## Virtual Portal for Interaction and ICT Training for People with Disabilities

### ViPi Curriculum

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<td>Workpackage Title</td>
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<tr>
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<td>Andy Burton and all consortium partners</td>
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<td>09-11-2011 - Reformatting of previous ViPi Curriculum Detail (Post Cyprus) document to new project standard and editing to include assignments of lead authoring roles as discussed in the Skype meeting on 02/11/2011 along with additional edits recently provided by partners, particularly on the What is there for me? Section.</td>
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Glossary

- **Android App**: A software application that facilitates access to specific resources, installable on Android devices
- **Click**: the press of a mouse button (and the sound it makes)
- **Cloud**: Web based storage allowing remote backup and roaming file access
- **Desktop**: a computer designed to be set up as a work station
- **Email**: electronic mail. Message sent through electronic devices, i.e. computers.
- **Hyperlink**: A link from a hypertext file or document to another location or file, typically activated by clicking on a highlighted word or image on the screen
- **E-learning**: this includes all forms of electronically supported learning – but more specifically, the computer and network enabled transfer of knowledge and skills.
- **Gestures**: (Touch or Touchless) Kinect-like gestures being used on mobile devices to facilitate starting applications or browsing the internet
- **ICT**: Information and Communication Technology – the use of computers and mobile devices to present and find information and to communicate with others
- **Input**: feeding control data into a computer telling it what you want it to do.
- **Kiosk presentation**: a slideshow that uses timings to move from one interaction to the next, requiring no manual input, and producing a rolling show.
- **Laptop**: a portable computer usually with a built-in monitor
- **LibreOffice Writer**: The textual document processors created by the Open Source Community
- **Mixed Case**: capital and small letters
- **Mobile Access**: Connect to a web resource through a mobile device
- **Mobile browsing**: Interact with a web resource
- **Mouse**: a device to control and interact with the on screen pointer via movement on the desk
- **MS Word**: The textual document processor created by Microsoft corporation
- **Navigating**: Moving between web pages
- **OS**: or Operating System – this is the software that your computer uses to allow you to interact with it and its programs. Common OS include Windows versions, Linux, Ubuntu and Mac OSX
• Predictive text: software that takes the first letters of a word entered and their context and uses this to predict the word being typed.

• Scroll bar: A sliding bar appearing on the barriers of a window, which allows the user to move it up/down or left/right, causing the move of the window itself.

• Touchpad: a device to control and interact with the on screen pointer via movement of a finger on a touch sensitive pad.

• Track-ball: a device similar to a mouse with a roller ball mounted in a surface so that it can be rolled to control the mouse pointer.

• URL: Abbreviation of Uniform Resource Locator, a web address often starting with http://www.

• USB: Universal Serial Bus – a standard cable drive or memory stick connection socket.

• Webcam – a video camera connected to or built into a laptop, PC or phone in order to allow images or video of the user to be captured and sent.

• ViPi platform: The main resource portal of the project.
UK Key Skills Summary
Skills which may be enhanced by each section are summarised here. These are the UK Key Skills Qualifications which are offered in six areas.

- Communication
  - speaking,
  - listening,
  - reading and
  - writing skills

- Application of Number
  - interpreting information involving numbers
  - carrying out calculations,
  - interpreting results and
  - presenting findings

- Information Communication Technology
  - finding, exploring, developing and presenting information including text, images and numbers

- Working with others
  - includes process and interpersonal skills to support working cooperatively with others to achieve shared objectives, work cooperatively and have regard for others

- Improving own learning and performance
  - developing independent learners who are clearly focused on what they want to achieve and able to work towards targets that will improve the quality of their learning and performance. The standards include
    - process skills, e.g., target-setting, planning, learning, reviewing and
    - interpersonal skills, e.g., communicating own needs, accepting constructive feedback, negotiating learning opportunities and support

- Problem solving
encouraging learners to develop and demonstrate their ability to tackle problems systematically, for the purpose of working towards their solution and learning from this process. Three types or combinations of problems are dealt with:

- diagnostic problems that depend primarily on analysis to arrive at conclusions,
- design problems that depend mainly on synthesis to create a product or process, and
- contingency problems that typically involve resource planning and gaining the cooperation of others, e.g. when organising an event
1 Unit 1 Computer Basics for Beginners

1.1 About Computers

1.1.1 Aims
This unit will help you recognise the parts of a desktop/laptop computer, and teach you how to turn it on and off safely.

1.1.2 Lead Partner
NTU

1.1.3 Learning Objectives
- Be aware of and be able to name parts of a computer (desktop and laptop)
- Be able to turn on and boot the computer (desktop and laptop)
- Be able to shut down the computer safely without risk to data/hardware (desktop and laptop)

1.1.4 Skills Enhanced

1.1.4.1 Directly
- ICT

1.1.4.2 Indirectly
- Communication
- Improving own learning and performance

1.1.5 Content of the Themes

1.1.5.1 Parts of a computer
Recognising the parts of a desktop computer including:

- Monitor
- PC base unit (CPU)
- Mouse
- Keyboard
- Modem/Router (optional)
- Printer (optional)
- Scanner (optional)
• Assistive technologies (optional and user specific)

Recognising the parts of a laptop computer including:

• Monitor
• Keyboard
• Touchpad
• Power supply
• Mouse

### 1.1.5.2 Turning the computer on and off and logging in and out safely

Startup and shutdown:

• Booting a laptop and desktop computer
  o Turning on the monitor (desktop)
  o “ON” button
  o Entering username/password
• Shutting down a laptop and desktop computer
  o Exiting programs
  o Using safe software shutdown
• Turning off monitor
• Hibernate and sleep modes

(Different versions for XP, Vista, Win 7, Win 8 (when available), Ubuntu, Mac)

### 1.1.6 Teaching Strategies

• Point and show parts of a computer using diagrams and actual kit
• Demonstration of booting and shutting down of desktop and laptop computers
• Demonstration of logging on and off safely
• Practical boot and shutdown of desktop and laptop computers by students
• Practical exercise on logging on and off the computer and laptop

### 1.1.7 Previous Knowledge

None

### 1.1.8 Resources

• PC with projector
• Laptop with projector
• Pens
• Hand-outs – pictorial guide to parts of desktop and laptop machines and of the boot/shutdown process specific to the hardware and OS used.
• Any necessary assistive devices (disability-specific)
1.1.9 Assessment Criteria

- Multiple choice questions
- Label a diagram of a PC and/or Laptop
- Demonstrate ability to boot, shut down, log on and log off for desktop and laptop

1.1.10 Assessment Questions

A desktop computer is...

- One which is portable in a bag
- One which is fixed to a workstation, but powerful to use
- One that only has a touchscreen
- One with a printer

What does a laptop computer have built in that we can use like a mouse...

- A keyboard
- A touch pad
- Speakers
- A monitor

A tablet computer does not have...

- A touch sensitive screen
- A built in battery
- A keyboard
- A charger

What is this?

- A keyboard
- A monitor
- A computer
- A mouse

What is this?
- A computer
- A mouse
- A printer
- A keyboard

What is this?

- a keyboard
- a computer
- a monitor
- speakers

What is this?

- a scanner
- a printer
- a computer
- a mouse

What is this?
• a scanner
• a printer
• a webcam
• a mouse

Attempt labelling exercises...

Figure 1: Desktop computer labelling exercise
Figure 2: laptop labelling test

1.1.11 Summary

Students should recognise the parts of both a laptop and desktop computer and be able to turn them on and off, as well as logging on and off the operating system, safely without compromising data.

1.1.12 Glossary

Desktop: a computer designed to be set up as a work station
Laptop: a portable computer usually with a built-in monitor
1.2 Input Devices

1.2.1 Aims
This unit will help you use a mouse/touchpad and keyboard (or equivalent assistive technologies) to interact with a computer.

1.2.2 Lead Partner
NTU

1.2.3 Learning Objectives
- Be aware of how to use a mouse/touchpad, its buttons and its scroll wheel.
- Recognise the most important keys on a keyboard.
- Be aware of what the most important keys are used for.

1.2.4 Skills Enhanced

1.2.4.1 Directly
- ICT

1.2.4.2 Indirectly
- Communication
- Improving own learning and performance
- Application of number

1.2.5 Content of the Themes

1.2.5.1 The mouse/touchpad
The Mouse (and its accessible alternatives such as trackball, etc.):
- Left Click
- Right Click
- Scroll Wheel
- Double Click
- Drag

1.2.5.2 The Keyboard
The Keyboard (and accessible alternatives such as onscreen keyboard, simplified keyboard, etc.):
- Letters, Numbers and Space
- The Shift/Caps Lock Keys
1.2.5.3 The TouchScreen
- Interacting with a touchscreen

1.2.6 Teaching Strategies
- Point and show parts of a mouse/touchpad and keyboard using diagrams, photos and actual kit.
- Demonstration of the use of a mouse/touchpad for each type of interaction.
- Demonstration of the use of the most important keys on a keyboard.
- Hands-on use of the mouse/keyboard to perform a structured task within a pre-opened document file.

1.2.7 Previous Knowledge
None

1.2.8 Resources
- PC with projector
- Laptop with projector
- Pens
- PCs for use by each student

1.2.9 Assessment Criteria
- Multiple choice questions
- Show on a diagram of a keyboard where the letter keys, number keys, space, enter and shift keys are.
- Label a diagram of a mouse
- Label a diagram of a touchpad
- Demonstrate ability to type some words and numbers using mixed case, spacing, and line breaks.

1.2.10 Assessment Questions
Which of the following is an input device?
- Printer
- Monitor
- Keyboard
- Speakers

Which part of a laptop can be used like a mouse?
• Keyboard
• Speakers
• Webcam
• Touchpad

The equivalent of a left mouse click on a touch-screen is...?

• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

The equivalent of a mouse double-click on a touch-screen is...?

• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

What is this?

• A touch pad
• A camera
• A mouse
• A webcam

The equivalent of a right mouse click on a touch-screen is...?

• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

Attempt labelling exercises:
Figure 3: Mouse labelling test

Figure 4: Touchpad labelling test
1.2.11 Summary
Students should recognise the parts of a keyboard and mouse/touchpad and be able to use them to operate the computer.

1.2.12 Glossary
Mixed Case: capital and small letters
Mouse: a device to control and interact with the on screen pointer via movement on the desk
Touchpad: a device to control and interact with the on screen pointer via movement of a finger on a touch sensitive pad.
1.3 Output Devices

1.3.1 Aims
This unit will make you aware of the settings and options that can be changed in the Windows display settings to improve accessibility of monitor output. It will explain how to adjust sound settings. It will also make you aware of other alternative output technologies including text-to-speech, screen readers and refreshable Braille displays.

1.3.2 Lead Partner
NTU

1.3.3 Learning Objectives
- Be able to improve accessibility by using display and application settings including:
  - Display resolution
  - Contrast
  - Brightness
  - Font size
  - Window zoom
- Make the user aware of how to mute and adjust sound volume.
- Be aware of other assistive technologies which can provide useful outputs including (but not limited to):
  - Magnifiers
  - Windows Narrator
  - Text-to-speech
  - Screen readers
  - Refreshable Braille displays

1.3.4 Skills Enhanced

1.3.4.1 Directly
- ICT

1.3.4.2 Indirectly
- Communication
- Improving own learning and performance

1.3.5 Content of the Themes

1.3.5.1 Application settings
- Font Size
- Window Zoom
1.3.5.2 Sound settings
- Adjustment of volume/mute from software
- Adjustment of volume from hardware

1.3.5.3 Introduction to assistive technologies
- Magnifiers
- Narrator
- Text-to-speech
- Screen readers
- Refreshable Braille displays.

1.3.6 Teaching Strategies
- Demonstration of adjustment of sound settings in both software and hardware.
- Demonstration of the adjustment of some application settings which may increase accessibility. Zooming a window in an office application, switching font size and zooming in a browser window.
- Hands-on use of a PC or laptop to adjust and optimise the settings.
- Description of assistive technologies using demonstration where possible.
- Handouts summarising the assistive technologies (ATs) available and highlighting the optional modules available on ATs.

