Pahang	308	2,410
Pulau Pinang	233	1,710
Perak	272	1,802
Perlis	177	1,336
Selangor	369	2,825
Terengganu	267	1,922
Sabah	417	3,143
Sarawak	347	2,463
W.P. Kuala Lumpur	134	1,044
W.P. Labuan	55	337
W.P. Putrajaya	61	471
MALAYSIA	3,983	29,663

8.2 Agihan saiz sampel ICTHS 2021 adalah seperti berikut:

9. PENILAIAN DATA

- 9.1 Data yang diperoleh daripada survei yang dijalankan secara sampel berkebarangkalian ini tertakluk kepada dua jenis ralat iaitu ralat pensampelan dan ralat bukan pensampelan.

i. Ralat pensampelan

Ralat pensampelan berpunca daripada anggaran data yang terhasil daripada sampel berkebarangkalian. Ralat ini boleh diukur dengan menganggarkan Ralat Piawai Relatif dan dinyatakan dalam bentuk peratusan. Ia digunakan sebagai penunjuk kepada kepersisan anggaran parameter yang dikaji. Ini memberi gambaran tahap variasi anggaran pembolehubah yang dianggarkan melalui survei berbanding dengan parameter populasi.

Sebagai contoh, penemuan ICTHS 2021 mendapati peratusan capaian isi rumah terhadap Internet bagi Malaysia adalah 95.5 peratus dengan Ralat Piawai Relatif 0.1 peratus. Dalam erti kata lain, peratus Ralat Piawai adalah 0.1 peratus. Berasaskan 95 peratus selang keyakinan ($\alpha=0.05$), peratusan capaian isi rumah terhadap Internet berada dalam batasan antara 95.2% - 95.8%.

ii. Ralat bukan pensampelan

Ralat ini boleh berpunca daripada liputan survei yang tidak lengkap, kelemahan rangka, ralat maklumbalas, tiada respons dan kesilapan semasa prosesan seperti di peringkat penyuntingan, pengekodan dan tangkapan data. Bagi memastikan kualiti data berada pada tahap yang tinggi, beberapa langkah pentadbiran telah diambil supaya **ralat bukan pensampelan** berada di tahap minimum. Antaranya, latihan intensif kepada penyelia dan penemuramah. Selain daripada itu, penyeliaan yang rapi dan semakan rambang dijalankan ke atas isi rumah yang telah diliputi oleh penemuramah untuk memastikan kesahihan maklumat yang direkodkan.

Bagi mengatasi kes tiada respons yang berpunca daripada beberapa sebab seperti TK kosong, tiada penghuni di rumah, enggan bekerjasama atau TK tidak layak diliputi dalam survei, maka penganggaran saiz sampel ICTHS 2021 telah mengambil kira semua kemungkinan tersebut.

Pengemaskinian rangka pensampelan yang dilaksanakan dari semasa ke semasa telah dapat mengurangkan kadar tiada respons yang berpunca daripada TK kosong. Publisiti yang meluas dilaksanakan melalui media elektronik serta media cetak bagi mengurangkan kes tiada penghuni di rumah dan enggan bekerjasama.

Selain daripada itu, di peringkat prosesan data, semakin konsistensi bagi setiap pembolehubah dan proses validasi telah dilaksanakan secara sistematik bagi meminimumkan kesemua ralat bukan pensampelan.

10. KONSEP DAN DEFINISI

10.1 TEMPAT KEDIAMAN

Tempat kediaman adalah suatu struktur yang dibina **berasingan** dan **bebas** yang lazimnya digunakan untuk tempat tinggal. Istilah berasingan dan bebas bermaksud seperti berikut:

- i. **Berasingan:** Struktur dianggap sebagai berasingan jika ia dikelilingi oleh dinding, pagar dan lain-lain serta ditutupi oleh bumbung.
- ii. **Bebas:** Struktur dikatakan bebas apabila ia mempunyai jalan masuk terus dari laluan umum, tempat lalu lintas atau ruang lapang (iaitu penghuni boleh masuk atau keluar dari TK mereka tanpa melalui perkarangan orang lain).

10.2 ISI RUMAH

Isi rumah ditakrifkan sebagai seseorang atau sekumpulan orang yang bersaudara atau tidak bersaudara yang biasanya tinggal bersama dalam satu TK serta membuat peruntukan (perbelanjaan) secara bersama untuk makanan dan keperluan hidup yang lain.

10.3 KETUA ISI RUMAH

Ketua IR ditakrifkan sebagai seorang ahli biasa sama ada lelaki atau perempuan yang dianggap sebagai ketua oleh ahli IR yang lain. Ketua IR mesti seorang penerima pendapatan dan berumur 15 tahun dan lebih.

