



MODULE 5 Problem Solving



Module 5 Overview

In Module 5, you will learn how to identify technical problems when operating devices and how to solve them (from troubleshooting to solving more complex problems), selecting and using digital tools, and possible technology. Show you to adjust and customize digital environments to personal needs (e.g. accessibility).

You will learn how to use digital tools and technologies to create knowledge and innovate processes. To engage individually and collectively in processing, understanding, and resolving conceptual problems or situations in digital environments. To understand where one's own digital competence needs to be improved or updated. To be able to support others with their digital competence development. To seek opportunities for self-development and to keep up-to-date with the digital evolution.







Topic 1: Identifying Needs and Technological Responses

Relevant Definitions



Before we begin topic 1, here are some useful definitions to help you understand some of the information in this module.

- Information technology (IT) is the use of any computers, storage, networking, and other physical devices, infrastructure, and processes to create, process, store, secure, and exchange all forms of electronic data.
- **Digital tools** are programs, websites, or online resources that can make tasks easier to complete.
- **Blended learning**, also known as hybrid learning, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. It requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace

Defining Technical Problems

1. Differing device capabilities and instructions

When students are required to bring their own device to the university, there can be large differences in device capability, for example between what a cheap android phone can do compared with a tablet. Students may have difficulty writing on small devices over long periods. Educators may need to give multiple instructions for many different devices.

2. It's easy to be distracted

Distraction by multiple notifications is very common, but it's manageable. You can mute, snooze notifications or make a plain decision to not overly multi-task. That is good for the well-being.





Defining Technical Problems

3. Technology can affect lesson time in institutions

Lessons are interrupted by regular negotiations that reduce lesson time. This enhances the need to balance the technology use and commit to not too many options, so the user does not overwhelm. If you feel disrupted by technology, talk to your educators about that.

4. Mishaps, bugs, and malfunctions

Technology can break down. We have all been there. Software and hardware both could need fixing at some point. Some malfunctions can be easily fixed, for others, we might need professional help.

5. Not everyone has technology at home

Not all students or educators use a computer at home and have sufficient data or internet access. Even though through COVID-19, we all went above and beyond to improve our connectivity, gaps still exist. Students should be encouraged to share their home technology challenges with their educators.

"When we invest in women and girls, we are investing in the people who invest in everyone else"

Melinda Gates



What are the needs in regards to Technology?



Learners today are very different from those whom the educational system was designed for.

Technology is in constant refinement in a number of ways to fit the needs of modern digital learners.

Why do we need digital skills and how can it impact engagement?

- ✓ Enables blended learning
- ✓ Helps connect people to the real world
- ✓ Prepares individuals for the workforce
- ✓ Encourages collaboration
- ✓ Supports different types of learners
- ✓ Access information more easily
- ✓ Teaches us how to be responsible online



Activity - Creating Email folders



- 1. Open up GMail
- 2. Go to the left side of your inbox and click 'More' or scroll down to find '+ Create new label'.
- 3. Type in name of the new folder in the box labelled 'Please enter a new label name'.
- 4. If you wish to create the new folder under another folder then click the box 'Nest label under' and select the select the folder you wish to create this new folder under.
- 5. You can now safe files in this folder that you wish to keep.

Case Study- Link to the outside world



Supporting senior learners to acquire digital skills that have no previous digital skills and very little language skills can be a challenge, especially where there is no motivation or the desire to learn.

Linking the development of digital skills to personal needs creates an opportunity to engage those that were once reluctant or unwilling to harness the power of IT.

SOURCE: Go-Woman! Alliance CIC

How We Linked Participants To The Outside World



Our target group, first generation immigrant predominately from Asian community get together on weekly basis to enjoy socialising, colouring and taking part in arts and craft activities.

Gradual encouragement to use online colouring apps rather than paper copy where they could select from 100's of drawings got the women intrigued.

Soon they enjoyed coming in just to use the tablets, spending all their time colouring to playing the matching game.