1.3.7 Previous Knowledge
None

1.3.8 Resources
- PC/Laptop with projector and speakers, along with assistive technologies where available (magnifier, TTS, screen reader, narrator software and Braille display hardware)
- Pens
- Hand-outs – guide to assistive output technologies and a summary of display adjustments.
- PCs for use by each student
- Online resources on assistive technology that exists per disability group (EASTIN, OatSoft, OAEG, UoA online repository, etc.).

1.3.9 Assessment Criteria
- Multiple choice questions
- Exercise in adjusting windows display and sound settings.

1.3.10 Assessment Questions
Which taskbar icon do you click to change the volume?
What can improve the visibility of the screen?

- Decreasing the resolution
- Changing to a high contrast theme
- Changing the display text size
- All of the above

You can change the sound volume of a video by...

- Turning the volume control on the speakers
- Adjusting the volume slider in Windows
- Adjusting the media player volume control
- All of the above

1.3.11 Summary

Students should be able to optimise display settings in Windows to their needs and optimise applications to allow ease of viewing. Students should be able to adjust the sound volume. Students should be aware of other output technologies that may assist them.

1.3.12 Glossary

AT: assistive technology – any technology that improves accessibility to ICT usage (or more specifically PC usage), be it hardware or software.
1.4 Using the Computer

1.4.1 Aims
This unit will teach you about how to interact with the desktop, its icons, task bar, start menu, and windows.

1.4.2 Lead Partner
NTU

1.4.3 Learning Objectives
- Be aware of how to start a program with a desktop icon and start the ‘start’ menu.
- Be aware of how to view the task bar and bring open widows to the fore.
- Be aware of the start menu and how to select items from it.
- Be aware of Windows and how to maximise, minimise, hide, restore, move and resize them.
- Be aware of how to switch between multiple windows.

1.4.4 Skills Enhanced

1.4.4.1 Directly
- ICT

1.4.4.2 Indirectly
- Communication
- Improving own learning and performance

1.4.5 Content of the Themes

1.4.5.1 Desktop Icons
- Clicking to select icons
- Double-clicking to open applications with icons

1.4.5.2 The Task Bar
- How to see the task bar
- Contents of the task bar
- Bringing a window to the foreground with the task bar

1.4.5.3 Windows
- Closing open windows
- Minimising windows
- Restoring windows down
- Moving windows
- Resizing restored down windows
- Scrolling using scroll bars within windows
1.4.5.4 Using an application

- Open paint
- Interact briefly with some simple tools to create a picture.
- Save work
- Print work

1.4.6 Teaching Strategies

- Demonstrate the use of the desktop features with a projected machine.
- Give handouts showing the features of a desktop
- Hands-on session - Allow students to perform structured tasks on a machine.
- Creation and printing of a simple document/picture to make to worth of the process clear

1.4.7 Previous Knowledge

None

1.4.8 Resources

- PC/laptop with projector
- Pens
- Hand-outs – pictorial guide to parts of the desktop
- PC access for each student (supportive devices to be used as required by disability type and level)

1.4.9 Assessment Criteria

- Multiple choice questions
- Show on a diagram of a desktop where they would find the start menu, task bar, desktop icons and windows.
- Demonstrate ability to open an application, hide and unhide windows, resize a window, move window and scroll with a scroll bar.

1.4.10 Assessment Criteria

The best way to shut down a computer is...?

- Press the power button once
- Press and hold the power button
- Select Shut Down from the start menu
- Disconnect the power cable

How do you run a program from a desktop icon with the mouse?

- Click on its icon on the desktop
- Double click on its icon on the desktop
- Drag its icon on the desktop
- Right click its icon on the desktop

How can you select more than one icon at a time?
Select the first, then hold CTRL whilst selecting the rest
Right click on them
Double click on them
Use the TAB button

How do you get capital letters using just one finger?

Use the CAPS LOCK key
Use the TAB key
Use the ESCAPE key
Use the CTRL key

What is the short cut for copying data to the clipboard?

CTRL + C
CTRL + X
CTRL + Z
CTRL + V

What is the short cut for pasting data from the clipboard?

CTRL + C
CTRL + X
CTRL + Z
CTRL + V

Which key can be used to open the start menu?

The WINDOWS Key
The CTRL key
The SHIFT key
The ESCAPE key

What is the shortcut to open the accessibility options in Windows?

WINDOWS KEY + U
CTRL + X
CTRL + Z
CTRL + V

How do you minimise a window?

Click on the bar icon at the top right of the window
Click on the cross icon at the top right of the window
Click on the square icon at the top right of the window
Click on the window's title bar
How do you close a window?

- Click on the bar icon at the top right of the window
- Click on the cross icon at the top right of the window
- Click on the square icon at the top right of the window
- Click on the window’s title bar

How do you reopen a minimised window?

- Click on its name or icon on the task bar.
- Use the ‘Start’ menu
- Double click its desktop icon
- Press the ‘Escape’ Key

What is the shortcut for accessing the window manipulation menu?

- ALT + SPACE BAR
- ALT + Z
- ALT + X
- ALT + C

To copy a file a useful shortcut is CTRL and C

- True
- False

The Task Bar is always visible at the bottom of the screen.

- True
- False

Double clicking on a desktop icon will run a program or open a file.

- True
- False

You have to have a mouse to be able to use a computer.

- True
- False

It is best to shut down a PC by pressing the power button.

- True
- False
I can have more than one program running at a time.

- True
- False

**Practical exercise: Using Windows**

- Open the ‘Notepad’ application from the start menu in accessories
- Type some words in the window
- Minimise the window to the task bar
- Open the ‘Paint’ application from the start menu in accessories
- Minimise it to the task bar
- Re-open the Notepad window from the task bar
- Maximise the Notepad window
- Restore the notepad window back down.
- Save the text (.txt) file you have created to the desktop.
- Close the notepad window
- Re-open the paint window
- Close the paint window.

1.4.11 **Summary**

Students should recognise the parts of the desktop and be able to use them to open applications and switch between them.

1.4.12 **Glossary**

Scroll bar: A sliding bar appearing on the barriers of a window, which allows the user to move it up/down or left/right, causing the move of the window itself.
1.5 Browsing the Web

1.5.1 Aims
This unit will teach the basics of using a web browser to view web pages.

1.5.2 Lead Partner
NTU

1.5.3 Learning Objectives
- Be aware of what types of web browser software are available and how to use them. Core functionalities Mozilla, chrome, ie
- Be able to type or copy a URL into the address bar
- Be able to use hyperlinks
- Be able to navigate backwards and forwards
- Be able to perform a web search
- Add site to favourites, and find them

1.5.4 Skills Enhanced

1.5.4.1 Directly
- ICT

1.5.4.2 Indirectly
- Communication
- Improving own learning and performance

1.5.5 Content of the Themes

1.5.5.1 Web browsing applications
- Recognise the most widely used web browsing applications. Currently Internet Explorer, Google Chrome, Mozilla Firefox and Lynx text browser (useful for visually impaired people)

1.5.5.2 Using a web browser (browser specific)
- URLs
  - Understanding their syntax/structure
- Hyperlinks
  - Recognising where hyperlinks are
  - Activating a link
- Navigating backwards and forwards
- Use the search bar or a search engine page

1.5.6 Teaching Strategies
- Show a selection of browser applications highlighting that they perform the same job.
• Demonstrate the use of the browser features with a projected machine.
• Give handouts labelling the features of a specific browser window
• Hands-on session: Allow students to perform structured tasks on a machine.

1.5.7 Previous Knowledge
Knowledge of what the internet is

1.5.8 Resources
• PC/laptop with projector and Internet access
• Pens
• Hand-outs – Diagram of a (specific) browser window showing locations of important features.
• PC/Laptop with web (Internet) access for each student

1.5.9 Assessment Criteria
• Multiple choice questions
• Recognise and start the browser application from the desktop and Start menu.
• Demonstrate ability to open a web page, navigate forward using hyperlinks and back and forward using the browser’s buttons.
• Perform a search for a specific subject. Very simple level

1.5.10 Assessment Questions
You can only have one web page open at a time.

• True
• False

There are many different web browsers available.

• True
• False

There is a way to quickly find a page you were looking at last week.

• True
• False

I can step backwards through the pages I recently browsed

• True
• False

I can make a browser shortcut to a web page that I visit often.

• True
• False
Clicking a hyperlink always opens a page in the same window and tab I am using.

- True
- False

Hyperlinks are always words that are underlined and a different colour.

- True
- False

Which of the following is not a web browser?

- Google Chrome
- Microsoft Internet Explorer
- Mozilla Firefox
- Microsoft Word

What is a URL?

- A type of port to plug in peripheral devices
- The name for a full web link address
- A file extension
- A way of transferring files across a network.

To quickly find a website I have recently been to I could look in my...

- Browsing history
- Favourites
- Bookmarks
- Downloads

When should I save my username and password on a computer?

- Never
- When it is on my own computer, connected to a trusted network.
- On a computer in a library
- On a computer in an internet café
If there is a page you visit frequently, you can access it more quickly by...

- Saving it as a favourite/bookmark
- Typing the URL into the search bar
- Searching for it on Google
- Going to another page that links to it

If a page stops loading before all the content is readable, you should not...

- Give up and look at something else
- Hit the reload button (or press F5) to try loading the page again
- Ensure that the URL address is correct.
- Check that your internet connection is OK.

Which of the following is not a popular search engine?

- Google
- Bing
- Yahoo
- Facebook

The following file type may be unsafe to download from an untrusted source...

- .exe an executable file
- .jpg an image file
- .gif an animated image file
- .txt a plain text file

Which of the following is the most important reason for installing Windows updates...

- They can protect your PC from virus attacks
- They can improve the performance of your PC.
- They may fix bugs in the operating system.
- They slow down the start-up time of your computer.

1.5.11 Summary
Students should recognise the parts of an internet browser, be able to navigate around a web site and perform a search on a subject.

1.5.12 Glossary
Hyperlink: A link from a hypertext file or document to another location or file, typically activated by clicking on a highlighted word or image on the screen
Navigating: Moving between web pages
URL: Abbreviation of Uniform Resource Locator, a web address often starting with http://www.
2 Unit 2 Basic ICT Skills

2.1 More About Computers

2.1.1 Aims
This unit will help you recognise the parts of a desktop/laptop computer, and teach you how to turn it on and off safely.

2.1.2 Lead Partner
NTU

2.1.3 Learning Objectives
- Be aware of and be able to name parts of a computer (desktop and laptop)
- Be able to turn on and boot the computer (desktop and laptop)
- Be able to shut down the computer safely without risk to data/hardware (desktop and laptop)

2.1.4 Skills Enhanced

2.1.4.1 Directly
- ICT

2.1.4.2 Indirectly
- Communication
- Improving own learning and performance

2.1.5 Content of the Themes

2.1.5.1 Parts of a computer
Recognising the parts of a desktop computer including:
- Monitor
- PC base unit (CPU)
- Mouse
- Keyboard
- Speakers
- Modem/Router (optional)
- Printer (optional)
- Scanner (optional)
• Cables (power, VGA, DVI, Network, USB, Printer) and connections (USB (printer, mini, micro) speakers/microphone, PS2)
• Assistive technologies (optional and user specific)

Recognising the parts of a laptop computer including:

• Monitor
• Keyboard
• Touchpad
• Power supply
• Mouse

2.1.5.2 Turning the computer on and off and logging in and out safely

Startup and shutdown:

• Booting a laptop and desktop computer
  o Turning on the monitor (desktop)
  o “ON” button
  o Entering username/password
• Shutting down a laptop and desktop computer
  o Exiting programs
  o Using safe software shutdown
• Turning off monitor
• Hibernate and sleep modes
(Different versions for XP, Vista, Win 7, Win 8 (when available), Ubuntu, Mac)

2.1.5.3 Assembly of a computer

Connecting a Desktop PC together to make it functional using: power cables, VGA/DVI cables, mouse, keyboard, network, speakers, microphone, and USB devices.