10.4 CAPAIAN DAN PENGGUNAAN ICT

10.4.1 Capaian ICT oleh isi rumah: Sesebuah isi rumah dianggap mempunyai capaian kepada perkhidmatan dan peralatan ICT sekiranya ia masih boleh digunakan ketika temu ramah dijalankan.

10.4.2 Penggunaan ICT oleh individu:

- Penggunaan perkhidmatan dan peralatan ICT oleh seorang atau beberapa individu atau beberapa individu di dalam sesebuah isi rumah, sama ada digunakan di TK atau di tempat lain;
- Individu di sesebuah isi rumah yang berusia 15 tahun dan ke atas; dan
- Penggunaan peralatan telefon bimbit, komputer dan perkhidmatan Internet bagi tempoh tiga bulan yang lalu.

10.4.3 Indikator Utama ICT

i. Radio

Radio didefinisikan sebagai peranti yang mampu menerima isyarat penyiaran radio, menggunakan frekuensi biasa seperti FM, AM, LW dan SW. Radio boleh menjadi peranti yang berdiri sendiri, atau termasuk radio set bersepadu dengan alat yang lain seperti jam penggera, pemain audio, telefon bimbit atau komputer. Ia juga termasuk radio dalam kereta.

$$\frac{(\text{bilangan IR terpilih yang memiliki radio})}{(\text{jumlah IR terpilih})} \times 100$$

ii. Televisyen

Televisyen (TV) adalah alat yang mampu menerima isyarat siaran televisyen, menggunakan akses popular seperti *over-the-air*, kabel dan satelit. Satu set televisyen lazimnya merupakan peranti yang berdiri sendiri, namun ia boleh juga termasuk fungsi TV yang bersepadu dengan peranti lain, seperti komputer atau telefon bimbit.

$$\frac{(\text{bilangan IR terpilih yang memiliki televisyen})}{(\text{jumlah IR terpilih})} \times 100$$

iii. Telefon talian tetap

Telefon talian tetap merujuk kepada talian telefon yang menyambungkan peralatan terminal pelanggan (contohnya set telefon, mesin faksimili) kepada Rangkaian Telefon Bersuis Awam (PSTN) dan yang mempunyai sebuah port pada pertukaran telefon. Istilah ini adalah sinonim dengan stesen istilah utama atau Pertukaran Talian Terus (DEL) yang biasanya digunakan dalam dokumen telekomunikasi. Ia mungkin tidak sama seperti akses dalam talian atau langganan.

$$\frac{(\text{bilangan IR terpilih yang memiliki telefon talian tetap})}{(\text{jumlah IR terpilih})} \times 100$$

iv. Telefon bimbit

Telefon bimbit merujuk kepada telefon mudah alih yang melanggan kepada satu perkhidmatan telefon mudah alih awam menggunakan teknologi selular yang menyediakan akses bagi PSTN. Ini termasuk sistem selular analog dan digital, serta teknologi seperti IMT-2000 (3G) dan IMT-Advanced. Ia adalah termasuk akaun bagi kedua-dua pelanggan pascabayar dan prabayar.

$$\frac{(\text{bilangan IR terpilih yang memiliki telefon bimbit})}{(\text{jumlah IR terpilih})} \times 100$$

v. Komputer

Komputer merujuk kepada *desktop*, komputer riba atau papan elektronik mudah alih. Ia tidak termasuk peralatan dengan beberapa *embedded computing ability* seperti telefon bimbit, *Personal Digital Assistant* (PDA) atau set TV.

$$\frac{(\text{bilangan IR terpilih yang memiliki komputer})}{(\text{jumlah IR terpilih})} \times 100$$

vi. Internet

Internet adalah rangkaian komputer awam di seluruh dunia. Ia menyediakan akses kepada beberapa perkhidmatan komunikasi termasuk *World Wide Web* dan membawa emel, berita, hiburan dan fail data, tanpa mengira peranti yang digunakan (tidak dianggap hanya melalui komputer - ia juga boleh dibuat melalui telefon bimbit, PDA, mesin permainan, TV digital dan sebagainya). Mengakses Internet juga boleh dibuat melalui rangkaian talian tetap atau telefon bimbit.