How We Linked Participants To The Outside World



To remove dependency from facilitators / volunteers they were encouraged to switch the devices on themselves and load the app rather than waiting for the facilitator each week. They were taught a single new step each week to learn / perform, gradually building their confidence to switch on, load and access the app on their device.

Soon they were looking to explore the devices further, seeing the endless possibilities that digital technology offered.

How We Linked Participants To The Outside World



Over time, women learned to use YouTube to access videos on religious scholars, cooking and much more, opening a whole new world of possibilities, helping to reduce isolation and dependency on others to use digital media.

They are now able to join the sessions, even when they are not well, online using Zoom, reducing risk of isolation.





Relevant Definitions



Before we begin topic 2, here are some useful definitions to help you

understand some of the information in this module.

Troubleshooting is a systematic approach to problem-solving that is often used to find and correct issues with complex machines, electronics, computers, and software systems.

A forum is a place, situation, or group in which people exchange ideas and discuss issues, especially important technology issues.

Using Troubleshooting to Resolve Problems

Digital technology is the best advancement that has been developed for humankind but it can be a huge headache when glitches rear their ugly head!

Learning the basics of troubleshooting can be very empowering to migrant women settling in new communities. The knowledge can help them in helping other members of the community or add a skill to their CV.

Problem-solving digital glitches start by defining the issue. You can then prepare a solution and try to solve the problem. Finish by reflecting on the steps you took to solve your digital problem.

Let's Look at Each Step in Detail

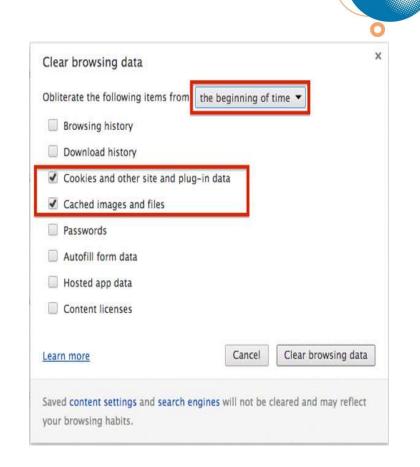
1. Define Digital Problem

This is the first step to a solution. It will require many questions to be asked and answered about what's happening. You need a clear vision of the problem. When seeking help, the more details or visuals you can provide to yourself or someone else the better. There are some teachers who create videos using Screencastify, Loom, or Flipgrid to showcase what's happening on their computers. This is a very good way to share information with someone who's trying to help you if you can't reach a solution yourself.



2. Prepare and Solve the Problem

The next step is to prepare and try to solve the problem. These steps require research and speaking to those you trust to help you troubleshoot. It's always good to clear cookies and restart the device as a habit. Clearing cookies and restarting or updating devices will help avoid technical issues. Some Chrome extensions can create unexpected problems, so removing extensions can be a good practice. Check if all the basic parts are ok with your device – power source for example.



3. Using Forums and Resources

A forum is an online discussion board where people can ask questions, share their experiences, and discuss topics of mutual interest.

Forums are a brilliant way to create social connections and a sense of community. They can also help you to cultivate an interest group in a particular subject.

Use the Forums application to start discussions about a specific topic or to debate solutions to shared problems. By participating in a forum, you can exchange ideas, ask questions, and use the expertise of people in your community.



Using resources and help (forums)



There are two types of forums:

In a stand-alone forum, anyone can post a topic or respond to a topic.

In a community forum, only a community member can participate.

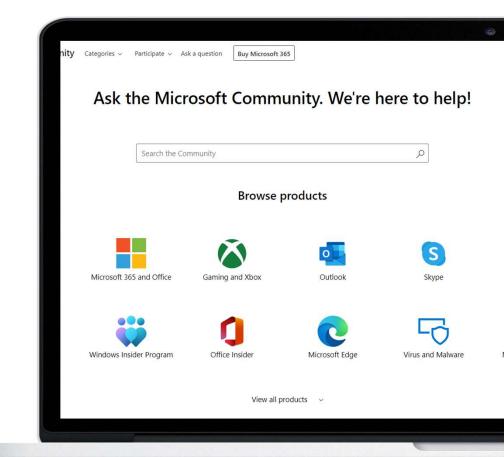
A forum is an online discussion board where people can ask questions, share their experiences, and discuss topics of mutual interest. Forums are an excellent way to create social connections and a sense of community. They can also help you to cultivate an interest group in a particular subject.