Assembly of a Laptop computer to make it functional including: attaching a power supply, USB mouse, headphones, network cable

2.1.6 Teaching Strategies

• Point and show parts of a computer using diagrams and actual kit
• Demonstration of booting and shutting down of desktop and laptop computers
• Demonstration of logging on and off safely
• Practical boot and shutdown of desktop and laptop computers by students
• Practical exercise on logging on and off the computer and laptop
• Practical assembly of a computer exercise
2.1.7 Previous Knowledge
None

2.1.8 Resources

- PC with projector
- Laptop with projector
- Pens
- Hand-outs – pictorial guide to parts of desktop and laptop machines and of the boot/shutdown process specific to the hardware and OS used.
- Any necessary assistive devices (disability-specific)
- Computers for student exercises with peripherals requiring assembly (speakers monitor, microphone, mouse keyboard (and optionally printer, scanner etc. and other necessary assistive devices)

2.1.9 Assessment Criteria

- Label a diagram of a PC and/or Laptop
- Demonstrate ability to boot, shut down, log on and log off for desktop and laptop
- Demonstrate ability to assemble a computer from the parts and cables

2.1.10 Assessment Questions

What is a Netbook computer not really suitable for?

- Writing documents
- Playing the latest graphically intensive games
- Going on the web
- Emailing your friends

A desktop computer is...?

- One which is portable in a bag
- One which is fixed to a workstation, but powerful to use
- One that only has a touchscreen
- One with a printer

What does a laptop computer have built in that we can use like a mouse...?

- A keyboard
- A touch pad
- Speakers
- A monitor

A tablet computer does not have...?

- A touch sensitive screen
• A built in battery
• A keyboard
• Wireless internet capability

Which of the following is required to connect a PC to the internet?

• Printer
• Modem
• Keyboard
• Webcam

Attempt labelling exercises...

Figure 6: Desktop computer labelling exercise
2.1.11 Summary

Students should recognise the parts of both a laptop and desktop computer, be able to put them together to make a working PC, and be able to turn it on and off, as well as logging on and off the operating system, safely without compromising data.

2.1.12 Glossary

Desktop: a computer designed to be set up as a work station
Laptop: a portable computer usually with a built-in monitor
2.2 Higher Input Devices

2.2.1 Aims
This unit will help you to use a mouse/touchpad (or equivalent assistive technologies) to interact with a computer. It will give you a broad knowledge of keyboard functions including ways to make the keyboard work better for you. You will also learn about alternative methods of text entry.

2.2.2 Lead Partner
NTU

2.2.3 Learning Objectives

- Be aware of how to use a mouse/touchpad, its buttons and its scroll wheel.
- Recognise the most important keys on a keyboard.
- Be aware of what the most important keys are used for, and ways to make the keyboard work better for you.
- Be aware of alternative text entry methods.

2.2.4 Skills Enhanced

2.2.4.1 Directly
- ICT

2.2.4.2 Indirectly
- Communication
- Application of number
- Improving own learning and performance

2.2.5 Content of the Themes

2.2.5.1 The mouse/touchpad
The Mouse (and its accessible alternatives such as trackball, etc.):
- Left Click
- Right Click
- Scroll Wheel
- Double Click
- Drag

2.2.5.2 The Keyboard
The Keyboard (and its accessible alternatives such as onscreen keyboard, simplified keyboard, etc.)
The Keys
- Letters, numbers and space
- The shift/caps lock keys
- The enter key
- The backspace key
- Other important keys

Keyboard shortcuts
- Assistive Keyboard approaches (optional)
  - Keyboard control tweaks:
    - Mouse keys
    - Toggle keys
    - Sticky keys
    - Filter keys
  - On-screen keyboard emulation
  - Scanning keyboards
  - Word prediction (predictive text)
  - Speech recognition
  - Speech to text

2.2.5.3 The TouchScreen
- Interacting with a touchscreen
- Changing sensitivity of a touchscreen
- Use with on-screen keyboards

2.2.6 Teaching Strategies
- Point and show parts of a mouse/touchpad and keyboard using diagrams, photos and actual kit.
- Demonstration of the use of a mouse/touchpad for each type of interaction.
- Demonstration of the use of the keys on a keyboard whilst highlighting which keys are being pressed, including keyboard shortcuts (such as cut, copy, paste, undo, redo, tab) and keyboard control tweaks (ease of use centre).
- Hands on use of the mouse/keyboard to perform a structured task within a pre-opened document file.

And optionally when appropriate...
- Demonstration of use of a trackball as an alternative to mouse/touchpad.
- Demonstration of on-screen keyboards and their potential assistive use (i.e., keyboard via mouse, and scanning keyboard with switch etc)
- Demonstration of word prediction software to aid literacy
- Demonstration of speech recognition control and speech to text
- Hands on use of these assistive keyboard approaches where suitable.

2.2.7 Previous Knowledge
Some degree of literacy for keyboard inputs.

2.2.8 Resources
- PC with projector
- Laptop with projector
• Pens
• Hand-outs – pictorial guide to parts of keyboard and mouse/touchpad and list of useful keyboard shortcuts.
• PCs for use by each student
And, when appropriate:
• Optional extra software/hardware including:
  o For speech-to-text, a microphone and speech-to-text software
  o Word-prediction (predictive text) software
  o On-screen keyboard/scanning keyboard software
  o Track ball

2.2.9 Assessment Criteria
• Show on a diagram of a keyboard where the letter keys, number keys, space, enter, backspace, control and shift keys are.
• Demonstrate ability to type some words and numbers using mixed case, spacing, and line breaks.
• Demonstrate knowledge of the shortcuts available and how to use them.
And where appropriate:
• Demonstrate ability to use assistive hardware/software combinations to get the most out of keyboard usage dependent on type and level of disability.

2.2.10 Assessment Questions

Which of the following is an input device?
• Printer
• Monitor
• Keyboard
• Speakers

Which part of a laptop can be used instead of a mouse?
• Keyboard
• Speakers
• Webcam
• Touch Pad

The equivalent of a left mouse click on a touch-screen is...?
• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

The equivalent of a mouse double-click on a touch-screen is...?
• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

The equivalent of a right mouse click on a touch-screen is...?

• Touch the screen and hold the finger on.
• Tap the screen and release.
• Tap the item twice on the screen
• Slide the finger on the screen

To zoom in on an item on a multi-touch touchscreen you can...?

• Touch the screen with thumb and finger and spread them wider apart
• Touch the screen with thumb and finger and pinch them together
• Tap the screen twice quickly
• Flick your finger on the screen.

To zoom out on an item on a multi-touch touchscreen you can...?

• Touch with thumb and finger together and spread them wider apart
• Touch with thumb and forefinger apart and pinch them together
• Tap the screen twice quickly
• Flick your finger on the screen.

To scroll a screen with a touch screen interface you can...?

• Touch the screen and flick your finger
• Touch with thumb and finger together and spread them wider apart
• Touch with thumb and forefinger apart and pinch them together
• Tap the screen twice quickly

Which of the following keyboard modes makes the computer ignore brief or repeated keystrokes?

• FilterKeys
• MouseKeys
• Sticky Keys
• ToggleKeys

Which of the following keyboard modes allows the user to use multi-key shortcuts by pressing one key at a time?

• FilterKeys
• MouseKeys
• Sticky Keys
• ToggleKeys
Which of the following keyboard modes plays a tone when a lock key (e.g. shift lock) is pressed?

- FilterKeys
- MouseKeys
- Sticky Keys
- ToggleKeys

Which of the following keyboard modes allows the keyboard to be used as a mouse?

- FilterKeys
- MouseKeys
- Sticky Keys
- ToggleKeys

Attempt labelling tests:

![Mouse diagram]

Figure 9: Mouse labelling test
2.2.11 Summary

Students should recognise the parts of a keyboard and mouse/touchpad and be able to use them to operate the computer. They should be familiar with keyboard shortcuts to enhance and speed up interaction with the computer. Where appropriate they should be aware of what assistive input devices are available to help them interact with the PC and how to use them.

2.2.12 Glossary

Click: the press of a mouse button (and the sound it makes)
Input: feeding control data into a computer telling it what you want it to do.
Mixed Case: capital and small letters

Mouse: a device to control and interact with the on screen pointer via movement on the desk.

Predictive text: software that takes the first letters of a word entered and their context and uses this to predict the word being typed.

Touchpad: a device to control and interact with the on screen pointer via movement of a finger on a touch sensitive pad.

Track-ball: a device similar to a mouse with a roller ball mounted in a surface so that it can be rolled to control the mouse pointer.
2.3 Output Devices

2.3.1 Aims
This unit will make you aware of the settings and options that can be changed on a monitor and in the OS display settings to improve accessibility of monitor output. It will also make you aware of other alternative output technologies including text-to-speech, screen readers and refreshable Braille displays.

2.3.2 Lead Partner
NTU

2.3.3 Learning Objectives
- Be able to improve accessibility by using display, monitor and application settings including:
  - Display resolution
  - Contrast
  - Brightness
  - Font size
  - Window zoom
- Be aware of other assistive technologies which can provide useful outputs including (but not limited to):
  - Magnifiers
  - Windows Narrator
  - Text-to-speech
  - Screen readers
  - Refreshable Braille displays

2.3.4 Skills Enhanced

2.3.4.1 Directly
- ICT

2.3.4.2 Indirectly
- Communication
- Improving own learning and performance

2.3.5 Content of the Themes

2.3.5.1 Display settings
- Resolution (OS specific) – Be aware of what “screen resolution” is and how to adjust the resolution settings
2.3.5.2 Monitor settings
Adjusting monitor settings (specific to monitor)
- Brightness
- Contrast
- Colour

2.3.5.3 Application settings
- Font Size
- Window Zoom

2.3.5.4 Sound settings
- Adjustment of volume/mute from software
- Adjustment of volume from hardware

2.3.5.5 Introduction to assistive technologies
- Magnifiers
- Narrator
- Text-to-speech
- Screen readers
- Refreshable Braille displays.

2.3.6 Teaching Strategies
- Demonstration of how to adjust to and accept new screen resolutions. Show examples of different resolutions to demonstrate how this affects the desktop. Show other display options from the graphics settings.
- Demonstration of the adjustment of monitor settings detailing where and how these can usually be accessed.
- Demonstration of adjustment of sound settings in both software and hardware.
- Demonstration of the adjustment of some application settings which may increase accessibility. Zooming a window in an office application, switching font size and zooming in a browser window.
- Hands-on use of a PC or laptop to adjust and optimise the settings.
- Description of assistive technologies using demonstration where possible.
- Handouts summarising the assistive technologies (ATs) available and highlighting the optional modules available on ATs.

2.3.7 Previous Knowledge
None

2.3.8 Resources
- PC/Laptop with projector and speakers, along with assistive technologies where available (magnifier, TTS, screen reader, narrator software and Braille display hardware)
- Pens
• Hand-outs – guide to assistive output technologies and a summary of display adjustments.
• PCs for use by each student
• Online resources on assistive technology that exists per disability group (EASTIN, OatSoft, OAEG, UoA online repository, etc.).

2.3.9 Assessment Criteria
• Multiple choice questions
• Exercise in adjusting windows display and sound settings.

2.3.10 Assessment Questions
Which taskbar icon do you click to change the volume?

•

What can improve the visibility of the screen?

• Decreasing the resolution
• Changing to a high contrast theme
• Changing the display text size
• All of the above

You can change the sound volume of a video by...?

• Turning the volume control on the speakers
• Adjusting the volume slider in Windows
• Adjusting the media player volume control
• All of the above
2.3.11 Summary
Students should be able to optimise a display to their needs and optimise applications to allow ease of viewing. Students should be able to adjust sound volume. Students should be aware of other output technologies that may assist them.

2.3.12 Glossary
AT: assistive technology – any technology that improves accessibility to ICT usage (or more specifically PC usage), be it hardware or software.
2.4 Higher Using the Computer

2.4.1 Aims
This unit will teach you about how to interact with the desktop, its icons, task bar, start menu, and windows.

2.4.2 Lead Partner
NTU

2.4.3 Learning Objectives
(Versions to be available for Windows XP, Windows Vista, Windows 7 and 8 if available)

- Be aware of how to start a program with a desktop icon or through the Start menu.
- Be aware of how to view the task bar and bring open windows to the fore.
- Be aware of the Start menu and how to select items from it.
- Be aware of Windows and how to maximise, minimise, hide, restore and resize them.
- Be aware of how to switch between multiple windows.
- Be aware of the help functionality and able to use it to answer questions.
- Know the difference between files and folders.
- Be aware of file types and able to arrange them into logical folders.
- Understand the importance of backing-up data.

