

## 6 The Effects of Using IT

### *Impact of ICT on society*

	<b>Effect</b>
Employment	General Staff unemployment, technical staff - employment Opportunities.
Increased leisure time	Staff may work for shorter periods.
Working patterns	Job-sharing, part-time working, flexible working hours, working from home, compressed hours, ability to move from branch to branch.
Security of, privacy of & access to personal/ confidential information/ data	Need to protect confidentiality of data, data protection legislation, social and ethical implications of access to personal information. Need for security.
Health and safety	Increase in RSI, vision and posture problems. Need for increased safety measures against electrocution, fire etc.

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<b>Society</b>	<b>Applications</b>	<b>Hardware Requirements</b>	<b>Software requirements</b>
<b>Home entertainment</b>	<b>Television:</b> <ul style="list-style-type: none"> <li>• Satellite</li> <li>• Terrestrial</li> <li>• Television programmes</li> <li>• Films</li> </ul> <b>Music centres:</b> <ul style="list-style-type: none"> <li>• Music</li> <li>• Plays</li> <li>• Radio programmes</li> <li>• Audio books</li> <li>• Interactive games consoles</li> </ul>	<ul style="list-style-type: none"> <li>• Satellite receiver,</li> <li>• TV screen</li> <li>• Speakers</li> <li>• PC</li> <li>• Portable media players (MP3 players),</li> <li>• CD/DVD</li> <li>• player/recorder</li> <li>• Projector</li> <li>• Satellite decoder</li> <li>• FM tuner</li> <li>• Games console</li> </ul>	<ul style="list-style-type: none"> <li>• Internet browser</li> <li>• MP3 software</li> <li>• Projector control software</li> </ul>
<b>Auctions</b>	<ul style="list-style-type: none"> <li>• Internet auctions</li> <li>• Buying goods</li> <li>• Selling goods</li> <li>• Online transaction services</li> </ul>	<ul style="list-style-type: none"> <li>• PC</li> <li>• Modem</li> </ul>	<ul style="list-style-type: none"> <li>• Internet browser</li> </ul>
<b>Booking</b>	<ul style="list-style-type: none"> <li>• Travel agents</li> <li>• Booking holidays</li> <li>• Booking plane tickets</li> <li>• Rail companies</li> <li>• Booking train tickets</li> <li>• Airlines</li> <li>• Booking plane tickets</li> <li>• Cinemas</li> <li>• Theatres</li> </ul>	<ul style="list-style-type: none"> <li>• PC terminals</li> <li>• PC networks</li> <li>• Modem</li> </ul>	<ul style="list-style-type: none"> <li>• Booking software</li> <li>• Databases</li> </ul>
<b>Information services</b>	<ul style="list-style-type: none"> <li>• Trading</li> <li>• Governments</li> <li>• Academic institutions</li> <li>• Stocks and shares</li> <li>• Public interest</li> </ul>	<ul style="list-style-type: none"> <li>• PC networks</li> </ul>	<ul style="list-style-type: none"> <li>• Internet browser</li> </ul>

**Computer (Information Technology) 9 & 10**

	<ul style="list-style-type: none"> <li>• Educational research</li> </ul>		
<b>Government (local, regional, central)</b>	<p><b>Inland Revenue -</b></p> <ul style="list-style-type: none"> <li>• Income tax records</li> <li>• Tax collection</li> <li>• Tax payment</li> </ul> <p><b>Local government –</b></p> <ul style="list-style-type: none"> <li>• Electoral register</li> <li>• Local tax records</li> <li>• Budget calculations</li> <li>• Issuing of:</li> <li>• Passports</li> <li>• Identity cards,</li> <li>• Driving licences</li> <li>• Passports</li> </ul>	<ul style="list-style-type: none"> <li>• PCs</li> <li>• Mainframes</li> <li>• PC networks</li> </ul>	<ul style="list-style-type: none"> <li>• Database</li> <li>• Budget Analysis</li> <li>• Spreadsheets</li> </ul>