$$\frac{(\text{bilangan IR terpilih yang memiliki Internet})}{(\text{jumlah IR terpilih})} \times 100$$

vii. Aktiviti Penggunaan Internet

Aktiviti penggunaan Internet dikategorikan seperti berikut:

a) Mendapatkan maklumat

- Mendapatkan maklumat tentang barangan atau perkhidmatan
- Membaca atau memuat turun akhbar atau majalah *online*, buku elektronik

b) Komunikasi

- Menyertai dalam rangkaian sosial (Cth: *Facebook*, *WhatsApp*, *Instagram*, *Twitter* dll)
- Menghantar atau menerima emel
- Membuat panggilan telefon melalui Internet / VoIP
- Memuat naik kandungan yang dicipta sendiri ke laman web
- Menguruskan laman web persendirian
- *Blogging*: Menyelenggara atau menambah kandungan ke dalam blog
- Mengakses laman perbualan, blog, kelompok berita atau perbincangan atas talian

c) Profesional

- Mencari pekerjaan atau menghantar permohonan kerja
- Mengambil bahagian dalam rangkaian profesional
- Mengakses sistem pengkomputeran pejabat untuk tujuan membuat kerja pejabat dari rumah

d) Sivik dan Politik

- Mengemukakan pendapat atau mengundi berkenaan isu-isu politik atau sivik (Cth: blog, media sosial, laman web)

e) Lain-lain Perkhidmatan Atas Talian

- Melaksanakan tugas yang boleh menjana pendapatan secara atas talian
- Menggunakan perkhidmatan berkaitan perjalanan atau penginapan perjalanan
- Menjual barangan atau perkhidmatan (melalui *Mudah*, *Facebook*, *WhatsApp* dsb.)
- Membeli atau membuat pesanan barangan atau perkhidmatan selain e-Dagang (melalui *Mudah*, *Facebook*, *WhatsApp* dsb.)
- Perbankan Internet
- Menggunakan perisian melalui Internet untuk menyunting teks pada dokumen, lembaran kerja atau persembahan
- Memuat turun perisian atau aplikasi

f) Ruang Penyimpanan

- Menggunakan ruang simpanan di Internet untuk menyimpan dokumen, gambar, muzik, video atau fail lain (Cth: *Google Drive*, *Dropbox*, *Window SkyDrive*, *iCloud*, *Amazon Cloud Drive*)

g) Aktiviti Pembelajaran

- Menjalani kursus formal atas talian
- Merujuk kepada wiki (*Wikipedia* dsb.), ensiklopedia atas talian atau laman web lain untuk tujuan pembelajaran formal
- Menjalani kursus/ latihan tidak formal atas talian

h) e-Kesihatan

- Mendapatkan maklumat berkaitan kesihatan atau perkhidmatan kesihatan (Cth: berkaitan penyakit, kecederaan, nutrisi dll.)
- Membuat temu janji dengan pengamal perubatan melalui laman web

i) e-Kerajaan

- Mendapatkan maklumat daripada organisasi kerajaan
- Berinteraksi dengan organisasi kerajaan

j) Hiburan

- Mendengar radio secara atas talian
- Menonton televisyen secara atas talian
- Memuat turun gambar, filem, video atau muzik; bermain atau memuat turun permainan

k) e-Dagang

- Membeli atau membuat pesanan barangan atau perkhidmatan (e-Dagang)
- Menjual barangan atau perkhidmatan melalui e-Dagang

l) Keselamatan & Perlindungan *Online*

- Mempunyai peralatan keselamatan & mengambil langkah perlindungan dalam talian yang mencukupi

10.4.4 Statistik Terpilih Malaysia daripada Suruhanjaya Komunikasi dan Multimedia Malaysia (SKMM)

i. Jalur lebar

Kadar penembusan jalur lebar bagi 100 penduduk dikira dengan membahagi jumlah langganan jalur lebar tetap dan jalur lebar mudah alih dengan jumlah penduduk dan didarab dengan 100. Langganan Wi-Fi awam tidak diambil kira.

iii. Selular mudah alih

Kadar penembusan selular mudah alih dikira sebagai jumlah langganan dibahagi jumlah penduduk dan didarabkan dengan 100. Penembusan yang melebihi 100% boleh berpunca daripada pelanggan yang melanggan melebihi daripada satu langganan.

iii. Talian tetap

Kadar penembusan talian tetap dikira sebagai jumlah langganan dibahagi dengan jumlah penduduk dan didarabkan dengan 100.

iv. TV berbayar

Kadar penembusan TV berbayar bagi 100 isi rumah dikira dengan membahagi jumlah langganan isi rumah dengan jumlah isi rumah dan didarab dengan 100.

10.5 PEMBUNDARAN ANGGARAN

Pengiraan bagi sesuatu kategori mungkin tidak sentiasa sama antara jadual disebabkan oleh pembundaran secara bebas. Walau bagaimanapun, perbezaan ini adalah tidak ketara.

Peratusan yang ditunjukkan dalam jadual adalah diperolehi daripada angka sebenar dan tidak semestinya memberikan jumlah genap 100 peratus disebabkan pembundaran, walaupun jumlah yang ditunjukkan adalah 100 peratus.