2.4.4 Skills Enhanced

2.4.4.1 Directly
- ICT

2.4.4.2 Indirectly
- Communication
- Improving own learning and performance

2.4.5 Content of the Themes

2.4.5.1 Desktop Icons
- Clicking to select icons
- Double-clicking to open applications with icons

2.4.5.2 The Task Bar
- How to see the task bar
- Contents of the task bar
- Bringing a window to the foreground with the task bar
2.4.5.3 Windows
- Closing open windows
- Minimising windows
- Restoring windows down
- Moving windows
- Resizing restored down windows
- Scrolling using scroll bars within windows

2.4.5.4 Help
- Opening the help search
- Learning with ‘Help and Support’, using example of ‘windows basics’

2.4.5.5 Files and Folders
- Files and folders and their tree-like structure
- Grouping files in a folder
- Types of files (extensions)
- Moving and copying files with the mouse
- Moving and copying files using cut, copy and paste
- Deleting (permanently) files
- Cleaning cache
- Backing up data

2.4.6 Teaching Strategies
- Demonstrate the use of the desktop features with a projected machine.
- Give handouts covering the course material.
- Hands-on session - Allow students to perform structured tasks on a machine.

2.4.7 Previous Knowledge
None

2.4.8 Resources
- PC/laptop with projector
- Pens
- Hand-outs – pictorial guide to parts of the desktop
- PC access for each student (supportive devices to be used as required by disability type and level)

2.4.9 Assessment Criteria
- Show on a diagram of a desktop where they would find the start menu, task bar, desktop icons and windows.
- Demonstrate ability to open an application, hide and unhide windows, resize a window, move window and scroll with a scroll bar.
- Demonstrate ability to group files into folders.
2.4.10 Assessment Criteria

The best way to shut down a computer is…?

- Press the power button once
- Press and hold the power button
- Select Shut Down from the start menu
- Disconnect the power cable

How do you run a program from a desktop icon with the mouse?

- Click on its icon on the desktop
- Double click on its icon on the desktop
- Drag its icon on the desktop
- Right click its icon on the desktop

How can you select more than one icon at a time?

- Select the first, then hold CTRL whilst selecting the rest
- Right click on them
- Double click on them
- Use the TAB button

How do you get capital letters using just one finger?

- Use the CAPS LOCK key
- Use the TAB key
- Use the ESCAPE key
- Use the CTRL key

What is the short cut for copying data to the clipboard?

- CTRL + C
- CTRL + X
- CTRL + Z
- CTRL + V

What is the short cut for pasting data from the clipboard?

- CTRL + V
CTRL + X  
CTRL + Z  
CTRL + V

What is the short cut for the UNDO command?

CTRL + C  
CTRL + X  
CTRL + Z  
CTRL + V

Which key can be used to open the start menu?

The WINDOWS Key  
The CTRL key  
The SHIFT key  
The ESCAPE key

Which key can be used to close a popup window?

The ESCAPE or ESC key  
The ENTER key  
The ALT key  
The CTRL key

Which key can be used to bring up a relevant help window?

The F1 key  
The HOME key  
The ALT key  
The ENTER key

What is the shortcut to open the accessibility options in Windows?

Windows Key + U  
CTRL + X  
CTRL + Z  
CTRL + V
How do you minimise a window?

- Click on the bar icon at the top right of the window
- Click on the cross icon at the top right of the window
- Click on the square icon at the top right of the window
- Click on the window’s title bar

How do you close a window?

- Click on the bar icon at the top right of the window
- Click on the cross icon at the top right of the window
- Click on the square icon at the top right of the window
- Click on the window’s title bar

How do you reopen a minimised window?

- Click on its name or icon on the task bar.
- Use the ‘Start’ menu
- Double click its desktop icon
- Press the ‘Escape’ Key

What is the shortcut for accessing the window manipulation menu?

- ALT + SPACE BAR
- ALT + Z
- ALT + X
- ALT + C

To copy a file a useful shortcut is CTRL and C

- True
- False

The Task Bar is always visible at the bottom of the screen.

- True
- False

Double clicking on a desktop icon will run a program or open a file.
• True
• False

You have to have a mouse to be able to use a computer.

• True
• False

If I accidentally delete a file it is lost forever.

• True
• False

It is best to shut down a PC by pressing the power button.

• True
• False

I can have more than one program running at a time.

• True
• False

Practical exercise: Using Windows

1. Open the ‘Notepad’ application from the start menu in accessories
2. Type some words in the window
3. Minimise the window to the task bar
4. Open the ‘Paint’ application from the start menu in accessories
5. Minimise it to the task bar
6. Re-open the Notepad window from the task bar
7. Maximise the Notepad window
8. Restore the notepad window back down.
9. Save the text (.txt) file you have created to the desktop.
10. Close the notepad window
11. Re-open the paint window
12. Close the paint window.

2.4.11 Summary

Students should recognise the parts of the desktop and be able to use them to open applications and switch between them. Students should be able to group files into folders and back them up to a cloud or USB drive.

2.4.12 Glossary

Cloud: Web based storage allowing remote backup and roaming file access
USB: Universal Serial Bus – a standard cable drive or memory stick connection socket.
OS: or Operating System – this is the software that your computer uses to allow you to interact with it and its programs. Common OS include Windows versions, Linux, Ubuntu and Mac OSX.
2.5 Making and Saving a Document and Spreadsheet

2.5.1 Aims
This unit will teach you about how to create, edit, save and print a text document.

2.5.2 Lead Partner
PhoenixKM

2.5.3 Learning Objectives
- Be able to create, edit, save and print a text document.
- Be able to create a simple spreadsheet and chart

2.5.4 Skills Enhanced

2.5.4.1 Directly
- ICT

2.5.4.2 Indirectly
- Communication
- Application of number
- Improving own learning and performance

2.5.5 Content of the Themes

2.5.5.1 Making and saving a simple document and a simple spreadsheet
(software specific suggested to use MS Word or LibreOffice Writer as this will lead on to future word processing module)

- Starting the application
- Adding text
- Use ‘Undo’ and ‘Redo’ commands
- Moving the cursor within text
- Adding bullets and images
- Adding a table
- Adding a hyperlink
- Saving the document
- Closing the document
- Re-opening the saved document
- Printing the document
2.5.5.2 Making and saving a simple spreadsheet

(software specific suggested to use MS Excel or LibreOffice Calc as this will lead on to future spreadsheet module)

- Starting the application
- Adding a data table
- Displaying as a simple chart (Pie or bar)
- Saving the document
- Closing the document
- Re-opening the saved document
- Printing the document

2.5.6 Teaching Strategies

- Demonstrate the process with a projected machine.
- Give handouts describing the process.
- Hands-on session - Allow students to perform structured task on a machine.

2.5.7 Previous Knowledge

None

2.5.8 Resources

- PC/laptop with projector
- Hand-outs – pictorial guide to features of a word processor and summary of shortcuts and locations from which to access important features.
- PC access for each student with word editor software and printer access.

2.5.9 Assessment Criteria

Demonstrate ability to create, edit, save and print a document and spreadsheet.

2.5.10 Assessment Questions

To avoid a particularly long addition of section here please refer to the ‘Self-Assessment Questions and Practical Exercises’ document, Section 2.5.

2.5.11 Summary

Students should be aware of the software available for creating text documents, and be able to use the simple features to create, edit, save and print a document.

2.5.12 Glossary

MS Word: The textual document processor created by Microsoft corporation
LibreOffice Writer: The textual document processors created by the Open Source Community
2.6 Web Browsing and Security

2.6.1 Aims
This unit will teach the basics of using a web browser to view web pages.

2.6.2 Lead Partner
EuroCy

2.6.3 Learning Objectives
- Be aware of what types of web browser software is available and how to start it.
- Be able to type or copy a URL into the address bar
- Be able to use hyperlinks
- Be able to navigate backwards and forwards
- Be able to perform a web search
- Be able to print a web page
- Be able to fill in a web form
- Be aware of available social networking sites and their global concept
  - Overview of different existing platforms, explaining their core functionalities
- Be aware of how to download and save a file
- Be aware of the risks (technical and social) associated with all the above.

2.6.4 Skills Enhanced

2.6.4.1 Directly
- ICT

2.6.4.2 Indirectly
- Communication
- Improving own learning and performance

2.6.5 Content of the Themes

2.6.5.1 Web browsing applications
- What is the World Wide Web?
- Recognise the most widely used web browsing applications. Currently Internet Explorer, Google Chrome, Mozilla Firefox and Lynx text browser (useful for visually impaired people)

2.6.5.2 Using a web browser (browser specific)
- URLs
  - Understanding their syntax/structure
- Browser Basics
  - The Address Bar
o The Forward and Back Buttons
o Hyperlinks
o History/Caching
o Favourites

- Using a Search Engine (Types of available search engines) include Bing and Google
- Printing a Web Page
- Filling-In Web Forms
- Social Networking Reference the “browser guardian to make children aware of social networking dangers” project
- Downloading Files links to supporting material

### 2.6.5.3 Web security

- Security and Certification of Web Sites
- Safe Internet Searching
- Viruses, Malware and Spyware
- Sharing Personal Information/Images – Access control and access prevention
- False Identity of Others
- Cyber Bullying
- Copyright issues

### 2.6.5.4 Using ViPi

- Computer based
- Mobile based
- Online repository
- Online Learning
- Mobile Applications

### 2.6.6 Teaching Strategies

- Show a selection of browser applications highlighting that they perform the same job.
- Demonstrate the use of the browser features with a projected machine.
- Give handouts labelling the features of a specific browser window
- Hands-on session - Allow students to perform structured tasks on a machine.
- Brainstorm/discussion of security issues – reinforce with handouts.

### 2.6.7 Previous Knowledge

Knowledge of what the internet is

### 2.6.8 Resources

- PC/laptop with web access and projector
- Pens
- Hand-outs – Diagram of a (specific) browser window showing locations of important features. Detailed information on safe internet use.
- PC with web access for each student

### 2.6.9 Assessment Criteria

- Recognise and start the browser application from the desktop and Start menu.
• Demonstrate ability to open a web page, navigate forward using hyperlinks and back and forward using the browser’s buttons.
• Perform a search for a specific subject.

2.6.10 Assessment Questions

You can only have one web page open at a time.

• True
• False

There are many different web browsers available.

• True
• False

There is no way to quickly find a page you were looking at last week.

• True
• False

I can step backwards through the pages I recently browsed

• True
• False

I can make a browser shortcut to a web page that I visit often.

• True
• False

Clicking a hyperlink always opens a page in the window and tab I am using.

• True
• False

Hyperlinks are always words that are underlined and a different colour.

• True
• False

Which of the following is not a web browser?

• Google Chrome
• Microsoft Internet Explorer
• Mozilla Firefox
• Microsoft Word
What is a URL?

- A type of port to plug in peripheral devices
- The name for a full web link address
- A file extension
- A way of transferring files across a network.

To quickly find a website I have recently been to I could look in my...

- Browsing history
- Favourites
- Bookmarks
- Downloads

When should I save my username and password on a computer?

- Never
- When it is on my own computer, connected to a trusted network.
- On a computer in a library
- On a computer in an internet café

If there is a page you visit frequently, you can access it more quickly by...

- Saving it as a favourite/bookmark
- Typing the URL into the search bar
- Searching for it on Google
- Going to another page that links to it

If a page stops loading before all the content is readable, you should not...

- Give up and look at something else
- Hit the reload button (or press F5) to try loading the page again
- Ensure that the URL address is correct.
- Check that your internet connection is OK.

Which of the following is not a popular search engine?

- Google
- Bing
- Yahoo
- Facebook

The following file type may be unsafe to download from an untrusted source...

- .exe an executable file
- .jpg an image file
- .gif an animated image file
Which of the following is the most important reason for installing Windows updates...?

- They may include security patches
- They can improve the performance of your PC.
- They may fix bugs in the operating system.
- They slow down the start-up time of your computer.

Written answers:

- Please, refer to the most widely used Web browsers.