Start by searching for a suitable Forum for the topic that concerns you.

Microsoft Forum

You can use the chat in the channels and you can activate Channel moderation so only moderators can start new posts, but members will be able to answer on that post.

https://answers.microsoft.com/en-us



Apple Forum

Find answers, ask questions, and connect with community of Apple users from around the world.

https://discussions.apple.com/welcom
e



Online Communities

These are a wider and more holistic approach than Forums.

Techfugees is a good example of an online community built around technical issues and skills building.

https://techfugees.com/fr/





Techfugees is an international organization mobilizing a community of developers, humanitarians and social entrepreneurs creating sustainab digital solutions contributing to the inclusion of displaced people.

Techfugees supports the regaining of the autonomy of displaced people through digital innovations made with, for and by them.

4. The problem-solving process

The last step is to reflect. It's important to note what occurred should this happen again. Creating troubleshooting videos and/or guides to assist your community is helpful. If someone in the know is an expert in this area, speak with them about how you can access these resources.

There will be times that everyone goes through the process more than once until finding a solution, but it's important to not give up. Asking for help is part of being prepared.

It's important to reach out to family, friends, or others in your circle as everyone is learning how to troubleshoot technology together.

Learn about Basic Rules of Digital Problem Solving!



BASIC TROUBLESHOOTING TECHNIQUES

CTRL+ CLICK on the image in the top right corner to open the PDF document.

- ✓ Write down the typical digital problems that are mentioned in the text.
- ✓ Did you ever experience other digital problems? Write them down as well. Read the article "Basic Trouble Shooting Techniques" closely.
- ✓ Note the individual steps of 'troubleshooting' that are described in the text.
 What is the first step and the second, etc.
 You can use the next slides to write down your results.

https://www.digitaltravellers.org/sheet/basic-troubleshooting-techniques/

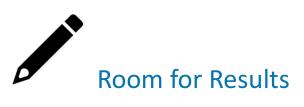
Exercise





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Exercise





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Learn!

How can you handle a virus on your computer?

Everybody has heard about computer viruses and how annoying and dangerous they can be for your work and your data.

This simple guide will help you to take basic protective measures against viruses on your computer. Click on the image on the right to open the PDF document.





SOURCE: https://www.digitaltravellers.org/sheet/what-to-do-if-your-computer-gets-a-virus/

Exercise - Blue screen of death!



Have you suddenly got the dreaded blue screen of death on your computer or laptop? Follow the steps below to help remove this issue:

- 1. Restart the machine.
- 2. Run anti-virus software.
- 3. Find out if Microsoft has released patches or service packs.
- 4. Update drivers.





Topic 3: Creatively using digital technologies

Relevant Definitions

Before we begin topic 3, here are some useful definitions to help you understand some of the information in this module.

- **Data privacy** generally means the ability of a person to determine for themselves when, how, and to what personal information about them is shared with or communicated to others.
- Data Security includes a set of standards and different safeguards and measures taken in order to prevent any third party from unauthorized access to digital data, or any intentional or unintentional alteration, deletion or disclosure of data.

Creativity and Technology

Yes! Creativity and technology definitely can work together and are not mutually exclusive. Instead of suppressing creativity, technology can enhance specific areas of the creative process. It does this by presenting a new platform for creativity to exist on (and come from).

Technology has inspired new careers, as well as creations. With technology, you can create new solutions to problems whilst embracing your creativity.

As someone who is looking for employment, it is important to stand out! You can do this by utilising technology.



Creative Learning and Creative Voicing

The Teach Digital team have decided to focus on two most relevant areas where having a creative approach by using technology can help the employability of female migrants:

- 1. Having a creative approach to digital learning, using digital learning platforms
- 2. Utilising the potential of technology to help shape the participation, voicing of opinions, boosting presentation skills

Creative Approach to Digital Learning, Using Platforms

An online learning platform is an information system that provides a safe learning environment where learners can take online courses. This type of learning provides collaboration, interaction and flexible time management, which are all important elements of CREATIVITY.