10.6 NOTA DAN SIMBOL

W.P.	Wilayah Persekutuan
n.a.	Tidak berkenaan
ICT	Teknologi Maklumat dan Komunikasi

1. INTRODUCTION

The statistics released in this report are findings of the ICT Use and Access by Individuals and Households Survey (ICTHS) 2021. It provides data at the national and state level. The guidelines, concepts and definitions used in this publication are based on the Manual for Measuring ICT Access and Use by Households and Individuals 2020 Edition published by the International Telecommunication Union (ITU).

ICTHS was carried out starting in reference year 2013, followed by 2015 and 2017. Since 2018, this survey is conducted annually. These technical notes will facilitate users with a better understanding pertaining to the published statistics.

2. OBJECTIVES OF SURVEY

The main objectives are as follows:

- i. to collect the latest and specific information on ICT use and access by individuals and households (HH);*
- ii. to serve as an input in the compilation of ICT Satellite Account (ICTSA); and*
- iii. to calculate ICT indicators to measure the development of national ICT and Digital Economy.*

3. METHOD OF DATA COLLECTION

- 3.1 ICTHS uses the personal interview method using the questionnaire form to obtain information from respondents. During the survey period, trained interviewers visit households in selected living quarters (LQs) to collect demographic information on all household members and detailed information on the use and access of ICT equipment and services.*
- 3.2 Quality checks were done by experienced officers from the DOSM State office to detect and correct any possibility of errors or omissions at the time when the survey is conducted. The review processes were also implemented for selected HH to ensure the quality of the data collected.*

4. REFERENCE PERIOD

ICTHS 2021 was conducted for three months from October to December 2021. The reference period for ICT use by individuals was for the last three months prior to the interview. For example, if the survey month is in October 2021, then the reference period for individuals is calculated from 1st July 2021 until 30th September 2021.

5. SCOPE AND COVERAGE

- 5.1 The selection of the sample of this survey has taken into consideration both urban and rural areas in the administrative districts for all states in Malaysia.*
- 5.2 The coverage of the survey is HH living in private LQs only and excluding those residing in institutions LQs such as hostels, hotels, hospitals, old folk's homes, military barracks and police, prisons, welfare homes and other institutions.*
- 5.3 This survey involved individuals aged five years and above. However, to enable the comparison to be made with the previous survey, the analysis for the use of ICT only involves individuals aged 15 years and above.*

6. SAMPLING FRAME

- 6.1 The sampling frame used for the selection of the ICTHS 2021 sample is based on the Household Sampling Frame, which is made up of enumeration blocks (EBs) created for the 2010 Population and Housing Census and was updated from time to time. EBs are geographically contiguous areas of land with identifiable boundaries created for survey operation purposes, which on average, contains about 80 to 120 LQs. All EBs are formed within gazette boundaries i.e. within administrative, districts or local authority areas.*
- 6.2 The EBs in the sampling frame are classified by urban and rural areas. Urban areas are gazetted areas with their adjoining built-up areas and the combination of these two areas had a total population of 10,000 or more during the 2010 Population and Housing Census. Meanwhile, gazetted area with a population of less than 10,000 and not gazetted areas are classified as a rural areas.*

6.3 *Built-up areas are the areas contiguous to a gazetted area and have at least 60 per cent of their population (aged 15 years and above) engaged in non-agricultural activities.*

6.4 *The definition of urban areas also takes into account the special development areas i.e. areas that are not gazetted and development can be identified and separated from the gazetted areas or built-up area of more than five kilometres and has a population of at least 10,000 people with 60 per cent of the population (aged 15 years and above) engaged in non-agricultural activities.*

6.5 *Urbanisation is a dynamic process and keeps changing with development and growth. Thus, the urban areas for 2000 and 2010 Population and Housing Censuses do not necessarily refer to the same areas, as areas fulfilling the above criteria of urban continue to expand and grow with time.*

6.6 *The classification of areas by strata is as follows:*

Strata	Population of gazetted, built-up areas and special development area
<i>Metropolitan</i>	<i>75,000 and above</i>
<i>Urban large</i>	<i>10,000 to 74,999</i>
<i>Urban small</i>	<i>1,000 to 9,999</i>
<i>Rural</i>	<i>All other areas</i>

6.7 *For sampling purposes, the classification of areas as stated in item 6.6 is used for all states and federal territories. For Sabah and Sarawak, due to inaccessibility, the rural strata had to be further stratified based on the time taken to reach the area from the nearest urban centre.*

6.8 *For the purpose of tabulation, the strata reclassified were combined as follows:*

Urban = Metropolitan + Urban large

Rural = Urban small + All rural

7. SAMPLE DESIGN

7.1 The two-stage stratified sampling design was used in ICTHS 2021. The first level sampling unit was EBs, randomly selected using Systematic Random Sampling method.