- Please, mention and explain the different options that a user has at his disposal to launch a Web browsing software. Perform two of them in practice and describe.

- Please, start your Web browser and navigate to the page http://www.vipi-project.eu. First, explain the meaning of the different parts of the domain name in which you just navigated. Then use a hyperlink to move to another page on the Web site and explain how you did it. Finally, add the initial page in your favourite pages.

- Please, visit the www.google.com page and perform a search for “Browsing the Web”. Then try to find images related to the same search phrase. Refer to any alternative search engines.

- Please, visit the www.vipi-project.eu page and then go to the Contact us page. Fill-in the form and print it before submitting. Then submit the form and go to the Download page and get the project presentation. Open it on your device.

- Please, repeat all questions with one more browsing software

- Please, refer to the widely used social software and give short description of their objectives.

2.6.11 Summary

Students should recognise the parts of an internet browser, be able to navigate around a web site and perform a search on a subject. They should be familiar with web forms and be able to download a file to a specific location. They should be familiar with social networking sites. They should know the risks and dangers associated with web usage.

2.6.12 Glossary

Hyperlink: A link from a hypertext file or document to another location or file, typically activated by clicking on a highlighted word or image on the screen.

Navigating: Moving between web pages.

URL: Abbreviation of Uniform Resource Locator, a web address often starting with http://www.
2.7 E-mail and Security

2.7.1 Aims
This unit will teach the use of email including software, accounts, folders, attachments and all relevant security matters.

2.7.2 Lead Partner
EuroCy

2.7.3 Learning Objectives
(This concentrates on core functionalities, but individual tutors might want to make the content more specific to a certain web or client based service)

- Be aware of what email is and which software can be used to access it.
- Know how to send and receive emails
- Know how to send and access attachments within emails
- Be aware of the risks involved with using email communication

2.7.4 Skills Enhanced

2.7.4.1 Directly
- ICT

2.7.4.2 Indirectly
- Communication
- Improving own learning and performance

2.7.5 Content of the Themes

2.7.5.1 Using E-mail
- Email Accounts and Addresses
- Clients and web based apps
- Logging In
- Inbox
- Composing an Email
- Sent Items Folder
- Other Folders
- Attaching Files
- TO/CC/BCC
- Forwarding an Email
- Reply
- Replying to all
- Organizing emails in inbox folders
2.7.5.2 Security Issues

- Logging into an e-mail account and saving passwords on Public Machines and Networks
- Phishing/Spoofing
- File Attachments and dangerous extension types
- Sharing Personal Information
- Copyright issues
- Spam / Unwanted emails being received/sent

2.7.6 Teaching Strategies

- Demonstrate use of an e-mail software package using PC with projector.
- Give handouts labelling the features of a specific email package window
- Hands-on session – Pair students and get them to send messages to each other and then send replies with an attached file.
- Discuss/brainstorm security issues and reinforce with a handout

2.7.7 Previous Knowledge

none

2.7.8 Resources

- PC/laptop with web access and projector
- Pens
- Hand-outs – Diagram of a (specific) email window showing locations of important features. Detailed information on safe email use.
- PC with web access and email client (or Webmail software available) for each student

2.7.9 Assessment Criteria

- Recognise and start a desktop email application
- Recognise and start a web-based email application
- Demonstrate ability to open receive mails, send mails, use a contact manager, access and send attachments.
- Knowledge of safe email usage – understanding about passwords, phishing, potentially unsafe file attachments, security of personal information and copyright.

2.7.10 Assessment Questions

You cannot send people files using email.

- True
- False

Many providers allow you to access your email using an internet browser.

- True
- False

Every time I want to email somebody, I have to type their email address.

- True
• False

When I delete an email it is gone forever.

• True
• False

If I CC an email to a list of people they will all see the list of addresses.

• True
• False

To keep my inbox in order I have to manually move files into folders.

• True
• False

You can notify people who send you mail while you are not at your computer that you are away.

• True
• False

To send an email you have received on to another recipient you should use…?

• The forward button
• The reply button
• The reply all button
• Blind carbon copy

To copy an email to a recipient you should type their email address in which field?

• To
• CC
• BCC
• Subject

When copying an email to a list of people which field will keep their addresses private from each other?

• To
• CC
• BCC
• Subject

The following type of attachment may be unsafe to download from an untrusted sender…?

• .exe an executable file
• .jpg an image file
If your bank emails you with a web link asking you to log into your account you should?

- Assume the email is from your bank
- Click the link and enter your details
- Not tell your bank
- Avoid opening any attachments on the mail

Which of these is not a common email provider?

- Google Gmail
- Microsoft Hotmail
- Yahoo
- Amazon

Written answers:

- Please, write down your email address and explain the different parts of the address and their use
- Please, refer to the most widely known email providers.
- Please, refer to the most widely used email client software, both Web- and Desktop-based. Give short explanation of the main similarities and differences.
- In case you do not have an email account, please, choose one of the alternative email providers and create an account. Then, configure Thunderbird desktop client to access your account but without deleting your messages from the provider’s server. The account must be configured for maximum safety and security.
- Please, repeat the previous question with Windows Mail
- (After asking them and collecting the email addresses of all students in a list)
- Please, choose one of your classmates and send her/him an email, keeping my address in carbon copy. Before sending the email, please, add both addresses in your Contacts. Then, please, follow up with the email discussion that we will have, download and read any attachments and send back any documents you are requested to. Note that your replies should be sent to all recipients of previous messages, using dedicated reply options.
- Please, create a folder called “Email and Security” and store there all messages from our conversation.
- Please, refer to the security threats when using email and give short explanation of the reasons why they are dangerous and how one can fight against the dangers
2.7.11 Summary
Students should be familiar with using email to send and receive messages and attachments safely.

2.7.12 Glossary
Email: electronic mail. Message sent through electronic devices, i.e. computers.
2.8 Communication Tools

2.8.1 Aims
This unit will help you to understand and use both text based and audio/visual communication tools on a computer and/or mobile device / tablet.

2.8.2 Lead Partner
PhoenixKM (+Steficon and Hypertech)

2.8.3 Learning Objectives
- Be able to recognise and start a communication software package
- Be able to make and receive calls
- Be able to have a text based conversation

2.8.4 Skills Enhanced

2.8.4.1 Directly
- ICT

2.8.4.2 Indirectly
- Communication
- Improving own learning and performance

2.8.5 Content of the Themes

2.8.5.1 Communication software
Recognising and describing the most common communication software used, including
- Skype
- Google Talk and Google+
- Facebook chat
- MSN Live Messenger

2.8.5.2 Using Communication Software
- (Optionally) Setting up the webcam and microphone
- Making a call
- Answering an incoming call
- Ending a call
- Text based messaging
- Inviting others to participate to a call or text-based messaging
2.8.5.3 Safety and communication software

Risks of using online communication software

- Talking to strangers
- Logging into communication software account and saving passwords on public machines
- Phishing/Spoofing
- File downloads and dangerous extension types
- Sharing Personal Information
- Copyright issues

2.8.6 Teaching Strategies

- Point and show parts of the computer or mobile device / tablet used by communication tools
- Demonstration of running communication software, and making and receiving calls using it
- Hands on use of communication software to make video/voice calls to each other (collaborative learning)
- Hands on use of communication software to have text based conversations
- Examples of unsafe practices

2.8.7 Previous Knowledge

none

2.8.8 Resources

- PC / mobile device with projector and network connection and communication software
- Webcams and microphones
- Pens
- Hand-outs – pictorial guide to parts of desktop and laptop machines and of the boot/shutdown process specific to the hardware and OS used.
- Any necessary assistive devices (disability-specific)
- Networked PCs for each student for hands-on use

2.8.9 Assessment Criteria

- Demonstrate ability to make and receive video/voice calls
- Demonstrate ability to have text based conversations
- Answer questions on staying safe when using a communication tool

2.8.10 Assessment Questions

1. The Skype programme is suitable for:
   a. Chatting
   b. Internet phone calls
   c. Communication
   d. a & b & c

2. From which bar can you change your status?
   a. Menu bar
   b. Status bar
   c. Call phones bar
3. How can you send files?
   a. By using Conversation window
   b. By using Conversation box
   c. By using Recent list
   d. By using Status bar

4. Is it possible to share your window using Skype?
   a. Yes
   b. No
   c. I don’t know

5. Is it possible to see if friends are around and what they are up to by using GTalk?
   a. Yes
   b. No
   c. I don’t know

6. Is it possible to talk to multiple people at once by using GTalk?
   a. Yes
   b. No
   c. I don’t know

7. Can you make calls while you are logged into your Google mail account?
   a. Yes
   b. No
   c. I don’t know

8. While using MSN messenger:
   a. you could add a contact a person to talk to
   b. send an instant message
   c. search for your existing friends
   d. a & b & c

9. Click the red “X” at the top of the screen to close the chat window of MSN.
   a. True
   b. False

10. While communicating online you should consider:
    a. Think carefully about who is on your list
    b. People may not be who they say they are
    c. Friend of a friend is not necessarily a friend
    d. a & b & c

11. You should keep your personal information secret when talking to someone you don’t know in the real world.
    a. Yes
    b. No
    c. I don’t know

12. How can you protect yourself while communicating with strangers on Internet?
    a. Archiving or saving your conversations
b. Check your preferences or privacy options in the applications you use
   c. Highlight the conversation with your mouse and copy and paste conversations into a Word document which you can save.
   d. a & b & c
13. How can you block a contact that you don’t want to communicate with anymore?
   a. Right click on the name of the person in the contact list and click on “Block”.
   b. Go to preferences and select “Ignore”
   c. I don’t know
   d. a & b
14. You should reply on abusive messages
   a. True
   b. False
   c. I don’t know
15. It is not a problem to receive files with an .exe extension
   a. True
   b. False
   c. I don’t know

Practical Exercise 5: Explore Skype

1. If you already downloaded the Skype programme (please refer to dedicated section of the course material), proceed now to the registration.
2. The next step requires that you register by choosing a username and a password of your own.

   Figure 22: Skype

3. The procedure is the same as when registering for an e-mail account.
4. When accessing it for the first time with your new username and password, a tutorial how to use will be started on your preferred language.
5. You can choose the language from the Menu Tools of the programme each time. The programme supports more than 32 languages.

6. Now click on the icon “Add contact” and on the last row “Skype name” try to find the user “karel.phoenixkm”

![Figure 23: Add contact](image)

7. The click on the button “Add”.

8. The user will after some time confirm your request.

9. If the user is online try to call him by pressing the green phone icon.

10. If you have installed a camera, microphone and speakers – then you could try to make a video call by pressing the green icon.

11. If you want you could continue your communication in “Chat mode”. For that purpose you could simply click on the name of the user (i.e. Karel Van Isacker) and start chatting with him.

12. If you want to “Sign out” just go to the File menu and press on “Log off”

[previously written MSN Messenger section removed as the software is now defunct and combined with SKYPE]

### 2.8.11 Summary

Students should recognise the different communications tools available and the parts of a computer required when using them including webcam and microphone. Students should be able to make and receive voice/video calls and also have text based conversations.

### 2.8.12 Glossary

Webcam – a video camera connected to or built into a laptop, PC or phone in order to allow images or video of the user to be captured and sent.
2.9 Mobiles, Smartphones and Tablets

2.9.1 Aims
This unit will inform the user about the different mobile devices available. It will teach the use of specific mobile devices, and demonstrate ways to improve accessibility on those devices.