<b>Use of ICT in Teaching and learning</b>	<p><b>Schools, Universities, Colleges –</b></p> <ul style="list-style-type: none"> <li>• CAL</li> <li>• CBL</li> <li>• Computer aided assessment</li> <li>• Record keeping</li> <li>• Examination boards</li> <li>• Computer aided assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Computer</li> <li>• Mouse</li> <li>• Keyboard</li> <li>• Printers (laser and inkjet)</li> <li>• Scanner (for OMR)</li> <li>• Overlay keyboard</li> </ul>	<ul style="list-style-type: none"> <li>• Web browsing software</li> <li>• Web authoring software</li> <li>• Overlay software</li> <li>• Database</li> <li>• Spreadsheet</li> <li>• Assessment</li> <li>• Software</li> </ul>
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<b>Computer Network</b>	<p><b>LANs</b></p> <ul style="list-style-type: none"> <li>• Intranets</li> <li>• Local email</li> <li>• Business networks</li> </ul> <p><b>WLAN Use of :</b></p> <ul style="list-style-type: none"> <li>• Microwave</li> <li>• Infrared</li> <li>• Spread spectrum transmission</li> </ul> <p><b>WLAN Used for:</b></p> <ul style="list-style-type: none"> <li>• Email</li> <li>• Business networks</li> </ul> <p><b>WANs</b></p> <ul style="list-style-type: none"> <li>• Internet</li> <li>• Extranets</li> <li>• Email</li> <li>• Virtual private network</li> <li>• Video conferencing</li> <li>• Business networks</li> <li>• Telephone call centres</li> <li>• Booking systems</li> <li>• On-line shopping</li> <li>• On-line banking</li> </ul>	<p>PCs, Hubs, Switches, Routers, Dedicated, cabling, Servers, Network cards</p> <p>Laptops Wireless access point Routers Wireless network cards</p> <p>PCs Modem Hubs Switches Routers Servers Proxy servers</p>	<p>ftp http telnet SSH router software</p>
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<b>Electronic Conferencing</b>	<p><b>Use of:</b></p> <ul style="list-style-type: none"> <li>• Video conferencing</li> <li>• Phone conferencing</li> <li>• Instant messaging</li> </ul>	<ul style="list-style-type: none"> <li>• PCs</li> <li>• Phones</li> <li>• Webcams</li> </ul>	<ul style="list-style-type: none"> <li>• Conference software</li> <li>• VOIP software</li> </ul>
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	<p><b>Used in:</b></p> <ul style="list-style-type: none"> <li>• Business conferences</li> <li>• Linking schools</li> <li>• Research meetings</li> </ul> <p><b>For each include:</b></p> <ul style="list-style-type: none"> <li>• Advantages</li> <li>• Disadvantages</li> </ul>	<ul style="list-style-type: none"> <li>• Microphones</li> <li>• Speakers</li> </ul>	<ul style="list-style-type: none"> <li>• Instant messaging</li> </ul>
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***Effects of the use of on-line services on society:***

<b>The digital divide/information Literacy</b>	<p><b>Individuals - Restricted access to:</b></p> <ul style="list-style-type: none"> <li>• educational services</li> <li>• health services</li> <li>• employment opportunities</li> </ul> <p><b>Nations – restricted access to:</b></p> <ul style="list-style-type: none"> <li>• Worldwide marketing opportunities</li> </ul>
<b>Catering for disabilities</b>	<p><b>Increased access for disabled people to:</b></p> <ul style="list-style-type: none"> <li>• Shopping</li> <li>• Banking</li> <li>• Booking Systems</li> <li>• Health services</li> <li>• Employment</li> </ul>
<b>Legal system</b>	<ul style="list-style-type: none"> <li>• Increased access to legal information</li> <li>• Increased involvement in focus groups</li> <li>• More able to influence political representatives</li> </ul>
<b>Computer fraud</b>	<ul style="list-style-type: none"> <li>• Personal identities can be stolen (government records)</li> <li>• Money taken from personal accounts (interception of bank details whilst using online booking)</li> <li>• Tickets intercepted from on-line booking details</li> <li>• Goods intercepted from on-line auction details</li> </ul>
<b>Antisocial use of ICT</b>	<ul style="list-style-type: none"> <li>• Deleting/Amending/distributing personal data gained from Auction, booking and government records</li> <li>• Spreading of viruses by email using the above sources of Information</li> </ul>
<b>Network security</b>	<p>Physical</p> <ul style="list-style-type: none"> <li>• Locked rooms</li> <li>• Security guards</li> </ul> <p>Software</p> <ul style="list-style-type: none"> <li>• Firewalls</li> <li>• Digital certification</li> <li>• Encryption</li> <li>• Anti Virus software</li> <li>• User ID</li> <li>• Passwords</li> <li>• Anti-spam</li> <li>• Anti pop up software</li> <li>• Physical security</li> <li>• Anti-spyware software</li> <li>• Authentication techniques</li> <li>• Wired equivalent privacy</li> </ul>