7.2 EBs were selected separately according to the following strata:

Primary strata	State
Secondary strata	Urban/ rural area by state

7.3 Then, the second level sampling units was LQs and samples for LQs were selected from the EBs by using the Systematic Random Sampling method that generates random number and interval class to ensure every LQs have an equal probability to be selected as a sample. This procedure is performed systematically and scientifically to produce an unbiased sample and can represent the entire population of HH in Malaysia.

8. SAMPEL SIZE

8.1 The sample of ICTHS 2021 represent a population at the fixed level of analysis. The sample size calculation has taken into account the following elements:

- i. selected statistics from previous survey
- ii. the level of sampling design; and
- iii. desired error.
- iv. response rates

8.2 The distribution of sample size for ICTHS 2021 is as follows:

State	Number of selected EBs	Number of selected LQs
Johor	312	2,389
Kedah	295	2,321
Kelantan	278	2,038
Melaka	226	1,727
Negeri Sembilan	232	1,725
Pahang	308	2,410
Pulau Pinang	233	1,710
Perak	272	1,802
Perlis	177	1,336
Selangor	369	2,825
Terengganu	267	1,922
Sabah	417	3,143
Sarawak	347	2,463
W.P. Kuala Lumpur	134	1,044
W.P. Labuan	55	337
W.P. Putrajaya	61	471
MALAYSIA	3,983	29,663

9. DATA EVALUATION

9.1 Data obtained from a probability sample surveys are subjected to two types of error i.e sampling error and non-sampling error.

i. Sampling Error

Sampling error is a result of estimating data based on probability sampling survey. This error can be measured by estimating the Relative Standard Error (RSE) and expressed in percentage. It is used as an indicator of the precision of the estimated parameters studied. This estimate reflects the level of variation that was estimated through a survey variable compared with the population parameter.

For instance, in ICTHS 2021, the percentage of Internet access by the household for Malaysia was 95.5 per cent with RSE of 0.1 per cent. In other words, the standard error (SE) is approximately 0.1 per cent. Based on a 95 per cent confidence level ($\alpha=0.05$), the percentage of Internet access by household was found to be in the range of 95.2% - 95.8%.

ii. **Non-Sampling Error**

These errors may arise through incomplete survey coverage, weaknesses in the frame, response errors, non-response errors and also errors during processing either through editing, coding and data capture. To ensure the high quality data, several administrative procedures were taken to keep **non-sampling errors** to a minimum. Intensive training was conducted for the supervisors and enumerators. In addition, close supervision and random checks were carried out on households that were covered by the enumerators to ensure the validity of the information recorded.

In order to resolve the case of non-response error due to several reasons such as vacant house, no one at homes, refusal to co-operate or not qualified LQ, the sample size estimation for ICTHS 2021 has taken into account all the possibilities.

The survey frame is updated regularly to overcome the problem of non-response due to vacant home. Wide publicity was carried out through electronic and printed media to minimise the case of 'no one at home' and refusal to cooperate.

In addition, at the data processing stage, each variable's consistency checking and a validation process has been systematically implemented in order to minimise the non-sampling error.

10. CONCEPTS AND DEFINITIONS

10.1 LIVING QUARTERS

*Living quarters are defined as **independent** and **separate** structures, and are usually used as a place of abode. The terms separate and independent mean the following:*

- i. **Separate:** A structure is considered separate if it is surrounded by walls, fences, etc. and is covered by a roof.*
- ii. **Independent:** A structure is said to be independent if it has direct access via public path, communal passageway or space (that is, occupants can come in or go out of their LQs without passing through others' premises).*

10.2 HOUSEHOLD

A Household is defined as a person or group of people whether related or unrelated who usually live together in a living quarter and make provisions (expenses) for food and necessities of life together.

10.3 HEAD OF HOUSEHOLD

Head of household is defined as any member whether male or female who is considered as the head of HH by other members. The Head of HH must be an income recipient and is aged 15 years and above.

10.4 ICT ACCESS AND USAGE

- 10.4.1 **ICT access by households:** In order for a household to have access to ICT services or equipment, it should be able to be used during the interview.*

10.4.2 ICT use by individuals:

- *Use of ICT services and equipment by one or more individuals in a household, either it was used in LQ or elsewhere;*
- *Individuals in a household aged 15 years and above; and*
- *Use of mobile phone, computer and Internet for the last three months.*

10.4.3 Core ICT Indicators

i. Radio

A radio is defined as a device capable of receiving broadcast radio signals, using common frequencies, such as FM, AM, LW and SW. A radio may be a stand-alone device, or it may be integrated with another device, such as an alarm clock, an audio player, a mobile phone or a computer. It includes a radio in a car.