2.9.2 Lead Partner
Steficon and Hiteco

2.9.3 Learning Objectives
- Be aware of what types of mobile devices are available including devise shape (smart, touch, tablet) and OS (Java, Symbian, Android, Windows Mobile, BlackBerry and iOS)
- Know how to use a mobile device to make calls and send and receive text messages
- Know how to access the Internet using a mobile device
- Be aware of accessibility aids available to assist in the use of the mobile device (eg. Text to speech, speech to text, gestures)

2.9.4 Skills Enhanced

2.9.4.1 Directly
- ICT

2.9.4.2 Indirectly
- Communication
- Improving own learning and performance

2.9.5 Content of the Themes

2.9.5.1 Mobile devices
Mobile Devices
- Phones
- Smartphones
- Tablets (Android and iOS based)
Types of mobile OS
- Symbian/Java
- Windows Mobile
- BlackBerry
- iOS
- Android
2.9.5.2 Using mobile devices

- Basic operation (calling and texting) *
- Accessing internet services *
- Applications *
- Alternative text input and browsing methods **
- Screen readers **
- Installing ViPi mobile application *
- Accessing and using ViPi Mobile Services
  (* device specific, ** device and user specific)

2.9.5.3 Mobile security

- Phishing
- Security and Certification of Web Sites
- Safe Internet Searching
- Viruses, Malware and Spyware
- Sharing Personal Information/Images
- False Identity of Others
- Cyber Bullying
- Copyright issues

2.9.6 Teaching Strategies

- Show and describe a selection of devices. Demonstrate their use if available.
- Give handouts labelling the features of a specific browser window
- Hands-on session - Allow students to perform structured tasks on a machine.

2.9.7 Previous Knowledge
none

2.9.8 Resources

- PC/laptop with projector
- Pens
- Hand-outs – Diagram of a (specific) email window showing locations of important features. Detailed information on safe email use.
- A selection of mobile devices for demonstration purposes.
- A set of similar mobile devices for hands on experience.

2.9.9 Assessment Criteria

- Ability to send/receive text messages and make a call to a contact.
- Ability to use standard applications through the mobile devices
- Ability to use the accessibility features of mobile devices
- Ability to activate and use Gestures for facilitating basic operations (next-previous, show properties- make a selection)
• Access the ViPi application using the device (using assistive technology if required)
• Display a knowledge of safe usage – understanding about passwords, phishing, potentially unsafe websites and networks, and security of personal information.

2.9.10 Assessment Exercises

Practical Exercise 7: explore phone design

Phones come in all colours, shapes and sizes. If the keypad is not visible, your phone may be a ‘flip’ phone (hinged) or a ‘slider’ phone (kepad becomes visible when the front cover is pushed up).

EXERCISE:

Have a look at the different types of phones in the class:
• What type of phone do you have?
• What is your phone number?
TIP: Sellotape your phone number to the back of your phone.

Practical Exercise 8: explore mobile phone operators and networks

In UK, Belgium, Cyprus, Greece, Lithuania there are variety of mobile phone operators:

Greece: Cosmote, Vodafone, Wind

UK: Everything Everywhere, O2, Vodafone, 3

Belgium: Proximus, Mobistar, BASE

Cyprus: Cyta Mobile-Vodafone, MTN

Lithuania: Bite, Omnitel, Tele2
EXERCISE:

• Which network do you use?

Practical Exercise 9: Switching your phone on and off

The on/off function is different on each phone. Your phone might have a power button on the top, or there may be a button on the front of the phone.

EXERCISE:

• Switch your phone off and on again
• You may be asked for a 4 digit PIN number. If you use one keep it secret.

Practical Exercise 10: Explore main features of mobile phone

EXERCISE:

What is displayed on your phone screen? *(Tick the boxes)*

- [ ] Phone operator name or logo
- [ ] Power level
- [ ] Signal strength
- [ ] Clock
- [ ] Menu
- [ ] Message (envelope)
- [ ] Go to
- [ ] Names/contact

• Anything else?

Charging your phone

The charger outlet is usually on the bottom or the side of your phone.

EXERCISE:

• Do you know how to charge your phone?
• What does the battery charge display look like on your phone?
• How do you know if you need to charge your battery?

Practical Exercise 11: Using your phone

To move through the phone’s menu, you use the Navigation or Centre button, and/or the touchscreen.
This button is different on each type of phone. It is the biggest button on the phone and will be either square or round. It’s also called the Select Key. Pressing the outside of the button, you can move up, down, left or right.

The left and right buttons let you select the text on the bottom left and right of the screen.

For example, this might be ‘Go to’ and ‘names’, or it might be ‘menu’ and ‘contacts’, or ‘options’ and ‘exit’.

**Answering the phone**

To **answer a call**, press the **green** (or left hand) button.  
To **finish or cancel a call**, press the **red** button.

**Making a call**

To **make a call**, enter a number using the key pad. The numbers will be displayed on your screen as you press them.

**EXERCISE:**

- Do you know what your phone sounds like – would you recognise your ring tone?

**EXERCISE:**

- Phone the mobile number of the person beside you, or the volunteer helping you to use your phone. What is their number?
- Get your partner or tutor to call your phone. Can you see their number on your screen?

**The Phone Menu**

When you press the **Menu** button on the phone you will see either a list or icons of the phone’s many applications, including:

- Phonebook or Contacts  
- Call log or Call Register  
- Messages  
- Settings  
- Organiser  
- Applications

**EXERCISE:**

- Using the Up, Down, Left or Right Arrows, see what you have on your phone.

**The most important applications are:**

- Contacts or Phone Book – you can store all your phone numbers in the phone.  
- Messages – for sending and receiving text messages.  
- Call Log or Register – details the calls you have received, dialled and missed.  
- Settings – lets you change the appearance of your screen, sound volumes & ring tones.

**Text messages**

Text messages have a symbol shaped like an envelope:
EXERCISE: read a text message

Step 1: Press Menu/Centre key
Step 2: Select Message (and maybe My Messages)
Step 3: Find Inbox
Step 4: Highlight a message
Step 5: Press Select or Options & View

EXERCISE: send a text message

Step 1: Press the Menu/Centre key
Step 2: Select Messages
Step 3: Select Create (or Compose) Message
Step 4: Select Text Message
Step 5: Enter message – Hi from (your name)
Step 6: Select Send
Step 7: Enter number of your partner or tutor & press Send or select Search to bring you to the Phone book/Contacts and use the number from there.

2.9.11 Summary
Students should be aware of the mobile devices available and their potential uses. Students should have a hands-on knowledge of a particular mobile device and be able to use it to communicate and use the web.

2.9.12 Glossary
ViPi platform: The main resource portal of the project.
Mobile Access: Connect to a web resource through a mobile device
Mobile browsing: Interact with a web resource
Android App: A software application that facilitates access to specific resources, installable on Android devices
Gestures: (Touch or Touchless) Kinect-like gestures being used on mobile devices to facilitate starting applications or browsing the internet
2.9.13

2.10 Assistive Technologies

2.10.1 Aims
This unit will provide detailed guidance on the use of relevant assistive technologies. *(Input to this section will come from the ATLEC project which runs in parallel and compliments ViPi work. ATLEC results will be available at the end of 2012)*

2.10.2 Lead Partner
PhoenixKM

2.10.3 Learning Objectives
- Be aware of what assistive technologies are available to improve your ICT experience
- Know how to set-up and use specific assistive hardware to improve your ICT experience.
- Know how to set-up and use specific assistive software to improve your ICT experience.

2.10.4 Skills Enhanced

2.10.4.1 Directly
- ICT

2.10.4.2 Indirectly
- Communication
- Improving own learning and performance

2.10.5 Content of the Themes

2.10.5.1 Using assistive technologies
- Screen Readers (PC)
- Screen readers (Mobile)
- Text-To-Speech
- Speech-To-Text
- Scanning on-screen keyboards
- Refreshable Braille displays
- More...

2.10.6 Teaching Strategies
- Detailed demonstration using PC and projector of setting up and using assistive hardware and software.
- Give handouts detailing the assistive technologies taught.
- Hands on use of the assistive technologies to work through suitable structured tasks.
2.10.7 Previous Knowledge

none

2.10.8 Resources

- PC/laptop with projector
- Pens
- Hand-outs – Diagram of a (specific) email window showing locations of important features. Detailed information on safe email use.
- A selection of mobile devices for demonstration purposes.
- A set of similar mobile devices for hands on experience.

2.10.9 Assessment Criteria

- Ability to perform standard tasks on a device using the relevant assistive technology.

2.10.10 Assessment Questions

Which of the following assistive technologies is least likely to be helpful to a user with a visual impairment?

- Speech-to-text
- Screen reader and text-to-speech
- Screen magnifier
- High contrast mode

Which of the following technologies is not provided by default with a Windows installation?

- Narrator
- Screen Magnifier
- High contrast themes
- A screen reader package

2.10.11 Summary

Students should be aware of and able to use the assistive technologies which help them perform tasks on a PC or mobile device.

2.10.12 Glossary

Hyperlink: a selectable object that includes the path information to another object
2.11 What is there for me??

2.11.1 Aims
This unit will make students aware of relevant resources available to them both locally and in Europe.

2.11.2 Lead Partner
PhoenixKM (and all other partners)

2.11.3 Learning Objectives
- Be aware of available relevant online resources.

2.11.4 Skills Enhanced

2.11.4.1 Directly
- ICT

2.11.4.2 Indirectly
- Communication
- Improving own learning and performance

2.11.5 Content of the Themes

2.11.5.1 Europe

2.11.5.2 Belgium

2.11.5.3 Cyprus

2.11.5.4 Greece

2.11.5.5 Lithuania

2.11.5.6 UK (English language resources)

2.11.6 Teaching Strategies
- Presentation on currently available resources targeted to location and disability

2.11.7 Previous Knowledge
none
2.11.8 Resources
- PC/laptop with internet access and projector
- Hand-outs – Detailing resources and where to find them

2.11.9 Assessment Criteria
- Knowledge of available resources in Europe, your own country and locally.

2.11.10 Assessment Questions
Not Applicable

2.11.11 Summary
Students should be aware of online software and some examples of what is available to them. Students should be familiar with using both online document editors and e-learning platforms.

2.11.12 Glossary
2.12 Safety and Security

2.12.1 Aims
This unit will teach the user to be secure in their use of their machine, the internet and email.

2.12.2 Lead Partner
EuroCy

2.12.3 Learning Objectives
- Be aware of necessity for system updates
- Be aware of virus checkers and how to use them
- Be able to use the internet safely in terms of protecting:
  - Yourself
  - Your data
  - Your computer

2.12.4 Skills Enhanced

2.12.4.1 Directly
- ICT

2.12.4.2 Indirectly
- Communication
- Improving own learning and performance

2.12.5 Content of the Themes

2.12.5.1 OS updates and virus checkers
Security Skills
- Installing Operating System and Software Updates
- Using a Virus Checker
  - Potential virus sources
- Firewalls

2.12.5.2 Internet
- Practical Safe Internet Interaction
- Browser Privacy
- Security and Certification of Web Sites
- Safe Internet Searching
- Viruses, Malware and Spyware
- Sharing Personal Information/Images
- False Identity of Others
- Cyber Bullying
- Copyright issues
- Preventing Pop-Ups
- Safe web-searching
- Secure Internet Use Rule List - A list of simple rules to follow to keep you safe on-line. This can be printed and displayed near to the computer as a reminder to the user.
- Legal Issues
- Social Media – (Facebook, NetLog, LinkedIn, Twitter, Google+)
  - Privacy Settings - General common settings and links to site training material.
  - safe online behaviour (check for BE UK GR Cy pdf document)
  - http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20I/Conference%20Papers%20and%20abstracts/Informal%20Processes%20of%20Risk%20Management/Atkinson.pdf
  - GR: http://www.saferinternet.gr
  - CY: http://www.cyberethics.info/cyethics1/
  - LT: http://www.draugiskasinternetas.lt/lt
    - http://www.internoto.lt
  - http://www.glogster.com/vilmosius/saugus-ir-teisetas-interneto-naudojimas/g-6jjs0hku6vcspsm0r7n4hoa0
- Account Security

2.12.5.3 E-mail
- Saving Passwords on Public Machines
- Spam
- Phishing
- Spoofing
- File Attachments
- Sharing Personal Information
- Copyright issues

2.12.6 Teaching Strategies
- List some common virus checkers and demonstrate their functionality using a projected machine
- Demonstrate the use of the browser security features with a projected machine.
- Describe an example internet use rule list
- Discuss legal issues
  - Copyright
  - Data security
  - Illegal content
- Demonstrate security and privacy settings in a social media site (eg Facebook).
• Show examples of phishing emails and ways to spot them.