These online learning platforms are often called 'online course marketplaces' because they give learners the opportunity to search for and pay for online courses directly.

A distinction should be made between Online Learning Platforms and Online Course Platforms:

An online learning platform emphasizes and presents the learner's perspective whereas an online course platform takes the perspective of the online instructor/ teacher.

Taking a Closer Look at Creative Learning Platforms



We have identified three of the top Online Learning Platforms below. Over the next few slides, we will take a closer look at each of these platforms, examining the pros and cons.

The three top Online Learning Platforms that we suggest are:

- 1. LinkedIn Learning
- 2. Udemy
- 3. Skillshare





LinkedIn Learning



LinkedIn Learning is an educational platform that offers professional courses in business, technology-related and creative fields in the format of video lessons. The platform offers over 16,000 courses in 7 languages. The aim of LinkedIn Learning is to develop the skillset of learners to help them to gain the career that they want.

LinkedIn Learning focuses on video courses that are taught by industry experts in the creative, software and business skills sectors. All courses on LinkedIn Learning are split into four categories which are Business, Creative, Technology and Certifications.

One of the best features of LinkedIn learning is that each course has an interactive Q&A on the page of each course which allows learners to ask questions and share ideas with instructors, colleagues, and others who have taken the course.

Check out LinkedIn learning by clicking on this link

LinkedIn Learning Pros and Cons

- Highly recognizable and valued in the Business 2 business community
- Comes with a one-month free trial
- Provides personalized course recommendations for users
- Offers certification upon course completion
- Allows you to assess your progress using quizzes
- Has offline learning access to learn on the go
- Grants you access to other premium career features

Cons

- The quality of the courses it offers is ambiguous and you need to conduct some research into them before enrolling
- Certificates aren't accredited by a university or partner
- Some subjects may not be covered on the platform





Udemy





Udemy is one of the most popular online course marketplaces on the web. It is an educational platform that has over 40 million students and 50 thousand instructors and subject matter experts creating online courses.

Udemy works like a Wiki (like an encyclopedia) of video programming tutorials. However, unlike Wiki it is far more organized and more accessible than anything you'll find for free on YouTube. Udemy's delivery method and organization of the courses makes the material easier to digest. You're much more likely to learn something quickly on Udemy compared to YouTube.

Udemy is attractive to so many people because you don't need to be a professional to use it. Many of the courses on Udemy are broken down into categories so that everybody can get a feel for the content. Some classes even start at the absolute beginner level. Udemy has been popular with engineers, computer scientists, coders, information technology support, and web developers. On Udemy, you'll find instructors and classes offered in all types of technology disciplines.

Check out Udemy by clicking on this link

Udemy Pros and Cons

Pros:

- Affordable. There are nearly 600 free courses to choose from
- Geared towards self-paced learning and video courses
- No need for highly technical knowledge
- If you don't like the course, or it wasn't what you expected, Udemy offer a 30-day money back guarantee
- You have lifetime access to any course that you have purchased
- Huge selection of courses, over 240,000.
- Fantastic selection of categories and subcategories.

Cons:

- Very limited interaction with students
- High competition between course creators





Skillshare





Skillshare was founded in New York in 2010 by two veterans of the digital world, Michael Karnjanaprakorn and Malcolm Ong. It offers more than 35,000 courses and has 8 million users. It is one of the most popular online learning platforms which focuses on classes for creative professionals and entrepreneurs. Classes are divided into 4 categories, Creative Arts, Technology, Business and Lifestyle. There are also dozens of subcategories that Skillshare offers.

Skillshare is aimed at creatives who want to develop new skills or improve existing ones. Since its classes focus on topics like illustration, design, photography, video, freelancing and much more naturally it appeals to; creative workers (e.g. designers, chefs, artists, etc.), entrepreneurs (e.g. marketers or SEOs), freelancers or small businesses who all want to take the next step in their creative journey.