$$\frac{(\text{number of in-scope household with a radio})}{(\text{total number of in-scope households})} \times 100$$

ii. Television

A television (TV) is a device capable of receiving broadcast television signals, using popular access means such as over-the-air, cable and satellite. A television set is typically a stand-alone device, but it may also be integrated with another device, such as a computer or a mobile phone.

$$\frac{(\text{number of in-scope household with a television})}{(\text{total number of in-scope households})} \times 100$$

iii. **Fixed-line telephone**

A fixed telephone refers to a telephone line connecting a customer's terminal equipment (e.g. telephone set, facsimile machine) to the Public Switched Telephone Network (PSTN) and which has a dedicated port on a telephone exchange. This term is synonymous with the terms main station or DirectExchange Line (DEL) which are commonly used in telecommunication documents. It may not be the same as an access line or a subscription.

$$\frac{(\text{number of in-scope household with a fixed-line telephone})}{(\text{total number of in-scope households})} \times 100$$

iv. **Mobile phone**

A mobile phone refers to a portable telephone subscribing to a public mobile phone service using cellular technology, which provides access to the PSTN. This includes analogue and digital cellular systems and technologies such as IMT-2000 (3G) and IMT-Advanced. Users of both postpaid subscriptions and prepaid accounts are included.

$$\frac{(\text{number of in-scope household with a mobile phone})}{(\text{total number of in-scope households})} \times 100$$

v. **Computer**

A computer refers to a desktop, a laptop (portable) computer or a tablet (or similar handheld computer). It does not include equipment with some embedded computing ability such as mobile phones, Personal Digital Assistant (PDA) or a TV set.

$$\frac{(\text{number of in-scope household with a computer})}{(\text{total number of in-scope households})} \times 100$$

vi. Internet

The Internet is a worldwide public computer network. It provides access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer - it may also be by mobile phone, tablet, PDA, games machine, digital TV and etc.). The Internet can be accessed via a fixed or mobile network.

$$\frac{(\text{number of in-scope household with a Internet})}{(\text{total number of in-scope households})} \times 100$$

vii. Internet Activities

Internet activities are categorised as follows:

a) Access to information

- Finding information about goods or services*
- Reading or downloading online newspaper or magazines, electronic books*

b) Communication

- Participating in social networks (e.g. Facebook, WhatsApp, Twitter etc.)*
- Sending or receiving e-mail*
- Telephoning over the Internet/ VoIP*
- Uploading self created content to a website*
- Managing personal homepage*
- Blogging: Maintaining or adding contents to a blog*
- Accessing chat sites, blogs, newsgroups or online discussions*

c) Professional

- Looking for a job or submitting a job application*
- Participating in professional networks (e.g. LinkedIn and Xing)*
- Accessing office's computing system for the purpose of doing work from home*

d) *Civic and Politics*

- *Posting opinions or voting on civic or political issues (e.g. blogs, social networks, websites)*

e) *Other Online Services*

- *Performing tasks online to generate income*
- *Using services related to travel or travel-related accommodation*
- *Selling goods or services (via Mudah, Facebook, WhatsApp etc.)*
- *Purchasing or ordering goods or services other than e-Commerce (via Mudah, Facebook, WhatsApp etc.)*
- *Internet Banking*
- *Using software run over the Internet for editing text documents, spreadsheets or presentations*
- *Downloading software or applications*

f) *Storage Space*

- *Using storage space on the Internet to save documents, pictures, music, video or other files (e.g. Google Drive, Dropbox, Window Sky Drive, iCloud, Amazon Cloud Drive)*

g) *Learning Activities*

- *Doing a formal online course*
- *Consulting wikis (Wikipedia etc.), online encyclopedias or other websites for formal learning purposes*
- *Doing an informal online course/ assessment*

h) *e-Health*

- *Seeking health related information or services related information (e.g. on disease, injuries, nutrition etc.)*
- *Making an appointment with a health practitioner via a website*

i) *e-Government*

- *Getting information from government organisations*
- *Interacting with government organisations*

j) Entertainment

- *Listening to radio online*
- *Watching television online*
- *Downloading images, movies, videos or music; playing or downloading games*

k) e-Commerce

- *Purchasing or ordering goods or services (e-Commerce)*
- *Selling goods or services via e-commerce*

l) Safety and Online Protection

- *Owning online security tools & adopt measures to ensure online protection*

10.4.4 Selected Statistics of Malaysia from Malaysian Communications and Multimedia Commission (MCMC)

i. Broadband

The broadband penetration rate per 100 inhabitants is calculated by dividing the sum of fixed and mobile-broadband subscriptions by the total number of population and multiplying by 100. Public Wi-Fi subscriptions are not taken into account.

ii. Mobile-cellular

The mobile-cellular penetration rate refers to the total subscriptions divided by total number of population and multiplied by 100. A penetration rate over 100% can occur because of multiple subscriptions.

iii. Fixed-telephone

The fixed-telephone penetration rate refers to the total subscriptions divided by the total number of population and multiplied by 100.

iv. Pay TV

The pay TV penetration rate per 100 households is calculated by dividing the number of household subscriptions by the number of households and multiplied by 100.