2.12.7 Previous Knowledge
none

2.12.8 Resources
• PC/laptop with web access and projector
• Pens
• Hand-outs – of an example internet use rule list
• PC with web access for each student

2.12.9 Assessment Criteria
• Demonstrate ability to recognise when a virus threat is present
• Demonstrate ability to access security settings in a browser.
• Demonstrate ability to edit security settings on a social media site.
• Demonstrate ability to spot a potentially malicious email (phishing or attachment)

2.12.9.1 Assessment Questions
It is OK to enter a login and password on a public computer.

• True
• False

Downloading files from the internet cannot harm my computer

• True
• False

It is safe to enter my card details to buy something on a web page that starts http://

• True
• False

You can use a social network without making your details public.

• True
• False

It is OK to download and keep any music or films.

• True
• False

It is OK to email my internet banking login details to my bank if they email me asking for them.

• True
• False
You do not need to have your virus checker running all the time as long as you scan your disk regularly.

- True
- False

Written answers:

- In case you do not have an Antivirus software, please, choose one of the free alternatives and install it on your device. Then, please, make sure that the Antivirus’ database is up to date and configure it for maximum protection from viruses and other threats.

- Please, refer to the main threats faced when using emails and give short explanation of how one could be protected against them.

- Please, configure your Windows Firewall for maximum protection. Refer to all the sections you have made and give short justifications.

- Please, refer to the important rules one needs to follow to ensure safe Internet use.

- In case you do not have an account on a social network and you would like to have one, please, go on and create one on each network you like. Then, configure your account settings for at your desired level of protection and explain why you made each configuration selection.

- Please, refer to the social networks that have accessible alternatives and explain how one could access them.

2.12.10 Summary

Students should be able to use their computer in a way that protects them, their data and their computer.

2.12.11 Glossary

OS: or Operating System – this is the software that your computer uses to allow you to interact with it and its programs. Common OS include Windows versions, Linux, Ubuntu and Mac OSX.
3 Unit 3 Higher Basic ICT Skills

3.1 Office Applications – Word Processing

3.1.1 Aims

This unit will demonstrate features used commonly in producing word processed document. For word processing proper function there is a list of functionalities as well as basic and advanced search features. The subsections below will describe Word most common functionalities as well as Word processing Basic and Advanced Search Features. More specifically, the subsection 3.1.3.1 “Undestanding Word” is dedicated to Microsoft Word window and it can be considered as an introductory training course while the 3.1.3.2, “Word Search Functionalities” aims to familiarize students with basic knowledge of the Word most common functionalities related to basic and more advanced features.

3.1.2 Lead Partner

Hypertech

3.1.3 Learning Objectives

3.1.3.1 Understanding Word

- The Microsoft Office Button
- The Quick Access Toolbar
- The Title Bar
- The Ribbon
- The Ruler
- The Text Area
- The Vertical and Horizontal Scroll Bars
- The Status Bar
- Understanding Documents Views
- Understanding Nonprinting Characters
- Create Sample Data and Select Text
- Place the Cursor
- Execute Commands with keyboard Shortcuts
- Start a new paragraph
- Exit Word

3.1.3.2 Word Basic Functionality

- Be able to create a document
  - Type, Backspace, and Delete
  - Insert and Overtype
  - Bold, Italicize, and Underline
  - Save a File and Close Word
- Be able to create documents in a more efficient way
3.1.4 Skills Enhanced

3.1.4.1 Directly

- ICT

3.1.4.2 Indirectly

- Communication
- Improving own learning and performance

3.1.5 Content of the Themes

- Acquire the ability to interact with Microsoft Word and LibreOffice Writer
• Learn how to create documents in an efficient way and present them in an attractive way
• Learn how to apply styles and various formats
• Learn how to Layout and Print your documents

3.1.5.1 Using a word processing package

• Create, Open, Close, Save, Exit documents
• Paste a block of example text
• Edit the text
• Justify the text
• Format the styles, font, colour, effects and sizes
• Format the paragraphs
• Add a border/shading to a paragraph
• Change the line spacing
• Insert a image
• Format the image
• Resize the image
• Insert a page/formatting break
• Insert symbols not on the keyboard
• Add hyperlinks
• Create a bulleted/numbered list
• Increase/decrease indents
• Use find and replace
• Add a header and footer
• Number pages
• Check and correct spelling
• Insert and populate a table
• Add or delete table rows/columns
• Format table borders
• Use columns
• Check and correct accessibility (ref OACD modules already available. Also reference accessibility checkers.)
• Show and hide paragraph marks
• Preview the document for printing
• Change the page setup
• Print all or part of the document
• Password protect a document

3.1.6 Teaching Strategies

• Demonstration of guided tasks with simultaneous task-based learning.
• Defining pre-task phases (to offer the proper orientations) and post-task phases (repeat performance of the task)
• Offer additional support to tasks completion by providing similar models
• Set rules for specific tasks (for instance “Within a paragraph just keep typing”)
• Demonstrate knowledge through more demanding tasks
• Give handouts detailing key points.
• Encourage use of system help.
3.1.7 Previous Knowledge
Unit 2.4 (Using the Computer)

3.1.8 Resources
- PC/laptop with word package and projector
- Hand-outs – Diagram of a (specific) word processor window showing useful shortcuts.
- PCs/laptops for student use with office package installed.

3.1.9 Assessment Criteria
- Ability to produce a well formatted document including images as defined in a structured task outline.
- Demonstrate the ability to change documents that are not well formatted.
- Demonstrate the ability to distinguish various Word documents with difference in formatting quality.

3.1.8.1 Evaluation of students’ skills

In the context of ViPi some tasks instructions could elicit students’ acquired skills and provide them with the opportunity to manage Word files in the most efficient way. After the initial practical steps (see 3.1.3 Learning objectives) the Sample Assessments described below, are dedicated to students’ skills evaluation. Functional skills in Word processing will be assessed gradually at different levels, as shown below:

**Level 1 (Basic Concepts of Word)**

*Sample Assessment 1: “Create a word file and save it on the desktop”*

The Sample Assessment 1 tests the basic skill of opening, saving and closing. Its goal is to evaluate the course of learning file management. Sample Assessment 1, requires three steps:

1. Click the “File” Button and select “Open” to open a file
2. Click on “Save as” and type a File Name
3. Select from the left menu “Desktop”
4. Save the file

*Sample Assessment 2: “Type and backspace, replace the last word”*

The Sample Assessment 2 asks from the student to type a sentence and delete it. The student has to:

1. Write a sentence, for instance: “Mary has a small house”
2. Delete the word “house” (by placing the cursor between the period and the “e” in house)
3. Type the word “car”

*Sample Assessment 3: “Open the Microsoft Word”*
The Sample Assessment 3, tests the basic functionalities of the Start Button. To answer successfully to the Sample assessment 3 you have to follow the steps below:

1. Click the Start Button
2. Click Start /All programs to display the submenu Microsoft Office and select the Microsoft Word

**Sample Assessment 4: “Format paragraphs”:**

The Sample assessment 4 is a tutorial that concerns paragraphs formatting. Students have to apply changes, adjust setting for alignment, line spacing and indentation in order to format paragraphs to the text given below:

"Ancient Greek Everyday Life"

Men if they were not training in military, or discussing politics went to the Theatre for entertainment. To watch dramas that they could relate to, including tragedies and comedies. These often involved current politics and gods in some form. It is thought that women were not allowed to watch theatre or perform at the theatre, although male actors did play women roles.

Lives of Women in Ancient Greece were closely tied to domestic work, spinning, weaving and other domestic duties. They were not involved in public life or in politics. The live were normally quite confined to the house although one public duty was acting as a priestess at a temple.

Children in ancient Greece usually occupied their time playing with toys and games.

**Level 2 (Intermediate)**

**Sample assessment 5: “Inserting a Table of Contents into your Documents”**

In the Sample Assessment 5, the student has to follow the next steps:

1. Prepare your document for a Table of Contents: Highlight your section heading and sub-heading text, Place your cursor at the location in your document where you want to insert a Table of Contents
2. From the Reference Tab in Microsoft Word, select Table of Contents
3. From the Table of Contents dropdown, select a style that meets your needs
4. A Table of Contents appears in the location you have selected
5. To Modify or Update an Existing Table of Contents go to the Reference tab and select Update Table
6. An update Table of Contents window appears. Select the radio button next to Update entire table and select the OK button.

**Sample assessment 6: “Create a Hyperlink to a specific location in another document or web page ”**
The sample assessment 6 tests a more advanced skill of Word processing managing: “How to link to a location in a document or Web page that you created in Word”. To answer to the Sample Assessment 6, you have to follow the next steps:

1. Insert a bookmark in the destination file or Web page
2. Open the file that you want to link from, and select text or object you want to display as the hyperlink
3. Right click and then click Hyperlink on the shortcut menu
4. Under Link to, click Existing File or Web Page
5. In the Look in box, click the down arrow, and navigate to and select the file that you want to link to
6. Click Bookmark, select the bookmark that you want and then click OK.

Level 3: Advanced

Sample assessment 7 “Use mail merge to create and print letters and other documents”

In this exercise students have to understand the purpose of the above functionality. In order to perform it successfully they have to follow the steps below:

1. Set up the main document
2. Connect a document to a data source
3. Refine the list of recipients or items
4. Add placeholders, called mail merge fields, to the document
5. Preview and complete the merge

3.1.10 Summary

Students should be aware of the many formatting options available and how to achieve them. They should be capable of creating tables and inserting images and objects within their document and producing a well-formed outcome.

3.1.11 Glossary
3.2 Office Applications – Spreadsheets

3.2.1 Aims

This unit will demonstrate features used commonly in producing a spreadsheet. More specifically, some courses of how to create and use formulas, functions, charts and graphs in Spreadsheets are available below. An introductory subsection, 3.2.3.1 “Basics of a Spreadsheet” aims to familiarize the learner with general knowledge and main concepts about spreadsheets (cells, rows, variables etc.). “The subsection 3.2.3.2 “Formatting spreadsheet data” is dedicated to basic tutorial of Excel while the 3.2.3.3 “Going one Step Further” adds some more advanced functionality.

3.2.2 Lead Partner

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3.2.3 Learning Objectives

3.2.3.1 “Basics of a Spreadsheet”

- Learn how a spreadsheet works. More specifically, learn about:
  - Columns
  - Rows
  - Their intersections that are called cells
- Learn about cells and data
  - Text (labels)
  - Number data (constants)
  - Formulas (mathematical equations)

3.2.3.2 Formatting Spreadsheet Data

- Be able to create a well formatted spreadsheet of data:
  - Add data
  - Add borders
  - Use formulae
  - Autofill data and formulae
  - Create and edit charts
  - Print the sheet
  - Create new sheets and use formulas for cross-sheet operations

3.2.3.3 “Going One Step Further”

- Be able to manage basic equations
  - Set up a Checkbook
  - Acquire the ability to make an authorization schedule
  - Come up with difficult formulas and calculations
3.2.4 Skills Enhanced

3.2.4.1 Directly
- ICT

3.2.4.2 Indirectly
- Communication
- Improving own learning and performance
- Application of number

3.2.5 Content of the Themes
- To obtain basic understanding of how spreadsheet works
- To learn how to perform basic calculations in Microsoft Excel Spreadsheets and LibreCalc
- Acquire knowledge of how to work with data, Formulas and Functions
- Learn how to format data in a worksheet

3.2.5.1 Using a spreadsheet package
- Open a spreadsheet
- Save spreadsheet in a desired location
- Add titles to columns and rows
- Resize column widths
- Add data to cells
- Add borders for clarity
- Use the autofill drag tool to copy and increment data
- Add a simple formula using =,+-,/,* and ^ and cell referencing
- Use the autofill drag tool to copy a function
- Investigate available functions
- Use drag to select, copy and paste and range of data
- Paste data in a new sheet tab
- Double click to deselect data range
- Use drag and CTRL to select separated data ranges
- Create a bar chart from selected data
- Resize the chart
- Edit chart properties
- Edit the chart's data source/switch rows columns
- Create a scatter chart
- Add a trendline
- Investigate other available chart types
- Print the sheet
- Filter data / Sort a table with/without heading
- Record a macro

3.2.6 Teaching Strategies
- Demonstration of guided tasks with simultaneous task-based learning.
• Supporting the different phases of a spreadsheet creation through the provision of additional information
• Give handouts detailing key points.
• Providing links between spreadsheet notation and standard notations
• Providing different solution strategies
• Encourage use of system help.