Check out Skill Share by clicking on this link

Skillshare Pros and Cons

Pros:



- Skillshare offers a free trial on its Premium membership, so you can enjoy the full learning experience before financially committing.
- Skillshare has a highly engaged community, which can make its classes more interactive and fun.
- Skillshare offers thousands of classes, on topics that include illustration, design, photography, video, freelancing and much more.

Cons:

- Skillshare is a platform for primarily personal growth, as there isn't any type of official (or non-official)
 certification awarded when you finish a course.
- Although Skillshare welcomes courses in any language, in reality, there aren't many courses available
 in different languages.
- Can be expensive as Skillshare Premium is only available when paid annually.

Why are Presentation skills Important?

Presentation skills are important. Whilst it may seem like you might not be in a position that requires you to make a presentation very often, being good at presentations is a fantastic skill to have.

When you are at a job interview, you probably won't have a set of slides, but if you present yourself well, you can come across as confident and knowledgeable- a good choice for the job you've gone for!

The Teach Digital team would always recommend becoming competent at using software to create a presentation, as it is a skill you will likely need for future jobs.



Building Presentation Skills

However, when you do make a presentation, it can be hard to capture and hold your audience's attention with mundane slides full of bullet points.

While traditional tools such as PowerPoint, Google Slides and Keynote can all be used to create presentations, you can break the conventional method – basic points on simple slides – by including images, creating movement, and limiting each slide or section to only a couple of key points. Make your voice heard, and let's take a closer look at some tools that will help to ensure your success!



Haiku Deck



Haiku Deck is a platform that prioritizes simplicity. Users can create elegant, basic presentations with high-quality images. The spartan approach allows for connecting with audiences instead of losing them in information overload due to text-heavy slides.

Haiku Deck uses a drag-and-drop interface and offers easy to use software along with templates for creating presentations. One of the best features of Haiku Deck is that they have over 40 million free images to use.

With the wide array of images, and vast font types, it makes it easy to craft simple, powerful presentations that are accessible on any device. Haiku Deck makes it easy to follow the best practices recommended by experts: simplify your message, use images to amplify emotional impact, and keep formatting clean and consistent.

Check out Haiku Deck by clicking on this link

Check out these 10 top tips for getting the most out of Haiku Deck

Visme



Visme is one of the most complete presentation software available online. Making professional presentations is easy and straightforward. Pretty much everything can be customized or moved around. That's not all that Visme can do, though.

The purpose of Visme is to allow non-designers to create beautiful designs, whether it's a presentation, an infographic or a social media cover photo. Whilst Visme offers a limited amount of transitions, the ones that are available ensure that your presentation holds the most impact available. You can also use Visme to create other visual content, such as infographics, reports and interactive charts. There are tons of customizable templates that come built-in with the software.

With Visme, you're able to choose between a presentation template and a presentation theme. Templates are complete, pre-designed presentations with 3-15 different slides. Visme currently offers over 100 unique templates to choose from and is always adding more options.

Check out Visme by clicking on this link

Click here for a guide on how to use Visme

Pitcherific



Pitcherific is not only a presentation solution but also a platform for building and practicing your presentation. It's a template-based program that guides you through the presentation creation process. Instead of drafting a few slides, Pitcherific prompts you to write out the areas of each part of your speech.

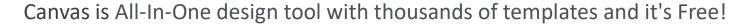
A pitch can be used in many different situations. As a startup you pitch a new idea to potential investors, business partners or clients. Sometimes you need more than a good idea you need to convince, sell and communicate to make your message clearly.

Pitcherific offers various templates for different kinds of pitches and presentations, so you'll have guidance on many kinds of speeches and presentations. Pitcherific also recommends a character count for each section and a timeclock, allowing you to track how long your speech or presentation is and stay within a desired range.

Check out Pitcherific by clicking on this link

Click on this link for ideas on how you can use Pitcherific

Activity - Canva





- 1. Go to www.canva.com
- 2. Click on 'Features' from the menu at the top.
- 3. Select 'Design Types'
- 4. Scroll down to see number of sections with the most popular designs.
- 5. Click on 'create ...' and you are ready to go.
- 6. Select designs or upload your own logo's / pictures or design.
- 7. Once done, click on downward arrow on the top right hand side of the screen to download the design in number of formats.