10.8 ROUNDING OF ESTIMATES

The calculation of certain categories may not always be the same between tables due to independent rounding. However, the differences were insignificant.

Percentages shown in the tables were computed from actual absolute figures and may not always add up exactly to 100 per cent due to rounding, although the totals were shown as 100 per cent.

10.9 NOTES AND SYMBOLS

<i>W.P.</i>	<i>Wilayah Persekutuan</i>
<i>n.a.</i>	<i>Not applicable</i>
<i>ICT</i>	<i>Information and Communication Technology</i>

**PERTANYAAN BERHUBUNG DENGAN PENERBITAN INI BOLEH JUGA DIBUAT DI PEJABAT
PERANGKAAN NEGERI SEPERTI BERIKUT:**

Pengarah,
Jabatan Perangkaan Malaysia Negeri Johor,
Tingkat 14, Menara Tabung Haji,
Jalan Air Molek,
80000 Johor Bahru, Johor.
Tel. : 07-225 3700
Faks : 07-224 9972
E-mel : jpjohor@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Kedah,
Aras 1, Zon C, Wisma Persekutuan,
Pusat Pentadbiran Kerajaan Persekutuan,
Bandar Muadzam Shah,
06550 Anak Bukit, Alor Setar, Kedah.
Tel. : 04-700 1240
Faks : 04-733 8412
E-mel : jpkedah@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Kelantan,
Tingkat 8, Bangunan Persekutuan,
Jalan Bayam,
15514 Kota Bharu, Kelantan.
Tel. : 09-741 9449
Faks : 09-748 2142
E-mel : jpkelantan@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Melaka,
Aras 7 & 8, Wisma Persekutuan,
Jalan MITC, Hang Tuah Jaya,
75450, Ayer Keroh,
Melaka.
Tel. : 06-252 2725
Faks : 06-252 2711
E-mel : jpmelaka@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sembilan,
Tingkat 12, Wisma Persekutuan,
Jalan Dato' Abdul Kadir,
70000 Seremban,
Negeri Sembilan.
Tel. : 06-765 5000
Faks : 06-765 5002
E-mel : jpnsembilan@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Pahang,
Tingkat 7, Bangunan Persekutuan,
Jalan Gambut,
25000 Kuantan, Pahang.
Tel. : 09-516 3931/7
Faks : 09-514 4636
E-mel : jppahang@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Pulau Pinang,
Tingkat 6, Bangunan Persekutuan,
10400 Jalan Anson,
Pulau Pinang.
Tel. : 04-226 6244
Faks : 04-229 9499
E-mel : jppulaupinang@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Perak,
Tingkat 3, Blok A,
Bangunan Persekutuan Ipoh,
Jalan Dato' Seri Ahmad Said (Greentown),
30450 Ipoh, Perak.
Tel. : 05-243 6107
Faks : 05-255 1073
E-mel : jpperak@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Perlis,
Tingkat 1, Bangunan Perodua,
Persiaran Jubli Emas,
01000 Kangar, Perlis.
Tel. : 04-977 1221
Faks : 04-977 1223
E-mel : jpperlis@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Selangor,
Tingkat 9, Bangunan Darul Ehsan,
Jalan Indah, Seksyen 14,
40000 Shah Alam, Selangor.
Tel. : 03-5515 0200
Faks : 03-5518 0408
E-mel : jpselangor@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Terengganu,
Tingkat 9, Wisma Persekutuan,
Jalan Sultan Ismail,
20200 Kuala Terengganu, Terengganu.
Tel. : 09-622 3062
Faks : 09-622 9659
E-mel : admin_jptrg@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sabah,
Tingkat 1-3, Blok C,
Kompleks Pentadbiran Kerajaan Persekutuan Sabah,
Jalan UMS, Beg Berkunci No. 2046,
88999 Kota Kinabalu, Sabah.
Tel. : 088-484 602
Faks : 088-484 659
E-mel : jpsabah@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia Negeri Sarawak,
Tingkat 7 & 8, Bangunan Tun Datuk Patinggi
Tuanku Haji Bujang, Jalan Simpang Tiga,
93514 Kuching, Sarawak.
Tel. : 082-240 287
Faks : 082-242 609
E-mel : sarawak@dosm.gov.my

Pengarah,
Jabatan Perangkaan Malaysia
Wilayah Persekutuan,
Tingkat 14 & 15, Wisma FGV,
Jalan Raja Laut,
50350 Kuala Lumpur.
Tel. : 03-2267 2400
Faks : 03-2274 5075
E-mel : jpwpl@dosm.gov.my