3.2.7 Previous Knowledge

Unit 2.4 (Using the Computer)

3.2.8 Resources

• PC/laptop with office package and projector
• Handouts – Diagram of a (specific) spreadsheet package window showing useful shortcuts.
• PCs/laptops for student use with office package installed.

3.2.9 Assessment Criteria

• Prove the ability to produce a well formatted spreadsheet including an image as defined in a structured task outline.
• Demonstrate skills to fill down a formula through a range of cells and generate a ‘variable column’.
• Prove the ability to create spreadsheets in order to accomplish simple or more complex tasks (for instance calculating a price, determining the price, estimating a price)

3.2.9.1 Evaluation of students’ skills

Level 1 (Basic Spreadsheet Concept)

Sample Assessment 1: “Entering data into Excel”

The student has to follow a three step process:

1. Click on the cell where you want the data to go
2. Type your data into the cell
3. Press the ENTER key on the keyboard or click on another cell with the mouse

Sample Assessment 2: “Enter the data listed below into a blank spreadsheet”

Cell Data

• A2: Deduction Calculations for Employees
• A8: Last Name
• A9: Jameson C.
• A10: Wilson M.
• B4: Date:
• B6: Deduction Rate:
• B8: Gross Salary
• B9: 38778
• C6: 06
• C8: Deduction
• D8: Net Salary

**Level 2 (Intermediate)**

**Sample Assessment 3: “Create a table in an Excel database”**

Include the names of your classmates (Year 2009-2010)’’ their age and the program that they are attending. Type the following data: Students’ ID, Last name, the Program that they have selected. See the example below.

<table>
<thead>
<tr>
<th>Student ID</th>
<th>Last Name</th>
<th>Age</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 37899</td>
<td>Jameson</td>
<td>25</td>
<td>Business</td>
</tr>
<tr>
<td>ST 37898</td>
<td>Peterson</td>
<td>30</td>
<td>Art</td>
</tr>
<tr>
<td>ST 37897</td>
<td>Thompson</td>
<td>37</td>
<td>Nursing</td>
</tr>
</tbody>
</table>

**Level 3 (Advanced)**

**Sample Assessment 4: “Create a Pie Chart in Excel”**

A step by step example will guide students to create and format a Pie Chart as the one showed in the picture below.

Create a worksheet with the following data:

• Volkswagen Group
• PSA Group
• Renault Group
Take into account that Volkswagen remained Europe’s strongest car manufacturer and top-selling car brand with 60% percentage of sales. The French PSA Group was the second selling car brand in Europe in 2010 with 25% percentage of sales, while Renault was the third selling car brand in Europe, 15% percentage of sales.

Students could be asked to create a chart concerning cars brands sales in Europe in 2010. In order to achieve this goal they have to:

1. Create a worksheet with the provided data
2. Create a column chart
3. Apply a Chart Layout
4. Add labels
5. Switch data

3.2.10 Summary

Students should be aware of the best methods for speeding up spreadsheet production, formatting them and creating charts from the data. In order to achieve this they have to be taught how to use in the most efficient way spreadsheet functionalities.

3.2.11 Glossary

Macro: a series of key strokes or mouse actions that are recorded and saved as a program.
3.3 Office Applications – Slideshow presentation software

3.3.1 Aims
This unit will demonstrate features used commonly in producing a slideshow presentation. Specifically, the subsection 3.3.3.1 “How to use Slideshow” is a beginner’s guide, while the 3.3.2.2 “Advanced Techniques” teach more advanced features of PowerPoint.

3.3.2 Lead Partner
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3.3.3 Learning Objectives

3.3.3.1 “How to use Slideshow”
- Be able to open Power Point
- Be able to start a new presentation
- Learn how to select a slide layout

3.3.3.2 “Advanced Techniques”
- Be able to create a well formatted slideshow presentation.
- Be able to:
  - Create a slideshow outline
  - Add images
  - Add video
  - Change between themes
  - Add transitions and animations
  - Add automatic timings for a kiosk show
  - Create the outline of the slideshow and print it in rtf format (to assist accessibility)
- Be able to Convert PowerPoint Presentations to Word
- Custom Design Templates and Master Slides
- Hiding PowerPoint Background Images for Printing

3.3.4 Skills Enhanced

3.3.4.1 Directly
- ICT

3.3.4.2 Indirectly
- Communication
- Improving own learning and performance
3.3.5 Content of the Themes

- Use of Microsoft PowerPoint and LibreOffice Impress
- Understanding how to use slideshow through the most common slideshow terms
- Learn how to design attractive and effective slideshow presentations
- Understanding the strong relation between text and slide
- Learn how to connect and exploit the power of other formats such as the Word to better Slideshow (PowerPoint) presentation (for instance transfer the presentation into a word-processing offers the advantage of modifying easily the handout’s layout)

3.3.5.1 Using a slideshow package

- Open the presentation software
- Add a title
- Add a subtitle
- Add a new slide for section header and add text
- Add a content slide with text
- Add a content slide and add an image
- Investigate image format options
- Add video media to a slide
- Investigate video format options
- Add a chart/ smartart graphics
- Add and switch slide designs (using themes)
- Try changing colours within the designs
- Switch to outline view and back to slide view
- Select and delete a slide
- Select and delete a range of slides
- Use the undo feature
- Switch between slide views
- Add transitions
- Accessibility check OACD modules from karel – reference Lindsay’s paper on accessible ppt for all
- Preview the slideshow (using keyboard shortcut)
- Tweak the transitions (type/duration/sound)
- Add animation effects
- Edit effect options
- Use the slide preview (if available)
- Change to kiosk show
- Make and adjust timings of events

3.3.6 Teaching Strategies

- Demonstration of guided tasks with simultaneous task-based learning.
- Give handouts detailing key points.
- Indicate the utility of different formats in better slideshow knowledge acquisition
- Encourage use of system help.

3.3.7 Previous Knowledge

Unit 2.4 (Using the Computer)
3.3.8 Resources

- PC/laptop with office package and projector
- Hand-outs – Diagram of a (specific) spreadsheet package window showing useful shortcuts.
- PCs/laptops for student use with office package installed.

3.3.9 Assessment Criteria

- Demonstrate the ability to manage effectively the toolbar
- Ability to produce a well formatted slideshow including text, images and video components, defined by a structured task outline.
- Demonstrate the ability to count in parameters as time importance and the reference of main points for an effective presentation

3.3.9.1 Evaluation of students’ skills

A preliminary presentation about the main menu and its functionalities is needed. The student has to be familiar first with the following terms and their usage:

- Toolbar: Provides quick access to commonly used tools
- Slide thumbnails: Provides a quick way of getting to any slide in your presentation by allowing you to click on a small picture of each slide
- Screen View Buttons: Provides quick way of getting to the main PowerPoint views
- Office Assistance: Quick access to the on line help
- Task pane: Clicking the arrow: “New presentation” can choose from several different task pane views.
- Drawing toolbar: Quick access to a variety of tools for editing drawings
- Status Bar: Useful information about what you are working on.

Sample Assessment 1:”Create a title slide of a presentation” (Basics)

The working process is the following:
1. Choose START/ALL PROGRAMS/MICROSOFT POWERPOINT
2. PowerPoint displays a screen that contains two boxes surrounded by dotted lines. Click anywhere in the top placeholder
3. The border of the placeholder changes and a blinking text cursor appears inside it. You can now type the text in the placeholder: “Simple yet effective”

**Sample assessment 2: “Changing Slide Color Schemes”**.

Students have to apply new color schemes to a given presentation. In order to achieve this task student have to follow the steps below:

1. Choose format
2. Slide Color Scheme to open the Color Scheme dialog
3. In the Color Scheme group box, select the new color scheme that you want to apply
4. To preview what it will look like, click the Preview Button
5. Click Apply to apply the color scheme to the current slide
6. Click Apply to All to apply the color scheme to the entire presentation

### 3.3.10 Summary

Students should be aware of the how to create and play slideshows for both manual and kiosk presentations.

### 3.3.11 Glossary

Kiosk presentation: a slideshow that uses timings to move from one interaction to the next, requiring no manual input, and producing a rolling show.
3.4 Online applications

3.4.1 Aims
This unit will make students aware of and briefly demonstrate examples of online document applications and e-learning systems.

3.4.2 Lead Partner
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3.4.3 Learning Objectives
- Be aware of available online resources for creating and collaborating on documents.
- Be aware of e-learning systems and what they have to offer.
- Be informed for the extend to which e-learning applications can be used to achieve specific goals with effectiveness, efficiency and satisfaction in a specified context of use.

3.4.4 Skills Enhanced

3.4.4.1 Directly
- ICT

3.4.4.2 Indirectly
- Communication
- Improving own learning and performance
- Working with others

3.4.5 Content of the Themes
- To understand that e-learning systems acquire a set of features for simple and efficient navigation, advanced personalization of contents, and clear exit.
- To realise that e-learning systems and applications offer them the potentiality to look for and select the most appropriate basic skills for their needs.

3.4.5.1 Online and collaborative document editors
- Google Gmail documents
- Collaborative editors
  - Wiki
  - Wordpress
  - CMS

3.4.5.2 E-Learning
(NB Functionalities details and links – not training courses)
- ATutor
- Blackboard
• Moodle

3.4.6 Teaching Strategies
• Presentation on currently available online software resources.
• Demonstration of collaborative document editing.
• Demonstration of navigation around an e-learning environment (using ViPi ATutor environment)
• Hands on collaboration practical (using for example Gmail documents.)

3.4.7 Previous Knowledge
Unit 2.4 (Using the Computer)
Unit 3.1 (Office Applications – Word Processing)

3.4.8 Resources
• PC/laptop with internet access and projector
• Hand-outs – Detailing locations and descriptions of available packages.
• PCs/laptops for student use with web access.

3.4.9 Assessment Criteria
• Ability to create and share a collaborative document, therefore to develop skills for interaction with different forms of e-learning.
• Ability to sign into and navigate around an e-learning environment.

3.4.10 Summary
Students should be aware of online software and some examples of what is available to them.
Moreover, they should be familiar with using both online document editors and e-learning platforms.

3.4.11 Glossary
E-learning: this includes all forms of electronically supported learning – but more specifically, the computer and network enabled transfer of knowledge and skills.
3.5 Practical Exercises

3.5.1 Aims
This unit will allow the user to practice some common operations under the watch of and with available guidance from their tutor.

3.5.2 Lead Partner
Partner relevant to content

3.5.3 Learning Objectives
- To reinforce the student’s ability to use their ICT skills
- To teach students new practical skills
- To ensure the student is confident in using ViPi

3.5.4 Skills Enhanced

3.5.4.1 Directly
- ICT

3.5.4.2 Indirectly
- Communication
- Improving own learning and performance
- Problem solving

3.5.5 Content of the Themes

3.5.5.1 Purchasing online
- Finding an Item at the Best Price
- Adding to the Shopping Basket
- Checking for Security
- Checking Out

3.5.5.2 Data finding
Exercises in obtaining information on:
- The Weather
- Relevant Interest Groups
- Health
- Travel
- Government
- Consumer Goods
3.5.5.3 Using ViPi

- Computer based
- Mobile based
- Online repository
- Online Learning
- Mobile Applications

3.5.6 Teaching Strategies

- Demonstration of a typical web purchase using a projected PC.
- Guided hands-on purchasing.
- Direct instructional research tasks without initial specific guidance, but with support from teaching staff present (e.g. find out what the weather will be like tomorrow)
- Demonstration of the features of ViPi using a projected PC
- Hands on exploration of ViPi
- Demonstration of mobile ViPi resources
- Hands on exploration of mobile ViPi resources

3.5.7 Previous Knowledge

Relevant modules to the exercises.

3.5.8 Resources

- PC/laptop with web access and projector
- Pens
- Hand-outs – with step by step guidance or hints on the tasks.
- PC with web access for each student
- Mobile device with web access for ViPi mobile work.

3.5.9 Assessment Criteria

- Demonstrate ability to perform the practical tasks.

3.5.10 Summary

Students should be able to use their computer to confidently make purchases and find information. Students should be able to access features of the ViPi portal using their PC or a mobile device.

3.5.11 Glossary