Case Study- Developing Email skills



As migrant women develop their English learning skills, the ability to communicate using not just their mobile devices becomes even more crucial.

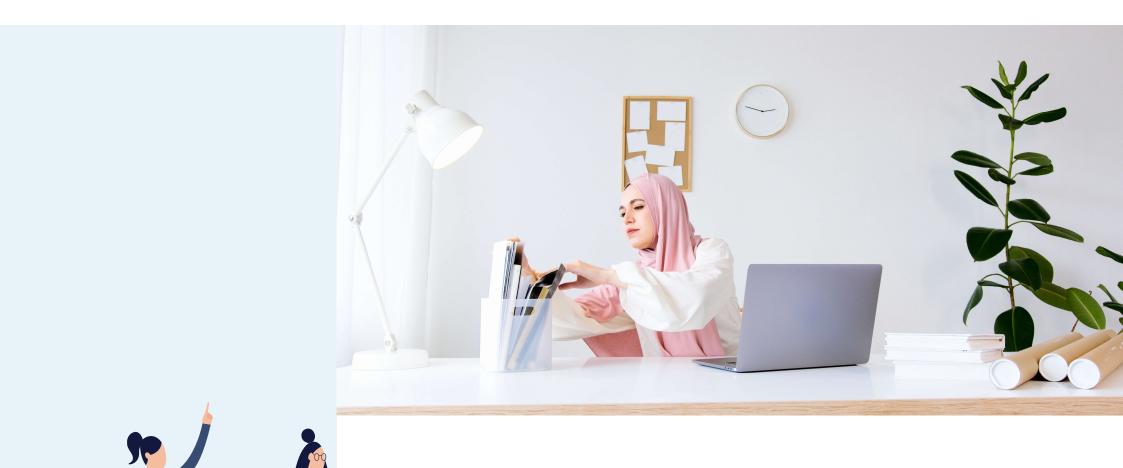
Many of the learners (migrant women) don't have emails as they never had the need or the skills to setup an email account, prohibiting them from fully engaging in post COVID delivery models which involved reduction in use of paper and greater use of homework being sent using word or pdf documents through email.

Ensuring that lack of digital skills did not create barriers to learning, learners were supported to setup an email.

Case Study- Developing Email skills

Through face-to-face sessions learners were supported through setting up an email account. This ensured that they had the control over their password and were in turn able to take ownership rather tan relying on their family members, who they would be reliant on to access any homework sent and in any communication they needed to send back to their tutors. Test emails were sent ensuring that the learners were able to practice what they had learned by using practical exercises.

Learners were asked to send simple emails to a central account which was monitored and replies sent back ensuring that learners got hands on practice on sending and receiving emails.





Relevant Definitions



Before we begin topic 4, here are some useful definitions to help you understand some of the information in this module.

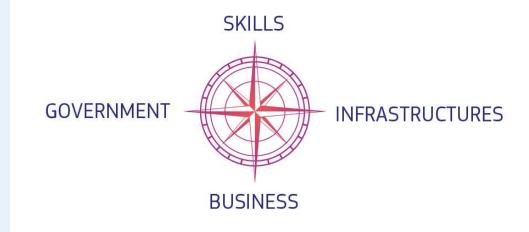
• **Digital competence** involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is essentially how comfortable you are with using digital technology.

Europe's Digital Decade

Many people want to get better at using digital technologies, especially as they become more and more relevant in today's digital world. The EU has planned a human-centric, sustainable vision for digital society throughout the digital decade to empower citizens and businesses.