ENQUIRIES ABOUT THIS PUBLICATION CAN ALSO BE MADE AT THE FOLLOWING STATE STATISTICS OFFICES:

Director,
Department of Statistics, Malaysia, Johor,
14th Floor, Menara Tabung Haji,
Jalan Air Molek,
80000 Johor Bahru, Johor.
Tel. : 07-225 3700
Fax : 07-224 9972
Email : jpjohor@dosm.gov.my

Director,
Department of Statistics, Malaysia, Kedah,
1st Floor, Zon C, Wisma Persekutuan,
Pusat Pentadbiran Kerajaan Persekutuan,
Bandar Muadzam Shah,
06550 Anak Bukit, Alor Setar, Kedah.
Tel. : 04-700 1240
Fax : 04-733 8412
Email : jpkedah@dosm.gov.my

Director,
Department of Statistics, Malaysia, Kelantan,
8th Floor, Bangunan Persekutuan,
Jalan Bayam,
15514 Kota Bharu, Kelantan.
Tel. : 09-741 9449
Fax : 09-748 2142
Email : jpkelantan@dosm.gov.my

Director,
Department of Statistics, Malaysia, Melaka,
7th & 8th Floor, Wisma Persekutuan,
Jalan MITC, Hang Tuah Jaya,
75450, Ayer Keroh,
Melaka.
Tel. : 06-252 2725
Fax : 06-252 2711
Email : jpmelaka@stats.gov.my

Director,
Department of Statistics, Malaysia, Negeri Sembilan,
12th Floor, Wisma Persekutuan,
Jalan Dato' Abdul Kadir,
70000 Seremban,
Negeri Sembilan.
Tel. : 06-765 5000
Fax : 06-765 5002
Email : jpnsembilan@dosm.gov.my

Director,
Department of Statistics, Malaysia, Pahang,
7th Floor, Bangunan Persekutuan,
Jalan Gambut,
25000 Kuantan, Pahang.
Tel. : 09-516 3931/7
Fax : 09-514 4636
Email : jppahang@dosm.gov.my

Director,
Department of Statistics, Malaysia, Pulau Pinang,
6th Floor, Bangunan Persekutuan,
10400 Jalan Anson,
Pulau Pinang.
Tel. : 04-226 6244
Fax : 04-229 9499
Email : jppulaupinang@dosm.gov.my

Director,
Department of Statistics, Malaysia, Perak,
3rd Floor, Block A,
Bangunan Persekutuan Ipoh,
Jalan Dato' Seri Ahmad Said (Greentown),
30450 Ipoh, Perak.
Tel. : 05-243 6107
Fax : 05-255 1073
Email : jpperak@dosm.gov.my

Director,
Department of Statistics, Malaysia, Perlis,
1st Floor, Bangunan Perodua,
Persiaran Jubli Emas,
01000 Kangar, Perlis.
Tel. : 04-977 1221
Fax : 04-977 1223
Email : jpperlis@dosm.gov.my

Director,
Department of Statistics, Malaysia, Selangor,
9th Floor, Bangunan Darul Ehsan,
Jalan Indah, Seksyen 14,
40000 Shah Alam, Selangor.
Tel. : 03-5515 0200
Fax : 03-5518 0408
Email : jpselangor@dosm.gov.my

Director,
Department of Statistics, Malaysia, Terengganu,
9th Floor, Wisma Persekutuan,
Jalan Sultan Ismail,
20200 Kuala Terengganu, Terengganu.
Tel. : 09-622 3062
Fax : 09-622 9659
Email : admin_jptrg@dosm.gov.my

Director,
Department of Statistics, Malaysia, Sabah,
Level 1-3, Block C,
Kompleks Pentadbiran Kerajaan Persekutuan Sabah,
Jalan UMS, Beg Berkunci No. 2046,
88999 Kota Kinabalu, Sabah.
Tel. : 088-484 602
Fax : 088-484 659
Email : jpsabah@dosm.gov.my

Director,
Department of Statistics, Malaysia, Sarawak,
7th & 8th Floor, Bangunan Tun Datuk Patinggi
Tuanku Haji Bujang, Jalan Simpang Tiga,
93514 Kuching, Sarawak.
Tel. : 082-240 287
Fax : 082-242 609
Email : sarawak@dosm.gov.my

Director,
Department of Statistics, Malaysia,
Federal Territories,
14th & 15th Floor, Wisma FGV,
Jalan Raja Laut,
50350 Kuala Lumpur.
Tel. : 03-2267 2400
Fax : 03-2274 5075
Email : jpwpkl@dosm.gov.my