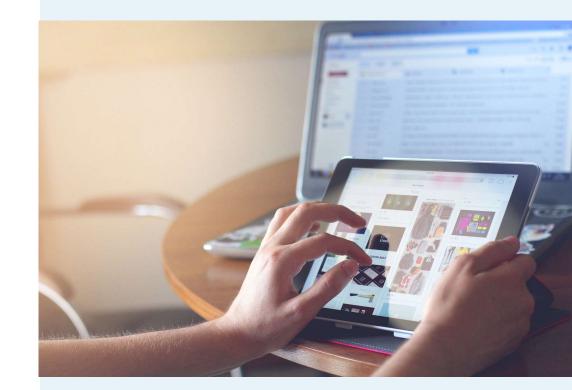
Click on the link below to read about the strategy that the European Union is taking to help ensure that its citizen's are digitally competent.

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digitaltargets-2030 en



Improving Your Digital Competence

If you are wondering what gaps you might have in your digital competencies, over the next few slides we will explore the different pillars that the European Union has set out to ensure that you are kept up to date with digital skills and competencies.



People at the Centre

Digital technologies should protect people's rights, support democracy, and ensure that all digital players act responsibly and safely. The EU promotes these values across the world. Think about the questions below:

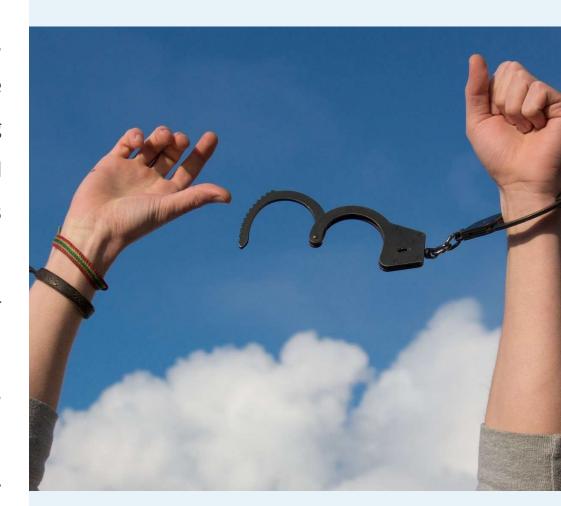
- Do you feel your usage of digital technologies can be described as above? Why yes, or why not?
- Can you change something so that your rights are more protected?
- Should someone else change their ways so you would be more protected (peers, educators, community, institutions..)?
- Are there any gaps preventing you to reach the above goal?



Freedom of choice

People should benefit from a fair online environment, be safe from illegal and harmful content, and be empowered when they interact with new and evolving technologies like artificial intelligence, virtual reality and augmented reality. Think about your own experiences below:

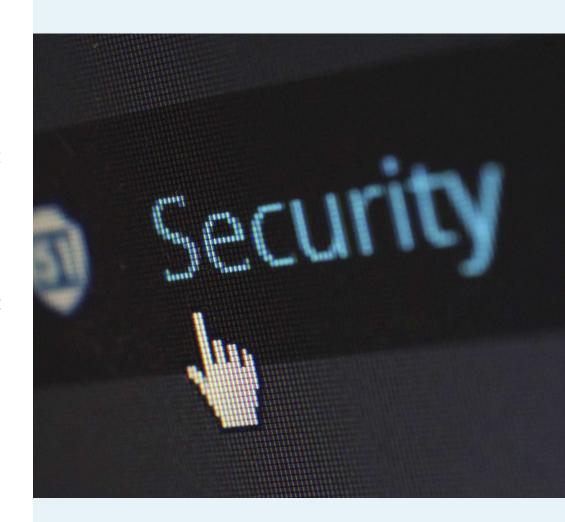
- Does your digital environment and usage diminish your freedom in any way?
- Does the way you use digital technologies to learn, empower you, or diminish your empowerment?
- Do you know how to detect harmful digital technologies, content, and behaviors and avoid them?



Safety and Security

The digital environment should be safe and secure. All users, from childhood to old age, should be empowered and protected with the technology that they use.

- Would you notice if your digital environment was not safe?
- Would you feel empowered to raise that question?
- What are your own standards of security and safety? You are allowed to have stricter standards then someone else!



Solidarity and inclusion

Technology should unite, not divide, people. Everyone should have access to the internet, to digital skills, to digital public services and to fair working conditions.

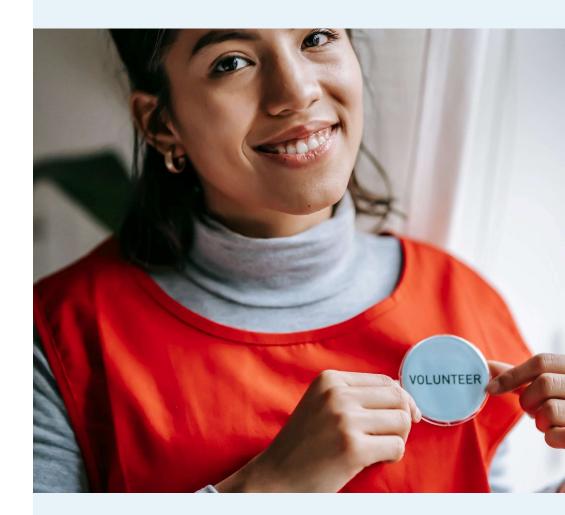
- Do you have access to everything you should as a migrant woman?
 - If not, what is the barrier?
- Is it a skill or something else? Do you feel included?
- Is your environment supportive?
- If you notice any gaps, consider raising the issue in a kind and polite manner.



Participation

Citizens should be able to engage in the democratic process at all levels and have control over their own data. Everyone is entitled to have their voice heard and their opinions and experiences heard. Passive inclusion is not enough.

- Do you actively use technology to voice your opinions?
- Do you know who holds your personal information?
- Can you influence this process and voice any concerns?



Sustainability

Digital devices should support sustainability and the green transition. People need to know about the environmental impact and energy consumption of their devices and make more carbon neutral choices.

- Do you know how your devices and digital behavior affects the environment?
- Have you the skills and the will to improve on this?
- Can you inspire others to do care more?



Taking another look at the Teach Digital Digital Route Finder

As one of the outputs of the Teach Digital project, we have created a Digital Route Finder. This is a set of questions designed to help establish how proficient you are with digital technologies and where you can improve them. The Digital Route Finder is a simple and clear way of thinking about digital skills. By participating in the tool, you will gain a personalised report on the competency of your personal digital skills providing an overview of your strengths and weaknesses.

The content is tailored specifically for migrant women which has been developed through collaborative partnerships with many adult education and migrant women organisations. Further, it will offer training recommendations on which modules of our Open Educational Resources to focus on that will best strengthen your digital skills

Click here for a link to the Teach Digital website, where you can find a link to the Digital Route Finder!

Case Study- Frauen Computer Zentrum Berlin e.V.

Digital Empowerment – media skills for refugee women



Frauen Computer Zentrum Berlin e.V. (FCZB) has been an institution for vocational training in Berlin for more than 30 years. Their goal is to eliminate inequalities and discrimination in vocational training and on the labor market. This also includes combining these two areas; because education and opportunities on the job market are directly related.

The Digital Empowerment programme empowers female migrants by building their digital competencies. Participants of the project learn how to use the internet, computers and smartphones and how these technologies can be used to obtain information independently. As FCZB is based in Germany, the project also helps people to learn German which helps to improve their job search and likelihood of employment.

Case Study- Frauen Computer Zentrum Berlin e.V.

Digital Empowerment – media skills for refugee women

Learners who participate in the FCZB Digital Empowerment programme learn the following skills:

- Internet, computer and smartphone use
- E-mail, Internet research, Office programs, apps, etc.
- German exercises for everyday life and the world of work, e.g. in online language courses
- Advice and information offers from Berlin and online
- Excursions

To learn more about Frauen Computer Zentrum Berlin e.V. Or the Digital Empowerment Media skills for refugee women, click on the link below:

https://www.fczb.de/weiterbildung/digital-empowerment/





End of Module 5

Thank you for reading Module 5, and we hope you learned some valuable information and improved your digital skills and knowledge.

This is the last module in the Teach Digital OERs, congratulations for finishing the course!

Make sure to keep up to date with the Teach Digital Project by visiting our website:

https://www.teachdigital.eu/



